*Final Report*

# Duration Analysis of Income Support Spells Initiated by Unemployment

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## Executive summary

- This study investigates the factors associated with long-term receipt of income support for which the origins can be directly traced to the experience of unemployment. It represents further development of work undertaken for FaCS and DEWR by Black et al (2005), who undertake income support spell duration analysis of males commencing a spell on unemployment benefits aged 25-44 years. This work is extended by considering a substantially broader range of income support recipients, by explicitly investigating heterogeneity in the determinants of duration of income support receipt across different groups defined by characteristics identifiable in the administrative data, and by focusing more attention on very long-term receipt, which we define as five or more years of continuous receipt.
- There are two stages to the research we undertake. In the first stage, we investigate the predictors of very long-term receipt with a view to identifying specific groups more susceptible to this outcome, while in the second stage we investigate the determinants of duration of income support spells. Aside from the innate policy value of the information generated by the first stage, this informs decisions regarding groups to examine separately in the second stage as part of our exploration of heterogeneity in exit rates and in their determinants. However, groups examined are also chosen on the basis of the project brief from DEWR, which identified some additional groups of interest.
- As with Black et al (2005), we adopt a spell duration approach to the study of the issue of long-term receipt, estimating models of the probability an income support spell reaches a pre-specified duration for the first stage analysis, and estimating duration models for the second stage analysis. The data used – panel data with a fortnightly periodicity spanning nine and a half years – is particularly well suited to estimation of duration models. These models identify the effects of recipient characteristics on likelihood of exit, and also identify 'duration effects' on the exit probability. Duration effects are those that are simply a function of time spent on income support, embodying factors such as human capital atrophy, loss of work habits and stigma effects.
- Based on results from Probit models estimating the probability an individual who commences an unemployment spell will have a long spell on income, the following groups of recipients are selected for separate duration analysis, on the basis that they have an elevated risk of long-term receipt:

- mature-age persons, defined as persons aged 50 or more years;
- persons with a work incapacity;
- indigenous persons;
- immigrants from non-English speaking countries;
- persons residing in high unemployment regions;
- persons residing outside the major cities of Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra, Hobart and Newcastle; and
- persons with a partner on income support.

- Duration models, which estimate the probability of exit at each spell duration conditional on that duration being reached (i.e., the hazard rate), are estimated for the sample as a whole and for each of the above population sub-groups identified above. In addition, we separately examine:
  - persons with dependent children;
  - persons who combine paid employment with income support receipt for more than ten per cent of the spell; and
  - persons with a recent history of substantial reliance on income support, defined as receiving income support payments for more than half the 3½ years preceding commencement of the current spell.

- The main findings from models estimated on all persons who commenced an unemployment benefit spell between June 1998 and June 2004 are as follows:
  - Characteristics found to be associated with an elevated risk of a long-term spell by the Probit models are likewise generally found by the hazard rate models to be associated with increased spell duration.
  - Current earnings on balance act to increase the likelihood of exit from the income support spell. Thus, greater attachment to the labour market would seem to act to decrease spell duration. However, it is also the case that the greater the proportion of the current spell the individual has had earnings, the less likely is exit, particularly if earnings in the spell have on average been quite low.
  - As might be expected, being on unemployment benefits and required to search for work is associated with the highest conditional probability of exit, all else equal. Pension and PPS receipt is associated with the lowest conditional probability of exit.

- Recent experience of work incapacity is associated with a much reduced hazard rate.
- The local unemployment rate affects the hazard rate in the expected direction, more so for persons required to search for employment.
- Location also matters to spell duration in terms of whether a person lives in one of the major cities, with those living in major cities about 9-12 per cent more likely to exit in any given fortnight (given exit has not already occurred) than observably identical persons living elsewhere.
- A recent (3.5-year) history of income support receipt is associated with longer current spell durations, and 'more history' is generally associated with longer spell durations. There is also evidence that adverse effects are greater if receipt of income support was within the year preceding current-spell commencement.
- Variables for past difficulty in the labour market – being on unemployment benefits and required to search for employment – show these are predictors of a lower hazard rate, with this effect also stronger if the last experience of difficulty occurred within the year prior to commencement of the current spell.
- Conversely, a recent history of securing employment while remaining on income support, which we interpret as a measure of past labour market success, is associated with an increased hazard rate for the current spell.

- Estimation of duration models for each of the ten groups separately examined shows that, for a number of the groups, the probability of exiting income support receipt (the 'hazard rate') starts out lower, but is a significantly 'flatter' function of duration than is the case for the general population of recipients (who commenced on unemployment benefits). That is, the hazard rate does not decline as quickly as duration increases. This implies there is less 'duration dependence' in the probability of exit at each spell duration for these groups than is the case for the general population of recipients. That is, increased duration on income support does not of itself lead to reductions in the likelihood of exit to the same extent for groups identified by observable characteristics to be at greater risk of long-term spells. From a policy standpoint, this would suggest that, relative to other groups of recipients, there be a greater focus on early stages of income support spells for these groups.

- Effects of recipient characteristics on spell duration are for the most part qualitatively the same for each of the groups examined as for the sample as a whole, but there are some qualitative differences as well as several significant quantitative differences:
    - Age effects – which show duration to be increasing in age for the sample as a whole – appear to be somewhat stronger for NESB immigrants, persons who experience incapacity and persons with a partner on income support. For persons with a partner on income support, the hazard rate is actually increasing in age up until the 25-34 years age category, after which it declines substantially. For females, age effects are relatively weaker for those with a substantial recent history of income support receipt, with only the 50-54 years age category significantly different from the other age categories.
    - Positive impacts of dependent children on the hazard rate in evidence for males as a whole are greater among those who experienced incapacity, and are also somewhat greater for those living in high-unemployment regions. A very strong positive effect on the hazard rate is also evident for indigenous males if the youngest child is over 13 years of age, acting to increase the conditional probability of exit by over 50 per cent compared with a person with no dependent children.
    - For females, most groups have similar effects of dependent children to the female recipient population as a whole, with dependent children having little effect on duration if the youngest is below six years of age, but acting to decrease duration if the youngest is over 6 years of age. However, for females with experience of incapacity, all else equal, a dependent child below the age of six years increases the hazard rate by over 30 per cent compared with having no dependent children. Also of note is that, for females with earnings for more than 10 per cent of the spell, dependent children of any age do not affect the hazard rate.
    - Earnings effects consistent with those evident for the general population are largely present for all groups.
    - Being on unemployment benefits with an activity-test requirement (i.e., *not* having an exemption due to work incapacity or caring responsibilities) increases the hazard rate for all groups, and for all groups other than indigenous persons, the effect is greater if the individual is required to actively search for work.

- Some notable differences are apparent across the groups in the effects of the year of receipt on the hazard rate. The year dummy variables will, among other things, capture the effects of changes over time in economic conditions and government policy. For the general population of persons commencing an unemployment benefit spell, hazard rates were highest, all else equal, in the years 2000 to 2003 for males and 2000-2002 for females. The positive effects of these years are much stronger for NESB immigrants, persons with earnings for more than ten per cent of the spell, indigenous females, mature-age females and females with a partner on income support at the start of the spell. By contrast, these positive effects are largely absent for indigenous males and females residing in high unemployment regions. The reasons for this diversity in responses of hazard rates are not clear.
- Effects of pre-spell income support receipt are remarkable for their similarity across the population groups. The overwhelming impression is that the effects of patterns of income support receipt prior to spell commencement (or the unobserved characteristics they embody) are universal.

- Estimated hazard ratios by educational attainment accord with prior expectations, being strongly ordered by level of attainment. Effects are stronger for females than males: compared with not completing Year 10, a degree increases the hazard rate by 48 per cent for females and by 23 per cent for males. For both males and females, positive effects of education are greatest for indigenous persons, immigrants from non-English speaking countries, those with a partner who is on income support, and persons with dependent children. Education effects tend to be weakest for mature-aged persons, persons with an incapacity early in the spell, persons with earnings for more than 10% of the income support spell and persons with a substantial history of income support receipt prior to the current spell.

- Examination of destination payment types and payment history of those who experienced long-term spells shows:
  - Over 70% of males were still on unemployment benefits five years after commencing the unemployment benefit spell, while 42% of females were on unemployment benefits at the same stage. A further 19% of males transferred to DSP. For females, Parenting Payment Single is the most common alternative payment type destination, accounting for one-quarter of females who commenced on unemployment benefits and had a spell lasting longer than five years. A further

14% of females were on DSP at the five-year mark, and 9% were on Parenting Payment Partnered.

- The majority had experience of income support receipt in the three-year period preceding commencement of the long-term spell, but a substantial minority – 42% – did not receive income support payments at all. Among those who had another income support spell in the three-year period, for most this was also on unemployment benefits. The unemployment benefit is therefore clearly the main 'feeder' payment type. The spell preceding the long-term spell was itself generally quite long, averaging over two years; and on average was completed two years prior to commencement of the long-term spell.

# 1 Introduction

This study investigates the factors associated with long-term receipt of income support for which the origins can be directly traced to the experience of unemployment. It represents further development of work undertaken for FaCS and DEWR by Black et al (2005), who undertake income support spell duration analysis of males commencing a spell on unemployment benefits aged 25-44 years. This work is extended by considering a substantially broader range of income support recipients, by explicitly investigating heterogeneity in the determinants of duration of income support receipt across different groups defined by characteristics identifiable in the administrative data, and by focusing more attention on very long-term receipt, which we define as five or more years of continuous receipt.

The population of interest for this study is all persons who enter income support receipt because of unemployment, which we interpret to be persons who commence income support receipt on unemployment benefits. However, because the study aims to investigate duration on *income support*, persons are retained in our sample even if they transfer to another payment type. Consequently, the study is not of unemployment duration, or indeed duration of spells on unemployment benefits. Rather, our focus is on the duration of income support receipt that has its origins in unemployment. For convenience, we refer to such income support spells as 'extended unemployment spells', despite the fact that an individual may not be unemployed, or even on unemployment benefits, for a significant part of his or her income support spell.

There are two main stages to the research we undertake. In the first stage, we investigate the predictors of very long-term receipt with a view to identifying specific groups more susceptible to this outcome, while in the second stage we investigate the determinants of duration of income support spells. Aside from the innate policy value of the information generated by the first stage, this informs decisions regarding groups to examine separately in the second stage as part of our exploration of heterogeneity in exit rates and in their determinants. However, we also examine other groups, chosen on the basis of likely policy interest as well as the project brief from DEWR.

As with Black et al (2005), we adopt a spell duration approach to the study of the issue of long-term receipt, estimating models of the probability an income support spell reaches a pre-specified duration for the first stage analysis, and estimating duration (hazard rate) models for

the second stage analysis. The data used – panel data with a fortnightly periodicity spanning nine and a half years – is well suited to estimation of these types of models.

Investigating spell duration is of course not equivalent to investigating long-term reliance, since an individual can have a short spell but be long-term reliant via subsequent spells. However, we adopt a definition of spells which allows our analysis to be more readily interpreted as an analysis of long-term reliance. Specifically, a spell is not deemed to have ended until an individual has remained off income support for seven consecutive fortnights – more than one-quarter of a year. Thus, we will only fail to model long-term reliance involving breaks in payments in excess of three months, implying we will capture much of the long-term reliance we seek to investigate. Furthermore, our models estimated consider the role of income support receipt in the three and a half years preceding the current spell, allowing us to investigate the effects of a recent history of reliance on income support.

Of key interest for this study is the nature, extent and persistence of 'duration' effects compared with the role of observed characteristics and the role of unobserved characteristics. Duration effects refer to effects on the likelihood of remaining on income support that are simply a function of time spent on income support. They embody factors such as human capital atrophy, loss of networks and work habits, and stigma effects. Current-spell duration effects are captured in the hazard models by the baseline hazard, which gives the probability of exit at each spell duration conditional on not having exited prior to that duration.

Persistence of duration effects, often referred to as lagged duration dependence, is captured by variables for income support receipt prior to the current spell. Black et al model lagged duration effects by including variables for length of elapsed time between last spell and the current spell and the length of the preceding spell. By focusing on males aged 25-44, Black et al were able to reasonably interpret time off income support as time in substantive employment. Furthermore, they restrict the sample to those with no recent (two-year) history of income support receipt prior to first spell commencement, allowing them to assume lagged duration effects were approximately zero at commencement of the first unemployment benefit spell.

We take a somewhat different – and broader – approach to capturing effects of past income support receipt, primarily motivated by the more inclusive and hence diverse nature of the sample examined. Specifically, given that we do not restrict the sample based on prior income support receipt, and that many recipients will not have been employed while off payments, we allow for both more general and more diverse effects of prior receipt. This is achieved by

considering effects of all income support receipt in both the year preceding spell commencement and the three and a half years preceding spell commencement, and by distinguishing past receipt on the basis of whether earnings were received and whether the individual was unemployed. Note, therefore, that we do not interpret our payment history variables as simply capturing lagged duration effects.[1]

The plan of the remainder of the report is as follows. In Section 2 we describe the data source, the sample examined and the spell definition we use, and then present descriptive information on the number and duration distribution of unemployment benefit and income support spells in our sample. In Section 3 we examine empirical survival functions – which show the proportion of recipients still on income support at each spell duration – for various groups of recipients. Econometric analysis of the characteristics associated with long-term spells is also undertaken in Section 3, the results of which are used to identify groups with an elevated risk of long-term spells. Duration models are estimated in Section 4. As well as estimating models for the sample as a whole, we investigate heterogeneity in duration and its determinants by comparing duration model results for the population sub-groups identified in Section 3. In Section 5 we investigate the effects of educational attainment on duration for persons who commenced on Newstart Allowance, a sub-sample for whom the educational attainment information available in the data is of reasonable quality. Consistent with specific interest in those who experience very long-term spells (spells longer than five years), in Section 6 we present descriptive information on the characteristics of these recipients, with a particular focus on payment receipt in three years leading up to commencement of the very long-term spell. Concluding comments are provided in Section 7.

# 2 Data

## *2.1 Data source, sample examined and spell definition*

The data set used is a ten per cent random sample of all individuals who received income support payment in the period January 1995 to June 2004, drawn from the FaCS Longitudinal Data Warehouse (LDW). It comprises all fortnightly Centrelink payment records of individuals in the sample, with a separate record generated for an individual in every fortnight in the period in which an income support payment and/or a non-income support payment was

[1] An advantage of our approach vis-à-vis Black et al is that problems of sample selection bias are reduced due to the removal of the requirement of a two-year break in payments prior to the first unemployment benefit spell.

received. In addition, parts of the analysis use matched data on educational attainment drawn from the DEWR Jobseeker Dataset (JDS).[2]

The sample for this study comprises all individuals who, in the sample period, commenced a spell on unemployment benefits, which comprise Newstart Allowance, Youth Allowance (other), Newstart Mature Age Allowance, Job Search Allowance and Youth Training Allowance. However, persons recorded at the time of commencement as having a DSP claim pending are excluded. Persons are also only retained in the sample for those periods they are below the minimum age of eligibility for the Age Pension. Furthermore, income support payments to full-time students (Youth Allowance (full-time study), Austudy and Abstudy) are excluded, with individuals treated as if they are not on income support when in receipt of one of these payment types.

For the purposes of this study, a spell is defined by commencement on unemployment benefits and exit from all income support payments. Exit from income support payments is deemed to occur only once an individual has been off payments for at least seven consecutive fortnights (but with exit deemed to occur in the fortnight payment was last received).[3] This criterion for exit is consistent with that applied under the *Social Security Act 1991* for determining continuous payment receipt for persons on payments twelve or more months. A spell is deemed to commence if an individual goes on to unemployment benefits after at least seven consecutive fortnights off all income support payments. Thus, a spell is a period on income support that began on unemployment benefits and in which the maximum break in payments is six consecutive fortnights.

### *2.2 Preliminary descriptive information*

Before proceeding to econometric analysis of spell durations, we first present descriptive statistics on the sample and outcome examined. We begin by presenting statistics on 'standard' unemployment benefit spells, which are periods of receipt of unemployment benefits in which the maximum break in receipt of unemployment benefits is six fortnights.

[2] We also obtained JDS data items on additional characteristics of recipients. However, this information was not suitable for statistical inference purposes because JDS data was not required to be gathered for all recipients during the sample period we examine. For example, whether an individual held a driver's licence is only recorded for a small subset of recipients. Also note that the LDW does not contain CDEP payment records.

[3] An individual is deemed to be off all income support payments in a fortnight if there is no payment record for the individual in that fortnight *or* there is a payment record but benefit entitlement is zero. Benefit entitlement may be zero for up to 6 consecutive fortnights due to earnings (usually from casual employment). It may also be zero following the initial claim for payment due to an applicable waiting period. Zero benefit entitlement may furthermore be observed for Parenting Payment Single and Parenting Payment Partnered recipients due to receipt of maintenance income.

We then examine the effects of broadening the scope to analysis of income support spells that began with the recipients on unemployment benefit spells – that is, 'extended' unemployment benefit spells – by examining the destinations of unemployment benefit spells and by presenting descriptive statistics for extended unemployment benefit spells.

Table 1 presents the average number of ongoing unemployment benefit spells in each year from 1995 to 2004. Since we have a ten per cent sample of recipients, the statistics reported imply that, on average, there were about 800,000 unemployment benefit recipients in each fortnight over the period 1995-2004, with 70 per cent of these recipients male. It appears that for both males and females the number of unemployment benefit recipients peaked in 1997, since when economic growth, and possibly welfare policy changes, have seen a decline in recipient numbers.

Table 1: Average number of on-going unemployment benefit spells in each fortnight

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|
| Females | 23,628 | 26,243 | 26,804 | 25,508 | 25,907 | 25,137 | 23,246 | 23,527 | 22,724 | 22,724 |
| *%* | *28.97* | *29.47* | *29.56* | *29.67* | *30.11* | *30.90* | *30.12* | *30.68* | *32.01* | *33.72* |
| Males | 57,946 | 62,815 | 63,868 | 60,459 | 60,140 | 56,212 | 53,932 | 53,165 | 48,257 | 44,660 |
| *%* | *71.03* | *70.53* | *70.44* | *70.33* | *69.89* | *69.10* | *69.88* | *69.32* | *67.99* | *66.28* |
| All | 81,574 | 89,058 | 90,672 | 85,967 | 86,047 | 81,349 | 77,178 | 76,692 | 70,981 | 67,384 |

Table 2 presents the duration distribution of the ongoing unemployment spells as at January each year from 1995 to 2004. Note that this describes 'incomplete' durations, because the spells are still ongoing (i.e., they are 'interrupted' spells). Incomplete duration only reflects how long a recipient has been on the benefit up to the point when the data were extracted. Under some conditions, the duration of completed spells can be inferred from incomplete durations, but these conditions are unlikely to hold for unemployment benefit spells.

For the nine (interrupted) spell duration intervals presented in Table 2, the single largest group is in the shortest duration interval, half a year or less. Nonetheless, over 40 per cent of females and about 50 per cent of males have an interrupted spell duration in excess of one year, which corresponds to the conventional notion of long-term unemployment. Over the period 1995-2004, the proportion of ongoing spells longer than one year exhibits a trend increase. The proportion of spells in progress that are very long (more than five years) has also increased over the period, particular over the last five years. Comparing males and females, the distribution is very similar for durations between half a year and five years, but more females have an incomplete duration less than half a year, while more males have an incomplete duration greater than five years.

Table 2: Duration distribution of ongoing unemployment benefit spells as at January of each year: 1995-2004 (%)

| Duration intervals | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | All yrs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Females | | | | | |
| <0.5 yr | 32.69 | 44.19 | 38.51 | 34.78 | 35.22 | 37.85 | 41.23 | 41.75 | 40.04 | 40.16 | 38.62 |
| 0.5-1 yr | 19.48 | 24.41 | 24.24 | 20.36 | 17.48 | 15.73 | 15.94 | 17.83 | 16.62 | 16.85 | 19.02 |
| 1-1.5 yrs | 13.33 | 8.12 | 14.26 | 13.61 | 11.44 | 9.64 | 8.6 | 10.15 | 10.53 | 10.1 | 11.01 |
| 1.5-2 yrs | 7.36 | 5.4 | 8.27 | 10.12 | 8.5 | 6.87 | 5.74 | 6.04 | 7.07 | 6.73 | 7.24 |
| 2-2.5 yrs | 6.38 | 3.81 | 3.45 | 7.34 | 7.25 | 6.02 | 4.71 | 3.88 | 5.23 | 5.26 | 5.33 |
| 2.5-3 yrs | 4.54 | 2.4 | 2.27 | 4.48 | 5.98 | 4.84 | 3.68 | 2.85 | 3.37 | 3.95 | 3.83 |
| 3-4 yrs | 8.11 | 4.41 | 2.76 | 3.31 | 7.43 | 8.57 | 6.56 | 4.62 | 4.25 | 5.18 | 5.5 |
| 4-5 yrs | 4.62 | 3.46 | 2.3 | 1.77 | 2.22 | 5.3 | 5.76 | 3.88 | 3.13 | 2.71 | 3.49 |
| > 5 yrs | 3.5 | 3.8 | 3.94 | 4.22 | 4.48 | 5.18 | 7.78 | 8.99 | 9.77 | 9.06 | 5.96 |
| | | | | | | Males | | | | | |
| <0.5 yr | 27.57 | 38.57 | 34.23 | 30.91 | 28.51 | 30.52 | 35.28 | 34.08 | 32.23 | 31.3 | 32.37 |
| 0.5-1 yr | 21.35 | 22.86 | 22.81 | 17.99 | 16.56 | 14.55 | 15.6 | 17.78 | 15.6 | 15.52 | 18.28 |
| 1-1.5 yrs | 10.15 | 8.49 | 13.62 | 12.97 | 11.47 | 9.09 | 8 | 10.29 | 9.89 | 9.77 | 10.45 |
| 1.5-2 yrs | 7.44 | 7.93 | 8.46 | 10.69 | 8.63 | 7.72 | 5.91 | 6.83 | 8.08 | 7.43 | 7.97 |
| 2-2.5 yrs | 5.61 | 3.16 | 4.43 | 7.63 | 8.01 | 6.92 | 4.9 | 4.19 | 6.07 | 5.78 | 5.66 |
| 2.5-3 yrs | 5.19 | 2.77 | 4.34 | 5.2 | 7.13 | 5.64 | 4.56 | 3.42 | 4.67 | 5.14 | 4.8 |
| 3-4 yrs | 9.73 | 5.05 | 3.11 | 5.66 | 9.1 | 10.89 | 7.98 | 5.87 | 5.35 | 7.29 | 6.96 |
| 4-5 yrs | 7.49 | 4.68 | 2.84 | 2.15 | 3.65 | 6.78 | 7.62 | 5.24 | 4.24 | 3.72 | 4.81 |
| > 5 yrs | 5.45 | 6.49 | 6.16 | 6.8 | 6.93 | 7.89 | 10.15 | 12.3 | 13.88 | 14.04 | 8.71 |

The longitudinal nature of the LDW data allows inferences on the durations of *completed* unemployment benefit spells. Table 3 presents statistics on the completed duration distribution of standard unemployment benefit spells experienced by recipients who commenced unemployment benefit receipt in the period 1995-1998 (denoted as the 1995-1998 entry cohort).[4] One of the objectives of the project is to examine the factors associated with very long-term income support spells originating with unemployment, whereby very long-term is defined as longer than five years. We therefore include a category for the proportion of spells in excess of five years, which necessarily restricts us to persons commencing more than five years before the end of the sample period; hence the restriction to the 1995-1998 entry cohort. The number of observations is the number of new unemployment benefit spells each year over the period 1995-1998. On average, the number of new unemployment benefit spells of males is more than double that of females.

For both males and females, approximately half the spells have a completed duration less than six months and about 20 per cent have a completed duration between half a year and one year.

[4] Due to the limited time window of the available data, it is more appropriate to present features of the duration distribution other than the mean because, even for the earliest entry cohort of recipients, some unemployment benefit spells will be right-censored – that is, the spells will still be in progress at the end of the sample period. Without knowledge of the completed duration of these right-censored spells, the mean completed duration cannot be precisely calculated.

Thus, using the one-year rule for defining long-term unemployment, about 30 per cent of the spells can be classified as long-term. Note, however, that a substantial proportion of the spells last between one and two years. *Very* long unemployment (longer than five years) accounts for only six per cent of male and three per cent of female spells. It is also notable that, beginning with spells commenced in 1996, the proportion of spells reaching five years duration has declined over time: 6.7 per cent of male spells and 3.5 per cent of female spells commenced in 1996 reached five years, compared with 4 per cent of male spells and 2.2 per cent of female spells commenced in 1998.

Table 3: Duration distribution of completed 'standard' unemployment benefit spells: 1995-1998 entry cohort (%)

| Duration | 1995 | 1996 | 1997 | 1998 | All years |
|---|---|---|---|---|---|
| intervals | | | Females | | |
| <= 0.5 yr | 47.91 | 48.7 | 51.24 | 56.61 | 51.32 |
| 0.5-1 yr | 21.44 | 20.52 | 19.36 | 19.68 | 20.17 |
| 1-2 yrs | 16.61 | 16.29 | 15.53 | 13.32 | 15.36 |
| 2-3 yrs | 5.89 | 5.85 | 6.21 | 5.16 | 5.77 |
| 3-5 yrs | 4.71 | 5.13 | 4.74 | 3.02 | 4.39 |
| > 5 years | 3.44 | 3.51 | 2.92 | 2.21 | 3.00 |
| No. of obs. | 17,116 | 25,854 | 23,061 | 24,150 | 90,181 |
| | | | Males | | |
| <= 0.5 yr | 43.28 | 44.7 | 47.64 | 51.47 | 46.83 |
| 0.5-1 yr | 20.36 | 18.99 | 18.71 | 18.93 | 19.19 |
| 1-2 yrs | 17.45 | 16.41 | 15.27 | 14.83 | 15.95 |
| 2-3 yrs | 6.63 | 6.47 | 7.05 | 5.79 | 6.48 |
| 3-5 yrs | 6.06 | 6.73 | 6.04 | 4.96 | 5.98 |
| > 5 years | 6.21 | 6.70 | 5.29 | 4.02 | 5.57 |
| No. of obs. | 38,570 | 52,919 | 46,542 | 45,626 | 183,657 |

Table 3 treats a spell as the subject of analysis. The number of persons who entered unemployment benefit spells during the period 1995-1998 will be smaller than the number of spells because some recipients will have experienced more than one spell during the period. To provide information on the occurrence of multiple spells, Table 4 presents the distribution of the number of spells of the recipients who entered unemployment benefits during the 1995-1998 period. During the four-year period, a large majority of the unemployment benefit recipients had one spell. Approximately 21 per cent had two spells and a further 5 per cent of recipients had three or more spells in the observation period.

Table 4: Distribution of the number of unemployment benefit spells of those in the 1995-1998 entry cohort (%)

| Number of spells | Females | Males | Total |
|---|---|---|---|
| 1 | 77.07 | 71.69 | 73.54 |
| 2 | 18.98 | 22.18 | 21.08 |
| 3 | 3.54 | 5.17 | 4.61 |
| 4 | 0.38 | 0.87 | 0.70 |
| 5+ | 0.03 | 0.09 | 0.06 |
| Number of recipients | 70,821 | 135,560 | 206,381 |

The key motivation for our focus on income support spell duration rather than unemployment benefit spell duration is that standard unemployment benefit spell durations may understate reliance on income support of recipients because persons may transfer to other payments. Restricting to unemployment benefits therefore risks inferences being drawn that are simply artefacts of administrative 'labels', rather than deriving from actual behaviour of sample members. For example, it may be that, for some persons, long-term receipt of unemployment benefits is a signal to programme administrators of work incapacity, such that long-term receipt is itself a cause of exit from unemployment benefits and entry to the Disability Support Pension, even when there has been no change in the individual's health or disability level.

To investigate the potential magnitude of this issue, we examine in Table 5 the proportion of unemployment benefit spells commenced in the period 1995-1998 that ended in transfers to other payments. We deem a payment transfer to occur if an unemployment benefit recipient is found to be receiving one of the other income support payments within seven fortnights of termination of a standard unemployment benefit spell. Among those who entered unemployment benefit programs during the period 1995-1998, 16 per cent of female recipients and 10 per cent of male recipients are found to transfer to another income support payment by June 2004. The most common transfer destinations for females are Parenting Payment Single (4.5 per cent), Parenting Payment Partnered (4 per cent) and DSP (3 per cent). For males, DSP is the dominant payment type destination for those who transfer, accounting for 4.2 per cent of all destinations of unemployment benefit spells. Both PPS and DSP are generally somewhat long-term payments, implying transfers to these payment types reflect moves towards more entrenched reliance on income support.

Table 5: Destinations of unemployment benefit spells for the 1995-1998 entry cohort (%)

| Destination | 1995 | 1996 | 1997 | 1998 | All years |
|---|---|---|---|---|---|
| | | Females | | | |
| Exit IS system | 82.54 | 82.22 | 81.9 | 82.56 | 82.29 |
| Transfers to other payments | 16.65 | 16.49 | 16.82 | 15.90 | 16.46 |
| *Disability Support Pension* | *2.40* | *3.10* | *3.33* | *3.33* | *3.09* |
| *Parenting Payment Single* | *3.89* | *4.01* | *4.82* | *5.07* | *4.48* |
| *Parenting Payment Partnered* | *3.70* | *3.93* | *4.19* | *4.02* | *3.98* |
| *Age Pension* | *0.55* | *0.61* | *0.66* | *0.63* | *0.62* |
| *Sickness benefit* | *1.33* | *0.32* | *0.25* | *0.27* | *0.48* |
| *Carer Payment* | *0.76* | *0.85* | *0.83* | *0.78* | *0.81* |
| *Partner Allowance* | *0.50* | *0.85* | *0.91* | *0.83* | *0.79* |
| *Special benefit* | *2.62* | *1.66* | *0.73* | *0.07* | *1.18* |
| *Crisis benefits* | *0.08* | *0.08* | *0.20* | *0.26* | *0.16* |
| *Widow Benefits* | *0.77* | *1.08* | *0.89* | *0.63* | *0.85* |
| *Others payments* | *0.05* | *0.00* | *0.01* | *0.01* | *0.02* |
| Right-Censored | 0.81 | 1.31 | 1.27 | 1.53 | 1.26 |
| No. of observations | 17,116 | 25,854 | 23,061 | 24,150 | 90,181 |
| | | Males | | | |
| Exit IS system | 87.97 | 87.47 | 88.01 | 87.52 | 87.72 |
| Transfers to other payments | 10.15 | 9.68 | 9.23 | 9.65 | 9.65 |
| *Disability Support Pension* | *3.59* | *4.35* | *4.39* | *4.59* | *4.26* |
| *Parenting Payment Single* | *1.11* | *1.11* | *1.09* | *1.16* | *1.12* |
| *Parenting Payment Partnered* | *0.68* | *0.82* | *0.77* | *0.89* | *0.80* |
| *Age Pension* | *2.24* | *1.81* | *1.44* | *1.23* | *1.66* |
| *Sickness benefit* | *1.65* | *0.51* | *0.44* | *0.47* | *0.72* |
| *Carer Payment* | *0.54* | *0.63* | *0.58* | *0.59* | *0.59* |
| *Partner Allowance* | *0.08* | *0.11* | *0.14* | *0.11* | *0.11* |
| *Special benefit* | *0.09* | *0.08* | *0.06* | *0.04* | *0.06* |
| *Crisis benefits* | *0.16* | *0.26* | *0.32* | *0.57* | *0.33* |
| *Others payments* | *0.01* | *0.00* | *0.00* | *0.00* | *0.00* |
| Right-Censored | 1.88 | 2.84 | 2.75 | 2.84 | 2.62 |
| No. of observations | 38,570 | 52,919 | 46,542 | 45,626 | 183,657 |

We consider now the duration distribution of completed extended unemployment benefit spells (Table 6). Unsurprisingly, compared with the results in Table 3, the number of long duration spells increases, while the number of short duration spells decreases. In particular, the proportion of spells that are of a very long duration (over five years) more than doubles. Inferences are therefore likely to be sensitive to the treatment of transfers from unemployment benefits to other income support payments.

Table 6: Duration distribution of extended unemployment spells that commenced during the period 1995-1998 (%)

| Duration intervals | 1995 | 1996 | 1997 | 1998 | All years |
|---|---|---|---|---|---|
| | | | Females | | |
| <= 0.5 yr | 43.21 | 44.76 | 46.59 | 51.07 | 46.61 |
| 0.5-1 yr | 19.11 | 17.42 | 16.35 | 17.28 | 17.43 |
| 1-2 yrs | 14.44 | 13.98 | 13.12 | 11.62 | 13.22 |
| 2-3 yrs | 5.36 | 4.89 | 5.51 | 4.57 | 5.05 |
| 3-5 yrs | 4.58 | 4.89 | 4.61 | 3.61 | 4.42 |
| > 5 years | 13.3 | 14.06 | 13.81 | 11.85 | 13.26 |
| No. of observations | 17,079 | 25,680 | 22,912 | 23,831 | 89,502 |
| | | | Males | | |
| <= 0.5 yr | 41.16 | 43.16 | 45.8 | 49.27 | 44.91 |
| 0.5-1 yr | 19.54 | 18.06 | 17.76 | 18.15 | 18.32 |
| 1-2 yrs | 16.51 | 15.15 | 14.02 | 13.68 | 14.79 |
| 2-3 yrs | 5.81 | 5.73 | 6.33 | 5.18 | 5.77 |
| 3-5 yrs | 5.10 | 5.51 | 5.20 | 4.38 | 5.07 |
| > 5 years | 11.88 | 12.39 | 10.89 | 9.34 | 11.15 |
| No. of observations | 38,512 | 52,519 | 46,184 | 44,767 | 181,982 |

Table 7 presents the distribution of the number of extended unemployment benefit spells for the 1995-1998 entry cohort. The number of extended unemployment spells is smaller than the number of standard unemployment benefit spells because some standard unemployment benefit spells have been combined into one extended spell. For example, if a person first transferred to Partner Allowance from unemployment benefits and then transferred back, the person had two standard unemployment benefit spells but only one extended spell. Nonetheless, the overall distribution is quite similar to that in Table 5, with approximately one-quarter having more than one spell. Thus, our focus on spell duration means we will not capture all longer-term reliance of individuals.

Table 7: Distribution of the number of extended unemployment spells that commenced during the period 1995-1998 (%)

| Number of spells | Females | Males | Total |
|---|---|---|---|
| 1 | 77.83 | 72.52 | 74.34 |
| 2 | 18.38 | 21.69 | 20.55 |
| 3 | 3.41 | 4.91 | 4.39 |
| 4 | 0.35 | 0.8 | 0.65 |
| 5+ | 0.03 | 0.07 | 0.06 |
| Number of recipients | 70,821 | 135,560 | 206,381 |

# 3 Identifying groups of individuals at greater risk of long-term spells on income support

## *3.1 Descriptive approach: Empirical survival functions*

The survival rate at duration *t* gives the proportion of spells known to be 'at risk' of being at least *t* fortnights long. An empirical survival function plots the survival rate at each spell duration. It is a useful way of describing the duration distribution, particularly when right-censored spells are present, because such spells are included in the estimation of the survival rate up until the duration at which they are censored. For example, a spell right-censored at 100 fortnights will be included in the calculation of the survival rate up to a duration of 100 fortnights, after which it will be excluded – that is, in calculating the proportion of spells of at least 101 fortnights duration, it will be excluded from both the numerator (number of spells at least 101 fortnights long) and the denominator (number of spells at risk of being 101 fortnights long). The survival function therefore makes full use of all available information on spell durations and is not invalidated by right-censored spells in the way that estimates of mean duration would be. By comparing the survival rates among recipients with different characteristics, we can informally infer factors that are more likely to be associated with longer durations.

In Figures 1-8 we present empirical survival functions of extended unemployment benefit spells for the 1995-1998 entry cohort, disaggregated by selected characteristics. Figure 1 compares survival rates by entry year. Survival rates of the four different entry cohorts are very similar, with the exception that those who commenced a spell in 1998 appear to have slightly lower survival rates than other entry cohorts. For example, the proportion of spells reaching a duration of one year is slightly greater than 20 per cent for the 1995-1997 entry cohorts, but slightly less than 20 per cent for the 1998 entry cohort.

Figure 1: Empirical survival function by entry cohort

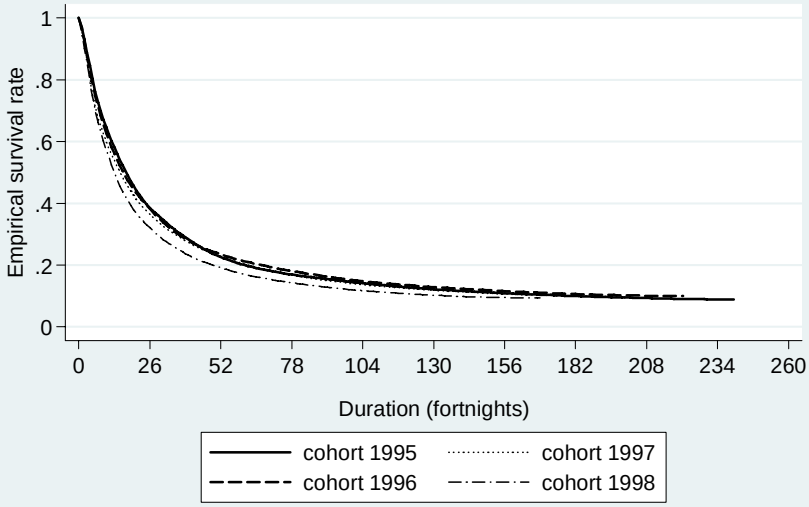



Figure 2 compares males and females. For durations less than approximately one-and-a-half to two years the survival functions are almost identical, but thereafter the survival function of males diverges below that of females. The gap mostly opens up in the 2-4 years duration interval, indicating that a greater proportion of male spells are completed in this duration range, and a correspondingly lower proportion of male spells are greater than 4 years duration.

Figure 2: Empirical survival function by sex

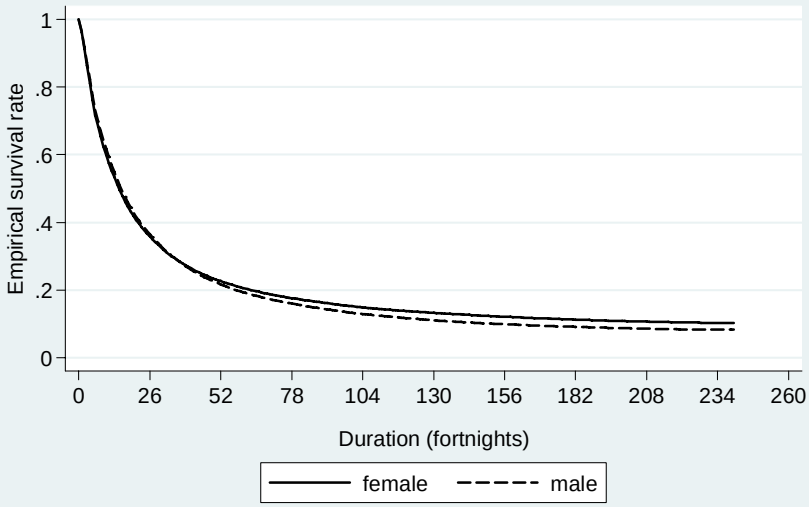



Figure 3 shows survival rates by age at commencement of unemployment benefit receipt. In general, the older the recipient, the higher the survival rate (i.e., the longer the expected

duration on income support). However, the difference in the survival rates between the two youngest age groups is very small. The 45-54 years age group has a substantially higher survival rate at all durations than the two younger age groups, and there is an even bigger jump again from this age group to the 55 years and over age group.

Figure 3: Empirical survival function by entry age

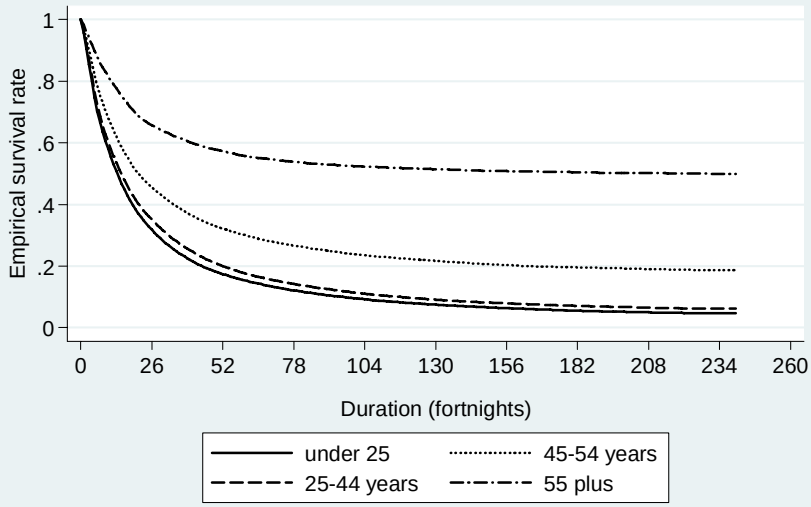
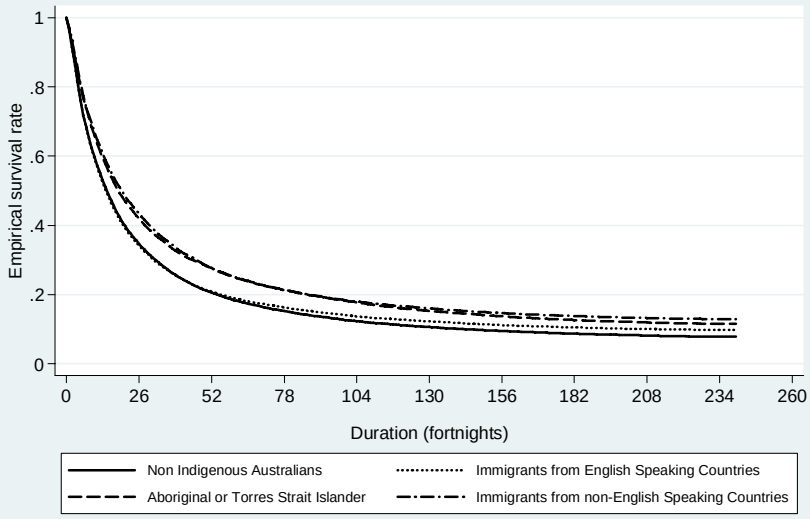



Figure 4 shows that indigenous Australians and immigrants from non-English speaking countries have similarly high survival rates compared with non-indigenous natives and immigrants from English speaking countries, who have similarly low survival rates. The proportion remaining on income support is higher for the former two groups at all durations, although the gap is widest at durations of approximately 1½-2 years, thereafter gradually narrowing.

Figure 4: Empirical survival function by country of birth and ethnicity




Survival rates by social marital status and partner's income support status at commencement of the spell are presented in Figure 5. Clearly, recipients who have a partner who is also on income support have the highest survival rates. Single persons and persons with a partner who is not on income support have similar survival functions, although the survival function for those partnered rises marginally above that of single persons from durations of approximately three years.

Figure 5: Empirical survival function by maritial status and partners' income support status

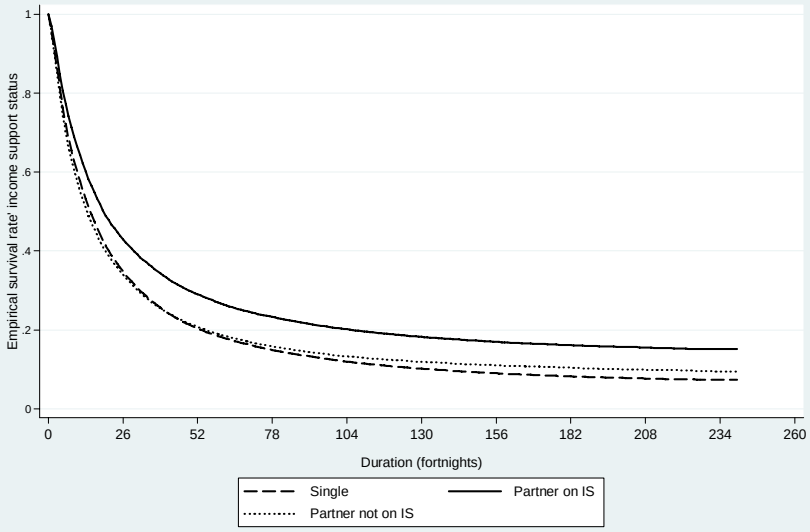
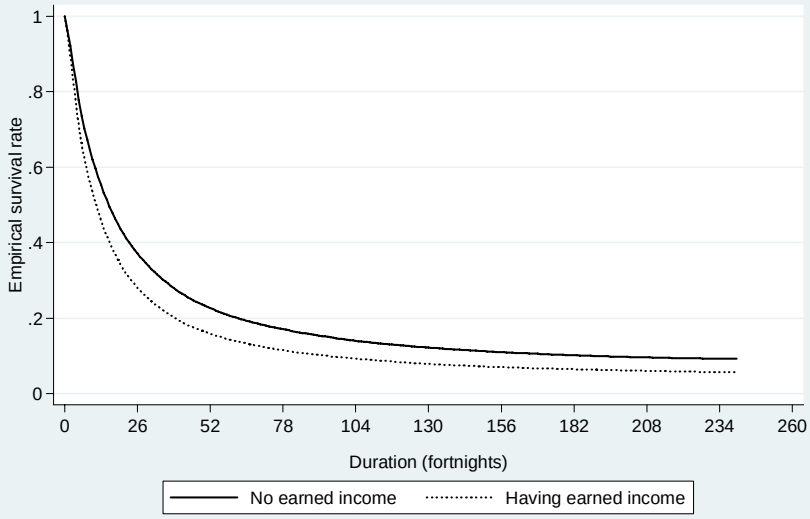


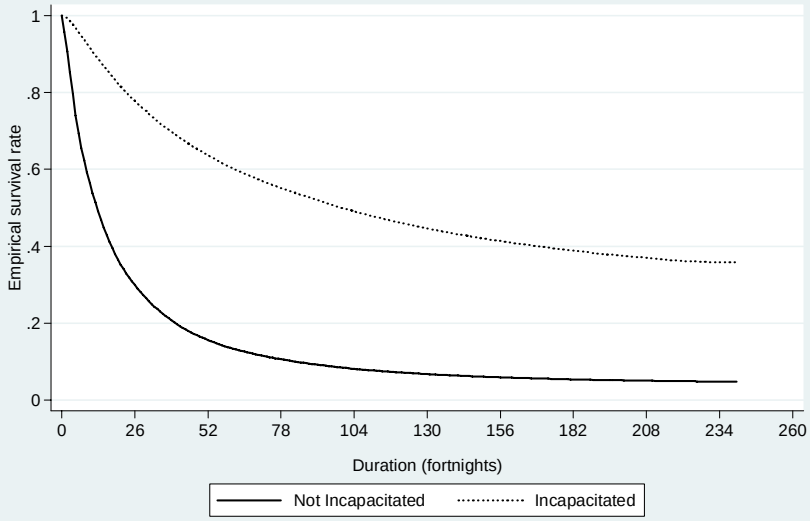
Figure 6 shows the survival rates by whether the recipient reported income from employment ('earned' income) during the income support spell. Despite the increased "opportunity" for earnings the longer the spell (i.e., simply because there are more fortnights in a longer spell in which earnings *could* be reported), survival rates are considerably lower among those with some degree of labour market attachment during the spell, as measured by the presence of earnings.

Figure 6: Empirical survival function by whether having earned income



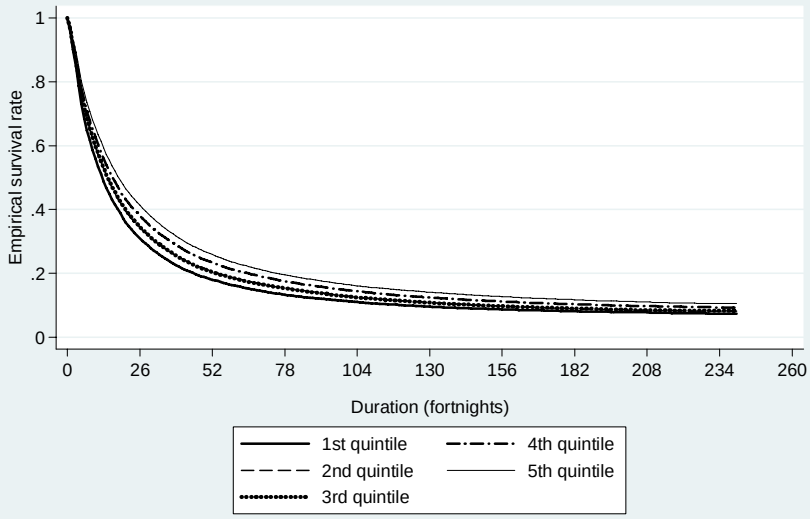

The experience of work incapacity deriving from illness or disability is inferable from the administrative data using the information on payment type and the information for unemployment benefit recipients on 'activity type'. Figure 7 classifies recipients by whether work incapacity is observed at any stage of the income support spell, where we define work incapacity to arise if the recipient transfers to Sickness Allowance or DSP, or if the recipient is exempted from active job search requirements while receiving unemployment benefits due to illness or other incapacity. Not surprisingly, recipients who at some stage experienced work incapacity have much higher survival rates than those who did not.

Figure 7: Empirical survival function by whether having been incapacitated




Finally, we use the local unemployment rate to categorise the sample. To this end, the mean monthly unemployment rate for each statistical region over the period 1995-1998 is first derived. Regions are then ranked from lowest to highest unemployment rate and classified according to quintile – that is, each region is assigned to one of five equal-sized groups based on rank. Using the postcode information in the data, each spell is then assigned to the quintile of the statistical region in which the recipient was residing at commencement of the spell. Figure 8 presents the empirical survival function by unemployment rate quintile, with the first quintile corresponding to the lowest unemployment rates and the fifth quintile corresponding to the highest unemployment rates. As might be expected, survival functions are ordered by quintile, with recipients who started their unemployment benefits in higher unemployment regions tending to have higher survival rates.

Figure 8: Empirical survival function by unemployment rate quintile




To summarise, from Figures 2-8 we find female recipients, recipients who are older when entering unemployment, indigenous Australians, immigrants from non-English speaking countries, recipients with a partner on income support, persons with no attachment to the labour market while on payments, persons who experience work incapacity while on payments, and recipients who live in a high-unemployment region are more likely to stay on income support longer following commencement of an unemployment benefit spell. Note, however, that these findings should not be treated as conclusive because the pair-wise comparison approach used in the figures does not control for other potentially confounding factors. More rigorous econometric analysis is required to isolate the independent effects of individual characteristics.

### *3.2 Econometric approach: Probit model*

*The sample and the statistical model*

Here we take a more formal approach to identifying groups of unemployment benefit recipients at an elevated risk of long-term spells on income support. This is achieved by estimating, for males and females separately, Probit models of the probability an individual who commences a spell on unemployment benefits has a long spell:

$$\Pr(y = 1) = F(\beta' x) \tag{1}$$

where $y = 1$ if the spell is long-term and 0 otherwise, $x$ is a vector of explanatory variables, $\beta$ is a coefficient vector to be estimated, and $F(.)$ is the standard normal distribution function.

Explanatory variables are included for age, partner status, dependent children, indigenous and place of birth status, type of accommodation, location of residence, earned and unearned income while on income support, work incapacity while on income support, the local unemployment rate and year and quarter of spell commencement. We are therefore able to identify the implications of each of these characteristics for the likelihood of a long-term spell.

Models are estimated for two alternative definitions of 'long-term spell' – more than three years, and more than five years – allowing us to evaluate the sensitivity of our findings to the definition of 'long-term'. Thus, we estimate a model of the probability a spell will last more than three years, and a further model of the probability a spell will last more than five years. Samples are chosen so as to maximise the number of observations. For the three-year model, we require a three year observation window following spell commencement for each observation, allowing us to include all commencements on unemployment benefits from January 1995 to March 2001. For the five-year model, we require a five year observation window, allowing us to include commencements from January 1995 to March 1999. The samples are also chosen to exclude transitions to the Age Pension. For the 1995-2001 sample, this is achieved by excluding males aged over 61 years and females aged over 57 years at the time of spell commencement. For the 1995-1999 sample, males aged over 59 years and females aged over 54 years are excluded. Sample sizes and means of the explanatory variables for each sample are reported in Table A1 in the Appendix.

*Estimation results*

Table 9 reports the model estimation results. Mean marginal effects estimates, evaluated over all observations in the estimation sample, are presented in the table for ease of interpretation.[5] Coefficient estimates are reported in Appendix A.

Most of the covariates included in the Probit models are evaluated at the commencement of the unemployment benefit spell and are self-explanatory.[6] The exceptions are the variables for non-welfare income and work incapacity. For the income variables, we distinguish income from employment (earned income) and income from other sources (unearned income) and include two variables for each type: the proportion of the extended unemployment benefit spell the recipient reported having the income ('time'); and the mean value of that income

[5] A marginal effect for a continuous explanatory variable gives the effect of a one unit increase in the variable, while a marginal effect for a dummy variable gives the effect of changing the variable from zero to one. A *mean* marginal effect is obtained by evaluating this marginal effect for every individual in the sample and then taking the average.

[6] Full details on the variables are contained in Appendix D.

type in those fortnights it was reported ('amount'). The 'time' variable ranges between zero and one, while the 'amount' variable is measured in dollars. The variable 'incapacitated' is a dummy variable equal to one if at any stage of the income support spell the recipient has this activity type or is placed on Sickness Allowance or the Disability Support Pension.

The econometric results are broadly consistent with the empirical survival functions for those characteristics considered by the survival functions, although there are some important differences – and of course the Probit models examine males and females separately and consider additional characteristics. Considering first the effects of age, we see that the older a person when entering unemployment benefit receipt, the more likely the person will stay for a long duration, an effect which is stronger for males than females. For example, at commencement of an unemployment spell, a male aged over 55 years has a probability of experiencing a spell in excess of three years that is, all else equal, on average 42 percentage points higher than a 16-19 year old male.

Compared with being single, having a partner who is on income support generally increases the likelihood of a long spell, more so for females than males, and more so for the probability of a spell greater than three years duration than for the probability of a spell greater than five years. Not uncovered by the empirical survival functions is that, for males, having a partner who is not on income support is associated with a significantly reduced risk of a long-term spell compared with being single or partnered with an income support recipient. Dependent children are associated with a reduced risk of a long-term spell for males. Furthermore, the older the youngest child at spell commencement, the less likely is a male to have a long-term spell. For females, a dependent child under the age of 13 years is associated with an elevated probability of a long spell, with the effect greatest if the youngest child is below school age. Similar to males, if the youngest child is over 13 years, the probability of a long spell is actually reduced compared with having no dependent children.

The indigenous status and place of birth variables indicate that, all else equal, indigenous persons have an elevated probability of a long spell compared with all other groups. The effect associated with indigenous status is larger for females than males. Immigrants from non-English speaking countries also have an elevated risk of long spells compared with non-indigenous natives, while immigrants from English-speaking countries have a reduced risk.

Table 9: Probit mean marginal effect estimates – Probability of a long income support spell

| | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | 3-year model | | 5-year model | | 3-year model | | 5-year model | |
| | MME | SE | MME | SE | MME | SE | MME | SE |
| *Age (15-19 omitted)* | | | | | | | | |
| 20-24 | -0.004 | 0.002 | -0.009*** | 0.002 | -0.051*** | 0.002 | -0.055*** | 0.002 |
| 25-34 | 0.023*** | 0.002 | 0.023*** | 0.003 | -0.043*** | 0.003 | -0.043*** | 0.003 |
| 35-44 | 0.083*** | 0.003 | 0.077*** | 0.003 | 0.012*** | 0.004 | 0.002 | 0.004 |
| 45-49 | 0.140*** | 0.005 | 0.149*** | 0.006 | 0.065*** | 0.005 | 0.066*** | 0.006 |
| 50-54 | 0.213*** | 0.006 | 0.228*** | 0.007 | 0.185*** | 0.007 | 0.162*** | 0.008 |
| 55+ | 0.419*** | 0.006 | 0.404*** | 0.009 | | | | |
| *Partner status (single omitted)* | | | | | | | | |
| Partner not on IS | -0.038*** | 0.002 | -0.031*** | 0.002 | 0.003 | 0.004 | -0.009** | 0.004 |
| Partner on IS | 0.008*** | 0.002 | 0.002 | 0.002 | 0.053*** | 0.004 | 0.036*** | 0.004 |
| *Dependent children (no dependent child omitted)* | | | | | | | | |
| Youngest child aged 0-5 | -0.010*** | 0.003 | -0.006** | 0.003 | 0.054*** | 0.009 | 0.044*** | 0.010 |
| Youngest child aged 6-12 | -0.019*** | 0.003 | -0.019*** | 0.003 | 0.024** | 0.010 | 0.014 | 0.010 |
| Youngest child aged 13 or over | -0.027*** | 0.004 | -0.017*** | 0.004 | -0.023** | 0.009 | -0.032*** | 0.009 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | | | |
| Indigenous | 0.050*** | 0.003 | 0.019*** | 0.003 | 0.130*** | 0.005 | 0.098*** | 0.006 |
| ESC | -0.025*** | 0.002 | -0.023*** | 0.002 | -0.021*** | 0.003 | -0.022*** | 0.004 |
| NESC | 0.021*** | 0.002 | 0.009*** | 0.002 | 0.036*** | 0.003 | 0.029*** | 0.003 |
| *Housing/living circumstances (private rent omitted)* | | | | | | | | |
| Homeowner outright | -0.023*** | 0.002 | -0.020*** | 0.002 | -0.016*** | 0.004 | -0.020*** | 0.004 |
| Other homeowner | -0.042*** | 0.003 | -0.027*** | 0.003 | -0.038*** | 0.005 | -0.025*** | 0.006 |
| Government rent | 0.087*** | 0.005 | 0.079*** | 0.005 | 0.091*** | 0.008 | 0.082*** | 0.009 |
| Other rent | 0.005*** | 0.002 | 0.000 | 0.002 | -0.011*** | 0.002 | -0.012*** | 0.002 |
| Missing | -0.003 | 0.002 | -0.003 | 0.002 | -0.026*** | 0.003 | -0.016*** | 0.003 |
| *Private income* | | | | | | | | |
| Earned income – Time | -0.102*** | 0.003 | -0.108*** | 0.003 | -0.135*** | 0.004 | -0.148*** | 0.004 |
| Earned income – Amount | 0.0009*** | 0.0001 | 0.0004*** | 0.0001 | 0.0008*** | 0.0001 | 0.0005*** | 0.0001 |
| Unearned income – Time | -0.018*** | 0.002 | -0.006*** | 0.002 | -0.032*** | 0.003 | -0.019*** | 0.003 |
| Unearned income – Amount | 0.0009*** | 0.0002 | 0.0002* | 0.0001 | 0.0009*** | 0.0003 | 0.0005* | 0.0003 |
| *Calendar year (1995 omitted)* | | | | | | | | |
| 1996 | 0.007*** | 0.002 | 0.003 | 0.002 | 0.004 | 0.003 | 0.002 | 0.003 |
| 1997 | -0.012*** | 0.002 | -0.013*** | 0.002 | -0.006* | 0.003 | -0.006* | 0.003 |
| 1998 | -0.028*** | 0.002 | -0.024*** | 0.002 | -0.029*** | 0.003 | -0.022*** | 0.003 |
| 1999 | -0.036*** | 0.002 | -0.028*** | 0.003 | -0.033*** | 0.003 | -0.015*** | 0.005 |
| 2000 | -0.029*** | 0.002 | | | -0.028*** | 0.003 | | |
| 2001 | -0.039*** | 0.003 | | | -0.020*** | 0.006 | | |
| *Calendar quarter (Quarter 1 omitted)* | | | | | | | | |
| Quarter 2 | 0.015*** | 0.002 | 0.010*** | 0.002 | 0.023*** | 0.003 | 0.022*** | 0.003 |
| Quarter 3 | 0.013*** | 0.002 | 0.008*** | 0.002 | 0.022*** | 0.003 | 0.018*** | 0.003 |
| Quarter 4 | 0.005** | 0.002 | 0.002 | 0.002 | 0.012*** | 0.003 | 0.019*** | 0.003 |
| Incapacitated | 0.137*** | 0.003 | 0.117*** | 0.004 | 0.181*** | 0.005 | 0.145*** | 0.006 |
| Reside in major city | -0.022*** | 0.001 | -0.019*** | 0.001 | -0.025*** | 0.002 | -0.019*** | 0.002 |
| Unemployment Rate | 0.005*** | 0.000 | 0.003*** | 0.000 | 0.006*** | 0.000 | 0.005*** | 0.000 |

Notes: *MME* – mean marginal effect; *SE* – standard error. ***indicates significance at 1% level. **indicates significance at 5% level. *indicates significance at 10% level.

Renting public housing is the accommodation arrangement associated with the highest risk of a long-term spell on income support, while renting in the private market is also associated

with a greater risk of a long-term spell than the remaining accommodation arrangements. Persons paying off a home have the lowest risk of long-term spells, all else equal. These effects are all consistent with anticipated labour supply responses to incentives created by both housing costs and rent assistance.

Consistent with the empirical survival functions, a greater proportion of the income support spell with earnings is associated with a decreased probability of a long spell, an effect that is stronger for females than males. A 10 percentage point increase in the proportion of the spell with earnings on average decreases the probability of a long spell by approximately one percentage point for males and 1.4 percentage points for females. However, counteracting this effect is that the higher are earnings when received, the greater the probability of a long-term spell. Each $100 increase in mean earnings in those fortnights in which earnings are received increases the probability of the spell reaching three years by nine percentage points for males and eight percentage points for females. Thus, a high proportion of the spell with very low earnings is associated with lower risk of a long spell, while a low proportion of the spell with earnings, but very high earnings in those fortnights, is associated with a higher risk. To some extent, the adverse 'level' effect of earnings may derive from higher earnings being more likely to be found for people who have transferred to a pension or PPS because of the more generous income tests for these payment types. That is, if high earnings are observed, it is more likely to be for a recipient of one of these payment types, which by their nature are longer-term payment types. Even if recipients of these payment types are less likely to have earnings in the first place, this scenario could still be the case.

The effects of unearned income are qualitatively the same as for earned income, but effects associated with the proportion of time unearned income is reported are much smaller than are these effects for earned income. The consequence of this is that unearned income is almost always a predictor of increased risk of long-term receipt.

As predicted by the empirical survival functions, observed work incapacity during the income support spell is a strong predictor of a long-term spell, for example on average increasing the probability of a spell longer than five years by 12 percentage points for males and 15 percentage points for females.

Residing outside one of the major cities is associated with an increased probability of a long spell, on average increasing the probability by approximately two percentage points. Residing in a high unemployment region also increases the probability of a long spell, each percentage point increase in the local unemployment rate on average increasing the probability of a spell

in excess of three years by 0.6 percentage points for males and 0.5 percentage points for females.

### *3.3 The population sub-groups to be examined*

The findings of this section of the report suggest the following groups of recipients warrant separate examination by virtue of their elevated risk of long-term continuous receipt of income support following entry on to unemployment benefits:

1. Mature-age persons, defined as persons aged 50 years and over at commencement of the spell. Age is the single-most important predictor of whether an individual experiences a very long-term spell, and persons over 50 years of age at commencement of an unemployment benefit spell are at a particularly high risk of a very long-term spell.
2. Persons with a work incapacity. Experience of work incapacity in the spell was found in the Probit analysis to be second only to age as a predictor of an individual having a long-term spell. To minimise endogeneity of selection into this group with respect to spell duration, we assign a person to this group only if that person is recorded as incapacitated in any of the first four fortnights of the unemployment spell.
3. Indigenous persons. Analysis by indigenous status and place of birth showed indigenous persons to have substantially increased probabilities of long-term spells compared with all other persons, all else equal.
4. Immigrants from non-English speaking countries. While the probability of a long-term spell is, all else equal, lower for this group than for indigenous persons, it is nonetheless significantly higher than for non-indigenous natives and immigrants from the main English-speaking countries.
5. Persons residing in a high unemployment region. As might be expected, the prospects of experiencing a long spell are a decreasing function of the strength of the local labour market. Although this effect is continuous in nature, for the purposes of creating an identifiable population sub-group, persons are assigned to this group if, at the start of the unemployment benefit spell, that person resided in an ABS labour force statistical region in the top quintile of regions ranked by mean unemployment rate over the period June 1998 to June 2004.
6. Persons residing outside the major cities of Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra, Hobart and Newcastle. Residing outside a major city was found to elevate the

probability of a long spell for both males and females, irrespective of whether 'long' is defined to be three years or five years. This is despite controlling for the local unemployment rate, suggesting this effect does not just derive from local labour demand conditions. For the purposes of defining membership of this group, we classify persons according to location of residence at the start of the unemployment benefit spell.

7. Persons with a partner on income support at the time of unemployment benefit spell commencement. While for males having a partner who is also on income support only slightly elevates the risk of a long-term spell compared with being single, it substantially elevates this risk compared with having a partner who is not on income support. For females, a partner on income support increases the likelihood of a long-term spell compared with both being single and having a partner not on income support.

A further group which could have been examined based on the Probit estimates is persons occupying public housing. However, we suspect that this effect largely reflects unobserved characteristics correlated with housing situation rather than the characteristic of occupying public housing. We therefore do not undertake separate analysis of this group. Most of the seven groups above were identified in the DEWR project brief, which also listed recipients with earned income as a group of interest for policy makers. Consequently, to the above list is added:

8. Persons who combine paid employment with income support receipt. To minimise potential endogeneity of selection into this group with respect to spell duration, we define this group to comprise persons who received earned income for more than ten per cent of the fortnights they were on income support. Our econometric analysis found mixed results for the effects of earnings on likelihood of long-term receipt. Thus, while separate examination of this group cannot be motivated in the same way as for the other groups, in some respects the mixed results provide a stronger case for further probing into the duration outcomes of earners and the factors that affect duration for this group. For example, it is of interest to know which earners have comparatively long durations and which have comparatively short durations.

Also relevant to decisions on population sub-groups to be examined is that the *Welfare-to-Work* reforms identify four key target groups: persons with disabilities, the very long-term unemployed, parents with dependent children and mature-age persons (over 50 years of age). Three of these target groups do not appear in the above list. The nature of the data precludes

identification of persons with disabilities[7], while the duration analysis being undertaken cannot readily be applied to the very-long-term unemployed. Analysis of parents with dependent children can, however, be undertaken, giving us a ninth group:

9. Persons with dependent children at commencement of the unemployment benefit spell.

Finally, because of the sample selection rules, the Probit models did not examine the implications of history of income support receipt, and it seems likely that past receipt would place an individual at an elevated risk of a long-term spell.[8] We therefore add the following population sub-group:

10. Persons with a recent history of substantial reliance on income support. This is implemented by assigning persons to the group if more than 50 per cent of the three and a half years preceding commencement of the unemployment benefit spell was spent on income support.

## 4 Determinants of duration

Our examination of duration and its determinants begins with the study of the entire population of individuals. This is the general or 'unified' model of income support spell duration for the entire population of persons who commence a spell on unemployment benefits. It allows us to understand the overall duration profile of extended unemployment benefit spells and the associations between recipient and other characteristics and spell duration. The baseline hazard and parameter estimates for this model also serve as a reference point for the models estimated on each of the groups identified in Section 3.

Recipients who entered unemployment benefits from June 1998 onwards are included in the analysis, providing us with at least three-and-a-half years income support payment history for every spell included in the estimation sample.[9] Males aged over 58 years and females over 54 years are excluded to avoid transitions to the Age Pension. Also excluded are persons who

[7] There is a loose correspondence between those who experience work incapacity early in the unemployment benefit spell (Group 2) and disability. However, many other unemployment benefit recipients will have disabilities, and a significant proportion of those with experience of work incapacity will not have a disability.

[8] Examination of the implications of 3.5-year history for five-year destinations would only be possible for a very limited sub-sample: those who commenced after June 1998 and before January 1999.

[9] An initial motivation for the restriction to spells commencing from June 1998 onwards was to allow inclusion of JDS data items, which are only available from that period forward. However, it turns out that our core analysis does not make use of the JDS because of missing information for a high proportion of individuals. We decided to retain this sample selection rule because of the strong explanatory power of income support history and because we are still able to track spells for up to six years, which is sufficient for understanding the determinants of long spells.

died while on income support. Descriptive statistics for the estimation samples are reported in Appendix B.

### *4.1 The econometric model*

Following Black et al (2005), we employ duration analysis methods, which involves estimating models of the hazard rate – that is, the probability of exiting income support payments at each spell duration, conditional on having reached that spell duration. This approach maximises use of the available information on spell duration, while also handling well right-censored spells. We employ the mixed proportional hazards model with a piecewise linear baseline hazard, which has the benefits of flexibility and the capacity to identify duration effects without imposing assumptions on their functional form. The estimating equation is the discrete-time counterpart to the underlying continuous-time proportional hazards model, and is given by:

$$h_j(X_{ij}) = 1 - \exp\{-\exp[X_{ij}\beta + D_j\gamma]\} \tag{2}$$

where $h_j(.)$ is the hazard rate (conditional probability of exit) in period *j*, $X_{ij}$ is a vector of observed characteristics, $\beta$ is a vector of parameters to be estimated and *D* is a set of dummy variables that represent duration since spell commencement. The vector $X_{ij}$ contains variables for socio-demographic and other individual characteristics.[10]

### *4.2 Explanatory variables*

A number of the explanatory variables included in the duration models are the same as those included in the Probit models, although time-varying variables differ by virtue of their ability to change for an individual over the course of a spell. In common with the Probit models, and not time-varying, are the age, indigenous status and place of birth variables. In common with the Probit models, but time-varying, are the variables for partner status, dependent children, accommodation type, earned and unearned income, work incapacity, year, quarter of year, location of residence and the local unemployment rate. With the exception of the income variables, these are straightforwardly analogous to the variables used in the Probit models, but

[10] Estimation of Equation (2) is via maximum likelihood methods. Models estimated do not allow for unobserved heterogeneity, which represents characteristics of individuals that affect their likelihood of exiting income support receipt that are unobserved and which differ across individuals. We attempted to estimate models allowing for Gamma distributed unobserved heterogeneity, but could not achieve model convergence for a number of the specifications. However, for those specifications that did converge, estimates were very similar to the 'no unobserved heterogeneity' model estimates, suggesting that inferences are robust to controlling for unobserved heterogeneity.

defined with respect to their values at the current point in the spell rather than at the commencement of the spell. Note, however, that the variable for work incapacity is a dummy variable equal to one if the recipient is classified as such in the current fortnight or any of the preceding four fortnights.

The nature of duration models allows us to investigate the implications of non-welfare (private) income in a more comprehensive manner than was possible with the Probit models. In principle, non-welfare income may affect the likelihood of exit from income support because, by having implications for the net income position of the individual (not only while on income support, but also in the event the individual exits income support), it alters the *incentives* for exiting or remaining on income support. It is also useful to distinguish earned income from other private income because, in addition to the above 'income effect', earned income communicates information about the recipient's degree of labour market attachment. All else equal, we might expect a recipient with greater labour market attachment to have better prospects of moving off income support. Hence, we consider the potential for earned income to have different effects from other private income.

The Probit analysis similarly drew a distinction between earned and unearned income, but the dynamic nature of duration models furthermore permits distinctions to be drawn based on the *timing* of the income in the spell. For example, current private income can be distinguished from private income received earlier in the spell. Clearly, current income is likely to have greater relevance to the current exit probability than is past income, and this distinct effect can be identified in a duration analysis framework. Nonetheless, it is also possible that past income may have its own (different) implications for the current exit probability. Specifically, while there is no strong argument for why past private income should affect the current exit probability per se, it is conceivable that past labour market attachment might affect current chances of exiting income support, for example via its beneficial effects on human capital and work habits. By interpreting past earned income as a proxy for past labour market attachment, this distinct effect can also be identified using duration analysis.

Based on the above potential effects of earned and unearned income, we therefore include the following income variables:

- Average earnings in the three fortnights preceding the current fortnight. This is a measure of the current level of engagement with the labour market. The expectation is that increased labour market attachment should be associated with a greater exit

probability. The current fortnight is excluded to reduce sensitivity of the results to administrative processes. For example, earnings may sometimes not be reported in the final fortnight before an individual exits income support receipt because the payment in the final fortnight is in fact payment of a partial benefit entitlement following exit, for which the individual is not required to report income.

- An indicator variable equal to one if the individual reported any earnings in the three fortnights preceding the current fortnight. This variable allows for 'non-linearities' in the effects of current earnings on likelihood of exit. For example, it may be that having *any* labour market engagement increases the likelihood of exit, independent of the level of engagement. That is, the first dollar of earnings may have a greater impact on the exit probability than subsequent dollars.

- Average private (earned plus unearned) income in the three fortnights preceding the current fortnight. This is a measure of the aggregate impact of current non-welfare income on likelihood of exit, measured in a manner consistent with the earned income measure. This could be associated with positive or negative effects on the probability of exit. Negative effects could stem from it making an individual more 'comfortable' while on income support, while positive effects could stem from the reductions in benefit entitlement non-welfare income might produce, leading to a reduction in income forgone by exiting income support. Earned income is included in this measure because the income effect this variable is intended to capture is a function of total income, not just unearned income. Note, therefore, that the 'average earned income' variable above should capture a pure 'labour market attachment' effect. That is, income effects should not drive estimates obtained for that variable.

- Proportion of the spell to date the recipient has reported earnings. This provides a measure of the proportion of the spell the individual has had some attachment to the labour market. Measurement as a proportion of the spell minimises endogeneity of the variable to spell length. For example, if we instead included a variable 'number of fortnights earnings were reported', this would tend to be increasing in spell duration simply because there are more fortnights in which earnings could potentially have been reported. One hypothesis is that a greater proportion of the spell with some attachment to the labour market should increase prospects of moving off income support. However, it is also possible that a higher proportion with earnings reflects a 'comfortable' combination of income support receipt with paid employment and is

therefore associated with a reduced likelihood of exit. The direction of effect of this variable is therefore not clear ex ante.

- Average earned income in those fortnights in the spell to date that earnings were reported. This variable augments the above variable by allowing effects to depend on the 'intensity' of past labour market attachment, as measured by the level of earned income in those fortnights earnings were reported. It may be that higher values of this variable imply a greater capacity for employment at a level facilitating exit from income support. However, given that we are holding constant the proportion of the spell the individual has reported earnings, higher values of this variable may indicate an inability to secure stable employment.

In addition to the variables analogous to those included in the Probit models, several other characteristics are considered by the duration models. First, variables are included for the payment type and activity type of the recipient. We distinguish five payment type/activity type situations: (1) on unemployment benefits and job search is required; (2) on unemployment benefits and job search is not required because of activities such as training; (3) on unemployment benefits and job search is not required because of caring responsibilities, illness or disability; (4) on an allowance other than unemployment benefits; and (5) on a pension or Parenting Payment Single.

Pensions and PPS have a different income test to allowances, implying non-welfare income is likely to have difference implications for exit behaviour. We therefore interact current pension or PPS receipt with the variable 'current private income'. In addition, the labour market attachment effects of earned income might also be expected to differ by payment type due to differences in labour supply preferences. Our expectation is that persons on payments other than unemployment benefits would, for reasons such as disability and caring responsibilities, generally prefer fewer hours of employment than unemployment benefit recipients required to search for employment. We would therefore expect to see fewer beneficial effects of labour market attachment (as measured by earnings) for these recipients. To allow for this possibility, we interact all of the earned income variables with a dummy variable equal to one if the individual is currently *not* on unemployment benefits with job search requirements. Thus, unemployment benefit recipients with no job search requirements are treated as part of the group with reduced labour supply preferences, although only while the individual has no job search requirements – for example, we allow for reduced earnings effects only during the period a person is actually incapacitated.

We also interact the local unemployment rate with the indicator variable equal to one if the individual is on unemployment benefits with an activity type of job search, for the same (labour supply related) reasons as motivated the interactions with the earned income variables.

A further set of variables not included in the Probit models but included in the duration models capture the effects of prior income support receipt on the duration of the current spell. These comprise variables relating to the three-and-a-half year period immediately preceding spell commencement as well as variables relating to the year immediately preceding spell commencement. The latter set of variables allow for recent income support receipt to have a differential impact to receipt more than one year ago.[11] As foreshadowed in the introduction, rather than capture duration effects of previous spells via variables for the duration of previous spells, we employ variables for the proportion of time on income support (TTO) in each of these two intervals of time. Specifically, we include a set of five dummy variables for TTO in the 3½ years preceding commencement of the current spell (Pre-$TTO_{3.5}$) and four dummy variables for TTO in the year preceding commencement of the current spell (Pre-$TTO_1$). The dummies for 3.5-year history are: Pre-$TTO_{3.5} = 0$; $0 <$ Pre-$TTO_{3.5} \leq 0.25$; $0.25 <$ Pre-$TTO_{3.5} \leq 0.5$; $0.5 <$ Pre-$TTO_{3.5} \leq 0.75$; and Pre-$TTO_{3.5} > 0.75$. The dummy variables for 1-year history are: Pre-$TTO_1 = 0$; $0 <$ Pre-$TTO_1 \leq 0.25$; $0.25 <$ Pre-$TTO_1 \leq 0.5$; and Pre-$TTO_1 > 0.5$. We do not distinguish between a TTO in the 0.5 to 0.75 range and a TTO in excess of 0.75 for the single-year history because our requirement of a seven fortnight break in payments prior to spell commencement eliminates the possibility of a one-year TTO in excess of 0.75.

For each of the pre-spell intervals, we also include history variables that are indicators of substantial labour market activity while on income support and variables that provide indicators of prior difficulty in the labour market. A history of substantial labour market activity while on income support is deemed to be present if the person reported earnings in more than half the fortnights he or she was on income support. A history of difficulty in the labour market is captured by a dummy variable equal to one if the person was on unemployment benefits with a job search requirement at any stage of the interval. Finally, an indicator variable for 'churning' in the three and a half years preceding spell commencement is included, defined by experience of more than one income support spell in the period.

[11] These variables are of course all time-invariant. Note that, to some extent, these variables will capture effects of time-invariant unobserved characteristics. That is, since time-invariant unobserved characteristics will in part determine past income support receipt, effects attributed to past receipt will themselves in part derive from the effects of time-invariant characteristics.

The above variables are included in all of the duration models we estimate. However, included explanatory variables are modified as required for each of the models estimated on population sub-groups. For example, the indigenous status and place of birth variables are omitted for the models estimated on indigenous persons and the models estimated on immigrants from non-English speaking countries.

### *4.3 Estimation results*

*All unemployment benefit spells*

Table 10 presents the duration model results for the whole male and female samples. Due to the nonlinear nature of the model, hazard ratio estimates are reported for the explanatory variables rather than the coefficient estimates.[12] Hazard ratios show the proportional impact of explanatory variables on the hazard rate. For a categorical (dummy) variable, the hazard ratio compares the hazard rate when the variable equals one to the hazard rate when the variable equals zero. For example, if the hazard ratio for the variable 'age 20-24' is equal to two, then holding all else constant the hazard rate for a person aged 20-24 is twice that of a person aged 16-19 (the omitted category). The interpretation of the hazard ratio for a continuous variable is analogous, being the proportionate effect on the hazard rate per unit increase in the variable. For example, if the hazard ratio for the variable 'average earned income while on income support' is equal to two, then a one dollar increase in average earned income while on income support will, all else equal, double the hazard rate. By construction, hazard ratios cannot be negative, and will be equal to one if a variable does not affect the hazard rate.

The baseline hazard reflects the underlying duration profile of spells on income support for our population of recipients. It is described by the hazard rates for the duration intervals reported in the upper panel of Table 10. Note, however, that this would only be the *level* of the hazard for an individual if all explanatory variables for that individual were equal to zero, which in fact applies to no-one, since the local unemployment rate is always strictly positive. Figure 9 provides a clearer picture of the duration profile, presenting the predicted hazard at each duration evaluated at mean values of the explanatory variables (which are held fixed across durations). The general pattern is of an almost monotonic decrease in the hazard rate as spell duration increases. That is, conditional on not having exited income support earlier, the probability of exit at each spell duration is generally decreasing in duration. The baseline hazard is lower for males than females, which translates to longer average spell durations.

[12] Coefficient estimates are reported in Appendix B.

The results for the explanatory variables are mostly consistent with those of the Probit models for the characteristics considered by both sets of models. If a characteristic is associated with a higher probability of a long-term spell it is generally also associated with a lower hazard rate. For example, for the age variables we see that the hazard rate is decreasing in age beyond the 20-24 years age group. As found for the Probit models, the differences by age are quite substantial. For example, holding all else constant, the hazard rate for males aged 50-54 years is 73 per cent of the hazard rate for males aged 16-19 years, while the corresponding figure for females is 75 per cent. Results for the dependent children and partner status variables likewise mirror the Probit estimates. For both males and females, dependent children raise the hazard rate, the effect stronger the older is the youngest child. Compared with being single, having a partner is associated with a much higher hazard rate if the partner is not on income support, but a much lower hazard rate if the partner is on income support. Hazard ratios across the accommodation type variables indicate that, all else equal, persons paying off their home have the highest hazard rate, while renters of public housing have the lowest hazard rate.

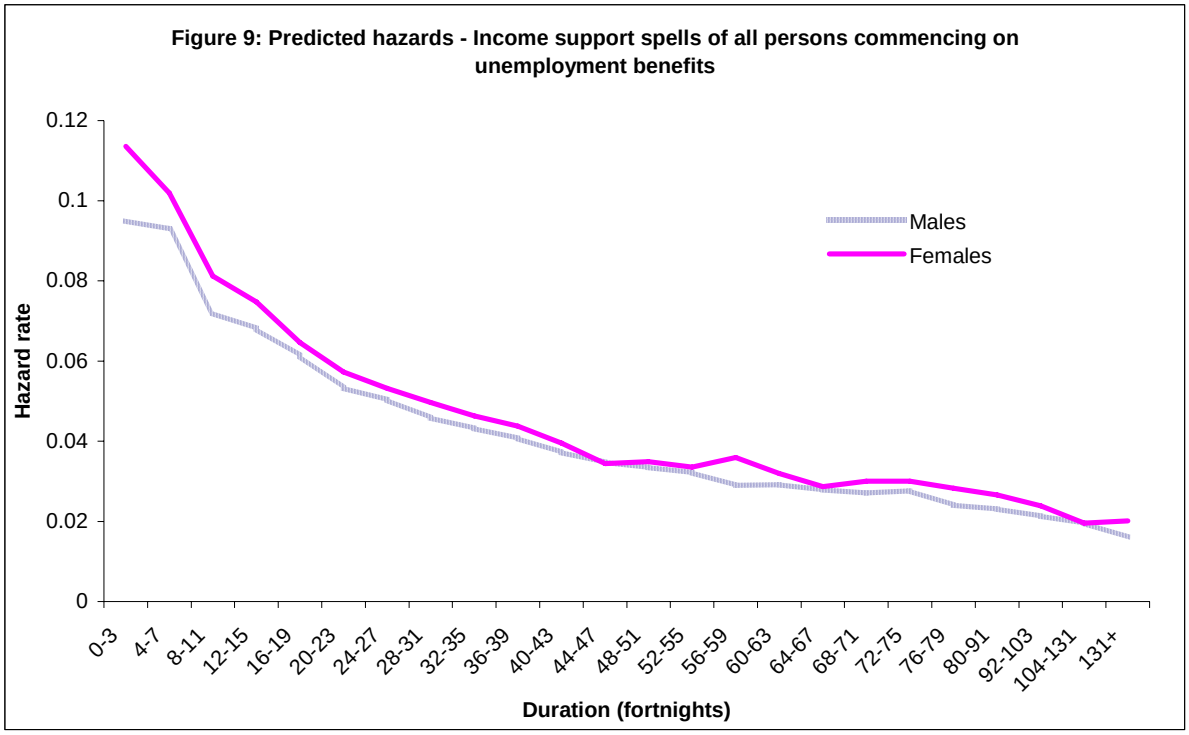
The hazard ratios for the income variables are also not all readily anticipated from the Probit model results, but results are qualitatively remarkably similar for males and females. Reporting earnings in the preceding three fortnights is a strong predictor of exiting income support in the fortnight. However, this effect is decreasing in the *level* of earned income. That is, given earned income is reported, the exit probability is decreasing in the amount of earned income reported. Note that increases in earned income, via their effects on private income, are in fact neutral in aggregate with respect to their effects on the exit probability. That is, as expected, increases in private income increase the exit probability. However, given the interpretation we give to the 'average private income' and 'average earned income' variables, the implication is that while the 'income effect' of increased earned income is to increase the probability of exit, the 'labour market attachment effect' of increased earned income operates in the reverse direction.

Table 10: Duration on income support of all commencements on unemployment benefits – Hazard model estimates

| | **Males** | | **Females** | |
|---|---|---|---|---|
| *Baseline hazard estimates (duration intervals in fortnights)* | | | | |
| | Hazard rate | Std. Error | Hazard rate | Std. Error |
| 0-3 | 0.055*** | 0.003 | 0.036*** | 0.002 |
| 4-7 | 0.054*** | 0.002 | 0.032*** | 0.002 |
| 8-11 | 0.042*** | 0.002 | 0.026*** | 0.001 |
| 12-15 | 0.039*** | 0.002 | 0.023*** | 0.001 |
| 16-19 | 0.035*** | 0.002 | 0.020*** | 0.001 |
| 20-23 | 0.031*** | 0.001 | 0.018*** | 0.001 |
| 24-27 | 0.029*** | 0.001 | 0.017*** | 0.001 |
| 28-31 | 0.027*** | 0.001 | 0.016*** | 0.001 |
| 32-35 | 0.025*** | 0.001 | 0.015*** | 0.001 |
| 36-39 | 0.024*** | 0.001 | 0.014*** | 0.001 |
| 40-43 | 0.022*** | 0.001 | 0.012*** | 0.001 |
| 44-47 | 0.020*** | 0.001 | 0.011*** | 0.001 |
| 48-51 | 0.019*** | 0.001 | 0.011*** | 0.001 |
| 52-55 | 0.019*** | 0.001 | 0.011*** | 0.001 |
| 56-59 | 0.017*** | 0.001 | 0.011*** | 0.001 |
| 60-63 | 0.017*** | 0.001 | 0.010*** | 0.001 |
| 64-67 | 0.016*** | 0.001 | 0.009*** | 0.001 |
| 68-71 | 0.016*** | 0.001 | 0.009*** | 0.001 |
| 72-75 | 0.016*** | 0.001 | 0.009*** | 0.001 |
| 76-79 | 0.014*** | 0.001 | 0.009*** | 0.001 |
| 80-91 | 0.013*** | 0.001 | 0.008*** | 0.001 |
| 92-103 | 0.012*** | 0.001 | 0.008*** | 0.001 |
| 104-131 | 0.011*** | 0.001 | 0.006*** | 0.000 |
| 131+ | 0.009*** | 0.001 | 0.006*** | 0.001 |
| *Covariates* | | | | |
| | Hazard ratio | Std. Error | Hazard ratio | Std. Error |
| *Age (16-19 omitted)* | | | | |
| Age 20-24 | 1.017** | 0.008 | 1.161*** | 0.010 |
| Age 25-34 | 1.010 | 0.008 | 1.151*** | 0.012 |
| Age 35-44 | 0.897*** | 0.008 | 0.977 | 0.014 |
| Age 45-49 | 0.828*** | 0.011 | 0.899*** | 0.016 |
| Age 50-54 | 0.730*** | 0.010 | 0.750*** | 0.016 |
| Age 55+ | 0.569*** | 0.011 | | |
| *Dependent children (no dependent child omitted)* | | | | |
| Youngest child aged 0-5 | 1.067*** | 0.012 | 1.009 | 0.027 |
| Youngest child aged 6-12 | 1.132*** | 0.016 | 1.133** | 0.058 |
| Youngest child aged 13 or older | 1.191*** | 0.025 | 1.137*** | 0.045 |
| *Accommodation type (private rent omitted)* | | | | |
| Homeowner outright | 1.076*** | 0.011 | 1.084*** | 0.019 |
| Other homeowner | 1.202*** | 0.012 | 1.222*** | 0.021 |
| Government rent | 0.868*** | 0.014 | 0.836*** | 0.022 |
| Other rent | 1.053*** | 0.006 | 1.105*** | 0.008 |
| Missing | 1.196*** | 0.010 | 1.310*** | 0.013 |
| *Partner status (single omitted)* | | | | |
| Partner not on IS | 1.474*** | 0.017 | 1.356*** | 0.021 |
| Partner on IS | 0.874*** | 0.009 | 0.728*** | 0.010 |

Table 10 continued: Duration on income support of all commencements on unemployment benefits – Hazard model estimates

| | Males | | Females | |
|---|---|---|---|---|
| | Hazard ratio | Std. Error | Hazard ratio | Std. Error |
| *Private income* | | | | |
| Avg private income – current | 1.044*** | 0.010 | 1.090*** | 0.015 |
| Have earnings | 1.587*** | 0.014 | 1.538*** | 0.018 |
| Avg earnings – current | 0.947*** | 0.010 | 0.900*** | 0.013 |
| Earnings – Time (spell) | 0.698*** | 0.010 | 0.685*** | 0.011 |
| Earnings – Amount (spell) | 1.079*** | 0.002 | 1.105*** | 0.004 |
| *Current payment/activity type (Other allowance omitted)* | | | | |
| UB – High search | 2.003*** | 0.087 | 3.139*** | 0.149 |
| UB – Low search | 1.448*** | 0.063 | 1.981*** | 0.095 |
| UB – No search | 0.904*** | 0.030 | 1.624*** | 0.056 |
| Pension/PPS | 0.281*** | 0.013 | 0.284*** | 0.012 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | |
| No search * Avg private income | 1.023 | 0.017 | 1.047** | 0.020 |
| No search * Avg earn current | 1.060*** | 0.012 | 1.038*** | 0.014 |
| No search * Have earnings | 1.219*** | 0.040 | 1.154*** | 0.042 |
| No search * Earn amount (spell) | 1.033*** | 0.011 | 1.028** | 0.014 |
| No search * Earn time (spell) | 0.625*** | 0.099 | 0.800 | 0.113 |
| Incapacity within last 4 fortnights | 0.759*** | 0.010 | 0.584*** | 0.011 |
| Local unemployment rate | 0.978*** | 0.004 | 0.983*** | 0.005 |
| Job search * local unemployment rate | 0.992* | 0.004 | 0.983*** | 0.005 |
| Major city | 1.086*** | 0.005 | 1.122*** | 0.008 |
| *Calendar year dummy (1998 omitted)* | | | | |
| 1999 | 0.992 | 0.013 | 1.007 | 0.018 |
| 2000 | 1.073*** | 0.014 | 1.149*** | 0.021 |
| 2001 | 1.042*** | 0.013 | 1.121*** | 0.021 |
| 2002 | 1.112*** | 0.014 | 1.139*** | 0.021 |
| 2003 | 1.085*** | 0.014 | 1.050*** | 0.020 |
| 2004 | 0.490*** | 0.009 | 0.485*** | 0.011 |
| *Calendar quarter dummy ($1^{st}$ quarter omitted)* | | | | |
| 2nd quarter | 0.765*** | 0.005 | 0.689*** | 0.006 |
| $3^{rd}$ quarter | 0.913*** | 0.006 | 0.838*** | 0.007 |
| $4^{th}$ quarter | 0.760*** | 0.005 | 0.698*** | 0.006 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | |
| $0 <$ Pre-$TTO_{3.5} \leq 0.25$ | 0.842*** | 0.010 | 0.843*** | 0.014 |
| $0.25 <$ Pre-$TTO_{3.5} \leq 0.5$ | 0.673*** | 0.009 | 0.681*** | 0.013 |
| $0.5 <$ Pre-$TTO_{3.5} \leq 0.75$ | 0.569*** | 0.008 | 0.589*** | 0.012 |
| Pre-$TTO_{3.5} > 0.75$ | 0.590*** | 0.010 | 0.660*** | 0.016 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | |
| $0 <$ Pre-$TTO_1 \leq 0.25$ | 1.025*** | 0.009 | 1.021* | 0.013 |
| $0.25 <$ Pre-$TTO_1 \leq 0.5$ | 0.912*** | 0.011 | 0.936*** | 0.017 |
| Pre-$TTO_1 > 0.5$ | 0.819*** | 0.012 | 0.823*** | 0.018 |
| Job search – 3.5 years pre-spell | 0.875*** | 0.008 | 0.843*** | 0.010 |
| Job search – 1 year pre-spell | 0.978** | 0.010 | 0.929*** | 0.015 |
| Earnings time > 0.5 – 3.5-yrs pre-spell | 1.033*** | 0.011 | 1.057*** | 0.016 |
| Earnings time > 0.5 – 1-yr pre-spell | 1.056*** | 0.008 | 1.073*** | 0.012 |
| Multiple spells in 3.5 yrs pre-spell | 1.240*** | 0.011 | 1.179*** | 0.017 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | |
| Indigenous | 0.953*** | 0.010 | 0.793*** | 0.013 |
| ESC | 1.050*** | 0.009 | 1.017 | 0.014 |
| NESC | 0.888*** | 0.006 | 0.910*** | 0.009 |




With regard to cumulative history of earnings in the spell to date, we find that the probability of exit is decreasing in the proportion of the spell in which earnings have been reported, but increasing in the value of earnings when reported. These two effects are consistent with low but frequent earnings reflecting an ongoing 'comfortable' situation of combining of income support with paid employment, while higher earnings reflect greater ability to engage in the labour market in a substantive way. That is, the estimates imply that high earnings over a short period in the spell are associated with the highest exit probabilities. This stands in marked contrast to the Probit model results, which suggested that frequent but low earnings were most conducive to exit. This contrast stems from the inability of the Probit model to distinguish earnings based on their timing, and highlights the benefits of the duration model approach, which is able to more precisely pin down the nature of earnings effects.

Perhaps somewhat surprising is that positive effects on exit probabilities associated with private income are slightly greater for pension and PPS recipients than allowance recipients. Also surprising is that earnings generally do more to promote exit for person not on unemployment benefits (and required to search for work). The main exception, which *is* consistent with expectations, is that a greater proportion of the spell with earnings is associated with an even lower probability of exit for recipients not currently required to search for work than for recipients with job search requirements.

Being on unemployment benefits with high job search requirements increases the conditional probability of exit compared with other payment type/activity type situations, more so for females than males. Compared with a person on an allowance with no search requirements, the conditional probability of exit is twice as high for a male with high job search requirements, and three-times higher for a female with high search requirements. As expected, pensions and PPS are associated with the lowest exit probabilities. Also to be expected is that recent experience of work incapacity is associated with a much reduced hazard rate.

The local unemployment rate affects the hazard rate in the expected direction, and the effect is stronger for persons required to search for employment. This is entirely consistent with expectations, since local labour market demand conditions are likely to be less important to persons who are not required to search for employment, because many of these individuals will not be seeking employment at the time they are recorded as not required to search. Location also matters to spell duration in terms of whether a person lives in one of the major cities, with those living in major cities about 9-12 per cent more likely to exit in any given fortnight (given exit has not already occurred) than observably identical persons living elsewhere.

A recent (3.5-year) history of income support receipt is associated with longer current spell durations, and 'more' history is generally associated with longer spell durations (i.e., lower hazard rates). We can also see evidence that adverse effects are greater if receipt of income support was within the year preceding current-spell commencement, although only if more than 25 per cent of that year was spent on income support. Variables for past difficulty in the labour market – being on unemployment benefits and required to search for employment – show these are predictors of a lower hazard rate, with this effect substantially stronger if the last experience of difficulty occurred within the year prior to commencement of the current spell. Conversely, a recent history of securing employment while remaining on income support, which we interpret as a measure of past labour market success, is associated with an increased hazard rate for the current spell. Finally a history of churning in the 3.5 years prior to the current spell increases the hazard rate, which is consistent with past churning predicting future churning (Tseng et al, 2004).

*Results for population subgroups*

While the preceding analysis provides information on the overall duration profile and the associations between characteristics and spell duration, it does not provide information on differences in the duration profile by recipient characteristics. Furthermore, it may well be

that for specific groups of recipients, the associations between characteristics (other than those that define the recipient group) and spell duration differ. We therefore investigate the determinants of continuous duration on income support for the ten groups identified in Section 3.

Duration models are estimated for each of the ten sub-groups, with the estimation results for the general population reported in the previous subsection used as the common reference point. To compare duration profiles, rather than report baseline hazard parameter estimates, we present in Figure 10 predicted hazard functions for each population sub-group, plotted against the hazard function from the general model. Predictions are evaluated at mean values of the covariates in the respective estimation samples at spell commencement. Consequently, differences in the predicted profiles will reflect both differences in current-spell duration effects and differences in the characteristics' composition of the samples. Following on from the predicted hazard functions, we then compare hazard ratios for the variables for recipient characteristics in Table 11.[13]

The predicted hazard rates show that for both males and females, indigenous persons, mature-age persons, persons observed to experience work incapacity at the start of the spell, persons with a partner on income support and persons with a recent history of substantial income support receipt have substantially lower hazard rates than the general population of income support recipients who commenced on unemployment benefits. While this is unsurprising in light of the findings of the general population duration models, it is important to note that these average differences reflect not only the effects of the characteristics that define the groups, but also the effects of other differences in the characteristics of these groups. For example, it may be that mature-age recipients are more likely to have a history of substantial income support receipt than are recipients more generally. Indeed, it is notable that hazard rates for immigrants from non-English speaking countries and persons living outside the major cities, are only slightly lower than the hazard rates for all recipients.

The major new information content of the predicted hazard depicted in Figure 10 is in the differences they reveal in the 'shapes' of the duration profiles across the population sub-groups. For a number of the groups it is clear that the hazard function is significantly flatter than for the general population of recipients – that is, the hazard rate does not decline as quickly as duration increases. This results in some degree of convergence in hazard rates as

[13] Baseline hazard parameter estimates and coefficient estimates for the explanatory variables are reported in Appendix B.

duration increases. In part, this may reflect lower potential for the hazard rate to fall, especially for the population groups with very low hazard rates to begin with – indigenous persons, persons with work incapacity, mature-age persons and persons on income support more than half the 3.5 years preceding spell commencement. However, this is unlikely to be the full explanation, since that pattern is also evident for groups with initially quite high hazard rates, such as females living outside the major cities and males living in high unemployment regions.

It is therefore possible that current spell duration effects become more important to determining exit than other pre-existing characteristics of recipients as duration increases. An alternative candidate explanation is that, as duration increases, the composition of recipients in terms of unobserved characteristics that affect duration converges. That is, as we move to higher durations, the recipients remaining on income support may become more alike in unobserved characteristics, as those less likely to have long durations have already exited.

For eight of the ten groups we examine in this section, the prior expectation was that the hazard rate would be lower than for the sample as a whole. For one of the remaining groups – parents – coefficient estimates suggested the hazard rate would be higher than for the general population of recipients. In fact, this is not true, with the hazard in fact lower for female parents than the general population of female recipients. For the tenth group – those with earned income – model estimates suggested some ambiguity with respect to the role of earnings. We in fact find that persons with earnings for more than ten per cent of the spell tend to have a lower hazard rate. A final notable feature of the predicted hazards is that the predicted hazard function for females residing in high unemployment regions lies slightly above the predicted hazard function for all female extended unemployment spells. It starts just above the hazard for the general population and then drops more slowly as duration increases. The analysis in the preceding subsection showed the local unemployment rate exerted a negative effect on the hazard for females, suggesting the higher predicted hazard reflects differences in other characteristics of females living in these regions that, all else equal, make them more likely to have shorter spell durations.

Figure 10a: Predicted hazard rates for males by personal characteristics

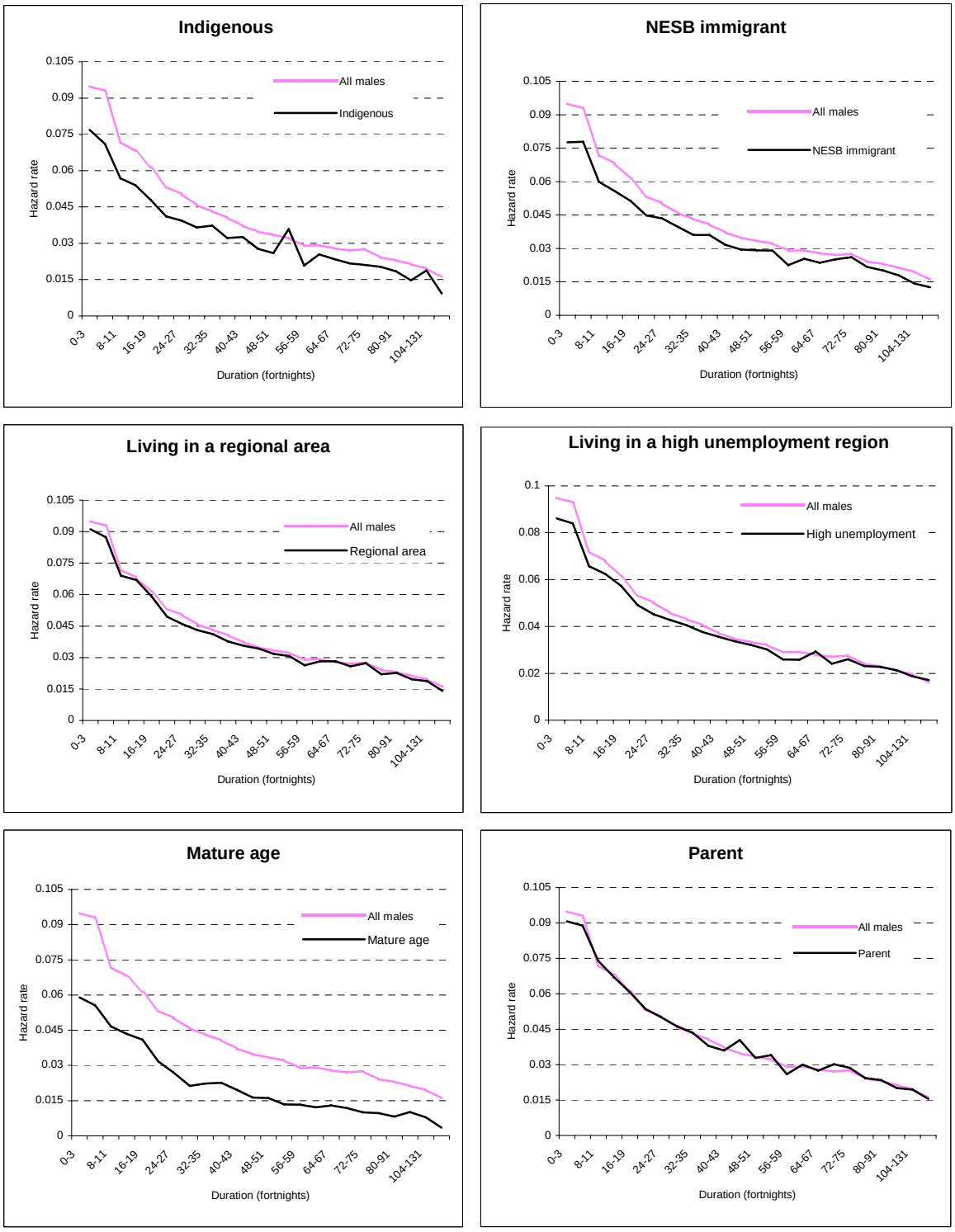


Figure 10b: Predicted hazard rates for males by income support characteristics

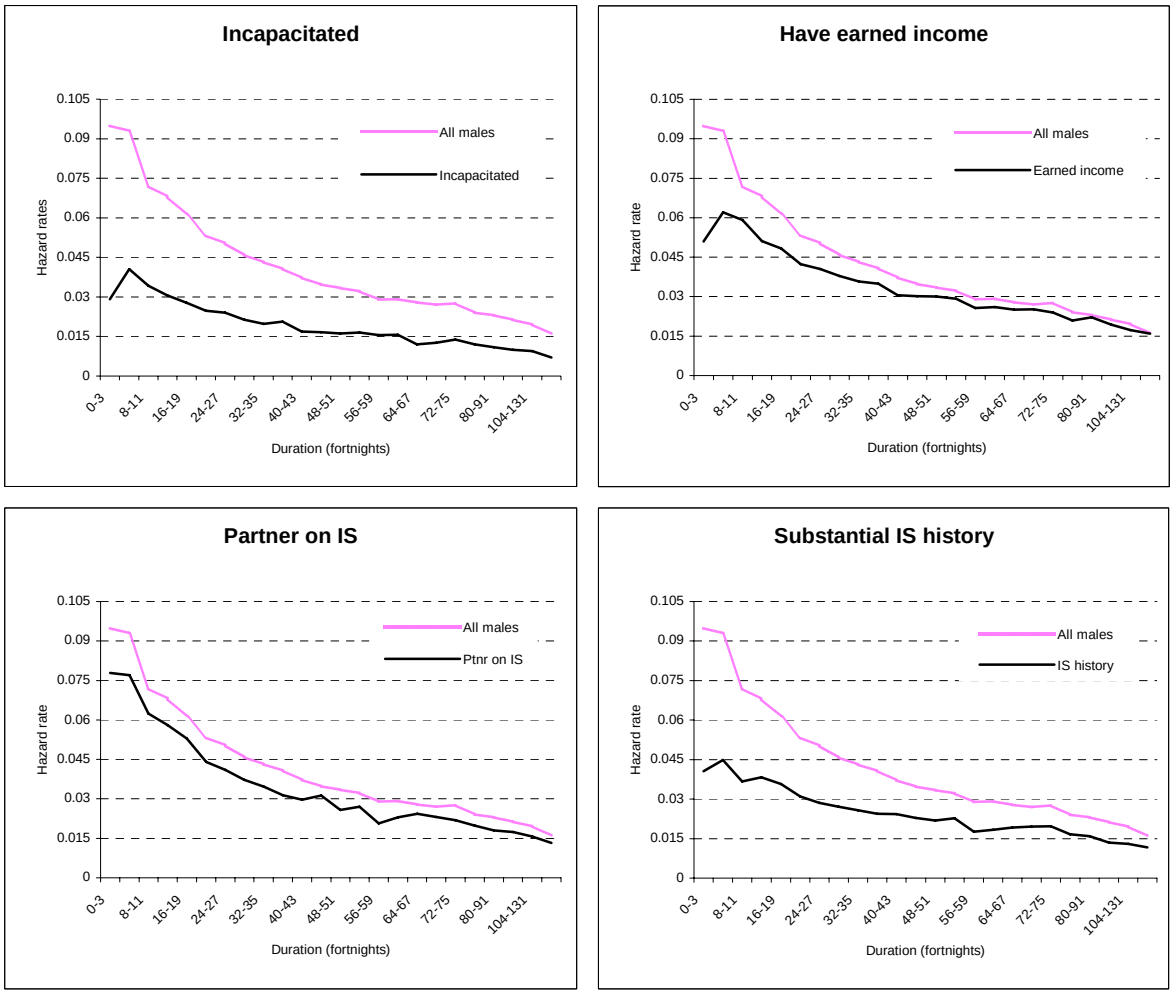
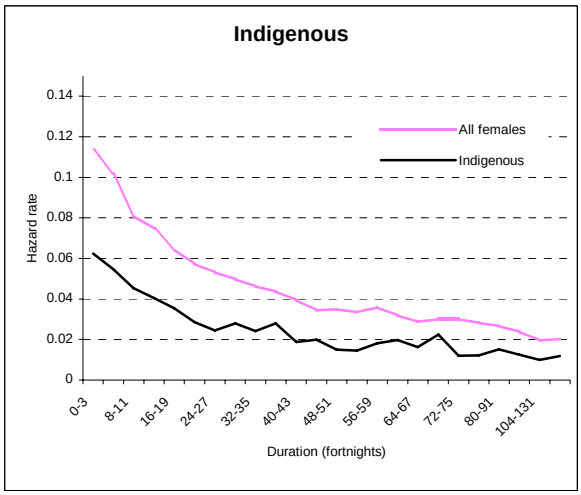
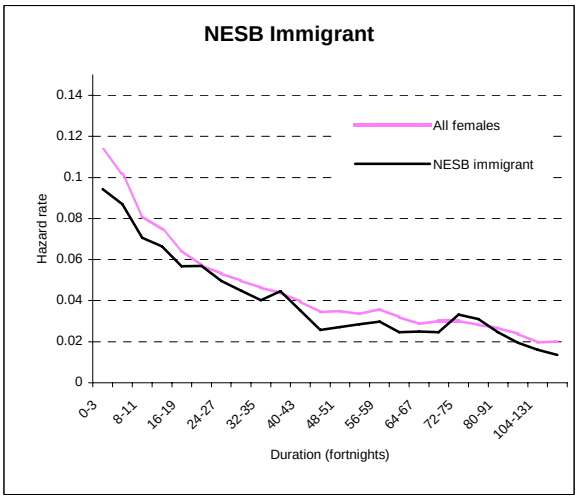
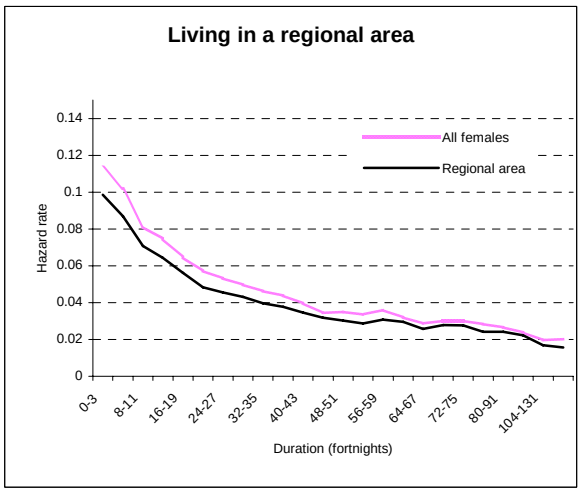
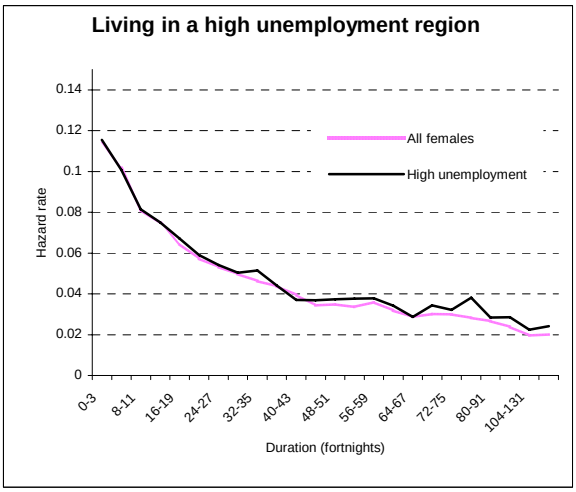


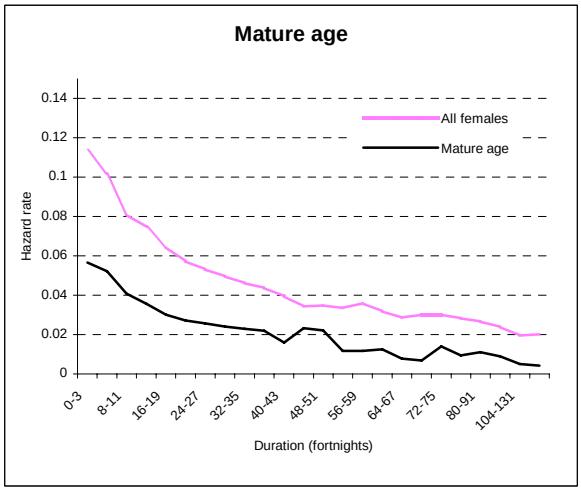
Figure 10c: Predicted hazard rates for females by personal characteristics



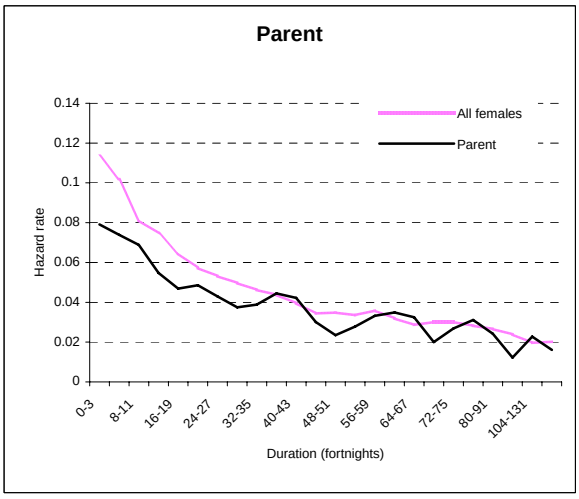
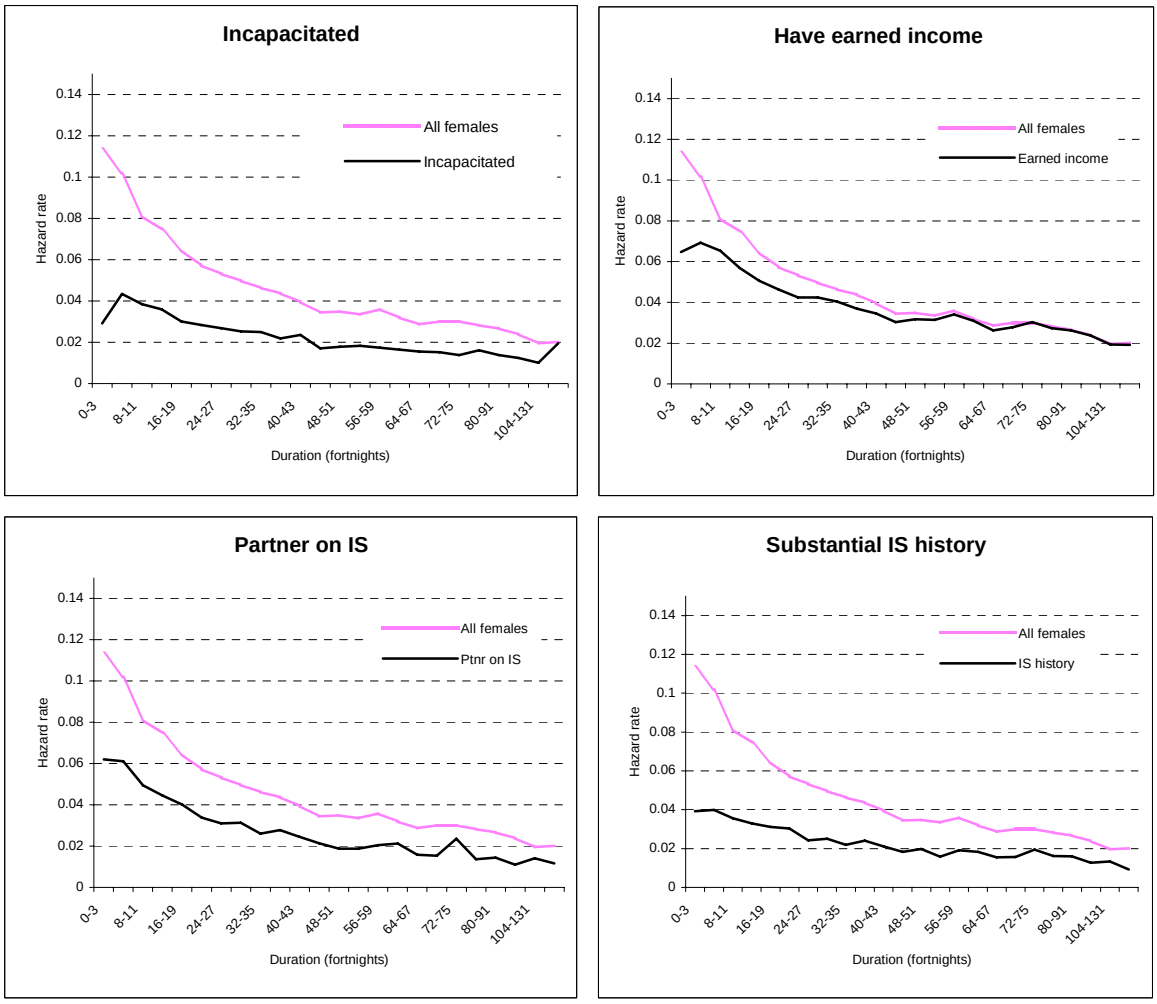



Figure 10d: Predicted hazard rates for females by income support characteristics




Hazard ratios for all explanatory variables are reported in Table 11 for the ten population subgroup models. Standard errors are not reported, but level of statistical significance is indicated by asterisks. The estimates reported in Table 10 for the population as a whole are reproduced in Table 11 to facilitate easier comparisons with hazard ratios for individual groups. As a general statement on the results, there are many commonalities in the nature of the effects of characteristics on spell duration, but there are also many differences across the population sub-groups. We focus here on those differences.

Age effects appear to be somewhat stronger for NESB immigrants, persons who experience incapacity and persons with a partner on income support. For NESB immigrants this primarily reflects the relatively higher hazard rate for 16-19 year olds. For persons with a partner on income support, the hazard rate is actually increasing in age up until the 25-34 years age category, after which it declines substantially. For females, age effects are relatively weaker

for those with a recent history of income support receipt, with only the 50-54 years age category significantly different from the other age categories.

Positive impacts of dependent children on the hazard rate for males are somewhat greater for those living in high-unemployment regions. A very strong positive effect on the hazard rate is also evident for indigenous males if the youngest child is over 13 years of age, acting to increase the conditional probability of exit by over 50 per cent compared with a person with no dependent children. For females, most groups have similar effects of dependent children to the female recipient population as a whole, with dependent children having little effect on duration if the youngest is below six years of age, but acting to decrease duration if the youngest is over 6 years of age. However, for females with experience of incapacity, all else equal, a dependent child below the age of six years increases the hazard rate by over 30 per cent compared with having no dependent children. A further notable difference is that positive effects of dependent children when the youngest is over six are greater for females living in high unemployment regions, which is consistent with the finding for males living in such regions. Also of note is that, for females with earnings for more than 10 per cent of the spell, dependent children of any age do not affect the hazard rate.

With regard to partner status, for females who commenced on unemployment benefits with a partner on income support there is a much stronger positive effect on the hazard rate of having a partner not on income support. However, since identification of this effect for these females would usually require the partner to exit income support, we may be capturing a joint (family) decision to exit income support rather than the effect of a change in partner's income support status per se. It could also in part reflect Partner Allowance qualification conditions.

Effects of accommodation type are relatively similar for all groups. Similarly, residing in a major city acts to increase the hazard rate for most groups; note, however, that it does so most dramatically for persons residing outside of the major cities at the start of the spell. This effect is identified from persons who move residence during the spell. No doubt, for some of these individuals, the motivation for moving was improved prospects of exiting welfare.

Table 11a: Hazard ratio estimates for population sub-groups – Males

| Covariates | All Males | Indigenous | NESB | Regional area | High UR | Mature age |
|---|---|---|---|---|---|---|
| *Age (16-19 omitted)* | | | | | | |
| Age 20-24 | 1.017** | 1.128*** | 0.724*** | 1.062*** | 1.052*** | |
| Age 25-34 | 1.010 | 1.100*** | 0.688*** | 1.073*** | 1.102*** | |
| Age 35-44 | 0.897*** | 1.018 | 0.620*** | 0.950*** | 0.962* | |
| Age 45-49 | 0.828*** | 0.957 | 0.586*** | 0.873*** | 0.887*** | |
| Age 50-54 | 0.730*** | 0.885* | 0.535*** | 0.765*** | 0.847*** | |
| Age 55+ | 0.569*** | 0.671*** | 0.424*** | 0.599*** | 0.640*** | 0.810*** |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 1.067*** | 1.186*** | 1.072*** | 1.087*** | 1.129*** | 1.055 |
| Youngest child aged 6-12 | 1.132*** | 1.194*** | 1.118*** | 1.179*** | 1.232*** | 1.092** |
| Youngest child aged 13 or older | 1.191*** | 1.518*** | 1.141*** | 1.247*** | 1.352*** | 1.209*** |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 1.076*** | 1.180*** | 1.217*** | 1.033** | 1.037* | 0.969 |
| Other homeowner | 1.202*** | 1.192*** | 1.314*** | 1.180*** | 1.156*** | 1.152*** |
| Government rent | 0.868*** | 0.886*** | 0.966 | 0.861*** | 0.864*** | 0.816*** |
| Other rent | 1.053*** | 1.046* | 1.111*** | 1.053*** | 1.052*** | 0.996 |
| Missing | 1.196*** | 1.058 | 1.245*** | 1.158*** | 1.206*** | 0.941 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 1.47** | 1.48* | 1.26** | 1.46** | 1.56** | 1.62** |
| Partner on IS | 0.87** | 0.86** | 0.72** | 0.87** | 0.86** | 0.87** |
| *Private income* | | | | | | |
| Avg private income – current | 1.044*** | 0.982 | 1.070*** | 1.047*** | 1.013 | 1.003 |
| Have earnings | 1.587*** | 1.586*** | 1.576*** | 1.555*** | 1.558*** | 1.498*** |
| Avg earnings – current | 0.947*** | 0.958 | 0.902*** | 0.944*** | 0.982 | 0.943*** |
| Earnings – Time (spell) | 0.698*** | 1.004 | 0.722*** | 0.744*** | 0.760*** | 0.799*** |
| Earnings – Amount (spell) | 1.079*** | 1.121*** | 1.100*** | 1.074*** | 1.079*** | 1.097*** |
| *Current payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 2.003*** | 2.219*** | 2.621*** | 1.944*** | 1.613*** | 2.036*** |
| UB – Low search | 1.448*** | 2.625*** | 1.846*** | 1.446*** | 1.148 | 1.493*** |
| UB – No search | 0.904*** | 0.950 | 1.414*** | 0.830*** | 0.840*** | 0.836 |
| Pension/PPS | 0.281*** | 0.416*** | 0.386*** | 0.267*** | 0.271*** | 0.237*** |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 1.023 | 1.052 | 1.039 | 1.054** | 1.075** | 1.188*** |
| No search * Avg earn current | 1.060*** | 1.019 | 1.086*** | 1.052*** | 1.027 | 1.020 |
| No search * Have earnings | 1.219*** | 1.089 | 1.257*** | 1.229*** | 1.266*** | 1.544*** |
| No search * Earn amount (spell) | 1.033*** | 1.026 | 1.045 | 1.039** | 1.021 | 1.021 |
| No search * Earn time (spell) | 0.625*** | 0.976 | 0.326* | 0.543*** | 0.588* | 0.182*** |
| Incapacity within 4 fortnights | 0.759*** | 0.884** | 0.658*** | 0.816*** | 0.781*** | 0.822*** |
| Local unemployment rate | 0.978*** | 1.001 | 0.966*** | 0.986** | 0.969*** | 0.971** |
| Job search * unemployment rate | 0.992* | 0.974 | 1.004 | 0.988* | 1.011 | 1.014 |
| Live in major city | 1.086*** | 1.080*** | 1.035** | 1.213*** | 1.125*** | 1.113*** |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | 0.992 | 0.957 | 1.049 | 0.956** | 0.994 | 1.028 |
| 2000 | 1.073*** | 0.981 | 1.192*** | 1.016 | 1.037 | 1.113** |
| 2001 | 1.042*** | 0.991 | 1.132*** | 1.019 | 1.021 | 1.085 |
| 2002 | 1.112*** | 0.948 | 1.202*** | 1.085*** | 1.135*** | 1.142*** |
| 2003 | 1.085*** | 0.979 | 1.130*** | 1.049** | 1.123*** | 1.132** |
| 2004 | 0.490*** | 0.420*** | 0.523*** | 0.463*** | 0.515*** | 0.472*** |

Table 11a continued: Hazard ratio estimates for population sub-groups – Males

| Covariates | All Males | Indigenous | NESB | Regional area | High UR | Mature age |
|---|---|---|---|---|---|---|
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | 0.765*** | 0.762*** | 0.751*** | 0.790*** | 0.752*** | 0.838*** |
| 3rd quarter | 0.913*** | 0.851*** | 0.911*** | 0.911*** | 0.897*** | 0.966 |
| 4th quarter | 0.760*** | 0.683*** | 0.759*** | 0.760*** | 0.734*** | 0.782*** |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5}$ ≤ 0.25 | 0.842*** | 0.911* | 0.910*** | 0.824*** | 0.846*** | 0.843*** |
| 0.25 < Pre-$TTO_{3.5}$ ≤ 0.5 | 0.673*** | 0.722*** | 0.761*** | 0.651*** | 0.671*** | 0.668*** |
| 0. 5< Pre-$TTO_{3.5}$ ≤ 0.75 | 0.569*** | 0.578*** | 0.654*** | 0.549*** | 0.561*** | 0.617*** |
| Pre-$TTO_{3.5}$ > 0.75 | 0.590*** | 0.546*** | 0.644*** | 0.559*** | 0.566*** | 0.588*** |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1$ ≤ 0.25 | 1.025*** | 1.055 | 1.042* | 1.017 | 1.031 | 1.135*** |
| 0.25 < Pre-$TTO_1$ ≤ 0.5 | 0.912*** | 1.017 | 0.859*** | 0.937*** | 0.920*** | 0.975 |
| Pre-$TTO_1$ > 0.5 | 0.819*** | 0.953 | 0.786*** | 0.843*** | 0.820*** | 0.860** |
| Job search – 3.5 years pre-spell | 0.875*** | 0.828*** | 0.927*** | 0.895*** | 0.886*** | 0.950 |
| Job search – 1 year pre-spell | 0.978** | 0.973 | 1.028 | 0.957*** | 0.986 | 0.992 |
| Earnings time > 0.5 – 3.5-yrs | 1.033*** | 0.882** | 1.069** | 1.031** | 1.031 | 0.986 |
| Earnings time > 0.5 – 1-yr | 1.056*** | 1.061* | 1.072*** | 1.054*** | 1.078*** | 1.035 |
| Multiple spells in 3.5 yrs | 1.240*** | 1.186*** | 1.233*** | 1.255*** | 1.239*** | 1.399*** |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | 0.953*** | | | 0.951*** | 0.957* | 1.134** |
| ESC | 1.050*** | | | 1.035** | 1.068*** | 1.057** |
| NESC | 0.888*** | | | 0.924*** | 0.941*** | 0.909*** |

Table 11b: Hazard ratio estimates for population sub-groups – Males

| Covariates | All Males | Parents | Incapacitat-ed | Have earnings | Partner on IS | TTO IS>50% |
|---|---|---|---|---|---|---|
| *Age (16-19 omitted)* | | | | | | |
| Age 20-24 | 1.017** | 1.516*** | 1.013 | 0.929*** | 1.404*** | 1.096 |
| Age 25-34 | 1.010 | 1.636*** | 0.863*** | 0.904*** | 1.491*** | 1.099 |
| Age 35-44 | 0.897*** | 1.523*** | 0.742*** | 0.824*** | 1.396*** | 0.996 |
| Age 45-49 | 0.828*** | 1.394*** | 0.704*** | 0.747*** | 1.274*** | 0.935 |
| Age 50-54 | 0.730*** | 1.198** | 0.612*** | 0.690*** | 1.109** | 0.885 |
| Age 55+ | 0.569*** | 0.992 | 0.449*** | 0.580*** | 0.806*** | 0.647*** |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 1.067*** | 0.951 | 1.041 | 1.048** | 1.073*** | 1.031 |
| Youngest child aged 6-12 | 1.132*** | 0.966 | 1.148*** | 1.125*** | 1.091*** | 1.076 |
| Youngest child aged 13 or older | 1.191*** | 1.014 | 1.205*** | 1.212*** | 1.177*** | 1.189*** |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 1.076*** | 1.105*** | 0.993 | 1.015 | 1.089*** | 1.023 |
| Other homeowner | 1.202*** | 1.158*** | 1.108*** | 1.119*** | 1.184*** | 1.080* |
| Government rent | 0.868*** | 0.862*** | 0.829*** | 0.938** | 0.871*** | 0.877*** |
| Other rent | 1.053*** | 0.984 | 1.058*** | 1.080*** | 1.044** | 0.986 |
| Missing | 1.196*** | 1.013 | 1.121*** | 1.156*** | 1.044 | 0.988 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 1.474*** | 1.363*** | 1.563*** | 1.340*** | 1.451*** | 1.436*** |
| Partner on IS | 0.874*** | 0.875*** | 0.876*** | 0.889*** | 0.755*** | 0.857*** |
| *Private income* | | | | | | |
| Avg private income – current | 1.044*** | 1.070*** | 1.070*** | 1.058*** | 1.040** | 1.154*** |
| Have earnings | 1.587*** | 1.381*** | 1.720*** | 2.340*** | 1.404*** | 1.612*** |
| Avg earnings – current | 0.947*** | 0.904*** | 0.944* | 0.840*** | 0.925*** | 0.884*** |
| Earnings – Time (spell) | 0.698*** | 0.862*** | 0.548*** | 1.598*** | 0.854*** | 0.729*** |
| Earnings – Amount (spell) | 1.079*** | 1.068*** | 1.083*** | 1.160*** | 1.078*** | 1.091*** |
| *Current payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 2.003*** | 2.060*** | 1.724*** | 1.364*** | 2.226*** | 1.492*** |
| UB – Low search | 1.448*** | 1.558*** | 1.385*** | 1.042 | 1.692*** | 1.304** |
| UB – No search | 0.904*** | 0.843*** | 0.533*** | 0.934 | 0.882** | 0.810** |
| Pension/PPS | 0.281*** | 0.322*** | 0.152*** | 0.222*** | 0.277*** | 0.370*** |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 1.023 | 1.030 | 1.027 | 1.054** | 1.052* | 1.147*** |
| No search * Avg earn current | 1.060*** | 1.090*** | 1.055* | 1.091*** | 1.067*** | 0.987 |
| No search * Have earnings | 1.219*** | 1.211** | 1.167** | 0.776*** | 1.253*** | 1.204* |
| No search * Earn amount (spell) | 1.033*** | 1.026 | 1.039 | 1.036* | 1.028 | 0.978 |
| No search * Earn time (spell) | 0.625*** | 0.497** | 0.569** | 0.655** | 0.650 | 0.321*** |
| Incapacity within 4 fortnights | 0.759*** | 0.768*** | 1.200*** | 0.701*** | 0.807*** | 0.735*** |
| Local unemployment rate | 0.978*** | 0.974*** | 0.972*** | 0.975*** | 0.969*** | 0.967*** |
| Job search * unemployment rate | 0.992* | 1.005 | 0.996 | 1.000 | 1.008 | 1.006 |
| Live in major city | 1.086*** | 1.085*** | 1.023 | 1.090*** | 1.103*** | 1.087*** |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | 0.992 | 0.925*** | 0.970 | 1.143*** | 0.982 | 1.015 |
| 2000 | 1.073*** | 1.035 | 1.062 | 1.259*** | 1.072** | 1.097* |
| 2001 | 1.042*** | 1.023 | 1.021 | 1.281*** | 1.048 | 1.038 |
| 2002 | 1.112*** | 1.126*** | 1.142** | 1.346*** | 1.158*** | 1.146** |
| 2003 | 1.085*** | 1.112*** | 1.077 | 1.338*** | 1.138*** | 1.161*** |
| 2004 | 0.490*** | 0.475*** | 0.466*** | 0.596*** | 0.495*** | 0.494*** |

Table 11b continued: Hazard ratio estimates for population sub-groups – Males

| Covariates | All Males | Parents | Incapacitat -ed | Have earnings | Partner on IS | TTO IS>50% |
|---|---|---|---|---|---|---|
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | 0.765*** | 0.831*** | 0.787*** | 0.765*** | 0.811*** | 0.782*** |
| 3rd quarter | 0.913*** | 0.937*** | 0.951** | 0.924*** | 0.918*** | 0.925*** |
| 4th quarter | 0.760*** | 0.706*** | 0.758*** | 0.745*** | 0.695*** | 0.760*** |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | 0.842*** | 0.880*** | 0.844*** | 0.886*** | 0.897*** | |
| $0.25 <$ Pre-$TTO_{3.5} \leq 0.5$ | 0.673*** | 0.679*** | 0.700*** | 0.732*** | 0.701*** | |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | 0.569*** | 0.572*** | 0.595*** | 0.632*** | 0.571*** | |
| Pre-$TTO_{3.5} > 0.75$ | 0.590*** | 0.591*** | 0.553*** | 0.636*** | 0.603*** | 0.860*** |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 1.025*** | 1.042* | 1.041 | 1.027* | 1.052** | 1.013 |
| $0.25 <$ Pre-$TTO_1 \leq 0.5$ | 0.912*** | 0.941** | 0.985 | 0.937** | 0.965 | 0.955 |
| Pre-$TTO_1 > 0.5$ | 0.819*** | 0.838*** | 0.886** | 0.899*** | 0.849*** | 0.862*** |
| Job search – 3.5 years pre-spell | 0.875*** | 0.887*** | 0.867*** | 0.911*** | 0.894*** | 0.755*** |
| Job search – 1 year pre-spell | 0.978** | 0.963 | 0.961 | 0.999 | 0.985 | 1.016 |
| Earnings time > 0.5 – 3.5-yrs | 1.033*** | 1.011 | 1.021 | 0.985 | 0.993 | 1.007 |
| Earnings time > 0.5 – 1-yr | 1.056*** | 1.057*** | 1.045 | 1.003 | 1.052*** | 1.069*** |
| Multiple spells in 3.5 yrs | 1.240*** | 1.250*** | 1.192*** | 1.200*** | 1.246*** | 1.165*** |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | 0.953*** | 1.092*** | 1.072* | 1.187*** | 1.044* | 1.016 |
| ESC | 1.050*** | 1.038* | 1.063** | 1.033** | 1.047*** | 1.094*** |
| NESC | 0.888*** | 0.767*** | 0.904*** | 0.874*** | 0.764*** | 0.987 |

Table 11c: Hazard ratio estimates for population sub-groups – Females

| Covariates | All females | Indigenous | NESB | Regional area | High UR | Mature age |
|---|---|---|---|---|---|---|
| *Age (16-19 omitted)* | | | | | | |
| Age 20-24 | 1.161*** | 1.216*** | 0.722*** | 1.175*** | 1.206*** | |
| Age 25-34 | 1.151*** | 1.164*** | 0.672*** | 1.194*** | 1.274*** | |
| Age 35-44 | 0.977 | 1.097 | 0.558*** | 1.056** | 1.087*** | |
| Age 45-49 | 0.899*** | 1.014 | 0.490*** | 0.967 | 0.994 | |
| Age 50-54 | 0.750*** | 0.904 | 0.445*** | 0.777*** | 0.825*** | |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 1.009 | 1.052 | 1.075 | 1.064 | 1.090 | 0.374 |
| Youngest child aged 6-12 | 1.133** | 1.360*** | 1.201** | 1.142* | 1.332*** | 1.258 |
| Youngest child aged 13 or older | 1.137*** | 1.081 | 1.167* | 1.167*** | 1.332*** | 1.086 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 1.084*** | 1.260** | 1.160*** | 1.004 | 1.052 | 0.985 |
| Other homeowner | 1.222*** | 1.264** | 1.317*** | 1.200*** | 1.181*** | 1.143*** |
| Government rent | 0.836*** | 0.887 | 0.886** | 0.844*** | 0.839*** | 0.888 |
| Other rent | 1.105*** | 1.016 | 1.102*** | 1.123*** | 1.155*** | 1.013 |
| Missing | 1.310*** | 1.104 | 1.333*** | 1.313*** | 1.367*** | 0.959 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 1.356*** | 1.388*** | 1.234*** | 1.512*** | 1.638*** | 1.522*** |
| Partner on IS | 0.728*** | 0.675*** | 0.661*** | 0.766*** | 0.739*** | 0.757*** |
| *Private income* | | | | | | |
| Avg private income – current | 1.090*** | 1.167 | 1.104*** | 1.086*** | 1.055* | 1.042 |
| Have earnings | 1.538*** | 1.612*** | 1.513*** | 1.517*** | 1.529*** | 1.716*** |
| Avg earnings – current | 0.900*** | 0.803** | 0.900*** | 0.906*** | 0.920** | 0.910** |
| Earnings – Time (spell) | 0.685*** | 0.646*** | 0.704*** | 0.719*** | 0.752*** | 0.604*** |
| Earnings – Amount (spell) | 1.105*** | 1.220*** | 1.118*** | 1.101*** | 1.103*** | 1.101*** |
| *Current payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 3.139*** | 2.175*** | 3.576*** | 3.213*** | 4.490*** | 4.093*** |
| UB – Low search | 1.981*** | 2.296*** | 2.146*** | 2.115*** | 2.852*** | 2.879*** |
| UB – No search | 1.624*** | 1.098 | 2.569*** | 1.495*** | 1.710*** | 1.528*** |
| Pension/PPS | 0.284*** | 0.308*** | 0.349*** | 0.266*** | 0.274*** | 0.332*** |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 1.047** | 1.248** | 1.197*** | 1.008 | 1.017 | 1.284*** |
| No search * Avg earn current | 1.038*** | 0.912 | 0.981 | 1.047* | 1.037 | 1.035 |
| No search * Have earnings | 1.154*** | 1.325 | 1.286** | 1.069 | 1.178** | 1.168 |
| No search * Earn amount (spell) | 1.028** | 0.955 | 0.908* | 1.069*** | 1.064* | 1.032 |
| No search * Earn time (spell) | 0.800 | 0.532 | 1.060 | 1.027 | 0.887 | 0.289** |
| Incapacity within 4 fortnights | 0.584*** | 0.742*** | 0.475*** | 0.644*** | 0.592*** | 0.726*** |
| Local unemployment rate | 0.983*** | 0.956** | 0.969** | 1.000 | 1.014 | 0.974 |
| Job search * unemployment rate | 0.983*** | 1.018 | 0.989 | 0.978*** | 0.957*** | 0.992 |
| Live in major city | 1.122*** | 1.079** | 1.056** | 1.202*** | 1.109*** | 1.162*** |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | 1.007 | 1.139 | 1.123** | 0.980 | 0.931* | 1.162 |
| 2000 | 1.149*** | 1.280** | 1.322*** | 1.106*** | 1.046 | 1.328*** |
| 2001 | 1.121*** | 1.349*** | 1.271*** | 1.079*** | 1.010 | 1.353*** |
| 2002 | 1.139*** | 1.291** | 1.305*** | 1.080*** | 1.033 | 1.493*** |
| 2003 | 1.050*** | 1.285** | 1.113* | 1.016 | 0.986 | 1.313*** |
| 2004 | 0.485*** | 0.588*** | 0.567*** | 0.464*** | 0.436*** | 0.541*** |

Table 11c continued: Hazard ratio estimates for population sub-groups – Females

| Covariates | All females | Indigenous | NESB | Regional area | High UR | Mature age |
|---|---|---|---|---|---|---|
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | 0.689*** | 0.623*** | 0.655*** | 0.699*** | 0.670*** | 0.834*** |
| 3rd quarter | 0.838*** | 0.720*** | 0.851*** | 0.840*** | 0.782*** | 0.923* |
| 4th quarter | 0.698*** | 0.592*** | 0.704*** | 0.698*** | 0.674*** | 0.704*** |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5}$ ≤ 0.25 | 0.843*** | 0.826** | 0.988 | 0.832*** | 0.859*** | 1.021 |
| 0.25 < Pre-$TTO_{3.5}$ ≤ 0.5 | 0.681*** | 0.703*** | 0.823*** | 0.677*** | 0.694*** | 0.858* |
| 0. 5< Pre-$TTO_{3.5}$ ≤ 0.75 | 0.589*** | 0.642*** | 0.754*** | 0.586*** | 0.619*** | 0.673*** |
| Pre-$TTO_{3.5}$ > 0.75 | 0.660*** | 0.691*** | 0.665*** | 0.634*** | 0.677*** | 0.768*** |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1$ ≤ 0.25 | 1.021* | 0.938 | 1.026 | 1.042** | 1.023 | 1.214*** |
| 0.25 < Pre-$TTO_1$ ≤ 0.5 | 0.936*** | 0.891 | 0.919 | 0.942** | 0.967 | 1.064 |
| Pre-$TTO_1$ > 0.5 | 0.823*** | 0.828** | 0.844*** | 0.811*** | 0.779*** | 0.959 |
| Job search – 3.5 years pre-spell | 0.843*** | 0.906* | 0.910*** | 0.864*** | 0.879*** | 0.919 |
| Job search – 1 year pre-spell | 0.929*** | 0.961 | 0.956 | 0.938*** | 0.959 | 1.007 |
| Earnings time > 0.5 – 3.5-yrs | 1.057*** | 1.038 | 1.014 | 1.055** | 1.031 | 1.053 |
| Earnings time > 0.5 – 1-yr | 1.073*** | 1.108* | 1.129*** | 1.066*** | 1.049* | 0.992 |
| Multiple spells in 3.5 yrs | 1.179*** | 1.183*** | 1.140*** | 1.173*** | 1.170*** | 1.220*** |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | 0.793*** | | | 0.790*** | 0.846*** | 0.993 |
| ESC | 1.017 | | | 0.995 | 0.992 | 1.038 |
| NESC | 0.910*** | | | 0.959* | 0.947* | 0.847*** |

Table 11d: Hazard ratio estimates for population sub-groups – Females

| Covariates | All females | Parents | Incapacitat-ed | Have earnings | Partner on IS | TTO IS>50% |
|---|---|---|---|---|---|---|
| *Age (16-19 omitted)* | | | | | | |
| Age 20-24 | 1.161*** | 0.653* | 1.210*** | 1.070*** | 1.700*** | 1.103 |
| Age 25-34 | 1.151*** | 0.772 | 1.131*** | 1.044** | 1.874*** | 1.152 |
| Age 35-44 | 0.977 | 0.890 | 0.980 | 0.882*** | 1.783*** | 1.056 |
| Age 45-49 | 0.899*** | 0.774 | 0.830*** | 0.852*** | 1.738*** | 1.004 |
| Age 50-54 | 0.750*** | 0.691 | 0.752*** | 0.702*** | 1.287*** | 0.889 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 1.009 | 1.186** | 1.309*** | 0.975 | 1.116*** | 1.210** |
| Youngest child aged 6-12 | 1.133** | 1.060 | 1.171 | 0.973 | 1.096* | 1.125 |
| Youngest child aged 13 or older | 1.137*** | 1.089 | 1.273* | 1.093 | 1.157** | 1.171* |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 1.084*** | 0.955 | 1.083* | 1.001 | 0.947 | 1.093* |
| Other homeowner | 1.222*** | 1.115* | 1.271*** | 1.118*** | 1.189*** | 1.132** |
| Government rent | 0.836*** | 0.812** | 0.808*** | 0.917** | 0.870** | 0.924 |
| Other rent | 1.105*** | 1.014 | 1.130*** | 1.119*** | 1.099*** | 1.018 |
| Missing | 1.310*** | 1.137 | 1.227*** | 1.286*** | 1.121 | 1.084 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 1.356*** | 1.539*** | 1.484*** | 1.395*** | 2.471*** | 1.629*** |
| Partner on IS | 0.728*** | 0.903* | 0.726*** | 0.818*** | 0.881*** | 0.778*** |
| *Private income* | | | | | | |
| Avg private income – current | 1.090*** | 1.010 | 1.060 | 1.144*** | 1.102** | 1.243*** |
| Have earnings | 1.538*** | 1.391*** | 1.452*** | 2.274*** | 1.511*** | 1.595*** |
| Avg earnings – current | 0.900*** | 0.926 | 0.897** | 0.777*** | 0.851*** | 0.796*** |
| Earnings – Time (spell) | 0.685*** | 0.855 | 0.807*** | 1.384*** | 0.837*** | 0.660*** |
| Earnings – Amount (spell) | 1.105*** | 1.110*** | 1.134*** | 1.195*** | 1.092*** | 1.117*** |
| *Current payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 3.139*** | 3.055*** | 4.158*** | 2.383*** | 3.225*** | 3.016*** |
| UB – Low search | 1.981*** | 2.216*** | 2.841*** | 1.610*** | 2.221*** | 2.298*** |
| UB – No search | 1.624*** | 0.981 | 1.260*** | 1.794*** | 1.250*** | 1.215* |
| Pension/PPS | 0.284*** | 0.352*** | 0.254*** | 0.234*** | 0.280*** | 0.396*** |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 1.047** | 1.016 | 1.128*** | 1.079*** | 1.129** | 1.125* |
| No search * Avg earn current | 1.038*** | 1.142* | 1.015 | 1.073*** | 1.025 | 1.041 |
| No search * Have earnings | 1.154*** | 0.986 | 1.154* | 0.837*** | 1.089 | 1.128 |
| No search * Earn amount (spell) | 1.028** | 0.939 | 1.026 | 1.002 | 1.029 | 0.899** |
| No search * Earn time (spell) | 0.800 | 1.549 | 0.527*** | 0.972 | 1.241 | 0.828 |
| Incapacity within 4 fortnights | 0.584*** | 0.820** | 1.091*** | 0.617*** | 0.811*** | 0.706*** |
| Local unemployment rate | 0.983*** | 1.006 | 0.983* | 0.972*** | 0.973** | 0.990 |
| Job search * unemployment rate | 0.983*** | 0.973 | 0.982 | 0.997 | 0.999 | 0.990 |
| Live in major city | 1.122*** | 1.072 | 1.039 | 1.133*** | 1.068*** | 1.100*** |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | 1.007 | 0.960 | 0.937 | 1.189*** | 1.053 | 1.136 |
| 2000 | 1.149*** | 0.984 | 0.966 | 1.415*** | 1.172** | 1.207** |
| 2001 | 1.121*** | 1.011 | 0.948 | 1.408*** | 1.151** | 1.170* |
| 2002 | 1.139*** | 1.132 | 1.000 | 1.431*** | 1.243*** | 1.208** |
| 2003 | 1.050*** | 1.122 | 0.948 | 1.344*** | 1.148* | 1.156 |
| 2004 | 0.485*** | 0.388*** | 0.363*** | 0.600*** | 0.439*** | 0.488*** |

Table 11d continued: Hazard ratio estimates for population sub-groups – Females

| Covariates | All females | Parents | Incapacitat-ed | Have earnings | Partner on IS | TTO IS>50% |
|---|---|---|---|---|---|---|
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | 0.689*** | 0.764*** | 0.739*** | 0.718*** | 0.761*** | 0.754*** |
| 3rd quarter | 0.838*** | 0.792*** | 0.832*** | 0.858*** | 0.846*** | 0.897*** |
| 4th quarter | 0.698*** | 0.622*** | 0.650*** | 0.712*** | 0.646*** | 0.676*** |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5}$ ≤ 0.25 | 0.843*** | 0.899 | 0.805*** | 0.842*** | 0.973 | |
| 0.25 < Pre-$TTO_{3.5}$ ≤ 0.5 | 0.681*** | 0.838** | 0.729*** | 0.691*** | 0.798*** | |
| 0. 5< Pre-$TTO_{3.5}$ ≤ 0.75 | 0.589*** | 0.755*** | 0.648*** | 0.617*** | 0.661*** | |
| Pre-$TTO_{3.5}$ > 0.75 | 0.660*** | 0.766*** | 0.639*** | 0.671*** | 0.678*** | 0.934* |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1$ ≤ 0.25 | 1.021* | 1.059 | 1.003 | 1.042** | 1.111** | 1.058 |
| 0.25 < Pre-$TTO_1$ ≤ 0.5 | 0.936*** | 0.930 | 1.051 | 0.960 | 0.992 | 1.035 |
| Pre-$TTO_1$ > 0.5 | 0.823*** | 0.716*** | 0.905 | 0.866*** | 0.841** | 0.885** |
| Job search – 3.5 years pre-spell | 0.843*** | 0.777*** | 0.832*** | 0.874*** | 0.916** | 0.800*** |
| Job search – 1 year pre-spell | 0.929*** | 1.356*** | 0.862*** | 0.954* | 0.944 | 0.920** |
| Earnings time > 0.5 – 3.5-yrs | 1.057*** | 1.035 | 0.917 | 0.985 | 0.998 | 1.065* |
| Earnings time > 0.5 – 1-yr | 1.073*** | 1.020 | 1.099** | 1.069*** | 1.064* | 1.180*** |
| Multiple spells in 3.5 yrs | 1.179*** | 1.181*** | 1.226*** | 1.150*** | 1.123*** | 1.106*** |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | 0.80** | 0.90* | 0.91* | 1.00** | 0.75* | 1.02** |
| ESC | 1.02** | 0.89* | 1.04** | 0.97** | 1.08** | 1.15** |
| NESC | 0.91** | 0.72* | 0.86** | 0.93** | 0.76** | 1.00** |

Earnings effects consistent with those evident for the general population are largely present for all groups. Being on unemployment benefits with job search requirements increases the hazard ratio for all groups, and for all groups other than indigenous persons, the effect is greater if the individual is subject to high job search requirements. Positive effects associated with the requirement to actively search for employment are, however, stronger for NESB immigrants, mature-age females, females incapacitated at commencement of the spell and females residing in high unemployment regions. Effects are weaker for persons with earnings for more than ten per cent of the spell, males living in high unemployment regions, males incapacitated at commencement of the spell and indigenous females.

Some notable differences are apparent across the groups in the effects of the year of receipt on the hazard rate. The year dummy variables will, among other things, capture the effects of changes over time in economic conditions and government policy. For the general population of persons commencing an unemployment benefit spell, hazard rates were highest, all else equal, in the years 2000 to 2003 for males and 2000-2002 for females. The positive effects of these years are substantially stronger for NESB immigrants, persons with earnings for more than ten per cent of the spell, indigenous females, mature-age females and females with a partner on income support at the start of the spell. By contrast, these positive effects are

largely absent for persons incapacitated at commencement of the spell, indigenous males and females residing in high unemployment regions. The reasons for this diversity in response of hazard rates are not clear.

Effects of pre-spell income support receipt are remarkable for their similarity across the population groups. All dimensions of recent income support receipt – proportion of time on payments, requirement of job search, earnings while on income support and churning – have quite similar implications for duration of the current spell. While there are some quantitative differences, these are generally small. The overwhelming impression is that the effects of patterns of income support receipt prior to spell commencement (or the unobserved characteristics they embody) are universal.

*Further consideration of the effects of earnings and income support history*

Identifying from the hazard ratios presented in Tables 10 and 11 the net effects of characteristics which are described by more than one covariate is not straightforward. This is particularly the case with respect to earned income and income support history. We therefore in this section attempt to disentangle the effects of these characteristics by presenting the effects on the predicted hazard rate of several 'stylised cases' in terms of these characteristics. While effects for these variables appeared to be similar across the population sub-groups examined, we nonetheless produce depictions for all groups. This is because differences may become apparent when the combined effects of variables are considered that did not reveal themselves readily from inspection of the individual hazard ratios.

Five cases are distinguished for earned income patterns:

1. No earned income: Have not reported earned income at any stage of the spell.
2. Low and infrequent earnings: Have reported earnings in 10 per cent of the fortnights in the spell and mean fortnightly earnings in those fortnights earnings were reported is $50. Do not currently have earned income.
3. Low and frequent earnings: Have reported earnings in every fortnight of the spell and mean fortnightly earnings is $50. Current earned income is $50.
4. High and infrequent earnings: Have reported earnings in 10 per cent of the fortnights in the spell and mean fortnightly earnings in those fortnights earnings were reported is $250. Do not currently have earned income.

5. High and frequent earnings: Have reported earnings in every fortnight of the spell and mean fortnightly earnings is $250. Current earned income is $250.

Unearned income is assumed to be zero in all five cases. Figure 11 presents the predicted hazard rates for each of these five cases, evaluated at sample means of explanatory variables (other than the income variables) and at the 24-27 fortnight duration interval. Considering first the sample as a whole, the predicted hazard is highest if earnings are frequent, high and currently being reported. Never having earnings, or only occasionally reporting small amounts, are clearly less desirable than the other outcomes in terms of promoting exit from income support. That is, exit is most likely if earnings are high and frequent, and least likely if earnings are rarely or never reported. [14]

The pattern in evidence for all persons is generally in evidence for each of the population sub-groups, but – particularly for males – there are some notable exceptions. First, earnings appear to have few implications for likelihood of exit from the income support spell for mature-age persons and males with early experience of work incapacity. That is, there is little difference in predicted hazard rates across the five earned income scenarios for these population sub-groups. Second, for a number of the male population subgroups, low and frequent earnings are associated with higher exit probabilities than are high and infrequent earnings. By contrast, for the general population of male recipients, low and frequent earnings have approximately the same implications for the exit probability as high and infrequent earnings. Finally, earnings effects appear to be greater for indigenous males and males residing in high unemployment regions than for the general population of male recipients, as indicated by a greater difference between the lowest and highest predicted hazard rates across the five earned income scenarios.

[14] There are, of course, other potential scenarios that could be considered. For example, our coefficient estimates suggest that a short 'burst' of high earnings is the pattern most conducive to exit from income support, a scenario not presented in Figure 11.

Figure 11a: Hazard rates associated with alternative earned income patterns – Males

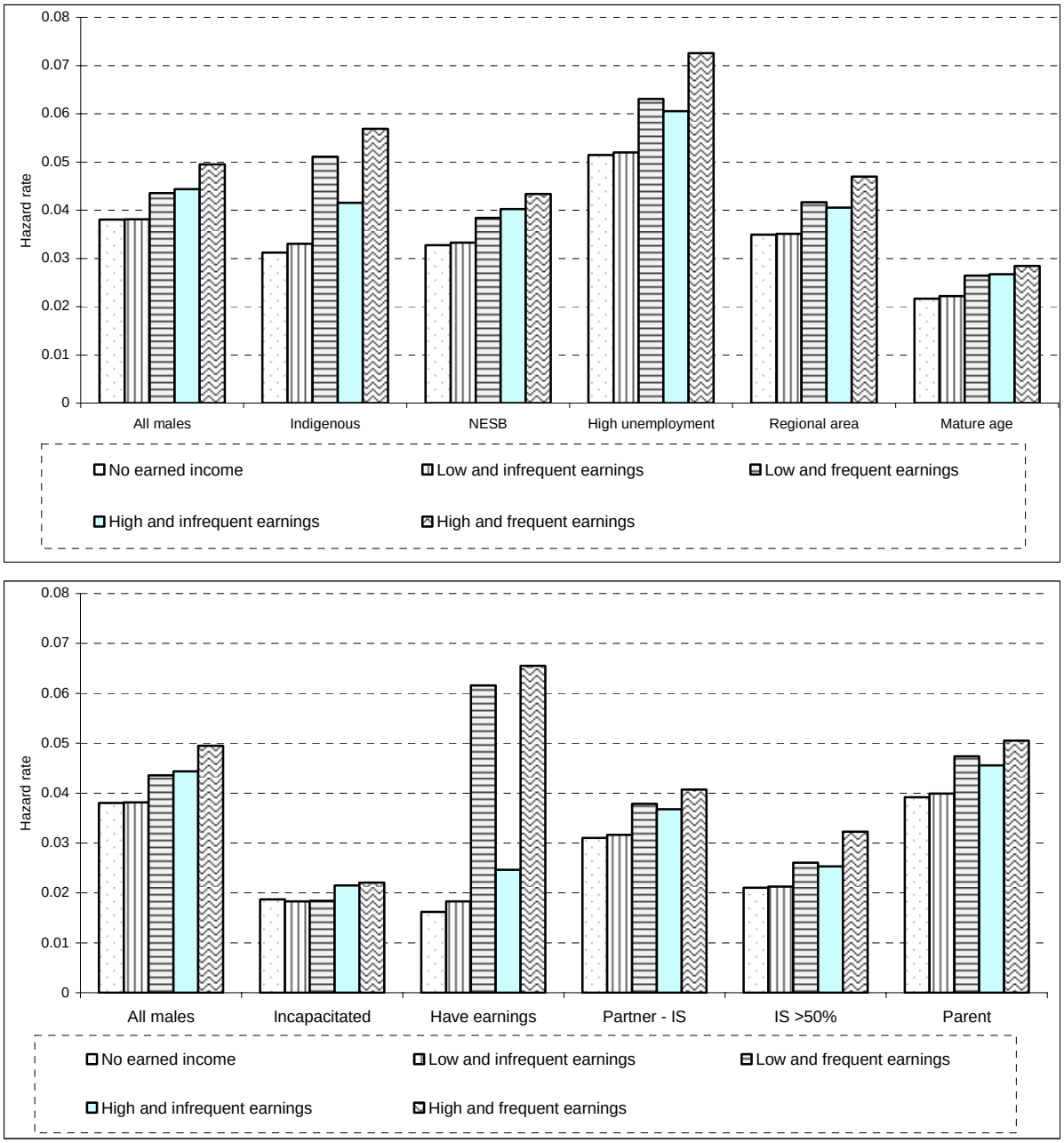
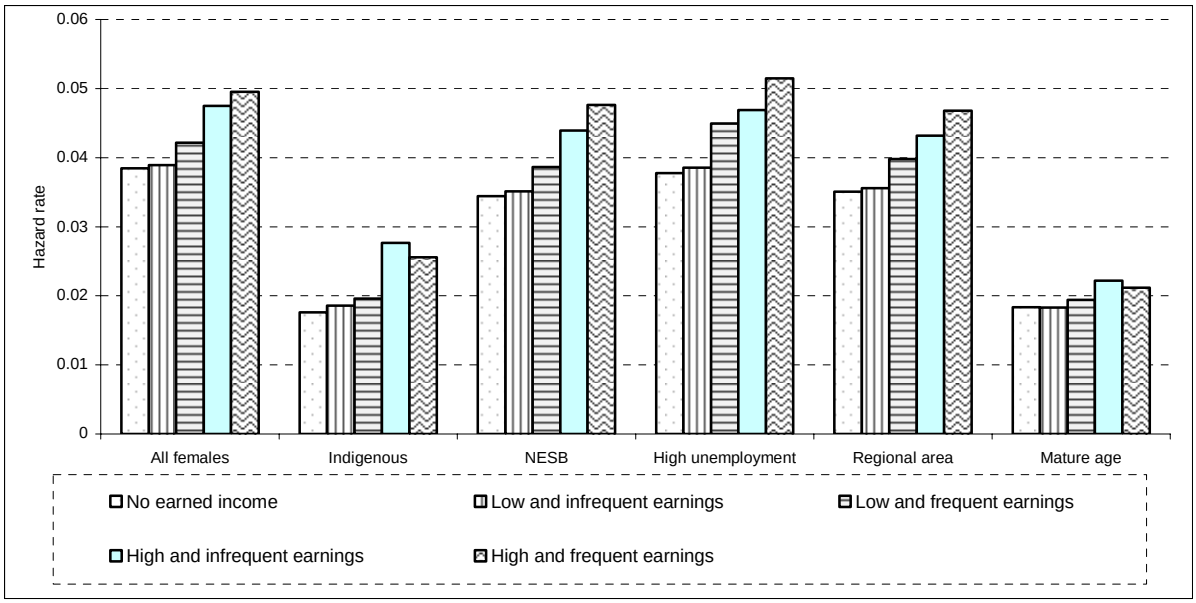
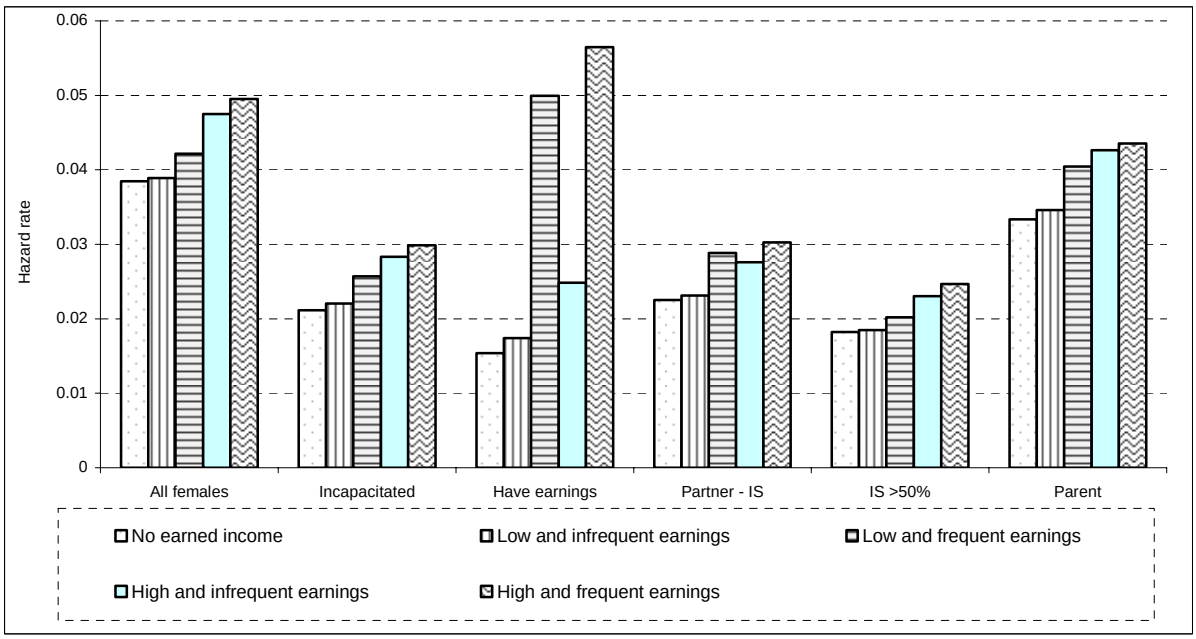


Figure 11b: Hazard rates associated with alternative earned income patterns – Females



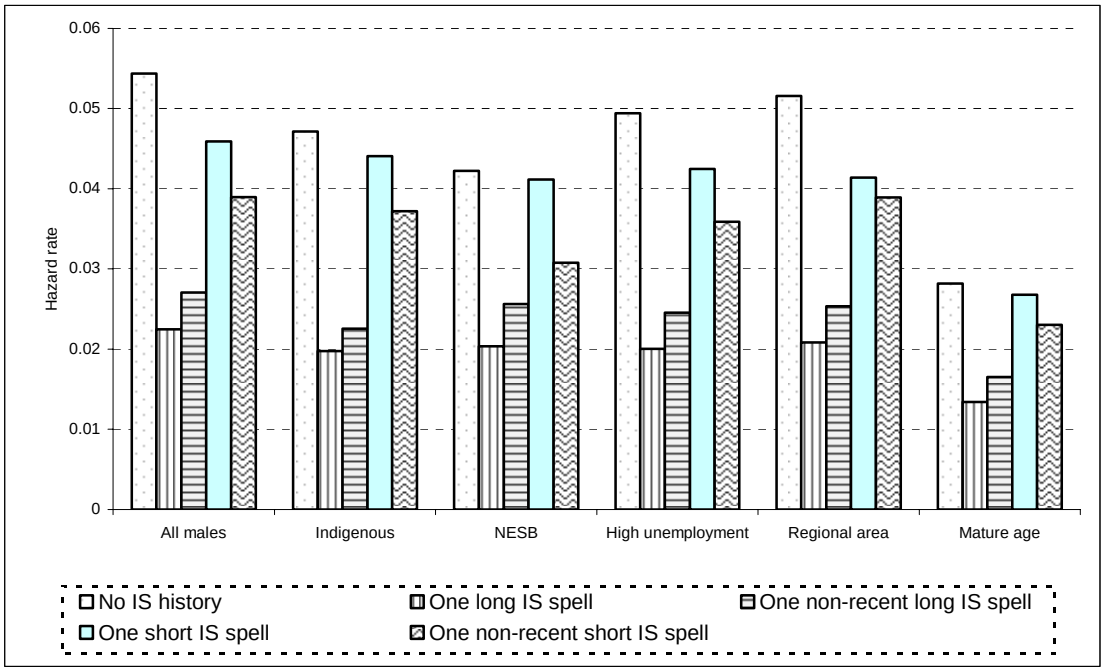



Similar to the earned income approach, we distinguish five cases for patterns of income support receipt in the 3.5 years preceding commencement of the current spell:

1. No IS history: Did not receive income support at any stage of the 3.5 year period.
2. Long IS spell: Pre-$TTO_1 > 0.5$; Pre-$TTO_{3.5} > 0.75$; Job search – 1 year pre-spell = 1; and Job search – 3.5 years pre-spell = 1.
3. Non-recent long IS spell: Pre-$TTO_1 = 0$; $0.5 <$ Pre-$TTO_{3.5} > 0.75$; Job search – 1 year pre-spell = 0; and Job search – 3.5 years pre-spell = 1.
4. Recent short IS spell: Pre-$TTO_1 < 0.25$; Pre-$TTO_{3.5} < 0.25$; Job search – 1 year pre-spell = 1; and Job search – 3.5 years pre-spell = 0.
5. Non-recent short IS spell: Pre-$TTO_1 = 0$; Pre-$TTO_{3.5} < 0.25$; Job search – 1 year pre-spell = 0; and Job search – 3.5 years pre-spell = 1.

Figure 12 presents the predicted hazard rates for each of these five cases, evaluated in the same manner as for earned income. Consistent with the hazard ratio estimates, no history of receipt is associated with the highest hazard rate, followed by a recent short spell, a non-recent short spell, a non-recent long spell and finally a (recent) long spell. As expected, based on the hazard ratio estimates, hazard rate patterns for the population subgroups are quite similar to those for the sample as a whole. Note that the focus here is on the relative heights of the bars, since the absolute heights reflect differences in hazard rates independent of income support history. The main differences by population sub-groups are that, for female parents, a recent short spell is associated with a higher hazard rate than no history; while for mature-age persons, those with incapacity and indigenous females, effects associated with different income support histories are more muted than for the general population.

Figure 12a: Hazard rates associated with alternative income support histories – Males



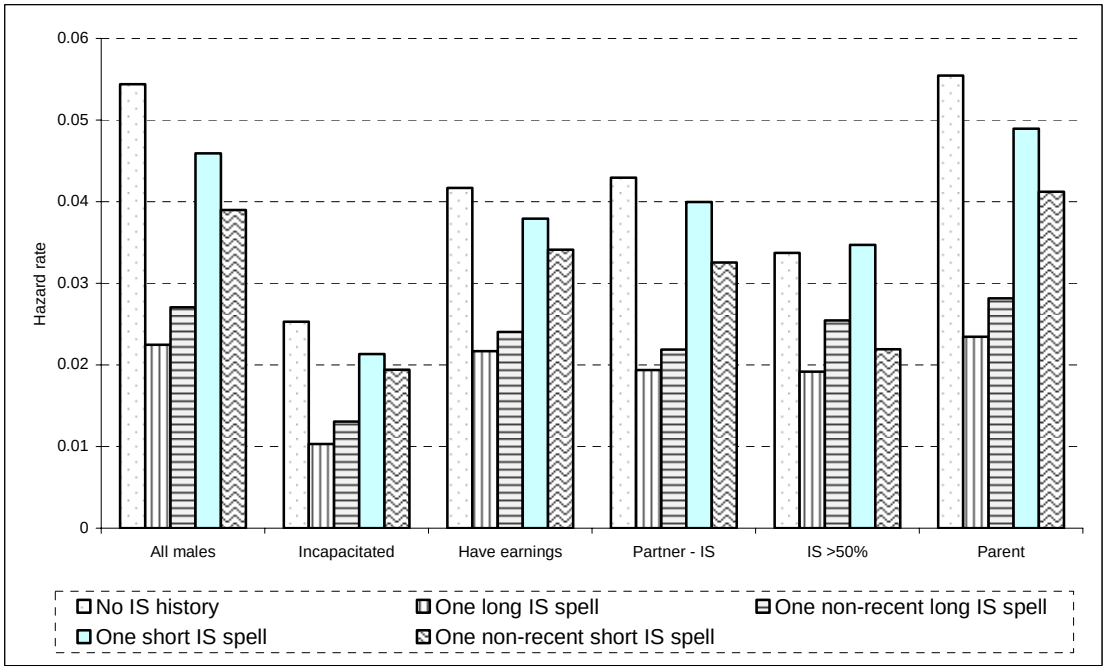
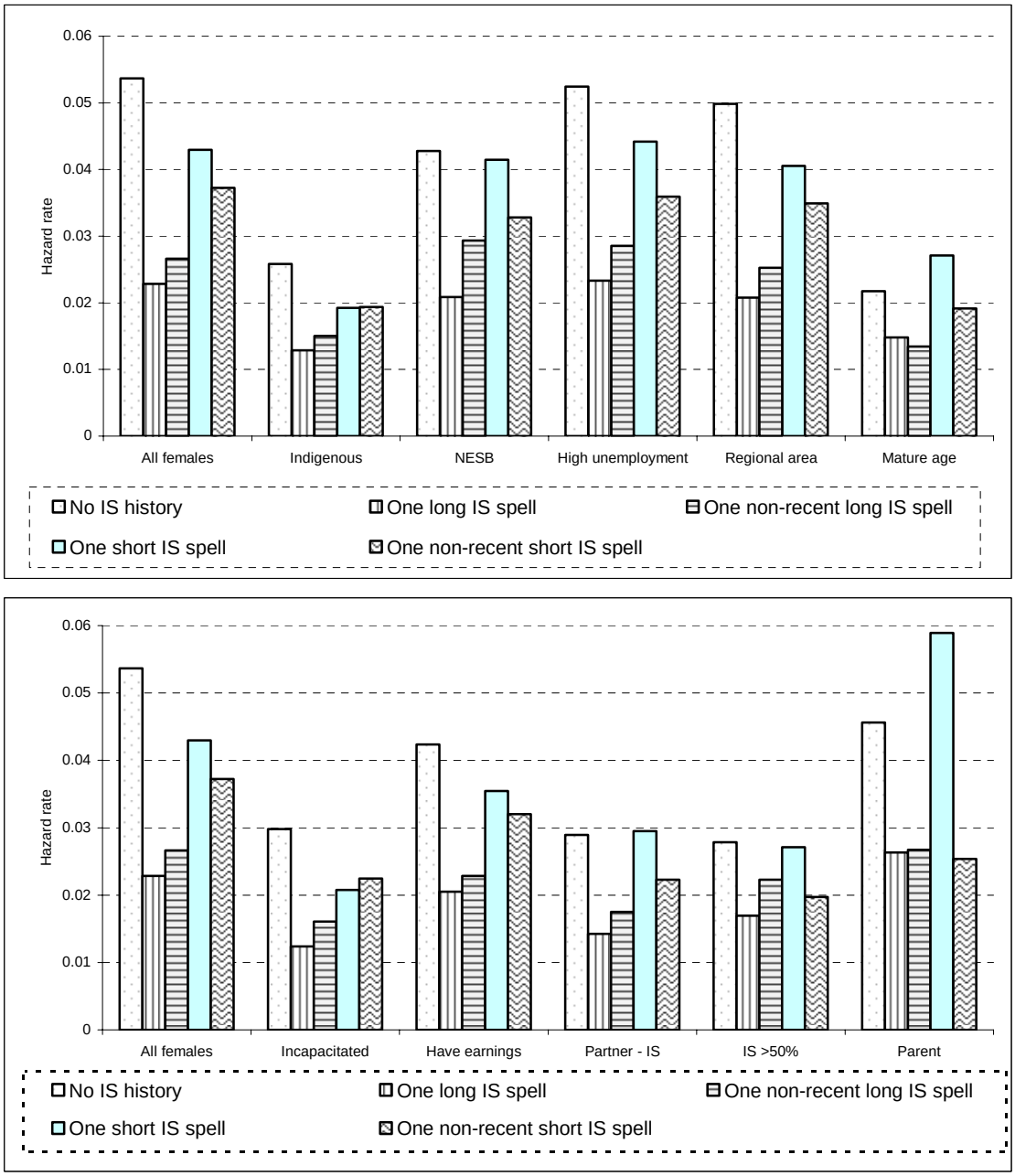



Figure 12b: Hazard rates associated with alternative income support histories – Females



# 5 The impact of education on spell duration

The DEWR JDS contains additional information on Newstart Allowance and Youth Allowance recipients to that available in the LDW. We obtained a number of data items from the JDS for the Newstart Allowance and Youth Allowance recipients in our sample, including data items on specific disadvantages faced by the recipients in the labour market. This is potentially valuable information for a study of the determinants of income support spell duration. Unfortunately, the usefulness of the JDS data items for statistical analysis is constrained by the large number of "missing values" for these items. That is, for each JDS data item, there are many cases where there is no recorded value.[15] We therefore did not make use of the JDS data items for the core analysis. However, the JDS does contain information on educational attainment that is relatively comprehensive for Newstart Allowance recipients, with attainment known for approximately 80 per cent of sample members if we restrict to persons commencing on Newstart from June 1998 onwards. Given the well-established pivotal role played by education in labour market outcomes, we took the decision to attempt to investigate its implications for duration on income support, despite the shortcomings imposed by missing data.

Table 12 reports the results of the estimation of duration models that include dummy variables for educational attainment. We report here only the hazard ratios for the education variables, since estimates for other explanatory variables are generally robust to the restriction of the sample and the inclusion of educational attainment variables.[16] Only persons who commenced on Newstart Allowance are included in the sample, since only 60 per cent of Youth Allowance recipients were able to be matched to the JDS, and educational attainment information was missing for approximately half of these matched individuals. We include all individuals who commenced on Newstart Allowance, regardless of whether educational attainment is known, and create an 'education missing' category for individuals for whom educational attainment information is unknown. The omitted education category is 'less than year 10'.

[15] This derives from payments administration processes, which only require collection of JDS data items for some recipients at certain times. For example, much of the information from which the JDS is produced is gathered for the purposes of implementing the Job Seeker Classification Instrument (JSCI), which only applies to jobseekers (not all income support recipients) before they first enter the Job Network.

[16] Coefficient estimates for all variables are reported in Appendix C, along with sample means of the explanatory variables.

The estimated hazard ratios for the 'education missing' variable suggest that recipients for whom education information is missing tend to have higher educational attainment than the general population of recipients. Hazard ratios for those missing education information are approximately the same as for the 'post-school qualifications' category, which is towards the top end of educational attainment for unemployment benefit recipients. In any event, estimated hazard ratios by educational attainment accord with prior expectations, being broadly ordered by level of attainment. Effects are stronger for females than males: compared with not completing Year 10, a degree increases the hazard rate by 48 per cent for females and by 23 per cent for males. For both males and females, positive effects of education are greatest for indigenous persons, immigrants from non-English speaking countries, those with a partner who is on income support, and persons with dependent children. Education effects tend to be weakest for mature-aged persons, persons with an incapacity early in the spell, persons with earnings for more than 10% of the income support spell and persons with a substantial history of income support receipt prior to the current spell.

Table 12: Impact of education on spell duration – Hazard ratios of variables for educational attainment (Persons commencing on Newstart Allowance only)

| | Edu missing | Year 10/11 | Year 12 | Post sch | Degree |
|---|---|---|---|---|---|
| | | **Males** | | | |
| All males | 1.22*** | 1.09*** | 1.13*** | 1.25*** | 1.23*** |
| Indigenous | 1.13*** | 1.03 | 1.11** | 1.20*** | 1.32*** |
| NESB immigrant | 1.25*** | 1.13*** | 1.15*** | 1.28*** | 1.31*** |
| High UR | 1.21*** | 1.12*** | 1.15*** | 1.27*** | 1.23*** |
| Regional area | 1.21*** | 1.09*** | 1.12*** | 1.22*** | 1.25*** |
| Mature age | 1.18*** | 1.04 | 1.07** | 1.14*** | 1.08** |
| Incapacitated | 1.18*** | 1.01 | 1.08* | 1.16*** | 1.14** |
| Have earnings | 1.10*** | 1.06*** | 1.05** | 1.14*** | 1.05** |
| Partner on IS | 1.20*** | 1.11*** | 1.15*** | 1.26*** | 1.30*** |
| TTO>50% | 1.10*** | 1.07*** | 1.05* | 1.13*** | 1.09** |
| Parents | 1.23*** | 1.12*** | 1.16*** | 1.27*** | 1.31*** |
| | | **Females** | | | |
| All females | 1.33*** | 1.13*** | 1.23*** | 1.32*** | 1.48*** |
| Indigenous | 1.46*** | 1.45*** | 1.67*** | 1.81*** | 2.18*** |
| NESB immigrant | 1.35*** | 1.16*** | 1.24*** | 1.39*** | 1.57*** |
| High UR | 1.30*** | 1.17*** | 1.24*** | 1.38*** | 1.51*** |
| Regional area | 1.29*** | 1.12*** | 1.20*** | 1.29*** | 1.44*** |
| Mature age | 1.23*** | 1.17*** | 1.19*** | 1.30*** | 1.40*** |
| Incapacitated | 1.25*** | 1.07 | 1.20*** | 1.21*** | 1.34*** |
| Have earnings | 1.16*** | 1.03 | 1.10*** | 1.15*** | 1.27*** |
| Partner on IS | 1.29*** | 1.18*** | 1.29*** | 1.42*** | 1.68*** |
| TTO>50% | 1.19*** | 1.13*** | 1.25*** | 1.25*** | 1.22*** |
| Parents | 1.34*** | 1.18** | 1.34*** | 1.38*** | 1.80*** |

# 6 Payment types and payment history of very long-term recipients

The focus to this stage of the report has been on identifying those most at risk of long-term spells on income support and examining differences across population sub-groups in the determinants of spell duration. While this analysis has considered the characteristics and income support history associated with long-term spells, a useful alternative perspective is provided by describing the payment types that long-spell recipients 'end up' on, as well as the payment history of those known to experience very long-term spells. In this section we therefore present descriptive information of this nature.

Table 13 presents information on the payment types on which persons observed to experience a spell in excess of five years ended up at the five-year mark. The sample for this table comprises persons who commenced on unemployment benefits prior to June 1999 and reached an income support spell duration of five years. Over 70% of males were still on unemployment benefits five years after commencing the unemployment benefit spell, while 42% of females were on unemployment benefits at the same stage. The most common alternative payment type destination at the five-year mark for males is DSP, with 19% having transferred to DSP. For females, Parenting Payment Single is the most common alternative payment type destination, accounting for one-quarter of females who commenced on unemployment benefits and had a spell lasting longer than five years. A further 14% of females were on DSP at the five-year mark, and 9% were on Parenting Payment Partnered.

Table 13: Payment type five years into the spell – Persons who commenced on unemployment benefits and experienced spells longer than five years (%)

| | Males | Females |
|---|---|---|
| Unemployment benefits | 70.49 | 41.75 |
| DSP | 19.16 | 13.83 |
| PPS | 2.37 | 24.89 |
| PPP | 1.38 | 9.08 |
| Carer payment | 1.81 | 2.34 |
| Partner Allowance | 0.40 | 2.72 |
| Other | 4.38 | 5.39 |

Table 14 presents summary information on the three-year income support history of those who commenced a spell on unemployment benefits in 1998 which became an income support spell in excess of five years duration. Information on the proportion of time on income support in the three years preceding commencement of the very long-term spell is presented in Panel A. The majority had experience of income support receipt in that three-year period,

but a substantial minority – 42% – did not receive income support payments at all. Perhaps surprising is that TTO is quite low in general.

Table 14: Three-year income support history of persons who commenced on unemployment benefits in 1998 and remained on income support for more than five years

| | Males | Females | Persons |
|---|---|---|---|
| No. of observations | 4,071 | 2,271 | 6,342 |
| **A. Three-year TTO history[a]** | | | |
| *% in each TTO category* | | | |
| TTO = 0 | 41.19 | 45.75 | 42.83 |
| 0 < TTO ≤ 0.25 | 17.42 | 19.15 | 18.04 |
| 0.25 < TTO ≤ 0.5 | 17.88 | 16.69 | 17.46 |
| 0.5 < TTO ≤ 0.75 | 17.22 | 13.83 | 16 |
| TTO > 0.75 | 6.29 | 4.58 | 5.68 |
| *Mean TTO \| TTO > 0 (%)* | 42.4 | 38.8 | 41.1 |
| **B. Last observed payment type – Those with IS history (TTO > 0)** | | | |
| *% in each payment type category* | | | |
| UB | 93.49 | 84.99 | 90.59 |
| Sickness benefits | 3.84 | 3.41 | 3.69 |
| DSP | 0.49 | 0.48 | 0.49 |
| PPS | 0.66 | 3.74 | 1.71 |
| Partner allowance | 0.34 | 3.08 | 1.28 |
| Other payments | 1.17 | 4.30 | 2.24 |
| **C. Duration of last income support spell – Those with IS history (TTO > 0)** | | | |
| *% in each duration category* | | | |
| < 6 fortnights | 18.05 | 18.75 | 18.28 |
| 6-12 fortnights | 16.58 | 18.67 | 17.29 |
| 13-25 fortnights | 22.93 | 25.65 | 23.86 |
| 26-51 fortnights | 27.23 | 23.54 | 25.98 |
| > 51 fortnights | 15.2 | 13.39 | 14.59 |
| *Mean duration (fortnights)* | 29.58 | 26.46 | 28.52 |
| **D. Elapsed time since completion of last spell – Those with IS history (TTO > 0)** | | | |
| *% in each duration category* | | | |
| 7-12 fortnights | 34.25 | 28.17 | 32.18 |
| 13-25 fortnights | 32.12 | 33.04 | 32.43 |
| 26-51 fortnights | 23.68 | 26.3 | 24.57 |
| 52-77 fortnights | 9.94 | 12.5 | 10.81 |
| *Mean duration (fortnights)* | 24.03 | 26.09 | 24.73 |

Notes: [a] Proportion of the 3 years preceding commencement of the 1998 spell on income support.

Panel B of Table 14 shows that, among those who had another income support spell in the three years prior to the long-term spell, for most individuals this was also on unemployment benefits. The unemployment benefit is therefore clearly the main 'feeder' payment type. Panel C shows that the spell preceding the long-term spell was itself generally quite long, averaging over two years. Among those with a recent history, the time since completion of the last spell

averages two years, with individuals distributed relatively evenly across the duration categories presented.

Compared with females, males on average spent slightly more time on income support in the three years preceding the long-term spell commenced in 1998, were more likely to have been on unemployment benefits, and had a slightly longer average duration of the spell preceding the long-term spell commenced in 1998.

# 7 Concluding comments

Persons who commence income support receipt on unemployment benefits are a particularly important group of income support recipients from the perspective of policy-makers concerned with reducing reliance on welfare. Regardless of whether such individuals ultimately transfer to other payment types, their welfare dependence can be directly traced to a failure to secure adequate employment. This is a source of reliance readily accepted by the wider the community as something to be minimised. That all people seeking employment should be able to obtain employment is widely seen as a worthy goal for society to aspire to achieve. By way of contrast, there is less community consensus about welfare reliance with other origins, such as disability, ageing or caring responsibilities.

In the context of the unambiguously desirable policy objective of reducing welfare reliance originating in unemployment – primarily by promoting employment participation – there is much value in understanding the associations between welfare recipient characteristics and behaviours and the duration of welfare receipt. Black et al (2005) estimated models of the determinants of duration on income support for males who commenced on unemployment benefits aged 25-44 years. In this study we have built on Black et al (2005) in several ways. First, we have expanded to the population examined to all persons who commenced on unemployment benefits. Second, we have explicitly addressed the issue of long-term receipt, estimating models of the determinants of long-term receipt and describing some key aspects of income support receipt prior to experience of a long-term spell. Third, we have investigated heterogeneity in duration and its determinants across different community groups, primarily chosen on the basis of our findings on the groups most at risk of long-term receipt. Like Black et al (2005), all of our analysis has focused on *spell* duration. However, our requirement that a break in payments be at least seven fortnights before a spell is regarded as completed means that our measure of spell duration corresponds reasonably well with the notion of sustained reliance over time.

The models estimated of the probability of experiencing a long-term spell identified seven key groups at a significantly elevated risk of a long spell: indigenous persons, immigrants from non-English speaking countries, persons residing outside the major cities, persons residing in high unemployment regions, persons over the age of 50 years, persons observed to experience work incapacity, and persons with a partner on income support. While the analysis also found other characteristics to be associated with an increased probability of a long spell, we settled on these groups as reasonably well-defined population sub-groups warranting separate investigation of spell duration. Persons with a recent history of income support receipt over a sustained period, persons with earnings while on income support and persons with dependent children were also examined separately.

The duration models estimated for the sample as a whole largely confirmed the findings of the Probit models for the recipient characteristics included in both sets of models. Significantly, combining paid employment with income support receipt is found, on balance, to reduce spell duration. However, a pattern of high-frequency earnings at low levels is not the most desirable within-spell earnings pattern from the perspective of promoting exit from income support. Indeed, our findings on the effects of earnings while on income support would seem to provide some support for the Working Credits programme. This programme facilitates high earnings over short periods (without loss of benefits), which the analysis undertaken in this report suggests is the earnings pattern most conducive to sustained exit from income support.

Duration models estimated for each population sub-group reveal somewhat lower duration dependence for a number of the 'at-risk' groups than is evident for the population of recipients as a whole. Hazard rates generally start out lower for these sub-groups, but do not decline as quickly as spell duration increases. We also find that most of the factors associated with increased spell duration for the population as a whole are likewise associated with increased spell duration for each of the groups examined. There are, however, a number of differences in the magnitudes of the effects of characteristics on duration, as well as some qualitative differences. Particularly notable are the differences in year effects across groups, suggesting policy changes and/or changes in economic conditions have differentially impacted on these groups.

# 8 References

Black, D., Tseng, Y. and Wilkins, R. (2005) "The Causes of Long-Term Income Support Receipt Associated with Unemployment," Report prepared for the Australian Government Departments of Family and Community Services and Employment and Workplace Relations.

Tseng, Y., Vu, H. and Wilkins, R. (2004) "Dynamic Properties of Income Support Receipt in Australia," Report prepared for the Australian Government Department of Family and Community Services.

# 9 Appendix A: Additional results from the Probit models

Table A1a: Sample means – Males

| | Jan 1995- March 2001 sample | | | Jan 1995-March 1999 sample | | |
|---|---|---|---|---|---|---|
| | On IS <= 3 years | On IS > 3 years | All | On IS <= 5 years | On IS > 5 years | All |
| No. of observations | 232,663 | 38,704 | 271,367 | 169,141 | 17,761 | 186,902 |
| Age 16-19 (%) | 15.13 | 10.11 | 14.42 | 15.01 | 8.99 | 14.43 |
| Age 20-24 (%) | 23.53 | 14.34 | 22.22 | 23.95 | 11.79 | 22.8 |
| Age 25-34 (%) | 31.26 | 23.56 | 30.16 | 31.62 | 22.87 | 30.79 |
| Age 35-44 (%) | 17.53 | 19.4 | 17.79 | 17.7 | 20.42 | 17.96 |
| Age 45-49 (%) | 5.5 | 8.19 | 5.88 | 5.46 | 10.08 | 5.90 |
| Age 50-54 (%) | 4.04 | 8.66 | 4.70 | 3.91 | 11.04 | 4.59 |
| Age 55+ (%) | 3.01 | 15.75 | 4.83 | 2.33 | 14.82 | 3.52 |
| Single (%) | 72.16 | 64.51 | 71.07 | 71.59 | 63.37 | 70.81 |
| Partner not on IS (%) | 7.89 | 7.18 | 7.79 | 8.00 | 7.15 | 7.92 |
| Partner on IS (%) | 19.95 | 28.31 | 21.14 | 20.41 | 29.47 | 21.27 |
| No dependent children (%) | 82.66 | 83.79 | 82.82 | 82.32 | 83.46 | 82.43 |
| Youngest child aged 0-5 (%) | 11.27 | 9.44 | 11.01 | 11.41 | 9.34 | 11.21 |
| Youngest child aged 6-12 (%) | 4.60 | 4.85 | 4.64 | 4.8 | 5.01 | 4.82 |
| Youngest child aged 13 or older (%) | 1.47 | 1.91 | 1.54 | 1.48 | 2.2 | 1.54 |
| Australian-born (%) | 71.97 | 65.73 | 71.08 | 71.77 | 66.37 | 71.26 |
| Indigenous (%) | 5.68 | 7.44 | 5.93 | 5.75 | 6.55 | 5.83 |
| ESC (%) | 8.79 | 8.62 | 8.77 | 8.79 | 8.55 | 8.77 |
| NESC (%) | 13.56 | 18.21 | 14.23 | 13.69 | 18.53 | 14.15 |
| Private rent (%) | 33.99 | 31.63 | 33.65 | 33.59 | 31.75 | 33.42 |
| Homeowner outright (%) | 13.29 | 20.47 | 14.32 | 14.23 | 21.67 | 14.94 |
| Other homeowner (%) | 4.62 | 3.96 | 4.52 | 3.52 | 3.4 | 3.51 |
| Government rent (%) | 2.01 | 4.46 | 2.36 | 2.11 | 5.32 | 2.42 |
| Other rent (%) | 33.13 | 29.76 | 32.65 | 34.25 | 28.71 | 33.72 |
| Missing (%) | 12.97 | 9.72 | 12.51 | 12.29 | 9.15 | 11.99 |
| Proportion of time with earnings (%) | 16.41 | 11.6 | 15.72 | 16.12 | 9.82 | 15.52 |
| Average earnings ($) | 228 | 249 | 231 | 229 | 240 | 230 |
| Prop of time with unearned income (%) | 16.92 | 22.38 | 17.7 | 15.95 | 22.7 | 16.6 |
| Average unearned income ($) | 9 | 24 | 11 | 11 | 24 | 12 |
| Entry cohort 1995 (%) | 13.55 | 15.16 | 13.78 | 19.65 | 20.84 | 19.76 |
| Entry cohort 1996 (%) | 18.26 | 22.45 | 18.86 | 26.6 | 31.12 | 27.03 |
| Entry cohort 1997 (%) | 16.39 | 17.74 | 16.59 | 23.79 | 23.92 | 23.8 |
| Entry cohort 1998 (%) | 16.34 | 14.58 | 16.09 | 23.46 | 19.27 | 23.06 |
| Entry cohort 1999 (%) | 16.18 | 13.4 | 15.79 | 6.5 | 4.84 | 6.35 |
| Entry cohort 2000 (%) | 15.16 | 13.52 | 14.93 | | | |
| Entry cohort 2001 (%) | 4.1 | 3.15 | 3.96 | | | |
| Enter in Quarter 1 (%) | 29.15 | 26.57 | 28.79 | 30.99 | 27.35 | 30.64 |
| Enter in Quarter 2 (%) | 22.09 | 23.71 | 22.32 | 22.34 | 24.12 | 22.51 |
| Enter in Quarter 3 (%) | 24.5 | 26.17 | 24.74 | 25.28 | 26.87 | 25.43 |
| Enter in Quarter 4 (%) | 24.26 | 23.55 | 24.16 | 21.4 | 21.66 | 21.42 |
| Incapacitated in 4 fortnight period (%) | 4.81 | 13.56 | 6.06 | 3.8 | 12.97 | 4.67 |
| Live in major city (%) | 56.64 | 51.64 | 55.93 | 56.77 | 51.16 | 56.24 |
| Unemployment rate (%) | 8.08 | 8.47 | 8.14 | 8.6 | 8.99 | 8.64 |

Table A1b: Sample means – Females

| | Jan 1995- March 2001 sample | | | Jan 1995-March 1999 sample | | |
|---|---|---|---|---|---|---|
| | On IS <= 3 years | On IS > 3 years | All | On IS <= 5 years | On IS > 5 years | All |
| No. of observations | 115,105 | 21,960 | 137,065 | 81,594 | 10,872 | 92,466 |
| Age 16-19 (%) | 24.59 | 25.54 | 24.74 | 24.44 | 28.35 | 24.9 |
| Age 20-24 (%) | 32.89 | 21.03 | 30.99 | 33.32 | 19.55 | 31.7 |
| Age 25-34 (%) | 23.41 | 17.63 | 22.49 | 23.95 | 17.45 | 23.19 |
| Age 35-44 (%) | 9.65 | 12.29 | 10.08 | 9.96 | 12.52 | 10.26 |
| Age 45-49 (%) | 4.81 | 8.42 | 5.39 | 4.86 | 9.92 | 5.46 |
| Age 50-54 (%) | 3.48 | 9.7 | 4.47 | 3.47 | 12.21 | 4.5 |
| Age 55+ (%) | 1.17 | 5.38 | 1.85 | | | |
| Single (%) | 86.39 | 77.54 | 84.97 | 86.15 | 78.81 | 85.28 |
| Partner not on IS (%) | 5.13 | 6.56 | 5.36 | 5.1 | 5.77 | 5.17 |
| Partner on IS (%) | 8.48 | 15.9 | 9.67 | 8.76 | 15.42 | 9.54 |
| No dependent children (%) | 97.29 | 95.52 | 97.01 | 97.16 | 95.74 | 97 |
| Youngest child aged 0-5 (%) | 1.09 | 1.94 | 1.23 | 1.18 | 1.89 | 1.26 |
| Youngest child aged 6-12 (%) | 0.86 | 1.52 | 0.96 | 0.93 | 1.5 | 1 |
| Youngest child aged 13 or older (%) | 0.75 | 1.02 | 0.8 | 0.73 | 0.86 | 0.74 |
| Australian-born (%) | 76.43 | 66.88 | 74.9 | 76.31 | 66.95 | 75.21 |
| Indigenous (%) | 4.35 | 10.19 | 5.29 | 4.51 | 10.48 | 5.21 |
| ESC (%) | 7.29 | 6.72 | 7.2 | 7.29 | 6.18 | 7.16 |
| NESC (%) | 11.93 | 16.21 | 12.61 | 11.89 | 16.39 | 12.42 |
| Private rent (%) | 35.43 | 34.42 | 35.27 | 35.24 | 33.95 | 35.09 |
| Homeowner outright (%) | 7.81 | 13.99 | 8.8 | 8.02 | 12.98 | 8.61 |
| Other homeowner (%) | 2.84 | 3.16 | 2.89 | 2.15 | 2.47 | 2.19 |
| Government rent (%) | 1.39 | 3.93 | 1.8 | 1.44 | 4.29 | 1.78 |
| Other rent (%) | 35.58 | 31.71 | 34.96 | 37.43 | 33.03 | 36.91 |
| Missing (%) | 16.95 | 12.79 | 16.29 | 15.72 | 13.29 | 15.43 |
| Proportion of time with earnings (%) | 24.27 | 14.86 | 22.76 | 23.98 | 12.53 | 22.63 |
| Average earnings ($) | 200 | 206 | 201 | 203 | 197 | 202 |
| Prop of time with unearned income (%) | 17.04 | 17.71 | 17.15 | 15.91 | 16.1 | 15.94 |
| Average unearned income ($) | 9 | 19 | 10 | 10 | 19 | 11 |
| Entry cohort 1995 (%) | 12.05 | 13.23 | 12.24 | 17.75 | 18.7 | 17.86 |
| Entry cohort 1996 (%) | 17.87 | 20.8 | 18.34 | 26.43 | 28.94 | 26.73 |
| Entry cohort 1997 (%) | 16.02 | 17.82 | 16.31 | 23.6 | 24.73 | 23.73 |
| Entry cohort 1998 (%) | 17.26 | 15.53 | 16.98 | 25.1 | 21.96 | 24.73 |
| Entry cohort 1999 (%) | 17.14 | 14.64 | 16.74 | 7.13 | 5.67 | 6.96 |
| Entry cohort 2000 (%) | 15.54 | 14.39 | 15.36 | | | |
| Entry cohort 2001 (%) | 4.12 | 3.6 | 4.03 | | | |
| Enter in Quarter 1 (%) | 32.1 | 28.54 | 31.53 | 35.29 | 30.06 | 34.68 |
| Enter in Quarter 2 (%) | 20.01 | 22.19 | 20.36 | 20.22 | 22.16 | 20.45 |
| Enter in Quarter 3 (%) | 22.32 | 25 | 22.75 | 23.15 | 24.97 | 23.36 |
| Enter in Quarter 4 (%) | 25.57 | 24.27 | 25.37 | 21.34 | 22.81 | 21.51 |
| Incapacitated in 4 fortnight period (%) | 5.64 | 17.24 | 7.5 | 4.59 | 14.51 | 5.75 |
| Live in major city (%) | 59.25 | 52.88 | 58.23 | 59.29 | 53.02 | 58.56 |
| Unemployment rate (%) | 8.01 | 8.39 | 8.07 | 8.55 | 8.98 | 8.6 |

Table A2a: Probit model coefficient estimates – Males

| | 1995-2001 sample | | 1995-1999 sample | |
|---|---|---|---|---|
| | Coef. | Std. Error | Coef. | Std. Error |
| *Age (16-19 omitted)* | | | | |
| 20-24 | -0.018 | 0.012 | -0.064*** | 0.017 |
| 25-34 | 0.111*** | 0.011 | 0.145*** | 0.016 |
| 35-44 | 0.364*** | 0.013 | 0.438*** | 0.017 |
| 45-49 | 0.549*** | 0.016 | 0.708*** | 0.021 |
| 50-54 | 0.774*** | 0.017 | 0.964*** | 0.022 |
| 55+ | 1.330*** | 0.017 | 1.452*** | 0.024 |
| *Partner status (single omitted)* | | | | |
| Partner not on IS | -0.203*** | 0.014 | -0.231*** | 0.020 |
| Partner on IS | 0.041*** | 0.012 | 0.011 | 0.015 |
| *Dependent children (no dependent child omitted)* | | | | |
| Youngest child aged 0-5 | -0.049*** | 0.014 | -0.043** | 0.019 |
| Youngest child aged 6-12 | -0.098*** | 0.017 | -0.136*** | 0.023 |
| Youngest child aged 13 or over | -0.141*** | 0.025 | -0.118*** | 0.033 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | |
| Indigenous | 0.223*** | 0.013 | 0.120*** | 0.018 |
| ESC | -0.131*** | 0.012 | -0.166*** | 0.016 |
| NESC | 0.097*** | 0.009 | 0.057*** | 0.013 |
| *Housing/living circumstances (private rent omitted)* | | | | |
| Homeowner outright | -0.118*** | 0.011 | -0.144*** | 0.015 |
| Other homeowner | -0.227*** | 0.017 | -0.201*** | 0.025 |
| Government rent | 0.362*** | 0.019 | 0.418*** | 0.024 |
| Other rent | 0.024*** | 0.008 | 0.001 | 0.011 |
| Missing | -0.013 | 0.012 | -0.022 | 0.016 |
| *Private income* | | | | |
| Prop of time with earnings | -0.497*** | 0.015 | -0.717*** | 0.022 |
| Average earned income while on IS | 0.005*** | 0.000 | 0.003*** | 0.001 |
| Prop of time with unearned income | -0.086*** | 0.010 | -0.042*** | 0.013 |
| Average unearned income when positive | 0.004*** | 0.001 | 0.002* | 0.001 |
| *Calendar year (1995 omitted)* | | | | |
| 1996 | 0.033*** | 0.011 | 0.019 | 0.013 |
| 1997 | -0.058*** | 0.011 | -0.086*** | 0.013 |
| 1998 | -0.145*** | 0.012 | -0.168*** | 0.014 |
| 1999 | -0.189*** | 0.012 | -0.208*** | 0.024 |
| 2000 | -0.148*** | 0.012 | | |
| 2001 | -0.211*** | 0.020 | | |
| *Calendar quarter (Quarter 1 omitted)* | | | | |
| Quarter 2 | 0.072*** | 0.009 | 0.067*** | 0.013 |
| Quarter 3 | 0.061*** | 0.009 | 0.052*** | 0.013 |
| Quarter 4 | 0.024** | 0.009 | 0.015 | 0.013 |
| Incapacitated | 0.539*** | 0.011 | 0.578*** | 0.016 |
| Reside in capital city | -0.106*** | 0.007 | -0.123*** | 0.009 |
| Unemployment Rate | 0.024*** | 0.001 | 0.023*** | 0.002 |
| Constant | -1.393*** | 0.020 | -1.636*** | 0.026 |

Note: ***indicates significance at 1% level. **indicates significance at 5% level. *indicates significance at 10% level.

Table A2b: Probit model coefficient estimates – Females

| | 1995-2001 sample | | 1995-1999 sample | |
|---|---|---|---|---|
| | Coef. | Std. Error | Coef. | Std. Error |
| *Age (15-19 omitted)* | | | | |
| 20-24 | -0.243*** | 0.012 | -0.329*** | 0.016 |
| 25-34 | -0.205*** | 0.014 | -0.260*** | 0.018 |
| 35-44 | 0.052*** | 0.017 | 0.012 | 0.022 |
| 45-49 | 0.268*** | 0.021 | 0.321*** | 0.026 |
| 50-54 | 0.661*** | 0.020 | 0.677*** | 0.028 |
| *Partner status (single omitted)* | | | | |
| Partner not on IS | 0.014 | 0.019 | -0.051** | 0.026 |
| Partner on IS | 0.221*** | 0.015 | 0.186*** | 0.019 |
| *Dependent children (no dependent child omitted)* | | | | |
| Youngest child aged 0-5 | 0.224*** | 0.036 | 0.223*** | 0.046 |
| Youngest child aged 6-12 | 0.104*** | 0.040 | 0.073 | 0.053 |
| Youngest child aged 13 or over | -0.109** | 0.046 | -0.202*** | 0.065 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | |
| Indigenous | 0.492*** | 0.017 | 0.451*** | 0.022 |
| ESC | -0.099*** | 0.017 | -0.129*** | 0.024 |
| NESC | 0.155*** | 0.013 | 0.156*** | 0.017 |
| *Housing/living circumstances (private rent omitted)* | | | | |
| Homeowner outright | -0.074*** | 0.017 | -0.120*** | 0.023 |
| Other homeowner | -0.190*** | 0.027 | -0.154*** | 0.040 |
| Government rent | 0.357*** | 0.028 | 0.384*** | 0.036 |
| Other rent | -0.052*** | 0.011 | -0.066*** | 0.014 |
| Missing | -0.121*** | 0.014 | -0.095*** | 0.019 |
| *Private income* | | | | |
| Prop of time with earnings | -0.614*** | 0.017 | -0.834*** | 0.024 |
| Average earned income while on IS | 0.003*** | 0.000 | 0.003*** | 0.001 |
| Prop of time with unearned income | -0.144*** | 0.014 | -0.108*** | 0.019 |
| Average unearned income when positive | 0.004*** | 0.001 | 0.003* | 0.002 |
| *Calendar year (1995 omitted)* | | | | |
| 1996 | 0.019 | 0.016 | 0.010 | 0.018 |
| 1997 | -0.029* | 0.016 | -0.033* | 0.018 |
| 1998 | -0.139*** | 0.017 | -0.126*** | 0.019 |
| 1999 | -0.155*** | 0.017 | -0.086*** | 0.031 |
| 2000 | -0.132*** | 0.017 | | |
| 2001 | -0.097*** | 0.027 | | |
| *Calendar quarter (Quarter 1 omitted)* | | | | |
| Quarter 2 | 0.102*** | 0.013 | 0.118*** | 0.017 |
| Quarter 3 | 0.099*** | 0.013 | 0.097*** | 0.017 |
| Quarter 4 | 0.053*** | 0.012 | 0.104*** | 0.017 |
| Incapacitated | 0.653*** | 0.014 | 0.621*** | 0.020 |
| Reside in capital city | -0.111*** | 0.009 | -0.106*** | 0.012 |
| Unemployment Rate | 0.026*** | 0.002 | 0.029*** | 0.002 |
| Constant | -1.062*** | 0.026 | -1.244*** | 0.032 |

Note: ***indicates significance at 1% level. **indicates significance at 5% level. *indicates significance at 10% level.

# 10 Appendix B: Additional results from the duration models

Table B1a: Sample means – Male duration models

| | All Males | Indigenous | NESC | High UR | Regional areas | Mature age |
|---|---|---|---|---|---|---|
| No. of observations | 234,187 | 13,510 | 33,241 | 47,879 | 102,708 | 19,493 |
| Age 16-19 (%) | 14.95 | 21.72 | 7.77 | 18.04 | 16.75 | |
| Age 20-24 (%) | 22.68 | 21.10 | 16.50 | 21.63 | 21.34 | |
| Age 25-34 (%) | 29.77 | 31.72 | 26.72 | 27.42 | 28.03 | |
| Age 35-44 (%) | 18.16 | 17.35 | 25.34 | 17.60 | 18.57 | |
| Age 45-49 (%) | 6.11 | 4.40 | 9.33 | 6.45 | 6.43 | |
| Age 50-54 (%) | 5.04 | 2.50 | 8.59 | 5.19 | 5.33 | 60.50 |
| Age 55+ (%) | 3.29 | 1.21 | 5.75 | 3.67 | 3.54 | 39.50 |
| No dependent children (%) | 84.17 | 80.61 | 75.50 | 82.19 | 82.27 | 86.28 |
| Youngest child aged 0-5 (%) | 10.34 | 13.86 | 15.06 | 11.34 | 11.56 | 2.50 |
| Youngest child aged 6-12 (%) | 4.12 | 4.48 | 6.80 | 4.75 | 4.69 | 6.01 |
| Youngest child aged 13 or older (%) | 1.38 | 1.05 | 2.63 | 1.71 | 1.49 | 5.21 |
| Private rent (%) | 33.91 | 26.22 | 31.81 | 29.64 | 32.97 | 25.18 |
| Homeowner outright (%) | 9.37 | 3.99 | 14.20 | 11.51 | 10.65 | 39.55 |
| Other homeowner (%) | 7.15 | 3.35 | 9.66 | 8.06 | 7.13 | 14.98 |
| Government rent (%) | 2.19 | 6.54 | 3.51 | 2.31 | 2.07 | 3.03 |
| Other rent (%) | 33.65 | 46.19 | 27.15 | 33.60 | 34.80 | 14.21 |
| Missing (%) | 13.73 | 13.71 | 13.67 | 14.87 | 12.38 | 3.05 |
| Single (%) | 75.11 | 74.91 | 60.53 | 71.93 | 72.08 | 44.0 |
| Partner not on IS (%) | 5.79 | 4.78 | 10.33 | 5.47 | 5.69 | 15.12 |
| Partner on IS (%) | 19.10 | 20.30 | 29.14 | 22.60 | 22.23 | 40.88 |
| Avg private income – current ($'00) | 0.26 | 0.15 | 0.24 | 0.30 | 0.28 | 0.41 |
| Have earnings (%) | 13.03 | 8.06 | 10.76 | 15.22 | 14.46 | 12.63 |
| Avg earnings – current ($'00) | 0.22 | 0.13 | 0.20 | 0.25 | 0.24 | 0.26 |
| Earnings – Time (spell) (%) | 11.64 | 7.35 | 9.25 | 13.65 | 12.90 | 11.91 |
| Earnings – Amount (spell) ($'00) | 0.75 | 0.58 | 0.64 | 0.87 | 0.84 | 0.90 |
| UB – High search (%) | 87.31 | 74.52 | 82.87 | 88.5 | 87.43 | 80.79 |
| UB – Low search (%) | 2.39 | 4.59 | 3.35 | 2.6 | 2.56 | 3.5 |
| UB – No search (%) | 10.3 | 20.9 | 13.77 | 8.9 | 10.01 | 15.71 |
| Pension/PPS (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other allowance (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| No search * Avg private income | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.03 |
| No search * Avg earn current | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.04 |
| No search * Have earnings | 0.96 | 1.18 | 0.92 | 1.11 | 1.08 | 1.72 |
| No search * Earn amount (spell ) | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.05 |
| No search * Earn time (spell) | 0.13 | 0.12 | 0.11 | 0.19 | 0.16 | 0.39 |
| Incapacity within 4 fortnights (%) | 6.66 | 4.89 | 6.47 | 6.15 | 6.20 | 12.88 |
| Unemployment Rate (%) | 7.0 | 6.87 | 6.66 | 9.36 | 7.55 | 7.07 |
| Job search * unemployment rate | 6.31 | 5.54 | 5.76 | 8.55 | 6.83 | 5.98 |
| Live in major city (%) | 56.14 | 28.91 | 81.52 | 39.01 | 0 | 53.23 |
| No pre-3.5 yr TTO (%) | 39.58 | 29.99 | 44.47 | 38.61 | 37.21 | 49.54 |
| 0<pre-3.5 yr TTO <=0.25 (%) | 31.68 | 30.29 | 27.73 | 30.85 | 31.94 | 26.60 |
| 0.25<pre-3.5 yr TTO <=0.5 (%) | 15.73 | 20.20 | 14.90 | 15.85 | 16.66 | 13.03 |
| 0.5<pre-3.5 yr TTO <=0.75 (%) | 8.86 | 13.66 | 8.52 | 9.91 | 9.73 | 6.72 |
| Pre-3.5 yr TTO > 0.75 (%) | 4.16 | 5.86 | 4.38 | 4.79 | 4.47 | 4.12 |
| No pre-1 yr TTO (%) | 64.67 | 55.77 | 68.57 | 63.12 | 62.12 | 72.11 |
| 0<pre-1 yr TTO <=0.25 (%) | 16.36 | 18.30 | 13.75 | 16.57 | 17.34 | 12.70 |
| 0.25 <pre-1 yr TTO <=0.5 (%) | 12.6 | 16.54 | 10.98 | 13.09 | 13.62 | 9.84 |
| Pre-1 yr TTO > 0.5 (%) | 6.37 | 9.40 | 6.69 | 7.22 | 6.92 | 5.35 |
| Job search requirement 3.5 years prior to entry (%) | 51.03 | 59.44 | 46.82 | 52.43 | 53.33 | 40.90 |
| Job search requirement 1 year prior to entry (%) | 24.39 | 29.30 | 21.89 | 25.91 | 26.21 | 18.26 |
| Pre-3.5 yr earnings time >0.5 (%) | 7.51 | 5.90 | 5.90 | 9.35 | 9.02 | 7.60 |
| Pre-1 yr earnings time >0.5 (%) | 23.77 | 19.51 | 18.65 | 27.48 | 27.29 | 21.28 |
| Multiple spells in pre-3.5 yr period (%) | 51.67 | 58.73 | 45.94 | 51.57 | 53.60 | 40.63 |
| Australian-born (%) | 72.00 | | | 80.73 | 78.02 | 56.91 |
| Indigenous (%) | 5.77 | 100 | | 4.90 | 9.35 | 2.57 |
| ESC (%) | 8.04 | | | 7.08 | 6.65 | 16.06 |
| NESC (%) | 14.19 | | 100 | 7.29 | 5.98 | 24.46 |

Table B1b: Sample means – Male duration models

| | *All Males* | *Parents* | *Incap.* | *Earned income* | *Ptnr. On IS* | *IS >50%* |
|---|---|---|---|---|---|---|
| No. of observations | 234,187 | 37,083 | 21,158 | 71,865 | 44,728 | 27,043 |
| Age 16-19 (%) | 14.95 | 0.55 | 9.62 | 11.81 | 1.12 | 1.13 |
| Age 20-24 (%) | 22.68 | 5.42 | 15.67 | 22.71 | 6.76 | 20.52 |
| Age 25-34 (%) | 29.77 | 34.60 | 26.11 | 30.86 | 30.08 | 41.68 |
| Age 35-44 (%) | 18.16 | 41.06 | 23.16 | 19.79 | 32.72 | 22.91 |
| Age 45-49 (%) | 6.11 | 11.15 | 9.21 | 6.67 | 11.50 | 6.88 |
| Age 50-54 (%) | 5.04 | 5.46 | 9.21 | 5.11 | 9.86 | 4.45 |
| Age 55+ (%) | 3.29 | 1.76 | 7.01 | 3.06 | 7.96 | 2.43 |
| No dependent children (%) | 84.17 | | 84.65 | 80.17 | 30.37 | 83.60 |
| Youngest child aged 0-5 (%) | 10.34 | 65.30 | 8.68 | 13.01 | 46.30 | 11.07 |
| Youngest child aged 6-12 (%) | 4.12 | 25.99 | 4.69 | 5.13 | 17.77 | 4.10 |
| Youngest child aged 13 or older (%) | 1.38 | 8.70 | 1.98 | 1.70 | 5.56 | 1.23 |
| Private rent (%) | 33.91 | 38.18 | 32.68 | 37.00 | 36.64 | 41.96 |
| Homeowner outright (%) | 9.37 | 23.61 | 14.00 | 10.61 | 26.42 | 6.32 |
| Other homeowner (%) | 7.15 | 22.75 | 7.96 | 8.23 | 20.02 | 3.61 |
| Government rent (%) | 2.19 | 6.41 | 2.85 | 2.36 | 5.64 | 5.67 |
| Other rent (%) | 33.65 | 6.55 | 32.96 | 29.88 | 8.44 | 36.02 |
| Missing (%) | 13.73 | 2.51 | 9.55 | 11.92 | 2.84 | 6.42 |
| Single (%) | 75.11 | 1.51 | 73.30 | 70.30 | | 77.37 |
| Partner not on IS (%) | 5.79 | 14.51 | 6.48 | 5.71 | | 3.44 |
| Partner on IS (%) | 19.10 | 83.98 | 20.22 | 23.99 | 100 | 19.19 |
| Avg private income – current ($'00) | 0.26 | 0.33 | 0.20 | 0.72 | 0.37 | 0.26 |
| Have earnings (%) | 13.03 | 15.03 | 7.18 | 39.48 | 15.52 | 14.29 |
| Avg earnings – current ($'00) | 0.22 | 0.28 | 0.12 | 0.68 | 0.30 | 0.24 |
| Earnings – Time (spell) (%) | 11.64 | 14.26 | 4.80 | 36.55 | 14.70 | 11.22 |
| Earnings – Amount (spell) ($'00) | 0.75 | 1.01 | 0.45 | 2.04 | 1.05 | 0.85 |
| UB – High search (%) | 87.31 | 87.65 | 24.09 | 91.52 | 86.14 | 84.13 |
| UB – Low search (%) | 2.39 | 2.37 | 0.36 | 2.52 | 2.6 | 5.9 |
| UB – No search (%) | 10.3 | 9.98 | 75.54 | 5.95 | 11.26 | 9.97 |
| Pension/PPS (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other allowance (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| No search * Avg private income | 0.01 | 0.01 | 0.05 | 0.02 | 0.02 | 0.01 |
| No search * Avg earn current | 0.02 | 0.03 | 0.07 | 0.06 | 0.03 | 0.03 |
| No search * Have earnings | 0.96 | 1.23 | 3.26 | 2.79 | 1.33 | 1.37 |
| No search * Earn amount (spell ) | 0.02 | 0.03 | 0.07 | 0.03 | 0.03 | 0.03 |
| No search * Earn time (spell) | 0.13 | 0.21 | 0.57 | 0.38 | 0.25 | 0.20 |
| Incapacity within 4 fortnights (%) | 6.66 | 6.26 | 73.71 | 3.56 | 6.86 | 6.36 |
| Unemployment Rate (%) | 7.0 | 7.27 | 6.84 | 7.15 | 7.31 | 7.13 |
| Job search * unemployment rate | 6.31 | 6.58 | 1.71 | 6.74 | 6.53 | 6.46 |
| Live in major city (%) | 56.14 | 50.88 | 58.87 | 51.14 | 48.95 | 51.53 |
| No pre-3.5 yr TTO (%) | 39.58 | 38.32 | 40.67 | 37.66 | 40.34 | |
| 0<pre-3.5 yr TTO <=0.25 (%) | 31.68 | 31.65 | 30.92 | 32.52 | 30.67 | |
| 0.25<pre-3.5 yr TTO <=0.5 (%) | 15.73 | 16.22 | 15.60 | 16.37 | 15.62 | |
| 0.5<pre-3.5 yr TTO <=0.75 (%) | 8.86 | 8.97 | 8.96 | 9.12 | 8.71 | 76.70 |
| Pre-3.5 yr TTO > 0.75 (%) | 4.16 | 4.84 | 3.85 | 4.32 | 4.66 | 23.30 |
| No pre-1 yr TTO (%) | 64.67 | 66.16 | 68.03 | 63.39 | 67.07 | 14.46 |
| 0<pre-1 yr TTO <=0.25 (%) | 16.36 | 16.21 | 14.22 | 17.18 | 15.44 | 18.72 |
| 0.25 <pre-1 yr TTO <=0.5 (%) | 12.6 | 11.52 | 11.66 | 13.11 | 11.42 | 35.09 |
| Pre-1 yr TTO > 0.5 (%) | 6.37 | 6.12 | 6.10 | 6.31 | 6.07 | 31.73 |
| Job search requirement 3.5 years prior to entry (%) | 51.03 | 50.90 | 44.25 | 53.10 | 49.66 | 97.20 |
| Job search requirement 1 year prior to entry (%) | 24.39 | 22.26 | 16.41 | 25.56 | 22.10 | 71.07 |
| Pre-3.5 yr earnings time >0.5 (%) | 7.51 | 10.03 | 5.35 | 14.32 | 9.99 | 22.07 |
| Pre-1 yr earnings time >0.5 (%) | 23.77 | 29.37 | 19.99 | 35.95 | 28.52 | 54.45 |
| Multiple spells in pre-3.5 yr period (%) | 51.67 | 51.03 | 48.75 | 53.02 | 49.35 | 61.03 |
| Australian-born (%) | 72.00 | 61.42 | 72.70 | 75.75 | 61.93 | 69.91 |
| Indigenous (%) | 5.77 | 7.07 | 4.24 | 3.99 | 6.13 | 9.00 |
| ESC (%) | 8.04 | 9.55 | 8.81 | 8.32 | 10.28 | 6.90 |
| NESC (%) | 14.19 | 21.96 | 14.25 | 11.94 | 21.66 | 14.20 |

Table B1c: Sample means – Female duration models

| | *All females* | *ATSI* | *NESC* | *High UR* | *Regional areas* | *Mature age* |
|---|---|---|---|---|---|---|
| No. of observations | 127,327 | 6,275 | 16,233 | 25,110 | 52,736 | 6,277 |
| Age 16-19 (%) | 25.44 | 38.85 | 14.05 | 30.49 | 29.46 | |
| Age 20-24 (%) | 31.77 | 24.70 | 27.37 | 28.69 | 29.79 | |
| Age 25-34 (%) | 22.08 | 18.15 | 24.73 | 18.36 | 18.66 | |
| Age 35-44 (%) | 10.07 | 11.33 | 15.46 | 10.39 | 10.48 | |
| Age 45-49 (%) | 5.71 | 4.21 | 9.79 | 6.34 | 6.20 | |
| Age 50-54 (%) | 4.93 | 2.76 | 8.61 | 5.74 | 5.40 | 100 |
| No dependent children (%) | 97.35 | 95.09 | 94.99 | 96.55 | 96.77 | 97.24 |
| Youngest child aged 0-5 (%) | 1.06 | 2.52 | 1.84 | 1.31 | 1.28 | 0.08 |
| Youngest child aged 6-12 (%) | 0.77 | 1.43 | 1.52 | 1.06 | 1.00 | 0.51 |
| Youngest child aged 13 or older (%) | 0.82 | 0.96 | 1.66 | 1.08 | 0.95 | 2.17 |
| Private rent (%) | 35.51 | 29.50 | 30.44 | 31.38 | 34.95 | 26.06 |
| Homeowner outright (%) | 6.04 | 2.50 | 10.10 | 7.95 | 7.16 | 37.74 |
| Other homeowner (%) | 4.51 | 2.06 | 6.57 | 5.23 | 4.58 | 16.04 |
| Government rent (%) | 1.75 | 5.12 | 3.28 | 1.85 | 1.44 | 4.54 |
| Other rent (%) | 34.00 | 44.16 | 30.41 | 34.22 | 35.72 | 12.22 |
| Missing (%) | 18.19 | 16.67 | 19.20 | 19.38 | 16.14 | 3.39 |
| Single (%) | 86.46 | 84.25 | 77.70 | 83.44 | 83.24 | 66.53 |
| Partner not on IS (%) | 4.84 | 5.12 | 8.80 | 4.88 | 5.13 | 9.78 |
| Partner on IS (%) | 8.69 | 10.63 | 13.50 | 11.68 | 11.64 | 23.69 |
| Avg private income – current ($'00) | 0.40 | 0.22 | 0.33 | 0.46 | 0.44 | 0.61 |
| Have earnings (%) | 19.47 | 10.74 | 14.49 | 22.08 | 21.55 | 20.16 |
| Avg earnings – current ($'00) | 0.37 | 0.21 | 0.29 | 0.43 | 0.41 | 0.47 |
| Earnings – Time (spell) (%) | 19.70 | 9.80 | 13.98 | 22.30 | 21.61 | 19.80 |
| Earnings – Amount (spell) ($'00) | 0.97 | 0.62 | 0.79 | 1.07 | 1.05 | 1.22 |
| UB – High search (%) | 84.52 | 71.73 | 78.88 | 85.75 | 85.26 | 77.33 |
| UB – Low search (%) | 1.98 | 3.54 | 3.38 | 2.19 | 2.13 | 3.01 |
| UB – No search (%) | 13.49 | 24.73 | 17.74 | 12.06 | 12.61 | 19.66 |
| Pension/PPS (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other allowance (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| No search * Avg private income | 0.03 | 0.05 | 0.02 | 0.03 | 0.03 | 0.04 |
| No search * Avg earn current | 0.05 | 0.07 | 0.04 | 0.06 | 0.06 | 0.08 |
| No search * Have earnings | 2.09 | 2.59 | 1.68 | 2.42 | 2.27 | 3.38 |
| No search * Earn amount (spell ) | 0.06 | 0.11 | 0.04 | 0.06 | 0.06 | 0.07 |
| No search * Earn time (spell) | 0.46 | 0.76 | 0.28 | 0.57 | 0.53 | 0.65 |
| Incapacity within 4 fortnights (%) | 7.73 | 8.02 | 7.99 | 7.24 | 7.02 | 15.77 |
| Unemployment Rate (%) | 6.91 | 6.86 | 6.59 | 9.30 | 7.52 | 7.00 |
| Job search * unemployment rate | 6.01 | 5.23 | 5.44 | 8.21 | 6.60 | 5.68 |
| Live in major city (%) | 58.58 | 33.15 | 82.54 | 39.38 | 0 | 54.61 |
| No pre-3.5 yr TTO (%) | 48.78 | 40.92 | 50.34 | 48.07 | 47.32 | 48.62 |
| 0<pre-3.5 yr TTO <=0.25 (%) | 30.61 | 28.53 | 27.65 | 29.93 | 30.23 | 25.08 |
| 0.25<pre-3.5 yr TTO <=0.5 (%) | 11.25 | 14.12 | 11.48 | 11.36 | 11.84 | 12.73 |
| 0.5<pre-3.5 yr TTO <=0.75 (%) | 5.92 | 10.61 | 6.44 | 6.65 | 6.72 | 8.33 |
| Pre-3.5 yr TTO > 0.75 (%) | 3.43 | 5.82 | 4.09 | 3.99 | 3.89 | 5.24 |
| No pre-1 yr TTO (%) | 71.62 | 64.70 | 72.24 | 70.77 | 70.22 | 72.50 |
| 0<pre-1 yr TTO <=0.25 (%) | 14.47 | 15.19 | 12.99 | 14.55 | 14.76 | 12.57 |
| 0.25 <pre-1 yr TTO <=0.5 (%) | 9.33 | 12.53 | 9.14 | 9.80 | 10.04 | 9.49 |
| Pre-1 yr TTO > 0.5 (%) | 4.57 | 7.59 | 5.64 | 4.88 | 4.98 | 5.43 |
| Job search requirement 3.5 years prior to entry (%) | 38.73 | 44.91 | 36.28 | 39.28 | 40.03 | 35.10 |
| Job search requirement 1 year prior to entry (%) | 17.4 | 20.70 | 16.75 | 18.01 | 18.62 | 15.31 |
| Pre-3.5 yr earnings time >0.5 (%) | 9.16 | 6.42 | 7.41 | 11.02 | 10.58 | 11.71 |
| Pre-1 yr earnings time >0.5 (%) | 25.20 | 20.13 | 19.82 | 28.28 | 28.00 | 29.22 |
| Multiple spells in pre-3.5 yr period (%) | 43.73 | 47.47 | 41.14 | 43.50 | 44.34 | 38.60 |
| Australian-born (%) | 75.82 | | | 83.01 | 81.34 | 61.38 |
| Indigenous (%) | 4.93 | | | 4.50 | 7.95 | 2.76 |
| ESC (%) | 6.50 | | | 6.13 | 5.33 | 13.61 |
| NESC (%) | 12.75 | | | 6.37 | 5.38 | 22.26 |

Table B1d: Sample means – Female duration models

| | *All females* | *Parents* | *Incap.* | *Earned income* | *Ptnr. On IS* | *IS >50%* |
|---|---|---|---|---|---|---|
| No. of observations | 127,327 | 3,379 | 13,035 | 53,187 | 11,068 | 10,315 |
| Age 16-19 (%) | 25.44 | 1.21 | 16.54 | 21.77 | 8.02 | 1.85 |
| Age 20-24 (%) | 31.77 | 6.63 | 23.52 | 34.37 | 15.94 | 25.82 |
| Age 25-34 (%) | 22.08 | 30.04 | 23.64 | 22.32 | 25.21 | 30.30 |
| Age 35-44 (%) | 10.07 | 42.47 | 15.88 | 10.57 | 24.13 | 22.63 |
| Age 45-49 (%) | 5.71 | 14.53 | 10.40 | 6.04 | 13.26 | 11.90 |
| Age 50-54 (%) | 4.93 | 5.12 | 10.03 | 4.93 | 13.44 | 7.50 |
| No dependent children (%) | 97.35 | | 96.52 | 97.26 | 81.12 | 92.19 |
| Youngest child aged 0-5 (%) | 1.06 | 40.01 | 1.17 | 0.95 | 8.98 | 3.06 |
| Youngest child aged 6-12 (%) | 0.77 | 29.12 | 0.99 | 0.88 | 6.25 | 2.30 |
| Youngest child aged 13 or older (%) | 0.82 | 30.87 | 1.31 | 0.91 | 3.65 | 2.45 |
| Private rent (%) | 35.51 | 37.88 | 37.32 | 38.53 | 40.21 | 45.18 |
| Homeowner outright (%) | 6.04 | 23.88 | 11.21 | 6.06 | 23.24 | 8.37 |
| Other homeowner (%) | 4.51 | 17.61 | 7.44 | 4.63 | 15.06 | 5.02 |
| Government rent (%) | 1.75 | 7.04 | 2.94 | 1.69 | 3.34 | 7.09 |
| Other rent (%) | 34.00 | 9.35 | 30.25 | 31.96 | 14.19 | 28.44 |
| Missing (%) | 18.19 | 4.23 | 10.84 | 17.14 | 3.97 | 5.90 |
| Single (%) | 86.46 | 24.30 | 79.73 | 88.34 | | 82.06 |
| Partner not on IS (%) | 4.84 | 13.85 | 8.60 | 3.50 | | 4.71 |
| Partner on IS (%) | 8.69 | 61.85 | 11.67 | 8.15 | 100 | 13.22 |
| Avg private income – current ($'00) | 0.40 | 0.54 | 0.30 | 0.90 | 0.47 | 0.49 |
| Have earnings (%) | 19.47 | 20.33 | 11.27 | 45.02 | 18.10 | 22.00 |
| Avg earnings – current ($'00) | 0.37 | 0.48 | 0.24 | 0.87 | 0.41 | 0.46 |
| Earnings – Time (spell) (%) | 19.70 | 20.16 | 8.56 | 46.25 | 18.36 | 20.15 |
| Earnings – Amount (spell) ($'00) | 0.97 | 1.19 | 0.65 | 2.12 | 1.10 | 1.21 |
| UB – High search (%) | 84.52 | 80.56 | 22.23 | 89.76 | 79.55 | 81.14 |
| UB – Low search (%) | 1.98 | 2.81 | 0.24 | 1.97 | 2.56 | 5.03 |
| UB – No search (%) | 13.49 | 16.63 | 77.53 | 8.27 | 17.89 | 13.82 |
| Pension/PPS (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other allowance (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| No search * Avg private income | 0.03 | 0.09 | 0.11 | 0.06 | 0.04 | 0.04 |
| No search * Avg earn current | 0.05 | 0.13 | 0.15 | 0.12 | 0.08 | 0.07 |
| No search * Have earnings | 2.09 | 3.97 | 6.28 | 4.68 | 2.94 | 2.92 |
| No search * Earn amount (spell ) | 0.06 | 0.15 | 0.18 | 0.10 | 0.07 | 0.09 |
| No search * Earn time (spell) | 0.46 | 1.33 | 1.47 | 1.00 | 0.63 | 0.81 |
| Incapacity within 4 fortnights (%) | 7.73 | 10.03 | 75.53 | 4.59 | 9.94 | 9.55 |
| Unemployment Rate (%) | 6.91 | 7.32 | 6.76 | 7.02 | 7.34 | 7.10 |
| Job search * unemployment rate | 6.01 | 6.17 | 1.55 | 6.46 | 6.07 | 6.17 |
| Live in major city (%) | 58.58 | 49.63 | 62.02 | 54.92 | 44.56 | 52.48 |
| No pre-3.5 yr TTO (%) | 48.78 | 36.16 | 44.33 | 46.70 | 45.81 | |
| 0<pre-3.5 yr TTO <=0.25 (%) | 30.61 | 21.31 | 30.92 | 31.40 | 26.67 | |
| 0.25<pre-3.5 yr TTO <=0.5 (%) | 11.25 | 16.99 | 13.39 | 12.11 | 13.68 | |
| 0.5<pre-3.5 yr TTO <=0.75 (%) | 5.92 | 15.57 | 7.17 | 6.35 | 8.71 | 73.09 |
| Pre-3.5 yr TTO > 0.75 (%) | 3.43 | 9.97 | 4.20 | 3.44 | 5.13 | 26.91 |
| No pre-1 yr TTO (%) | 71.62 | 65.11 | 71.09 | 70.59 | 70.69 | 18.25 |
| 0<pre-1 yr TTO <=0.25 (%) | 14.47 | 13.73 | 13.59 | 15.18 | 13.33 | 19.54 |
| 0.25 <pre-1 yr TTO <=0.5 (%) | 9.33 | 11.99 | 10.18 | 9.68 | 10.21 | 32.65 |
| Pre-1 yr TTO > 0.5 (%) | 4.57 | 9.17 | 5.14 | 4.54 | 5.77 | 29.55 |
| Job search requirement 3.5 years prior to entry (%) | 38.73 | 27.02 | 37.08 | 40.85 | 35.66 | 84.44 |
| Job search requirement 1 year prior to entry (%) | 17.4 | 12.43 | 13.66 | 18.28 | 15.62 | 58.42 |
| Pre-3.5 yr earnings time >0.5 (%) | 9.16 | 12.13 | 7.69 | 14.23 | 9.88 | 32.61 |
| Pre-1 yr earnings time >0.5 (%) | 25.20 | 32.11 | 24.41 | 33.97 | 27.08 | 66.22 |
| Multiple spells in pre-3.5 yr period (%) | 43.73 | 40.90 | 44.69 | 45.16 | 42.09 | 54.09 |
| Australian-born (%) | 75.82 | 57.32 | 73.92 | 80.94 | 65.06 | 68.87 |
| Indigenous (%) | 4.93 | 9.12 | 4.95 | 3.02 | 6.03 | 9.26 |
| ESC (%) | 6.50 | 9.47 | 7.73 | 6.37 | 9.11 | 7.25 |
| NESC (%) | 12.75 | 24.09 | 13.40 | 9.67 | 19.80 | 14.62 |

Table B2a: Duration model results for males

| | *All Males* | | *Indigenous* | | *NESC* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -2.902*** | 0.046 | -3.201*** | 0.185 | -3.071*** | 0.120 |
| 4-7 | -2.923*** | 0.046 | -3.280*** | 0.185 | -3.067*** | 0.120 |
| 8-11 | -3.179*** | 0.046 | -3.504*** | 0.186 | -3.331*** | 0.121 |
| 12-15 | -3.234*** | 0.046 | -3.555*** | 0.187 | -3.402*** | 0.121 |
| 16-19 | -3.339*** | 0.047 | -3.675*** | 0.188 | -3.484*** | 0.122 |
| 20-23 | -3.479*** | 0.047 | -3.826*** | 0.191 | -3.621*** | 0.122 |
| 24-27 | -3.537*** | 0.047 | -3.870*** | 0.190 | -3.652*** | 0.123 |
| 28-31 | -3.630*** | 0.048 | -3.944*** | 0.193 | -3.741*** | 0.124 |
| 32-35 | -3.690*** | 0.048 | -3.925*** | 0.193 | -3.838*** | 0.126 |
| 36-39 | -3.749*** | 0.049 | -4.072*** | 0.196 | -3.839*** | 0.126 |
| 40-43 | -3.838*** | 0.049 | -4.059*** | 0.199 | -3.968*** | 0.128 |
| 44-47 | -3.907*** | 0.050 | -4.223*** | 0.202 | -4.040*** | 0.130 |
| 48-51 | -3.946*** | 0.051 | -4.285*** | 0.204 | -4.049*** | 0.131 |
| 52-55 | -3.984*** | 0.052 | -3.963*** | 0.201 | -4.053*** | 0.133 |
| 56-59 | -4.089*** | 0.054 | -4.508*** | 0.220 | -4.306*** | 0.140 |
| 60-63 | -4.082*** | 0.054 | -4.310*** | 0.216 | -4.189*** | 0.140 |
| 64-67 | -4.128*** | 0.056 | -4.390*** | 0.221 | -4.261*** | 0.144 |
| 68-71 | -4.158*** | 0.057 | -4.466*** | 0.225 | -4.200*** | 0.146 |
| 72-75 | -4.137*** | 0.059 | -4.499*** | 0.230 | -4.163*** | 0.149 |
| 76-79 | -4.275*** | 0.062 | -4.531*** | 0.243 | -4.345*** | 0.157 |
| 80-91 | -4.318*** | 0.053 | -4.630*** | 0.211 | -4.419*** | 0.137 |
| 92-103 | -4.396*** | 0.057 | -4.854*** | 0.232 | -4.536*** | 0.147 |
| 104-131 | -4.481*** | 0.057 | -4.612*** | 0.215 | -4.771*** | 0.146 |
| 131+ | -4.679*** | 0.097 | -5.316*** | 0.427 | -4.889*** | 0.234 |
| *Age (16-19 omitted)* | | | | | | |
| Age 20-24 | 0.017** | 0.008 | 0.120*** | 0.033 | -0.322*** | 0.027 |
| Age 25-34 | 0.010 | 0.008 | 0.096*** | 0.032 | -0.374*** | 0.028 |
| Age 35-44 | -0.109*** | 0.009 | 0.018 | 0.038 | -0.478*** | 0.030 |
| Age 45-49 | -0.189*** | 0.013 | -0.044 | 0.060 | -0.535*** | 0.035 |
| Age 50-54 | -0.315*** | 0.014 | -0.122* | 0.074 | -0.626*** | 0.037 |
| Age 55+ | -0.564*** | 0.019 | -0.400*** | 0.125 | -0.858*** | 0.046 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.065*** | 0.012 | 0.170*** | 0.051 | 0.070*** | 0.027 |
| Youngest child aged 6-12 | 0.124*** | 0.014 | 0.177*** | 0.063 | 0.112*** | 0.032 |
| Youngest child aged 13 or older | 0.175*** | 0.021 | 0.417*** | 0.094 | 0.132*** | 0.045 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.073*** | 0.010 | 0.165*** | 0.057 | 0.196*** | 0.022 |
| Other homeowner | 0.184*** | 0.010 | 0.176*** | 0.061 | 0.273*** | 0.024 |
| Government rent | -0.142*** | 0.016 | -0.121*** | 0.044 | -0.035 | 0.035 |
| Other rent | 0.051*** | 0.006 | 0.045* | 0.025 | 0.105*** | 0.016 |
| Missing | 0.179*** | 0.008 | 0.056 | 0.041 | 0.219*** | 0.024 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.388*** | 0.012 | 0.394*** | 0.057 | 0.237*** | 0.026 |
| Partner on IS | -0.135*** | 0.010 | -0.144*** | 0.049 | -0.325*** | 0.025 |
| *Private income* | | | | | | |
| Avg private income – current | 0.043*** | 0.010 | -0.018 | 0.051 | 0.068*** | 0.025 |
| Have earnings | 0.462*** | 0.009 | 0.462*** | 0.043 | 0.455*** | 0.028 |
| Avg earnings – current | -0.055*** | 0.010 | -0.042 | 0.053 | -0.103*** | 0.027 |
| Earnings – Amount (spell) | 0.076*** | 0.002 | 0.114*** | 0.010 | 0.095*** | 0.005 |
| Earnings –Time (spell) | -0.359*** | 0.014 | 0.004 | 0.077 | -0.325*** | 0.040 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 0.695*** | 0.043 | 0.797*** | 0.173 | 0.964*** | 0.110 |
| UB – Low search | 0.370*** | 0.044 | 0.965*** | 0.174 | 0.613*** | 0.111 |
| UB – No search | -0.101*** | 0.033 | -0.052 | 0.132 | 0.347*** | 0.089 |
| Pension/PPS | -1.270*** | 0.045 | -0.876*** | 0.163 | -0.951*** | 0.121 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.023 | 0.017 | 0.051 | 0.069 | 0.038 | 0.054 |
| No search * Avg earn current | 0.058*** | 0.011 | 0.018 | 0.058 | 0.083*** | 0.025 |
| No search * Have earnings | 0.198*** | 0.033 | 0.085 | 0.149 | 0.229*** | 0.084 |
| No search * Earn amount (spell) | 0.032*** | 0.011 | 0.026 | 0.051 | 0.044 | 0.041 |
| No search * Earn time (spell) | -0.470*** | 0.159 | -0.024 | 0.442 | -1.120* | 0.627 |
| Incapacity within 4 fortnights | -0.276*** | 0.013 | -0.123** | 0.052 | -0.418*** | 0.036 |
| Local unemployment rate | -0.022*** | 0.004 | 0.001 | 0.016 | -0.035*** | 0.011 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Job search * unemployment rate | -0.008* | 0.004 | -0.026 | 0.016 | 0.004 | 0.011 |
| Live in major city | 0.083*** | 0.005 | 0.077*** | 0.022 | 0.035** | 0.017 |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | -0.008 | 0.013 | -0.043 | 0.056 | 0.048 | 0.035 |
| 2000 | 0.071*** | 0.013 | -0.019 | 0.058 | 0.176*** | 0.036 |
| 2001 | 0.042*** | 0.013 | -0.009 | 0.058 | 0.124*** | 0.036 |
| 2002 | 0.106*** | 0.013 | -0.053 | 0.059 | 0.184*** | 0.036 |
| 2003 | 0.082*** | 0.013 | -0.022 | 0.060 | 0.122*** | 0.036 |
| 2004 | -0.713*** | 0.018 | -0.866*** | 0.078 | -0.648*** | 0.047 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.269*** | 0.006 | -0.272*** | 0.027 | -0.287*** | 0.017 |
| 3rd quarter | -0.091*** | 0.006 | -0.162*** | 0.027 | -0.093*** | 0.017 |
| 4th quarter | -0.275*** | 0.006 | -0.381*** | 0.029 | -0.276*** | 0.018 |
| *3.5-year pre-spell TTO ('Pre-TTO$_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-TTO$_{3.5}$ ≤ 0.25 | -0.172*** | 0.012 | -0.094* | 0.052 | -0.094*** | 0.032 |
| 0.25 < Pre-TTO$_{3.5}$ ≤ 0.5 | -0.396*** | 0.014 | -0.326*** | 0.058 | -0.273*** | 0.037 |
| 0. 5< Pre-TTO$_{3.5}$ ≤ 0.75 | -0.564*** | 0.014 | -0.548*** | 0.059 | -0.424*** | 0.040 |
| Pre-TTO$_{3.5}$ > 0.75 | -0.528*** | 0.017 | -0.604*** | 0.071 | -0.440*** | 0.047 |
| *1-year pre-spell TTO ('Pre-TTO$_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-TTO$_1$ ≤ 0.25 | 0.025*** | 0.009 | 0.053 | 0.037 | 0.041* | 0.025 |
| 0.25 < Pre-TTO$_1$ ≤ 0.5 | -0.092*** | 0.012 | 0.017 | 0.049 | -0.152*** | 0.036 |
| Pre-TTO$_1$ > 0.5 | -0.199*** | 0.014 | -0.048 | 0.057 | -0.241*** | 0.041 |
| Job search – 3.5 years pre-spell | -0.134*** | 0.009 | -0.189*** | 0.040 | -0.076*** | 0.026 |
| Job search – 1 year pre-spell | -0.022** | 0.010 | -0.027 | 0.041 | 0.027 | 0.030 |
| Earnings time > 0.5 – 3.5-yrs | 0.033*** | 0.011 | -0.126** | 0.052 | 0.066** | 0.032 |
| Earnings time > 0.5 – 1-yr | 0.055*** | 0.007 | 0.059* | 0.031 | 0.070*** | 0.022 |
| Multiple spells in 3.5 yrs | 0.215*** | 0.009 | 0.171*** | 0.038 | 0.209*** | 0.025 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | -0.048*** | 0.010 | | | | |
| ESC | 0.049*** | 0.009 | | | | |
| NESC | -0.119*** | 0.007 | | | | |

Table B2a: Duration model results for males (continued)

| | *High unemployment* | | *Regional areas* | | *Mature age* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* | *Coef.* | *Std. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -2.909*** | 0.11 | -2.914*** | 0.067 | -3.433*** | 0.161 |
| 4-7 | -2.934*** | 0.11 | -2.956*** | 0.067 | -3.494*** | 0.161 |
| 8-11 | -3.180*** | 0.11 | -3.194*** | 0.068 | -3.668*** | 0.161 |
| 12-15 | -3.230*** | 0.11 | -3.222*** | 0.068 | -3.739*** | 0.163 |
| 16-19 | -3.318*** | 0.11 | -3.347*** | 0.068 | -3.797*** | 0.163 |
| 20-23 | -3.471*** | 0.11 | -3.526*** | 0.069 | -4.055*** | 0.165 |
| 24-27 | -3.554*** | 0.12 | -3.598*** | 0.070 | -4.221*** | 0.166 |
| 28-31 | -3.608*** | 0.12 | -3.665*** | 0.070 | -4.455*** | 0.168 |
| 32-35 | -3.664*** | 0.12 | -3.708*** | 0.071 | -4.405*** | 0.170 |
| 36-39 | -3.737*** | 0.12 | -3.798*** | 0.072 | -4.390*** | 0.170 |
| 40-43 | -3.792*** | 0.12 | -3.853*** | 0.073 | -4.536*** | 0.172 |
| 44-47 | -3.849*** | 0.12 | -3.892*** | 0.074 | -4.718*** | 0.177 |
| 48-51 | -3.897*** | 0.12 | -3.971*** | 0.075 | -4.730*** | 0.178 |
| 52-55 | -3.958*** | 0.12 | -4.002*** | 0.077 | -4.918*** | 0.186 |
| 56-59 | -4.110*** | 0.13 | -4.157*** | 0.079 | -4.924*** | 0.190 |
| 60-63 | -4.113*** | 0.13 | -4.089*** | 0.080 | -5.012*** | 0.196 |
| 64-67 | -3.987*** | 0.13 | -4.087*** | 0.081 | -4.948*** | 0.196 |
| 68-71 | -4.181*** | 0.13 | -4.175*** | 0.084 | -5.043*** | 0.200 |
| 72-75 | -4.108*** | 0.13 | -4.119*** | 0.085 | -5.212*** | 0.216 |
| 76-79 | -4.227*** | 0.14 | -4.337*** | 0.091 | -5.239*** | 0.218 |
| 80-91 | -4.242*** | 0.12 | -4.304*** | 0.078 | -5.407*** | 0.194 |
| 92-103 | -4.309*** | 0.13 | -4.449*** | 0.085 | -5.197*** | 0.197 |
| 104-131 | -4.437*** | 0.13 | -4.498*** | 0.082 | -5.454*** | 0.196 |
| 131+ | -4.524*** | 0.19 | -4.784*** | 0.148 | -6.246*** | 0.406 |
| *Age ( 16-19 omitted)* | | | | | | |
| 20-24 | 0.051*** | 0.02 | 0.061*** | 0.012 | | |
| 25-34 | 0.097*** | 0.02 | 0.070*** | 0.012 | | |
| 35-44 | -0.039* | 0.02 | -0.052*** | 0.014 | | |
| 45-49 | -0.120*** | 0.03 | -0.136*** | 0.019 | | |
| 50-54 | -0.166*** | 0.03 | -0.268*** | 0.021 | | |
| 55+ | -0.446*** | 0.04 | -0.513*** | 0.028 | -0.210*** | 0.019 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.122*** | 0.02 | 0.083*** | 0.017 | 0.054 | 0.060 |
| Youngest child aged 6-12 | 0.208*** | 0.03 | 0.164*** | 0.020 | 0.088** | 0.039 |
| Youngest child aged 13 or older | 0.301*** | 0.04 | 0.221*** | 0.030 | 0.190*** | 0.040 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.037* | 0.02 | 0.032** | 0.014 | -0.032 | 0.024 |
| Other homeowner | 0.145*** | 0.02 | 0.165*** | 0.015 | 0.142*** | 0.029 |
| Government rent | -0.146*** | 0.03 | -0.150*** | 0.025 | -0.204*** | 0.059 |
| Other rent | 0.051*** | 0.01 | 0.051*** | 0.009 | -0.004 | 0.029 |
| Missing | 0.187*** | 0.02 | 0.146*** | 0.014 | -0.061 | 0.066 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.445*** | 0.03 | 0.422*** | 0.018 | 0.475*** | 0.029 |
| Partner on IS | -0.152*** | 0.02 | -0.125*** | 0.015 | -0.140*** | 0.023 |
| *Private income* | | | | | | |
| Avg private income – current | 0.013 | 0.02 | 0.046*** | 0.014 | 0.003 | 0.020 |
| Have earnings | 0.443*** | 0.02 | 0.442*** | 0.013 | 0.404*** | 0.035 |
| Avg earnings – current | -0.018 | 0.02 | -0.058*** | 0.015 | -0.059*** | 0.023 |
| Earnings – Time (spell) | -0.275*** | 0.03 | -0.295*** | 0.020 | -0.225*** | 0.051 |
| Earnings – Amount (spell) | 0.076*** | 0.00 | 0.071*** | 0.002 | 0.093*** | 0.006 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 0.478*** | 0.11 | 0.665*** | 0.064 | 0.711*** | 0.152 |
| UB – Low search | 0.138 | 0.11 | 0.369*** | 0.064 | 0.401*** | 0.152 |
| UB – No search | -0.175*** | 0.07 | -0.187*** | 0.047 | -0.179 | 0.124 |
| Pension/PPS | -1.307*** | 0.09 | -1.322*** | 0.065 | -1.438*** | 0.148 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.072** | 0.03 | 0.053** | 0.024 | 0.172*** | 0.053 |
| No search * Avg earn current | 0.027 | 0.03 | 0.051*** | 0.018 | 0.020 | 0.048 |
| No search * Have earnings | 0.236*** | 0.07 | 0.206*** | 0.050 | 0.434*** | 0.120 |
| No search * Earn amount (spell) | 0.020 | 0.02 | 0.039** | 0.017 | 0.021 | 0.029 |
| No search * Earn time (spell) | -0.531* | 0.27 | -0.611*** | 0.218 | -1.705*** | 0.509 |
| Incapacity within 4 fortnights | -0.247*** | 0.03 | -0.204*** | 0.020 | -0.195*** | 0.046 |
| Local unemployment rate | -0.032*** | 0.01 | -0.015** | 0.006 | -0.029** | 0.013 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Job search * unemployment rate | 0.011 | 0.01 | -0.012* | 0.006 | 0.014 | 0.014 |
| Live in major city | 0.117*** | 0.01 | 0.193*** | 0.015 | 0.107*** | 0.019 |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | -0.006 | 0.03 | -0.045** | 0.019 | 0.027 | 0.051 |
| 2000 | 0.036 | 0.03 | 0.016 | 0.020 | 0.107** | 0.052 |
| 2001 | 0.021 | 0.03 | 0.018 | 0.020 | 0.081 | 0.052 |
| 2002 | 0.127*** | 0.03 | 0.081*** | 0.020 | 0.133*** | 0.052 |
| 2003 | 0.116*** | 0.03 | 0.048** | 0.020 | 0.124** | 0.052 |
| 2004 | -0.664*** | 0.04 | -0.771*** | 0.027 | -0.750*** | 0.069 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.285*** | 0.01 | -0.236*** | 0.010 | -0.177*** | 0.024 |
| 3rd quarter | -0.108*** | 0.01 | -0.093*** | 0.010 | -0.035 | 0.024 |
| 4th quarter | -0.309*** | 0.01 | -0.275*** | 0.010 | -0.246*** | 0.025 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | -0.168*** | 0.03 | -0.193*** | 0.018 | -0.171*** | 0.044 |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | -0.399*** | 0.03 | -0.429*** | 0.021 | -0.404*** | 0.052 |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | -0.578*** | 0.03 | -0.599*** | 0.022 | -0.482*** | 0.056 |
| Pre-$TTO_{3.5} > 0.75$ | -0.568*** | 0.04 | -0.581*** | 0.025 | -0.531*** | 0.065 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.030 | 0.02 | 0.017 | 0.013 | 0.127*** | 0.036 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | -0.084*** | 0.03 | -0.065*** | 0.018 | -0.026 | 0.052 |
| Pre-$TTO_1 > 0.5$ | -0.198*** | 0.03 | -0.171*** | 0.021 | -0.151** | 0.061 |
| Job search – 3.5 years pre-spell | -0.121*** | 0.02 | -0.111*** | 0.014 | -0.052 | 0.036 |
| Job search – 1 year pre-spell | -0.014 | 0.02 | -0.043*** | 0.015 | -0.008 | 0.045 |
| Earnings time > 0.5 – 3.5-yrs | 0.031 | 0.02 | 0.030** | 0.015 | -0.014 | 0.043 |
| Earnings time > 0.5 – 1-yr | 0.075*** | 0.02 | 0.053*** | 0.011 | 0.034 | 0.030 |
| Multiple spells in 3.5 yrs | 0.215*** | 0.02 | 0.227*** | 0.014 | 0.336*** | 0.036 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | -0.044* | 0.02 | -0.050*** | 0.013 | 0.126** | 0.057 |
| ESC | 0.066*** | 0.02 | 0.035** | 0.014 | 0.056** | 0.025 |
| NESC | -0.061*** | 0.02 | -0.079*** | 0.016 | -0.096*** | 0.023 |

Table B2b: Duration model results for males

| | *Parents* | | *Incapacitated* | | *Earned income* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* | *Coef.* | *Std. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -3.318*** | 0.115 | -3.046*** | 0.118 | -3.807*** | 0.099 |
| 4-7 | -3.338*** | 0.115 | -2.718*** | 0.118 | -3.610*** | 0.099 |
| 8-11 | -3.523*** | 0.115 | -2.885*** | 0.119 | -3.658*** | 0.099 |
| 12-15 | -3.620*** | 0.116 | -2.999*** | 0.120 | -3.805*** | 0.099 |
| 16-19 | -3.719*** | 0.116 | -3.094*** | 0.121 | -3.861*** | 0.100 |
| 20-23 | -3.844*** | 0.117 | -3.210*** | 0.122 | -3.993*** | 0.100 |
| 24-27 | -3.912*** | 0.118 | -3.237*** | 0.123 | -4.036*** | 0.101 |
| 28-31 | -3.991*** | 0.119 | -3.358*** | 0.124 | -4.106*** | 0.101 |
| 32-35 | -4.052*** | 0.120 | -3.436*** | 0.125 | -4.162*** | 0.101 |
| 36-39 | -4.188*** | 0.122 | -3.390*** | 0.127 | -4.185*** | 0.102 |
| 40-43 | -4.243*** | 0.123 | -3.597*** | 0.131 | -4.319*** | 0.103 |
| 44-47 | -4.127*** | 0.123 | -3.609*** | 0.133 | -4.331*** | 0.104 |
| 48-51 | -4.333*** | 0.126 | -3.640*** | 0.135 | -4.335*** | 0.105 |
| 52-55 | -4.298*** | 0.128 | -3.614*** | 0.137 | -4.366*** | 0.106 |
| 56-59 | -4.569*** | 0.135 | -3.679*** | 0.141 | -4.495*** | 0.109 |
| 60-63 | -4.424*** | 0.134 | -3.669*** | 0.145 | -4.479*** | 0.110 |
| 64-67 | -4.512*** | 0.138 | -3.928*** | 0.154 | -4.516*** | 0.112 |
| 68-71 | -4.419*** | 0.138 | -3.884*** | 0.158 | -4.510*** | 0.114 |
| 72-75 | -4.470*** | 0.142 | -3.788*** | 0.159 | -4.560*** | 0.117 |
| 76-79 | -4.635*** | 0.151 | -3.934*** | 0.169 | -4.695*** | 0.121 |
| 80-91 | -4.671*** | 0.130 | -4.033*** | 0.145 | -4.643*** | 0.108 |
| 92-103 | -4.827*** | 0.140 | -4.120*** | 0.157 | -4.774*** | 0.115 |
| 104-131 | -4.860*** | 0.136 | -4.167*** | 0.153 | -4.892*** | 0.114 |
| 131+ | -5.085*** | 0.223 | -4.461*** | 0.296 | -4.968*** | 0.168 |
| *Age ( 16-19 omitted)* | | | | | | |
| 20-24 | 0.416*** | 0.072 | 0.013 | 0.036 | -0.074*** | 0.015 |
| 25-34 | 0.492*** | 0.069 | -0.147*** | 0.035 | -0.101*** | 0.016 |
| 35-44 | 0.421*** | 0.070 | -0.298*** | 0.037 | -0.194*** | 0.018 |
| 45-49 | 0.332*** | 0.072 | -0.351*** | 0.045 | -0.292*** | 0.025 |
| 50-54 | 0.180** | 0.075 | -0.490*** | 0.048 | -0.371*** | 0.026 |
| 55+ | -0.008 | 0.088 | -0.801*** | 0.058 | -0.545*** | 0.036 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | -0.050 | 0.033 | 0.040 | 0.043 | 0.047** | 0.022 |
| Youngest child aged 6-12 | -0.034 | 0.034 | 0.138*** | 0.048 | 0.118*** | 0.027 |
| Youngest child aged 13 or older | 0.014 | 0.036 | 0.187*** | 0.068 | 0.193*** | 0.036 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.100*** | 0.016 | -0.007 | 0.033 | 0.015 | 0.018 |
| Other homeowner | 0.147*** | 0.015 | 0.102*** | 0.036 | 0.112*** | 0.019 |
| Government rent | -0.149*** | 0.025 | -0.188*** | 0.051 | -0.064** | 0.029 |
| Other rent | -0.017 | 0.024 | 0.056*** | 0.021 | 0.077*** | 0.010 |
| Missing | 0.013 | 0.046 | 0.114*** | 0.038 | 0.145*** | 0.017 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.310*** | 0.037 | 0.446*** | 0.044 | 0.293*** | 0.023 |
| Partner on IS | -0.134*** | 0.034 | -0.132*** | 0.037 | -0.118*** | 0.019 |
| *Private income* | | | | | | |
| Avg private income – current | 0.067*** | 0.018 | 0.068*** | 0.025 | 0.056*** | 0.021 |
| Have earnings | 0.323*** | 0.021 | 0.542*** | 0.043 | 0.850*** | 0.012 |
| Avg earnings – current | -0.101*** | 0.020 | -0.058* | 0.032 | -0.174*** | 0.022 |
| Earnings – Time (spell) | -0.149*** | 0.031 | -0.601*** | 0.075 | 0.469*** | 0.017 |
| Earnings – Amount (spell) | 0.066*** | 0.003 | 0.080*** | 0.009 | 0.149*** | 0.003 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 0.723*** | 0.084 | 0.545*** | 0.096 | 0.310*** | 0.093 |
| UB – Low search | 0.444*** | 0.085 | 0.326*** | 0.099 | 0.041 | 0.093 |
| UB – No search | -0.171*** | 0.051 | -0.629*** | 0.078 | -0.069 | 0.068 |
| Pension/PPS | -1.132*** | 0.082 | -1.884*** | 0.092 | -1.503*** | 0.120 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.030 | 0.030 | 0.027 | 0.029 | 0.052** | 0.023 |
| No search * Avg earn current | 0.086*** | 0.027 | 0.054* | 0.030 | 0.087*** | 0.015 |
| No search * Have earnings | 0.192** | 0.080 | 0.155** | 0.076 | -0.253*** | 0.048 |
| No search * Earn amount (spell) | 0.026 | 0.023 | 0.038 | 0.024 | 0.035* | 0.019 |
| No search * Earn time (spell) | -0.699** | 0.315 | -0.564** | 0.277 | -0.423** | 0.178 |
| Incapacity within 4 fortnights | -0.264*** | 0.032 | 0.182*** | 0.022 | -0.355*** | 0.030 |
| Local unemployment rate | -0.026*** | 0.010 | -0.029*** | 0.007 | -0.026*** | 0.009 |
| Job search * unemployment rate | 0.005 | 0.010 | -0.004 | 0.008 | 0.000 | 0.009 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Live in major city | 0.082*** | 0.012 | 0.023 | 0.018 | 0.086*** | 0.009 |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | -0.078*** | 0.029 | -0.031 | 0.061 | 0.134*** | 0.030 |
| 2000 | 0.035 | 0.030 | 0.060 | 0.061 | 0.230*** | 0.031 |
| 2001 | 0.023 | 0.030 | 0.020 | 0.061 | 0.248*** | 0.031 |
| 2002 | 0.119*** | 0.031 | 0.133** | 0.061 | 0.297*** | 0.031 |
| 2003 | 0.106*** | 0.031 | 0.075 | 0.062 | 0.291*** | 0.031 |
| 2004 | -0.745*** | 0.045 | -0.765*** | 0.075 | -0.518*** | 0.037 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.185*** | 0.015 | -0.239*** | 0.023 | -0.268*** | 0.011 |
| 3rd quarter | -0.065*** | 0.015 | -0.050** | 0.023 | -0.079*** | 0.011 |
| 4th quarter | -0.348*** | 0.016 | -0.277*** | 0.024 | -0.295*** | 0.012 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | -0.128*** | 0.027 | -0.170*** | 0.040 | -0.121*** | 0.022 |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | -0.387*** | 0.031 | -0.357*** | 0.047 | -0.312*** | 0.025 |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | -0.558*** | 0.033 | -0.518*** | 0.050 | -0.458*** | 0.026 |
| Pre-$TTO_{3.5} > 0.75$ | -0.527*** | 0.039 | -0.592*** | 0.063 | -0.452*** | 0.034 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.041* | 0.021 | 0.040 | 0.030 | 0.026* | 0.016 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | -0.061** | 0.031 | -0.015 | 0.041 | -0.065** | 0.026 |
| Pre-$TTO_1 > 0.5$ | -0.177*** | 0.036 | -0.121** | 0.052 | -0.107*** | 0.029 |
| Job search – 3.5 years pre-spell | -0.120*** | 0.022 | -0.143*** | 0.030 | -0.093*** | 0.017 |
| Job search – 1 year pre-spell | -0.037 | 0.026 | -0.040 | 0.036 | -0.001 | 0.021 |
| Earnings time > 0.5 – 3.5-yrs | 0.011 | 0.024 | 0.021 | 0.045 | -0.015 | 0.017 |
| Earnings time > 0.5 – 1-yr | 0.056*** | 0.017 | 0.044 | 0.027 | 0.003 | 0.013 |
| Multiple spells in 3.5 yrs | 0.223*** | 0.021 | 0.176*** | 0.033 | 0.182*** | 0.017 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | 0.088*** | 0.023 | 0.070* | 0.042 | 0.171*** | 0.022 |
| ESC | 0.037* | 0.020 | 0.061** | 0.031 | 0.032** | 0.016 |
| NESC | -0.265*** | 0.016 | -0.101*** | 0.027 | -0.135*** | 0.014 |

Table B2b: Duration model results for males (continued)

| | *Partner On IS* | | *IS history > 50%* | |
|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | |
| 0-3 | -3.326*** | 0.099 | -3.470*** | 0.161 |
| 4-7 | -3.337*** | 0.099 | -3.371*** | 0.161 |
| 8-11 | -3.548*** | 0.099 | -3.570*** | 0.162 |
| 12-15 | -3.620*** | 0.100 | -3.531*** | 0.162 |
| 16-19 | -3.713*** | 0.100 | -3.600*** | 0.163 |
| 20-23 | -3.895*** | 0.101 | -3.740*** | 0.163 |
| 24-27 | -3.968*** | 0.102 | -3.821*** | 0.164 |
| 28-31 | -4.064*** | 0.103 | -3.874*** | 0.165 |
| 32-35 | -4.135*** | 0.104 | -3.926*** | 0.165 |
| 36-39 | -4.234*** | 0.105 | -3.981*** | 0.166 |
| 40-43 | -4.292*** | 0.107 | -3.982*** | 0.166 |
| 44-47 | -4.238*** | 0.108 | -4.043*** | 0.168 |
| 48-51 | -4.430*** | 0.110 | -4.087*** | 0.168 |
| 52-55 | -4.383*** | 0.112 | -4.051*** | 0.170 |
| 56-59 | -4.654*** | 0.119 | -4.302*** | 0.173 |
| 60-63 | -4.547*** | 0.118 | -4.265*** | 0.174 |
| 64-67 | -4.487*** | 0.119 | -4.222*** | 0.175 |
| 68-71 | -4.542*** | 0.122 | -4.198*** | 0.175 |
| 72-75 | -4.596*** | 0.126 | -4.192*** | 0.178 |
| 76-79 | -4.692*** | 0.131 | -4.364*** | 0.183 |
| 80-91 | -4.787*** | 0.114 | -4.408*** | 0.170 |
| 92-103 | -4.826*** | 0.122 | -4.576*** | 0.177 |
| 104-131 | -4.930*** | 0.120 | -4.605*** | 0.175 |
| 131+ | -5.098*** | 0.195 | -4.716*** | 0.245 |
| *Age ( 16-19 omitted)* | | | | |
| 20-24 | 0.340*** | 0.050 | 0.092 | 0.075 |
| 25-34 | 0.399*** | 0.048 | 0.095 | 0.074 |
| 35-44 | 0.334*** | 0.048 | -0.004 | 0.075 |
| 45-49 | 0.242*** | 0.050 | -0.068 | 0.080 |
| 50-54 | 0.104** | 0.051 | -0.122 | 0.085 |
| 55+ | -0.215*** | 0.054 | -0.435*** | 0.097 |
| *Dependent children (no dependent child omitted)* | | | | |
| Youngest child aged 0-5 | 0.071*** | 0.016 | 0.031 | 0.037 |
| Youngest child aged 6-12 | 0.088*** | 0.018 | 0.073 | 0.045 |
| Youngest child aged 13 or older | 0.163*** | 0.025 | 0.173*** | 0.065 |
| *Housing/living circumstances (private rent omitted)* | | | | |
| Homeowner outright | 0.085*** | 0.015 | 0.022 | 0.035 |
| Other homeowner | 0.169*** | 0.015 | 0.077* | 0.041 |
| Government rent | -0.138*** | 0.025 | -0.132*** | 0.034 |
| Other rent | 0.043** | 0.020 | -0.014 | 0.017 |
| Missing | 0.043 | 0.041 | -0.012 | 0.041 |
| *Partner status (single omitted)* | | | | |
| Partner not on IS | 0.372*** | 0.032 | 0.362*** | 0.044 |
| Partner on IS | -0.281*** | 0.025 | -0.154*** | 0.033 |
| *Private income* | | | | |
| Avg private income – current | 0.040** | 0.016 | 0.143*** | 0.038 |
| Have earnings | 0.339*** | 0.019 | 0.478*** | 0.027 |
| Avg earnings – current | -0.078*** | 0.018 | -0.124*** | 0.040 |
| Earnings – Time (spell) | -0.158*** | 0.028 | -0.315*** | 0.047 |
| Earnings – Amount (spell) | 0.075*** | 0.003 | 0.087*** | 0.006 |
| *Payment/activity type (Other allowance omitted)* | | | | |
| UB – High search | 0.800*** | 0.080 | 0.400*** | 0.121 |
| UB – Low search | 0.526*** | 0.081 | 0.265** | 0.121 |
| UB – No search | -0.126** | 0.052 | -0.211** | 0.089 |
| Pension/PPS | -1.282*** | 0.081 | -0.994*** | 0.110 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | |
| No search * Avg private income | 0.050* | 0.029 | 0.137*** | 0.052 |
| No search * Avg earn current | 0.065*** | 0.025 | -0.013 | 0.040 |
| No search * Have earnings | 0.226*** | 0.075 | 0.186* | 0.101 |
| No search * Earn amount (spell) | 0.027 | 0.021 | -0.022 | 0.037 |
| No search * Earn time (spell) | -0.431 | 0.275 | -1.138*** | 0.407 |
| Incapacity within 4 fortnights | -0.215*** | 0.029 | -0.308*** | 0.039 |
| Local unemployment rate | -0.032*** | 0.009 | -0.033*** | 0.012 |

| | | | | |
|---|---|---|---|---|
| Job search * unemployment rate | 0.008 | 0.009 | 0.006 | 0.013 |
| Live in major city | 0.098*** | 0.012 | 0.084*** | 0.016 |
| *Calendar year dummy (1998 omitted)* | | | | |
| 1999 | -0.018 | 0.028 | 0.015 | 0.053 |
| 2000 | 0.070** | 0.030 | 0.092* | 0.053 |
| 2001 | 0.047 | 0.030 | 0.037 | 0.053 |
| 2002 | 0.146*** | 0.030 | 0.136** | 0.053 |
| 2003 | 0.129*** | 0.030 | 0.150*** | 0.054 |
| 2004 | -0.703*** | 0.042 | -0.704*** | 0.065 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | |
| 2nd quarter | -0.209*** | 0.014 | -0.245*** | 0.020 |
| 3rd quarter | -0.085*** | 0.014 | -0.077*** | 0.020 |
| 4th quarter | -0.364*** | 0.015 | -0.275*** | 0.021 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | -0.108*** | 0.025 | | |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | -0.356*** | 0.030 | | |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | -0.561*** | 0.032 | | |
| Pre-$TTO_{3.5} > 0.75$ | -0.505*** | 0.036 | -0.151*** | 0.024 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.051** | 0.020 | 0.013 | 0.029 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | -0.035 | 0.029 | -0.046 | 0.035 |
| Pre-$TTO_1 > 0.5$ | -0.164*** | 0.034 | -0.149*** | 0.037 |
| Job search – 3.5 years pre-spell | -0.112*** | 0.021 | -0.281*** | 0.051 |
| Job search – 1 year pre-spell | -0.015 | 0.025 | 0.016 | 0.027 |
| Earnings time > 0.5 – 3.5-yrs | -0.007 | 0.023 | 0.007 | 0.021 |
| Earnings time > 0.5 – 1-yr | 0.050*** | 0.016 | 0.067*** | 0.018 |
| Multiple spells in 3.5 yrs | 0.220*** | 0.020 | 0.153*** | 0.019 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | |
| Indigenous | 0.043* | 0.023 | 0.016 | 0.027 |
| ESC | 0.045*** | 0.018 | 0.090*** | 0.029 |
| NESC | -0.270*** | 0.015 | -0.014 | 0.024 |

Table B2c: Duration model results for females

| | *All females* | | *Indigenous* | | *NESC* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -3.333*** | 0.051 | -3.438*** | 0.216 | -3.275*** | 0.130 |
| 4-7 | -3.441*** | 0.051 | -3.569*** | 0.216 | -3.356*** | 0.130 |
| 8-11 | -3.668*** | 0.052 | -3.756*** | 0.219 | -3.563*** | 0.131 |
| 12-15 | -3.751*** | 0.052 | -3.870*** | 0.222 | -3.626*** | 0.133 |
| 16-19 | -3.897*** | 0.053 | -4.006*** | 0.225 | -3.783*** | 0.135 |
| 20-23 | -4.017*** | 0.053 | -4.221*** | 0.226 | -3.780*** | 0.135 |
| 24-27 | -4.091*** | 0.054 | -4.370*** | 0.228 | -3.917*** | 0.138 |
| 28-31 | -4.159*** | 0.055 | -4.240*** | 0.229 | -4.015*** | 0.139 |
| 32-35 | -4.230*** | 0.056 | -4.385*** | 0.233 | -4.128*** | 0.142 |
| 36-39 | -4.287*** | 0.057 | -4.241*** | 0.236 | -4.024*** | 0.144 |
| 40-43 | -4.387*** | 0.059 | -4.641*** | 0.247 | -4.260*** | 0.150 |
| 44-47 | -4.527*** | 0.061 | -4.579*** | 0.252 | -4.572*** | 0.162 |
| 48-51 | -4.514*** | 0.062 | -4.866*** | 0.265 | -4.519*** | 0.163 |
| 52-55 | -4.553*** | 0.063 | -4.899*** | 0.269 | -4.469*** | 0.166 |
| 56-59 | -4.484*** | 0.065 | -4.675*** | 0.266 | -4.430*** | 0.169 |
| 60-63 | -4.602*** | 0.069 | -4.589*** | 0.269 | -4.617*** | 0.186 |
| 64-67 | -4.709*** | 0.072 | -4.781*** | 0.284 | -4.607*** | 0.188 |
| 68-71 | -4.662*** | 0.073 | -4.459*** | 0.272 | -4.619*** | 0.195 |
| 72-75 | -4.662*** | 0.076 | -5.082*** | 0.335 | -4.316*** | 0.185 |
| 76-79 | -4.724*** | 0.081 | -5.078*** | 0.327 | -4.387*** | 0.198 |
| 80-91 | -4.783*** | 0.065 | -4.854*** | 0.254 | -4.620*** | 0.166 |
| 92-103 | -4.891*** | 0.072 | -5.046*** | 0.276 | -4.852*** | 0.190 |
| 104-131 | -5.090*** | 0.073 | -5.271*** | 0.281 | -5.044*** | 0.186 |
| 131+ | -5.062*** | 0.130 | -5.098*** | 0.408 | -5.216*** | 0.360 |
| *Age (16-19 omitted)* | | | | | | |
| Age 20-24 | 0.149*** | 0.009 | 0.196*** | 0.045 | -0.326*** | 0.031 |
| Age 25-34 | 0.141*** | 0.010 | 0.152*** | 0.050 | -0.397*** | 0.033 |
| Age 35-44 | -0.023 | 0.014 | 0.093 | 0.067 | -0.583*** | 0.039 |
| Age 45-49 | -0.107*** | 0.018 | 0.014 | 0.108 | -0.714*** | 0.046 |
| Age 50-54 | -0.288*** | 0.021 | -0.101 | 0.132 | -0.809*** | 0.052 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.009 | 0.027 | 0.051 | 0.098 | 0.072 | 0.062 |
| Youngest child aged 6-12 | 0.125** | 0.051 | 0.308*** | 0.115 | 0.183** | 0.079 |
| Youngest child aged 13 or older | 0.129*** | 0.040 | 0.078 | 0.161 | 0.155* | 0.083 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.081*** | 0.017 | 0.231** | 0.109 | 0.149*** | 0.038 |
| Other homeowner | 0.200*** | 0.017 | 0.234** | 0.118 | 0.275*** | 0.043 |
| Government rent | -0.180*** | 0.027 | -0.120 | 0.074 | -0.121** | 0.055 |
| Other rent | 0.100*** | 0.007 | 0.016 | 0.039 | 0.097*** | 0.023 |
| Missing | 0.270*** | 0.010 | 0.099 | 0.061 | 0.287*** | 0.030 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.304*** | 0.015 | 0.328*** | 0.072 | 0.210*** | 0.034 |
| Partner on IS | -0.318*** | 0.014 | -0.393*** | 0.063 | -0.414*** | 0.036 |
| *Private income* | | | | | | |
| Avg private income – current | 0.086*** | 0.013 | 0.154 | 0.107 | 0.099*** | 0.035 |
| Have earnings | 0.430*** | 0.011 | 0.478*** | 0.072 | 0.414*** | 0.036 |
| Avg earnings – current | -0.105*** | 0.014 | -0.219** | 0.112 | -0.106*** | 0.037 |
| Earnings – Time (spell) | -0.379*** | 0.017 | -0.437*** | 0.106 | -0.351*** | 0.048 |
| Earnings – Amount (spell) | 0.099*** | 0.004 | 0.198*** | 0.021 | 0.111*** | 0.008 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 1.144*** | 0.047 | 0.777*** | 0.187 | 1.274*** | 0.113 |
| UB – Low search | 0.684*** | 0.048 | 0.831*** | 0.191 | 0.764*** | 0.115 |
| UB – No search | 0.485*** | 0.034 | 0.093 | 0.128 | 0.943*** | 0.081 |
| Pension/PPS | -1.258*** | 0.041 | -1.177*** | 0.134 | -1.054*** | 0.109 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.046** | 0.019 | 0.221** | 0.093 | 0.180*** | 0.065 |
| No search * Avg earn current | 0.038*** | 0.014 | -0.092 | 0.088 | -0.019 | 0.042 |
| No search * Have earnings | 0.143*** | 0.037 | 0.281 | 0.184 | 0.251** | 0.107 |
| No search * Earn amount (spell) | 0.028** | 0.014 | -0.046 | 0.049 | -0.097* | 0.053 |
| No search * Earn time (spell) | -0.223 | 0.141 | -0.632 | 0.490 | 0.058 | 0.536 |
| Incapacity within 4 fortnights | -0.538*** | 0.018 | -0.299*** | 0.081 | -0.744*** | 0.050 |
| Local unemployment rate | -0.017*** | 0.005 | -0.045** | 0.019 | -0.031** | 0.012 |
| Job search * unemployment rate | -0.018*** | 0.005 | 0.018 | 0.021 | -0.011 | 0.013 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Live in major city | 0.116*** | 0.007 | 0.076** | 0.034 | 0.054** | 0.025 |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | 0.007 | 0.018 | 0.130 | 0.099 | 0.116** | 0.054 |
| 2000 | 0.139*** | 0.018 | 0.247** | 0.101 | 0.279*** | 0.055 |
| 2001 | 0.114*** | 0.018 | 0.300*** | 0.101 | 0.240*** | 0.055 |
| 2002 | 0.130*** | 0.018 | 0.255** | 0.102 | 0.266*** | 0.055 |
| 2003 | 0.049*** | 0.019 | 0.251** | 0.102 | 0.107* | 0.055 |
| 2004 | -0.723*** | 0.024 | -0.532*** | 0.124 | -0.568*** | 0.067 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.373*** | 0.009 | -0.472*** | 0.043 | -0.423*** | 0.025 |
| 3rd quarter | -0.177*** | 0.009 | -0.328*** | 0.043 | -0.162*** | 0.024 |
| 4th quarter | -0.360*** | 0.009 | -0.524*** | 0.045 | -0.351*** | 0.025 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5}$ ≤ 0.25 | -0.171*** | 0.016 | -0.191** | 0.075 | -0.012 | 0.046 |
| 0.25 < Pre-$TTO_{3.5}$ ≤ 0.5 | -0.384*** | 0.019 | -0.353*** | 0.088 | -0.195*** | 0.053 |
| 0. 5< Pre-$TTO_{3.5}$ ≤ 0.75 | -0.530*** | 0.021 | -0.443*** | 0.090 | -0.283*** | 0.057 |
| Pre-$TTO_{3.5}$ > 0.75 | -0.415*** | 0.024 | -0.370*** | 0.106 | -0.408*** | 0.067 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1$ ≤ 0.25 | 0.021* | 0.012 | -0.064 | 0.059 | 0.026 | 0.036 |
| 0.25 < Pre-$TTO_1$ ≤ 0.5 | -0.066*** | 0.018 | -0.116 | 0.080 | -0.085 | 0.054 |
| Pre-$TTO_1$ > 0.5 | -0.194*** | 0.022 | -0.188** | 0.092 | -0.170*** | 0.061 |
| Job search – 3.5 years pre-spell | -0.171*** | 0.012 | -0.099* | 0.059 | -0.095*** | 0.036 |
| Job search – 1 year pre-spell | -0.073*** | 0.016 | -0.040 | 0.066 | -0.045 | 0.046 |
| Earnings time > 0.5 – 3.5-yrs | 0.056*** | 0.015 | 0.038 | 0.076 | 0.014 | 0.046 |
| Earnings time > 0.5 – 1-yr | 0.071*** | 0.011 | 0.103* | 0.053 | 0.121*** | 0.033 |
| Multiple spells in 3.5 yrs | 0.164*** | 0.014 | 0.168*** | 0.062 | 0.131*** | 0.039 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | -0.233*** | 0.016 | | | | |
| ESC | 0.017 | 0.014 | | | | |
| NESC | -0.095*** | 0.010 | | | | |

Table B2c: Duration model results for females (continued)

| | *High unemployment* | | *Regional areas* | | *Mature age* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* | *Coef.* | *Std. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -3.748*** | 0.134 | -3.465*** | 0.078 | -4.198*** | 0.212 |
| 4-7 | -3.885*** | 0.134 | -3.590*** | 0.078 | -4.281*** | 0.213 |
| 8-11 | -4.098*** | 0.135 | -3.797*** | 0.079 | -4.527*** | 0.215 |
| 12-15 | -4.180*** | 0.135 | -3.893*** | 0.080 | -4.664*** | 0.217 |
| 16-19 | -4.291*** | 0.136 | -4.029*** | 0.081 | -4.833*** | 0.221 |
| 20-23 | -4.418*** | 0.137 | -4.176*** | 0.082 | -4.935*** | 0.223 |
| 24-27 | -4.506*** | 0.139 | -4.237*** | 0.083 | -4.987*** | 0.224 |
| 28-31 | -4.579*** | 0.139 | -4.292*** | 0.083 | -5.056*** | 0.229 |
| 32-35 | -4.555*** | 0.141 | -4.375*** | 0.085 | -5.104*** | 0.233 |
| 36-39 | -4.713*** | 0.144 | -4.423*** | 0.087 | -5.149*** | 0.238 |
| 40-43 | -4.883*** | 0.149 | -4.513*** | 0.089 | -5.470*** | 0.252 |
| 44-47 | -4.890*** | 0.150 | -4.593*** | 0.091 | -5.091*** | 0.240 |
| 48-51 | -4.878*** | 0.152 | -4.644*** | 0.094 | -5.138*** | 0.248 |
| 52-55 | -4.868*** | 0.152 | -4.702*** | 0.096 | -5.774*** | 0.287 |
| 56-59 | -4.864*** | 0.156 | -4.629*** | 0.098 | -5.771*** | 0.296 |
| 60-63 | -4.963*** | 0.163 | -4.669*** | 0.102 | -5.706*** | 0.286 |
| 64-67 | -5.138*** | 0.172 | -4.810*** | 0.108 | -6.172*** | 0.336 |
| 68-71 | -4.962*** | 0.169 | -4.731*** | 0.107 | -6.313*** | 0.364 |
| 72-75 | -5.027*** | 0.178 | -4.737*** | 0.113 | -5.598*** | 0.299 |
| 76-79 | -4.855*** | 0.175 | -4.867*** | 0.121 | -5.998*** | 0.360 |
| 80-91 | -5.152*** | 0.155 | -4.867*** | 0.098 | -5.835*** | 0.261 |
| 92-103 | -5.143*** | 0.167 | -4.951*** | 0.107 | -6.041*** | 0.298 |
| 104-131 | -5.385*** | 0.168 | -5.230*** | 0.110 | -6.614*** | 0.327 |
| 131+ | -5.311*** | 0.266 | -5.305*** | 0.198 | -6.801*** | 0.611 |
| *Age ( 16-19 omitted)* | | | | | | |
| 20-24 | 0.187*** | 0.020 | 0.161*** | 0.014 | | |
| 25-34 | 0.243*** | 0.024 | 0.178*** | 0.016 | | |
| 35-44 | 0.083*** | 0.031 | 0.054** | 0.023 | | |
| 45-49 | -0.006 | 0.039 | -0.034 | 0.027 | | |
| 50-54 | -0.192*** | 0.045 | -0.253*** | 0.032 | | |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.086 | 0.055 | 0.062 | 0.038 | -0.984 | 0.601 |
| Youngest child aged 6-12 | 0.287*** | 0.073 | 0.133* | 0.078 | 0.229 | 0.221 |
| Youngest child aged 13 or older | 0.286*** | 0.076 | 0.154*** | 0.059 | 0.082 | 0.128 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.051 | 0.036 | 0.004 | 0.027 | -0.015 | 0.042 |
| Other homeowner | 0.167*** | 0.038 | 0.182*** | 0.027 | 0.134*** | 0.052 |
| Government rent | -0.176*** | 0.061 | -0.170*** | 0.045 | -0.119 | 0.083 |
| Other rent | 0.144*** | 0.018 | 0.116*** | 0.012 | 0.013 | 0.054 |
| Missing | 0.313*** | 0.023 | 0.272*** | 0.017 | -0.042 | 0.113 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.494*** | 0.033 | 0.413*** | 0.023 | 0.420*** | 0.055 |
| Partner on IS | -0.302*** | 0.029 | -0.266*** | 0.020 | -0.278*** | 0.045 |
| *Private income* | | | | | | |
| Avg private income – current | 0.053* | 0.032 | 0.083*** | 0.023 | 0.041 | 0.037 |
| Have earnings | 0.425*** | 0.026 | 0.416*** | 0.018 | 0.540*** | 0.059 |
| Avg earnings – current | -0.083** | 0.034 | -0.098*** | 0.024 | -0.094** | 0.041 |
| Earnings – Time (spell) | -0.284*** | 0.040 | -0.330*** | 0.027 | -0.505*** | 0.073 |
| Earnings – Amount (spell) | 0.098*** | 0.011 | 0.096*** | 0.007 | 0.097*** | 0.008 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 1.502*** | 0.124 | 1.167*** | 0.073 | 1.409*** | 0.187 |
| UB – Low search | 1.048*** | 0.125 | 0.749*** | 0.074 | 1.057*** | 0.189 |
| UB – No search | 0.537*** | 0.073 | 0.402*** | 0.051 | 0.424*** | 0.119 |
| Pension/PPS | -1.294*** | 0.091 | -1.326*** | 0.062 | -1.101*** | 0.192 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.017 | 0.043 | 0.008 | 0.030 | 0.250*** | 0.077 |
| No search * Avg earn current | 0.036 | 0.026 | 0.046* | 0.024 | 0.034 | 0.047 |
| No search * Have earnings | 0.164** | 0.077 | 0.067 | 0.060 | 0.155 | 0.159 |
| No search * Earn amount (spell) | 0.062* | 0.034 | 0.066*** | 0.019 | 0.032 | 0.056 |
| No search * Earn time (spell) | -0.120 | 0.282 | 0.027 | 0.203 | -1.241** | 0.583 |
| Incapacity within 4 fortnights | -0.525*** | 0.044 | -0.440*** | 0.029 | -0.321*** | 0.077 |
| Local unemployment rate | 0.013 | 0.011 | 0.000 | 0.007 | -0.027 | 0.022 |
| Job search * unemployment rate | -0.044*** | 0.012 | -0.022*** | 0.007 | -0.008 | 0.023 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Live in major city | 0.104*** | 0.016 | 0.184*** | 0.019 | 0.150*** | 0.035 |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | -0.072* | 0.043 | -0.020 | 0.029 | 0.150 | 0.093 |
| 2000 | 0.045 | 0.044 | 0.101*** | 0.030 | 0.284*** | 0.095 |
| 2001 | 0.010 | 0.044 | 0.076*** | 0.029 | 0.302*** | 0.095 |
| 2002 | 0.032 | 0.045 | 0.077*** | 0.030 | 0.401*** | 0.096 |
| 2003 | -0.014 | 0.045 | 0.016 | 0.030 | 0.272*** | 0.096 |
| 2004 | -0.830*** | 0.057 | -0.768*** | 0.038 | -0.614*** | 0.122 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.400*** | 0.020 | -0.358*** | 0.014 | -0.181*** | 0.043 |
| 3rd quarter | -0.245*** | 0.020 | -0.174*** | 0.014 | -0.080* | 0.044 |
| 4th quarter | -0.394*** | 0.020 | -0.360*** | 0.014 | -0.350*** | 0.046 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | -0.152*** | 0.036 | -0.183*** | 0.025 | 0.021 | 0.071 |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | -0.366*** | 0.043 | -0.391*** | 0.030 | -0.153* | 0.081 |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | -0.480*** | 0.045 | -0.535*** | 0.032 | -0.395*** | 0.090 |
| Pre-$TTO_{3.5} > 0.75$ | -0.390*** | 0.052 | -0.456*** | 0.037 | -0.264*** | 0.100 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.023 | 0.029 | 0.041** | 0.020 | 0.194*** | 0.061 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | -0.034 | 0.042 | -0.060** | 0.029 | 0.062 | 0.087 |
| Pre-$TTO_1 > 0.5$ | -0.249*** | 0.051 | -0.209*** | 0.034 | -0.041 | 0.100 |
| Job search – 3.5 years pre-spell | -0.128*** | 0.028 | -0.146*** | 0.020 | -0.084 | 0.056 |
| Job search – 1 year pre-spell | -0.042 | 0.036 | -0.064*** | 0.024 | 0.007 | 0.075 |
| Earnings time > 0.5 – 3.5-yrs | 0.030 | 0.033 | 0.053** | 0.022 | 0.051 | 0.073 |
| Earnings time > 0.5 – 1-yr | 0.048* | 0.025 | 0.064*** | 0.017 | -0.008 | 0.055 |
| Multiple spells in 3.5 yrs | 0.157*** | 0.030 | 0.160*** | 0.021 | 0.199*** | 0.061 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | -0.167*** | 0.038 | -0.236*** | 0.021 | -0.007 | 0.113 |
| ESC | -0.008 | 0.035 | -0.005 | 0.026 | 0.037 | 0.046 |
| NESC | -0.054* | 0.031 | -0.042* | 0.023 | -0.167*** | 0.044 |

Table B2d: Duration model results for females

| | *Parents* | | *Incapacitated* | | *Earned income* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* | *Coef.* | *Std. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -3.302*** | 0.320 | -4.185*** | 0.136 | -4.359*** | 0.106 |
| 4-7 | -3.370*** | 0.319 | -3.784*** | 0.136 | -4.291*** | 0.107 |
| 8-11 | -3.442*** | 0.321 | -3.908*** | 0.137 | -4.350*** | 0.108 |
| 12-15 | -3.670*** | 0.322 | -3.972*** | 0.138 | -4.488*** | 0.108 |
| 16-19 | -3.825*** | 0.326 | -4.151*** | 0.140 | -4.605*** | 0.108 |
| 20-23 | -3.791*** | 0.327 | -4.212*** | 0.141 | -4.691*** | 0.109 |
| 24-27 | -3.913*** | 0.332 | -4.267*** | 0.142 | -4.781*** | 0.110 |
| 28-31 | -4.048*** | 0.337 | -4.329*** | 0.144 | -4.782*** | 0.110 |
| 32-35 | -4.014*** | 0.338 | -4.339*** | 0.146 | -4.832*** | 0.110 |
| 36-39 | -3.878*** | 0.341 | -4.470*** | 0.150 | -4.921*** | 0.112 |
| 40-43 | -3.931*** | 0.345 | -4.394*** | 0.152 | -4.986*** | 0.114 |
| 44-47 | -4.270*** | 0.366 | -4.720*** | 0.160 | -5.117*** | 0.116 |
| 48-51 | -4.515*** | 0.378 | -4.673*** | 0.163 | -5.071*** | 0.117 |
| 52-55 | -4.347*** | 0.368 | -4.646*** | 0.164 | -5.082*** | 0.118 |
| 56-59 | -4.169*** | 0.370 | -4.702*** | 0.171 | -5.001*** | 0.119 |
| 60-63 | -4.120*** | 0.369 | -4.758*** | 0.176 | -5.097*** | 0.123 |
| 64-67 | -4.192*** | 0.371 | -4.816*** | 0.181 | -5.261*** | 0.129 |
| 68-71 | -4.678*** | 0.423 | -4.833*** | 0.188 | -5.204*** | 0.129 |
| 72-75 | -4.381*** | 0.408 | -4.928*** | 0.200 | -5.117*** | 0.131 |
| 76-79 | -4.236*** | 0.400 | -4.779*** | 0.198 | -5.220*** | 0.137 |
| 80-91 | -4.487*** | 0.365 | -4.930*** | 0.166 | -5.259*** | 0.120 |
| 92-103 | -5.167*** | 0.428 | -5.038*** | 0.183 | -5.361*** | 0.128 |
| 104-131 | -4.548*** | 0.366 | -5.247*** | 0.185 | -5.568*** | 0.129 |
| 131+ | -4.895*** | 0.634 | -4.581*** | 0.269 | -5.579*** | 0.212 |
| *Age ( 16-19 omitted)* | | | | | | |
| 20-24 | -0.425* | 0.234 | 0.190*** | 0.038 | 0.068*** | 0.015 |
| 25-34 | -0.259 | 0.220 | 0.123*** | 0.039 | 0.043** | 0.017 |
| 35-44 | -0.116 | 0.222 | -0.020 | 0.045 | -0.126*** | 0.024 |
| 45-49 | -0.256 | 0.228 | -0.186*** | 0.055 | -0.160*** | 0.028 |
| 50-54 | -0.370 | 0.240 | -0.285*** | 0.059 | -0.354*** | 0.035 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.171** | 0.082 | 0.269*** | 0.058 | -0.026 | 0.051 |
| Youngest child aged 6-12 | 0.058 | 0.076 | 0.158 | 0.136 | -0.028 | 0.130 |
| Youngest child aged 13 or older | 0.085 | 0.073 | 0.241* | 0.124 | 0.089 | 0.062 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | -0.046 | 0.057 | 0.080* | 0.046 | 0.001 | 0.032 |
| Other homeowner | 0.109* | 0.056 | 0.240*** | 0.050 | 0.112*** | 0.030 |
| Government rent | -0.208** | 0.087 | -0.213*** | 0.073 | -0.087** | 0.040 |
| Other rent | 0.014 | 0.081 | 0.122*** | 0.028 | 0.113*** | 0.012 |
| Missing | 0.129 | 0.119 | 0.204*** | 0.048 | 0.252*** | 0.016 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.431*** | 0.074 | 0.395*** | 0.046 | 0.333*** | 0.032 |
| Partner on IS | -0.102* | 0.058 | -0.320*** | 0.046 | -0.200*** | 0.026 |
| *Private income* | | | | | | |
| Avg private income – current | 0.010 | 0.060 | 0.058 | 0.038 | 0.135*** | 0.024 |
| Have earnings | 0.330*** | 0.069 | 0.373*** | 0.057 | 0.821*** | 0.015 |
| Avg earnings – current | -0.077 | 0.062 | -0.109** | 0.045 | -0.252*** | 0.025 |
| Earnings – Time (spell) | -0.157 | 0.108 | -0.215*** | 0.078 | 0.325*** | 0.019 |
| Earnings – Amount (spell) | 0.104*** | 0.020 | 0.126*** | 0.009 | 0.178*** | 0.005 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 1.117*** | 0.201 | 1.425*** | 0.103 | 0.868*** | 0.097 |
| UB – Low search | 0.796*** | 0.205 | 1.044*** | 0.111 | 0.476*** | 0.098 |
| UB – No search | -0.019 | 0.130 | 0.231*** | 0.072 | 0.585*** | 0.070 |
| Pension/PPS | -1.043*** | 0.156 | -1.370*** | 0.076 | -1.450*** | 0.097 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.016 | 0.080 | 0.121*** | 0.033 | 0.076*** | 0.023 |
| No search * Avg earn current | 0.133* | 0.068 | 0.015 | 0.035 | 0.071*** | 0.016 |
| No search * Have earnings | -0.014 | 0.191 | 0.143* | 0.084 | -0.178*** | 0.050 |
| No search * Earn amount (spell) | -0.063 | 0.057 | 0.026 | 0.023 | 0.002 | 0.019 |
| No search * Earn time (spell) | 0.438 | 0.463 | -0.641*** | 0.240 | -0.028 | 0.153 |
| Incapacity within 4 fortnights | -0.198** | 0.098 | 0.087*** | 0.030 | -0.483*** | 0.033 |
| Local unemployment rate | 0.006 | 0.023 | -0.017* | 0.009 | -0.028*** | 0.009 |
| Job search * unemployment rate | -0.027 | 0.025 | -0.018 | 0.011 | -0.003 | 0.009 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Live in major city | 0.070 | 0.046 | 0.038 | 0.025 | 0.125*** | 0.011 |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | -0.041 | 0.107 | -0.065 | 0.082 | 0.173*** | 0.038 |
| 2000 | -0.017 | 0.111 | -0.035 | 0.082 | 0.347*** | 0.038 |
| 2001 | 0.011 | 0.113 | -0.054 | 0.082 | 0.342*** | 0.039 |
| 2002 | 0.124 | 0.112 | 0.000 | 0.082 | 0.359*** | 0.038 |
| 2003 | 0.116 | 0.113 | -0.054 | 0.083 | 0.296*** | 0.038 |
| 2004 | -0.946*** | 0.158 | -1.013*** | 0.101 | -0.512*** | 0.044 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.270*** | 0.052 | -0.303*** | 0.031 | -0.332*** | 0.013 |
| 3rd quarter | -0.233*** | 0.054 | -0.184*** | 0.031 | -0.153*** | 0.013 |
| 4th quarter | -0.474*** | 0.057 | -0.432*** | 0.032 | -0.340*** | 0.014 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | -0.106 | 0.075 | -0.217*** | 0.051 | -0.172*** | 0.027 |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | -0.176** | 0.082 | -0.317*** | 0.060 | -0.370*** | 0.032 |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | -0.282*** | 0.079 | -0.434*** | 0.067 | -0.482*** | 0.034 |
| Pre-$TTO_{3.5} > 0.75$ | -0.267*** | 0.100 | -0.447*** | 0.080 | -0.399*** | 0.040 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.057 | 0.073 | 0.003 | 0.042 | 0.041** | 0.020 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | -0.073 | 0.087 | 0.049 | 0.059 | -0.041 | 0.030 |
| Pre-$TTO_1 > 0.5$ | -0.334*** | 0.098 | -0.100 | 0.075 | -0.144*** | 0.036 |
| Job search – 3.5 years pre-spell | -0.253*** | 0.073 | -0.184*** | 0.040 | -0.135*** | 0.020 |
| Job search – 1 year pre-spell | 0.304*** | 0.098 | -0.149*** | 0.054 | -0.047* | 0.024 |
| Earnings time > 0.5 – 3.5-yrs | 0.034 | 0.085 | -0.086 | 0.057 | -0.015 | 0.022 |
| Earnings time > 0.5 – 1-yr | 0.020 | 0.064 | 0.094** | 0.038 | 0.067*** | 0.018 |
| Multiple spells in 3.5 yrs | 0.166*** | 0.060 | 0.204*** | 0.046 | 0.140*** | 0.022 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | -0.107 | 0.081 | -0.105* | 0.058 | -0.002 | 0.029 |
| ESC | -0.117 | 0.080 | 0.039 | 0.044 | -0.036 | 0.026 |
| NESC | -0.330*** | 0.056 | -0.149*** | 0.039 | -0.072*** | 0.018 |

Table B2d continued: Duration model results for females

| | *Partner on IS* | | *IS history > 50%* | |
|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | |
| 0-3 | -4.190*** | 0.147 | -4.392*** | 0.228 |
| 4-7 | -4.204*** | 0.146 | -4.378*** | 0.227 |
| 8-11 | -4.414*** | 0.148 | -4.489*** | 0.228 |
| 12-15 | -4.520*** | 0.149 | -4.565*** | 0.230 |
| 16-19 | -4.624*** | 0.151 | -4.625*** | 0.231 |
| 20-23 | -4.794*** | 0.153 | -4.651*** | 0.231 |
| 24-27 | -4.879*** | 0.154 | -4.874*** | 0.233 |
| 28-31 | -4.873*** | 0.155 | -4.845*** | 0.233 |
| 32-35 | -5.055*** | 0.160 | -4.977*** | 0.236 |
| 36-39 | -4.994*** | 0.163 | -4.882*** | 0.236 |
| 40-43 | -5.116*** | 0.166 | -5.015*** | 0.241 |
| 44-47 | -5.255*** | 0.176 | -5.158*** | 0.244 |
| 48-51 | -5.384*** | 0.181 | -5.078*** | 0.245 |
| 52-55 | -5.384*** | 0.182 | -5.301*** | 0.251 |
| 56-59 | -5.298*** | 0.188 | -5.112*** | 0.248 |
| 60-63 | -5.260*** | 0.188 | -5.153*** | 0.253 |
| 64-67 | -5.552*** | 0.203 | -5.320*** | 0.260 |
| 68-71 | -5.587*** | 0.213 | -5.309*** | 0.265 |
| 72-75 | -5.154*** | 0.195 | -5.095*** | 0.259 |
| 76-79 | -5.704*** | 0.240 | -5.282*** | 0.271 |
| 80-91 | -5.651*** | 0.183 | -5.296*** | 0.246 |
| 92-103 | -5.921*** | 0.208 | -5.527*** | 0.263 |
| 104-131 | -5.666*** | 0.186 | -5.466*** | 0.257 |
| 131+ | -5.864*** | 0.333 | -5.845*** | 0.439 |
| *Age ( 16-19 omitted)* | | | | |
| 20-24 | 0.531*** | 0.052 | 0.098 | 0.104 |
| 25-34 | 0.628*** | 0.051 | 0.142 | 0.104 |
| 35-44 | 0.578*** | 0.053 | 0.055 | 0.107 |
| 45-49 | 0.553*** | 0.057 | 0.004 | 0.112 |
| 50-54 | 0.252*** | 0.062 | -0.118 | 0.118 |
| *Dependent children (no dependent child omitted)* | | | | |
| Youngest child aged 0-5 | 0.109*** | 0.040 | 0.191** | 0.076 |
| Youngest child aged 6-12 | 0.092* | 0.048 | 0.117 | 0.087 |
| Youngest child aged 13 or older | 0.146** | 0.063 | 0.158* | 0.092 |
| *Housing/living circumstances (private rent omitted)* | | | | |
| Homeowner outright | -0.054 | 0.034 | 0.089* | 0.051 |
| Other homeowner | 0.173*** | 0.035 | 0.124** | 0.063 |
| Government rent | -0.140** | 0.065 | -0.079 | 0.053 |
| Other rent | 0.094*** | 0.036 | 0.017 | 0.030 |
| Missing | 0.114 | 0.074 | 0.080 | 0.063 |
| *Partner status (single omitted)* | | | | |
| Partner not on IS | 0.904*** | 0.051 | 0.488*** | 0.053 |
| Partner on IS | -0.127*** | 0.046 | -0.252*** | 0.047 |
| *Private income* | | | | |
| Avg private income – current | 0.097** | 0.038 | 0.218*** | 0.050 |
| Have earnings | 0.413*** | 0.043 | 0.467*** | 0.044 |
| Avg earnings – current | -0.161*** | 0.040 | -0.228*** | 0.052 |
| Earnings – Time (spell) | -0.177*** | 0.056 | -0.416*** | 0.061 |
| Earnings – Amount (spell) | 0.088*** | 0.008 | 0.110*** | 0.009 |
| *Payment/activity type (Other allowance omitted)* | | | | |
| UB – High search | 1.171*** | 0.113 | 1.104*** | 0.168 |
| UB – Low search | 0.798*** | 0.116 | 0.832*** | 0.170 |
| UB – No search | 0.223*** | 0.072 | 0.195* | 0.113 |
| Pension/PPS | -1.273*** | 0.118 | -0.926*** | 0.129 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | |
| No search * Avg private income | 0.122** | 0.051 | 0.118* | 0.068 |
| No search * Avg earn current | 0.025 | 0.041 | 0.041 | 0.058 |
| No search * Have earnings | 0.086 | 0.118 | 0.121 | 0.144 |
| No search * Earn amount (spell) | 0.029 | 0.035 | -0.107** | 0.048 |
| No search * Earn time (spell) | 0.216 | 0.339 | -0.189 | 0.434 |
| Incapacity within 4 fortnights | -0.209*** | 0.055 | -0.348*** | 0.062 |
| Local unemployment rate | -0.027** | 0.013 | -0.010 | 0.018 |
| Job search * unemployment rate | -0.001 | 0.014 | -0.010 | 0.019 |

| | | | | |
|---|---|---|---|---|
| Live in major city | 0.066*** | 0.025 | 0.095*** | 0.027 |
| *Calendar year dummy (1998 omitted)* | | | | |
| 1999 | 0.051 | 0.068 | 0.127 | 0.090 |
| 2000 | 0.159** | 0.070 | 0.188** | 0.092 |
| 2001 | 0.140** | 0.070 | 0.157* | 0.093 |
| 2002 | 0.218*** | 0.071 | 0.189** | 0.093 |
| 2003 | 0.138* | 0.071 | 0.145 | 0.094 |
| 2004 | -0.822*** | 0.092 | -0.717*** | 0.112 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | |
| 2nd quarter | -0.274*** | 0.030 | -0.282*** | 0.033 |
| 3rd quarter | -0.167*** | 0.031 | -0.108*** | 0.034 |
| 4th quarter | -0.437*** | 0.032 | -0.392*** | 0.035 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | -0.027 | 0.048 | | |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | -0.226*** | 0.056 | | |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | -0.414*** | 0.058 | | |
| Pre-$TTO_{3.5} > 0.75$ | -0.389*** | 0.073 | -0.068* | 0.039 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.105** | 0.044 | 0.056 | 0.045 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | -0.008 | 0.059 | 0.035 | 0.053 |
| Pre-$TTO_1 > 0.5$ | -0.173** | 0.071 | -0.122** | 0.057 |
| Job search – 3.5 years pre-spell | -0.087** | 0.040 | -0.223*** | 0.046 |
| Job search – 1 year pre-spell | -0.058 | 0.054 | -0.083** | 0.042 |
| Earnings time > 0.5 – 3.5-yrs | -0.002 | 0.052 | 0.063* | 0.033 |
| Earnings time > 0.5 – 1-yr | 0.062* | 0.037 | 0.166*** | 0.033 |
| Multiple spells in 3.5 yrs | 0.116*** | 0.042 | 0.101*** | 0.032 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | |
| Indigenous | -0.290*** | 0.053 | 0.020 | 0.049 |
| ESC | 0.066 | 0.042 | 0.141*** | 0.049 |
| NESC | -0.273*** | 0.034 | 0.004 | 0.038 |

# 11 Appendix C: Results from the duration models with education variables

Table C1a: Summary statistics for males

| | All Males | Indigenous | NESC | High UR | Regional area | Mature age |
|---|---|---|---|---|---|---|
| No. of observations | 179,555 | 9,457 | 28,395 | 40,043 | 77,225 | 19,012 |
| Age 20-24 (%) | 19.81 | 19.48 | 12.81 | 19.46 | 18.76 | |
| Age 25-34 (%) | 38.40 | 44.71 | 30.87 | 37.62 | 36.91 | |
| Age 35-44 (%) | 23.36 | 24.46 | 29.18 | 23.29 | 24.37 | |
| Age 45-49 (%) | 7.84 | 6.15 | 10.74 | 8.34 | 8.41 | |
| Age 50-54 (%) | 6.42 | 3.51 | 9.83 | 6.68 | 6.95 | 60.60 |
| Age 55+ (%) | 4.17 | 1.69 | 6.57 | 4.61 | 4.59 | 39.40 |
| No dependent children (%) | 79.99 | 74.14 | 71.90 | 77.80 | 77.20 | 86.23 |
| Youngest child aged 0-5 (%) | 13.00 | 18.18 | 17.35 | 14.26 | 14.73 | 2.52 |
| Youngest child aged 6-12 (%) | 5.26 | 6.22 | 7.76 | 5.88 | 6.12 | 6.05 |
| Youngest child aged 13 or older (%) | 1.75 | 1.47 | 2.99 | 2.07 | 1.95 | 5.19 |
| Private rent (%) | 38.44 | 30.81 | 34.79 | 35.35 | 37.10 | 25.41 |
| Homeowner outright (%) | 11.85 | 5.49 | 16.22 | 14.08 | 13.78 | 39.33 |
| Other homeowner (%) | 9.11 | 4.66 | 11.04 | 9.86 | 9.26 | 14.90 |
| Government rent (%) | 2.63 | 8.32 | 3.92 | 2.87 | 2.52 | 3.02 |
| Other rent (%) | 30.59 | 42.46 | 25.58 | 30.46 | 30.71 | 14.32 |
| Missing (%) | 7.38 | 8.26 | 8.45 | 7.37 | 6.62 | 3.02 |
| Single (%) | 69.07 | 67.33 | 54.96 | 65.47 | 64.77 | 44.31 |
| Partner not on IS (%) | 7.08 | 6.08 | 11.67 | 6.56 | 7.03 | 14.84 |
| Partner on IS (%) | 23.85 | 26.59 | 33.37 | 27.98 | 28.20 | 40.85 |
| Avg private income – current ($'00) | 0.29 | 0.18 | 0.26 | 0.33 | 0.32 | 0.41 |
| Have earnings (%) | 13.80 | 9.09 | 11.32 | 15.79 | 15.29 | 12.82 |
| Avg earnings – current ($'00) | 0.24 | 0.16 | 0.21 | 0.28 | 0.27 | 0.26 |
| Earnings – Time (spell) (%) | 11.83 | 8.17 | 9.34 | 13.47 | 13.27 | 12.07 |
| Earnings – Amount (spell) ($'00) | 0.82 | 0.67 | 0.68 | 0.96 | 0.94 | 0.92 |
| UB – High search (%) | 87.95 | 74.93 | 83.74 | 88.35 | 87.93 | 81.55 |
| UB – Low search (%) | 2.42 | 4.62 | 3.53 | 2.62 | 2.59 | 3.57 |
| UB – No search (%) | 9.63 | 20.45 | 12.72 | 9.03 | 9.47 | 14.88 |
| Pension/PPS (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other allowance (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| No search * Avg private income | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.03 |
| No search * Avg earn current | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 | 0.04 |
| No search * Have earnings | 0.96 | 1.28 | 0.88 | 1.21 | 1.11 | 1.71 |
| No search * Earn amount (spell ) | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.05 |
| No search * Earn time (spell) | 0.15 | 0.13 | 0.12 | 0.24 | 0.18 | 0.37 |
| Incapacity within 4 fortnights (%) | 6.85 | 5.40 | 6.86 | 6.84 | 6.28 | 12.10 |
| Unemployment Rate (%) | 6.98 | 6.89 | 6.66 | 9.05 | 7.57 | 7.08 |
| Job search * unemployment rate | 6.33 | 5.59 | 5.83 | 8.27 | 6.88 | 6.04 |
| Live in major city (%) | 56.99 | 28.05 | 81.15 | 40.67 | 0 | 53.13 |
| No pre-1 yr TTO (%) | 62.30 | 52.27 | 67.01 | 58.93 | 58.97 | 71.54 |
| 0<pre-1 yr TTO <=0.25 (%) | 16.76 | 18.18 | 13.90 | 17.43 | 18.10 | 12.98 |
| 0.25 <pre-1 yr TTO <=0.5 (%) | 13.74 | 18.66 | 11.72 | 14.99 | 15.02 | 10.05 |
| Pre-1 yr TTO > 0.5 (%) | 7.20 | 10.89 | 7.36 | 8.65 | 7.90 | 5.44 |
| No pre-3.5 yr TTO (%) | 33.70 | 21.05 | 41.09 | 30.36 | 30.24 | 48.66 |
| 0<pre-3.5 yr TTO <=0.25 (%) | 32.26 | 29.64 | 27.75 | 31.08 | 32.73 | 27.05 |
| 0.25<pre-3.5 yr TTO <=0.5 (%) | 18.34 | 24.21 | 16.58 | 19.44 | 19.62 | 13.31 |
| 0.5<pre-3.5 yr TTO <=0.75 (%) | 10.83 | 17.56 | 9.71 | 13.10 | 12.05 | 6.86 |
| Pre-3.5 yr TTO > 0.75 (%) | 4.87 | 7.53 | 4.87 | 6.02 | 5.35 | 4.13 |
| Job search requirement 3.5 years prior to entry (%) | 57.25 | 68.63 | 50.83 | 61.07 | 60.52 | 41.73 |
| Job search requirement 1 year prior to entry (%) | 26.46 | 32.23 | 23.37 | 29.41 | 28.80 | 18.66 |
| Pre-3.5 yr earnings time >0.5 (%) | 8.63 | 7.35 | 6.52 | 10.85 | 10.53 | 7.77 |
| Pre-1 yr earnings time >0.5 (%) | 27.86 | 24.67 | 20.67 | 33.14 | 32.50 | 21.67 |
| Multiple spells in pre-3.5 yr period (%) | 55.23 | 63.69 | 47.83 | 56.50 | 57.93 | 41.38 |
| Non-indigenous Australian-born (%) | 69.60 | | | 78.29 | 76.23 | 56.84 |
| Indigenous (%) | 5.27 | 100 | | 4.78 | 8.81 | 2.59 |
| ESC (%) | 9.32 | | | 8.65 | 8.02 | 16.09 |
| NESC (%) | 15.81 | | 100 | 8.27 | 6.93 | 24.48 |
| Less than year 10 education (%) | 12.54 | 24.44 | 12.81 | 13.75 | 15.22 | 19.82 |
| Missing (%) | 18.63 | 26.92 | 18.96 | 17.96 | 19.11 | 21.61 |
| Year 10 or year 11 (%) | 28.28 | 29.28 | 18.02 | 31.40 | 31.63 | 22.92 |
| Year 12 (%) | 17.46 | 8.97 | 22.52 | 14.96 | 14.11 | 11.55 |
| Non degree post school qualification (%) | 15.76 | 8.31 | 15.07 | 17.02 | 15.77 | 17.62 |
| Degree (%) | 7.33 | 2.08 | 12.62 | 4.91 | 4.16 | 6.49 |

Table C1a: Summary statistics for males (continued)

| | *All Males* | *Incapacity* | *Earnings* | *Partner – IS* | *IS >50%* | *Parents* |
|---|---|---|---|---|---|---|
| No. of observations | 179,555 | 16,986 | 58,309 | 42,823 | 25,508 | 35,934 |
| Age 20-24 (%) | 19.81 | 10.90 | 19.92 | 5.36 | 17.25 | 4.61 |
| Age 25-34 (%) | 38.40 | 31.67 | 37.76 | 31.01 | 44.06 | 35.18 |
| Age 35-44 (%) | 23.36 | 27.81 | 24.20 | 33.66 | 24.17 | 41.62 |
| Age 45-49 (%) | 7.84 | 10.89 | 8.16 | 11.83 | 7.26 | 11.32 |
| Age 50-54 (%) | 6.42 | 10.71 | 6.23 | 10.07 | 4.68 | 5.51 |
| Age 55+ (%) | 4.17 | 8.02 | 3.73 | 8.07 | 2.57 | 1.78 |
| No dependent children (%) | 79.99 | 81.97 | 76.13 | 29.45 | 82.95 | |
| Youngest child aged 0-5 (%) | 13.00 | 10.23 | 15.57 | 46.62 | 11.46 | 64.96 |
| Youngest child aged 6-12 (%) | 5.26 | 5.49 | 6.24 | 18.23 | 4.29 | 26.27 |
| Youngest child aged 13 or older (%) | 1.75 | 2.31 | 2.06 | 5.69 | 1.30 | 8.77 |
| Private rent (%) | 38.44 | 35.62 | 40.44 | 36.14 | 42.39 | 38.04 |
| Homeowner outright (%) | 11.85 | 16.07 | 12.89 | 27.01 | 6.64 | 23.83 |
| Other homeowner (%) | 9.11 | 9.28 | 10.02 | 20.51 | 3.81 | 23.01 |
| Government rent (%) | 2.63 | 3.30 | 2.77 | 5.68 | 5.84 | 6.41 |
| Other rent (%) | 30.59 | 30.40 | 27.14 | 7.90 | 35.47 | 6.27 |
| Missing (%) | 7.38 | 5.33 | 6.74 | 2.76 | 5.84 | 2.44 |
| Single (%) | 69.07 | 69.39 | 64.77 | | 76.60 | 1.51 |
| Partner not on IS (%) | 7.08 | 7.28 | 6.68 | | 3.53 | 14.42 |
| Partner on IS (%) | 23.85 | 23.33 | 28.55 | 100 | 19.88 | 84.07 |
| Avg private income – current ($'00) | 0.29 | 0.21 | 0.75 | 0.38 | 0.27 | 0.33 |
| Have earnings (%) | 13.80 | 7.36 | 39.61 | 15.64 | 14.59 | 15.14 |
| Avg earnings – current ($'00) | 0.24 | 0.13 | 0.72 | 0.31 | 0.24 | 0.28 |
| Earnings – Time (spell) (%) | 11.83 | 4.67 | 35.09 | 14.77 | 11.52 | 14.35 |
| Earnings – Amount (spell) ($'00) | 0.82 | 0.48 | 2.13 | 1.05 | 0.87 | 1.01 |
| UB – High search (%) | 87.95 | 25.37 | 91.99 | 86.56 | 84.28 | 88.02 |
| UB – Low search (%) | 2.42 | 0.41 | 2.64 | 2.61 | 5.82 | 2.37 |
| UB – No search (%) | 9.63 | 74.22 | 5.38 | 10.83 | 9.89 | 9.62 |
| Pension/PPS (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other allowance (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| No search * Avg private income | 0.01 | 0.05 | 0.02 | 0.02 | 0.01 | 0.01 |
| No search * Avg earn current | 0.02 | 0.07 | 0.06 | 0.03 | 0.03 | 0.03 |
| No search * Have earnings | 0.96 | 3.23 | 2.60 | 1.32 | 1.40 | 1.22 |
| No search * Earn amount (spell ) | 0.02 | 0.07 | 0.04 | 0.03 | 0.03 | 0.03 |
| No search * Earn time (spell) | 0.15 | 0.57 | 0.41 | 0.24 | 0.20 | 0.20 |
| Incapacity within 4 fortnights (%) | 6.85 | 72.38 | 3.56 | 6.57 | 6.35 | 6.05 |
| Unemployment Rate (%) | 6.98 | 6.83 | 7.14 | 7.31 | 7.12 | 7.27 |
| Job search * unemployment rate | 6.33 | 1.79 | 6.77 | 6.56 | 6.45 | 6.61 |
| Live in major city (%) | 56.99 | 59.91 | 51.81 | 49.15 | 51.81 | 51.00 |
| No pre-1 yr TTO (%) | 62.30 | 66.15 | 60.75 | 66.95 | 14.85 | 66.01 |
| 0<pre-1 yr TTO <=0.25 (%) | 16.76 | 14.42 | 17.92 | 15.52 | 18.87 | 16.34 |
| 0.25 <pre-1 yr TTO <=0.5 (%) | 13.74 | 12.60 | 14.28 | 11.43 | 34.89 | 11.51 |
| Pre-1 yr TTO > 0.5 (%) | 7.20 | 6.83 | 7.05 | 6.09 | 31.39 | 6.14 |
| No pre-3.5 yr TTO (%) | 33.70 | 35.81 | 32.16 | 39.90 | | 37.87 |
| 0<pre-3.5 yr TTO <=0.25 (%) | 32.26 | 31.38 | 33.39 | 30.70 | | 31.86 |
| 0.25<pre-3.5 yr TTO <=0.5 (%) | 18.34 | 17.75 | 18.74 | 15.84 | | 16.38 |
| 0.5<pre-3.5 yr TTO <=0.75 (%) | 10.83 | 10.54 | 10.76 | 8.88 | 76.21 | 9.07 |
| Pre-3.5 yr TTO > 0.75 (%) | 4.87 | 4.52 | 4.96 | 4.69 | 23.79 | 4.82 |
| Job search requirement 3.5 years prior to entry (%) | 57.25 | 48.83 | 58.87 | 50.14 | 97.18 | 51.31 |
| Job search requirement 1 year prior to entry (%) | 26.46 | 17.48 | 27.78 | 22.14 | 70.50 | 22.33 |
| Pre-3.5 yr earnings time >0.5 (%) | 8.63 | 5.92 | 15.88 | 10.14 | 22.53 | 10.14 |
| Pre-1 yr earnings time >0.5 (%) | 27.86 | 22.58 | 40.49 | 28.96 | 55.31 | 29.74 |
| Multiple spells in pre-3.5 yr period (%) | 55.23 | 51.50 | 56.58 | 49.49 | 59.97 | 51.29 |
| Non-indigenous Australian-born (%) | 69.60 | 69.79 | 73.50 | 61.56 | 69.46 | 61.35 |
| Indigenous (%) | 5.27 | 4.15 | 3.87 | 5.87 | 8.68 | 6.81 |
| ESC (%) | 9.32 | 9.86 | 9.43 | 10.45 | 7.15 | 9.63 |
| NESC (%) | 15.81 | 16.20 | 13.20 | 22.12 | 14.72 | 22.21 |
| Less than year 10 education (%) | 12.54 | 13.70 | 11.54 | 15.52 | 20.30 | 14.29 |
| Missing (%) | 18.63 | 33.24 | 16.29 | 19.36 | 19.77 | 19.52 |
| Year 10 or year 11 (%) | 28.28 | 25.90 | 28.87 | 28.59 | 33.71 | 29.42 |
| Year 12 (%) | 17.46 | 11.67 | 18.77 | 12.59 | 13.10 | 12.44 |
| Non degree post school qualification (%) | 15.76 | 12.18 | 16.35 | 17.81 | 9.94 | 18.15 |
| Degree (%) | 7.33 | 3.30 | 8.18 | 6.13 | 3.18 | 6.19 |

Table C1b: Summary statistics for females

| | All females | Indigenous | NESC | High UB | Regional area | Mature age |
|---|---|---|---|---|---|---|
| No. of observations | 78,134 | 3,110 | 12,142 | 16,244 | 30,498 | 6,081 |
| Age 20-24 (%) | 31.78 | 28.30 | 23.37 | 30.47 | 30.89 | |
| Age 25-34 (%) | 35.24 | 35.85 | 32.37 | 32.04 | 31.74 | |
| Age 35-44 (%) | 16.08 | 22.19 | 20.28 | 17.45 | 17.79 | |
| Age 45-49 (%) | 9.11 | 8.23 | 12.86 | 10.56 | 10.50 | |
| Age 50-54 (%) | 7.78 | 5.43 | 11.13 | 9.48 | 9.08 | 100 |
| No dependent children (%) | 95.95 | 91.58 | 93.62 | 94.53 | 94.82 | 97.32 |
| Youngest child aged 0-5 (%) | 1.56 | 3.95 | 2.32 | 2.06 | 1.95 | 0.07 |
| Youngest child aged 6-12 (%) | 1.20 | 2.67 | 1.91 | 1.69 | 1.66 | 0.48 |
| Youngest child aged 13 or older (%) | 1.28 | 1.80 | 2.15 | 1.71 | 1.57 | 2.14 |
| Private rent (%) | 41.67 | 37.11 | 35.25 | 38.05 | 39.78 | 26.30 |
| Homeowner outright (%) | 9.33 | 4.76 | 12.95 | 12.32 | 11.76 | 37.30 |
| Other homeowner (%) | 7.04 | 3.79 | 8.58 | 8.16 | 7.58 | 16.15 |
| Government rent (%) | 2.36 | 7.97 | 3.97 | 2.44 | 1.94 | 4.57 |
| Other rent (%) | 30.08 | 38.46 | 28.37 | 30.10 | 30.85 | 12.28 |
| Missing (%) | 9.52 | 7.91 | 10.88 | 8.94 | 8.08 | 3.40 |
| Single (%) | 82.03 | 77.33 | 72.70 | 76.98 | 76.54 | 67.01 |
| Partner not on IS (%) | 6.06 | 6.46 | 10.39 | 6.29 | 6.73 | 9.74 |
| Partner on IS (%) | 11.91 | 16.21 | 16.91 | 16.73 | 16.73 | 23.25 |
| Avg private income – current ($'00) | 0.48 | 0.30 | 0.37 | 0.55 | 0.54 | 0.62 |
| Have earnings (%) | 21.16 | 13.06 | 15.71 | 23.62 | 23.55 | 20.63 |
| Avg earnings – current ($'00) | 0.44 | 0.28 | 0.33 | 0.50 | 0.49 | 0.48 |
| Earnings – Time (spell) (%) | 19.98 | 11.58 | 14.20 | 22.15 | 22.38 | 20.19 |
| Earnings – Amount (spell) ($'00) | 1.12 | 0.80 | 0.87 | 1.26 | 1.25 | 1.24 |
| UB – High search (%) | 85.36 | 70.04 | 81.03 | 85.14 | 85.27 | 78.18 |
| UB – Low search (%) | 2.18 | 3.95 | 3.97 | 2.37 | 2.36 | 3.04 |
| UB – No search (%) | 12.47 | 26.01 | 15.00 | 12.49 | 12.36 | 18.78 |
| Pension/PPS (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other allowance (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| No search * Avg private income | 0.03 | 0.07 | 0.02 | 0.04 | 0.04 | 0.04 |
| No search * Avg earn current | 0.05 | 0.10 | 0.04 | 0.07 | 0.06 | 0.08 |
| No search * Have earnings | 2.04 | 3.17 | 1.58 | 2.68 | 2.40 | 3.44 |
| No search * Earn amount (spell ) | 0.06 | 0.14 | 0.05 | 0.09 | 0.07 | 0.07 |
| No search * Earn time (spell) | 0.51 | 0.98 | 0.33 | 0.72 | 0.61 | 0.65 |
| Incapacity within 4 fortnights (%) | 8.78 | 10.16 | 9.24 | 8.89 | 8.12 | 14.98 |
| Unemployment Rate (%) | 6.85 | 6.81 | 6.58 | 9.01 | 7.57 | 7.01 |
| Job search * unemployment rate | 6.02 | 5.09 | 5.60 | 7.92 | 6.66 | 5.75 |
| Live in major city (%) | 60.97 | 34.24 | 82.02 | 40.68 | 0 | 54.45 |
| No pre-1 yr TTO (%) | 68.67 | 56.24 | 69.80 | 66.28 | 66.35 | 71.88 |
| 0<pre-1 yr TTO <=0.25 (%) | 14.85 | 16.91 | 12.89 | 15.24 | 15.34 | 12.86 |
| 0.25 <pre-1 yr TTO <=0.5 (%) | 10.78 | 16.01 | 10.38 | 11.88 | 11.88 | 9.69 |
| Pre-1 yr TTO > 0.5 (%) | 5.70 | 10.84 | 6.93 | 6.60 | 6.44 | 5.57 |
| No pre-3.5 yr TTO (%) | 39.68 | 22.67 | 44.93 | 36.27 | 36.12 | 47.59 |
| 0<pre-3.5 yr TTO <=0.25 (%) | 32.11 | 28.55 | 27.59 | 31.09 | 31.80 | 25.57 |
| 0.25<pre-3.5 yr TTO <=0.5 (%) | 14.83 | 20.42 | 14.00 | 15.98 | 16.15 | 13.01 |
| 0.5<pre-3.5 yr TTO <=0.75 (%) | 8.65 | 18.59 | 8.38 | 10.58 | 10.31 | 8.52 |
| Pre-3.5 yr TTO > 0.75 (%) | 4.73 | 9.77 | 5.10 | 6.08 | 5.62 | 5.31 |
| Job search requirement 3.5 years prior to entry (%) | 47.07 | 59.61 | 42.25 | 49.79 | 49.73 | 36.13 |
| Job search requirement 1 year prior to entry (%) | 19.62 | 25.05 | 19.08 | 21.19 | 21.35 | 15.77 |
| Pre-3.5 yr earnings time >0.5 (%) | 11.22 | 9.16 | 8.80 | 13.83 | 13.46 | 12.04 |
| Pre-1 yr earnings time >0.5 (%) | 32.56 | 30.51 | 23.81 | 37.96 | 37.54 | 29.93 |
| Multiple spells in pre-3.5 yr period (%) | 48.73 | 55.69 | 44.02 | 49.48 | 50.17 | 39.42 |
| Non-indigenous Australian-born (%) | 72.30 | | | 79.51 | 78.81 | 61.36 |
| Indigenous (%) | 3.98 | 100 | | 4.00 | 6.71 | 2.78 |
| ESC (%) | 8.18 | | | 8.29 | 7.33 | 13.63 |
| NESC (%) | 15.54 | | 100 | 8.20 | 7.16 | 22.23 |
| Less than year 10 education (%) | 6.91 | 16.05 | 10.87 | 7.95 | 8.51 | 17.27 |
| Missing (%) | 17.96 | 28.62 | 18.70 | 17.53 | 18.55 | 22.40 |
| Year 10 or year 11 (%) | 21.79 | 26.82 | 14.28 | 25.58 | 26.37 | 30.24 |
| Year 12 (%) | 24.46 | 14.47 | 26.16 | 22.63 | 22.37 | 12.89 |
| Non degree post school qualification (%) | 14.03 | 8.87 | 13.89 | 14.57 | 13.69 | 9.88 |
| Degree (%) | 14.85 | 5.18 | 16.10 | 11.75 | 10.52 | 7.32 |

Table C1b: Summary statistics for females (continued)

| | *All females* | *Incapacity* | *Earnings* | *Partner – IS* | *IS >50%* | *Parents* |
|---|---|---|---|---|---|---|
| No. of observations | 78,134 | 9,063 | 34,872 | 9,308 | 9,392 | 3,164 |
| Age 20-24 (%) | 31.78 | 18.81 | 33.89 | 12.54 | 21.18 | 5.34 |
| Age 25-34 (%) | 35.24 | 32.21 | 33.59 | 28.99 | 33.10 | 30.66 |
| Age 35-44 (%) | 16.08 | 21.62 | 15.96 | 27.85 | 24.61 | 43.87 |
| Age 45-49 (%) | 9.11 | 14.00 | 9.14 | 15.44 | 12.96 | 14.98 |
| Age 50-54 (%) | 7.78 | 13.36 | 7.43 | 15.19 | 8.16 | 5.15 |
| No dependent children (%) | 95.95 | 95.66 | 95.98 | 78.80 | 91.72 | |
| Youngest child aged 0-5 (%) | 1.56 | 1.39 | 1.36 | 9.85 | 3.18 | 38.56 |
| Youngest child aged 6-12 (%) | 1.20 | 1.20 | 1.30 | 7.17 | 2.47 | 29.71 |
| Youngest child aged 13 or older (%) | 1.28 | 1.74 | 1.36 | 4.18 | 2.63 | 31.73 |
| Private rent (%) | 41.67 | 39.63 | 43.87 | 37.10 | 44.97 | 37.71 |
| Homeowner outright (%) | 9.33 | 14.58 | 8.97 | 26.43 | 9.02 | 24.49 |
| Other homeowner (%) | 7.04 | 9.74 | 6.90 | 17.00 | 5.45 | 18.20 |
| Government rent (%) | 2.36 | 3.63 | 2.25 | 3.44 | 7.52 | 6.95 |
| Other rent (%) | 30.08 | 26.46 | 28.57 | 12.35 | 27.32 | 8.66 |
| Missing (%) | 9.52 | 5.96 | 9.43 | 3.69 | 5.72 | 3.98 |
| Single (%) | 82.03 | 77.45 | 84.96 | | 81.54 | 24.02 |
| Partner not on IS (%) | 6.06 | 9.19 | 4.18 | | 4.74 | 13.62 |
| Partner on IS (%) | 11.91 | 13.36 | 10.86 | 100 | 13.72 | 62.36 |
| Avg private income – current ($'00) | 0.48 | 0.33 | 1.00 | 0.51 | 0.52 | 0.56 |
| Have earnings (%) | 21.16 | 11.47 | 45.93 | 18.86 | 22.67 | 21.00 |
| Avg earnings – current ($'00) | 0.44 | 0.25 | 0.96 | 0.44 | 0.48 | 0.49 |
| Earnings – Time (spell) (%) | 19.98 | 7.99 | 43.94 | 19.14 | 20.83 | 20.73 |
| Earnings – Amount (spell) ($'00) | 1.12 | 0.69 | 2.29 | 1.16 | 1.26 | 1.21 |
| UB – High search (%) | 85.36 | 22.07 | 90.67 | 80.88 | 81.35 | 82.39 |
| UB – Low search (%) | 2.18 | 0.21 | 2.22 | 2.59 | 5.04 | 2.84 |
| UB – No search (%) | 12.47 | 77.72 | 7.10 | 16.53 | 13.61 | 14.78 |
| Pension/PPS (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other allowance (%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| No search * Avg private income | 0.03 | 0.11 | 0.07 | 0.04 | 0.04 | 0.09 |
| No search * Avg earn current | 0.05 | 0.16 | 0.12 | 0.08 | 0.08 | 0.12 |
| No search * Have earnings | 2.04 | 6.16 | 4.26 | 2.88 | 2.98 | 3.93 |
| No search * Earn amount (spell ) | 0.06 | 0.18 | 0.10 | 0.07 | 0.09 | 0.14 |
| No search * Earn time (spell) | 0.51 | 1.46 | 1.05 | 0.61 | 0.83 | 1.30 |
| Incapacity within 4 fortnights (%) | 8.78 | 75.68 | 4.90 | 9.31 | 9.41 | 9.07 |
| Unemployment Rate (%) | 6.85 | 6.70 | 6.97 | 7.35 | 7.09 | 7.34 |
| Job search * unemployment rate | 6.02 | 1.52 | 6.48 | 6.18 | 6.18 | 6.32 |
| Live in major city (%) | 60.97 | 63.78 | 57.28 | 45.18 | 52.87 | 50.03 |
| No pre-1 yr TTO (%) | 68.67 | 69.20 | 67.27 | 70.54 | 18.99 | 64.60 |
| 0<pre-1 yr TTO <=0.25 (%) | 14.85 | 13.52 | 15.85 | 12.96 | 19.68 | 13.78 |
| 0.25 <pre-1 yr TTO <=0.5 (%) | 10.78 | 11.22 | 11.32 | 10.49 | 32.54 | 12.20 |
| Pre-1 yr TTO > 0.5 (%) | 5.70 | 6.06 | 5.56 | 6.02 | 28.79 | 9.42 |
| No pre-3.5 yr TTO (%) | 39.68 | 38.16 | 37.71 | 44.08 | | 35.37 |
| 0<pre-3.5 yr TTO <=0.25 (%) | 32.11 | 31.20 | 33.08 | 25.93 | | 21.05 |
| 0.25<pre-3.5 yr TTO <=0.5 (%) | 14.83 | 15.98 | 15.62 | 14.60 | | 17.26 |
| 0.5<pre-3.5 yr TTO <=0.75 (%) | 8.65 | 9.21 | 8.96 | 9.67 | 71.99 | 15.93 |
| Pre-3.5 yr TTO > 0.75 (%) | 4.73 | 5.45 | 4.63 | 5.72 | 28.01 | 10.40 |
| Job search requirement 3.5 years prior to entry (%) | 47.07 | 41.81 | 49.20 | 36.28 | 83.56 | 27.34 |
| Job search requirement 1 year prior to entry (%) | 19.62 | 14.41 | 20.83 | 15.48 | 57.05 | 12.96 |
| Pre-3.5 yr earnings time >0.5 (%) | 11.22 | 8.44 | 16.70 | 10.34 | 33.12 | 12.67 |
| Pre-1 yr earnings time >0.5 (%) | 32.56 | 28.40 | 41.96 | 28.69 | 66.84 | 33.06 |
| Multiple spells in pre-3.5 yr period (%) | 48.73 | 47.20 | 50.30 | 42.14 | 51.93 | 41.28 |
| Non-indigenous Australian-born (%) | 72.30 | 69.49 | 77.63 | 62.57 | 67.70 | 57.65 |
| Indigenous (%) | 3.98 | 4.48 | 2.70 | 5.41 | 8.99 | 8.28 |
| ESC (%) | 8.18 | 9.25 | 7.80 | 9.96 | 7.64 | 9.58 |
| NESC (%) | 15.54 | 16.78 | 11.87 | 22.06 | 15.67 | 24.49 |
| Less than year 10 education (%) | 6.91 | 9.47 | 6.10 | 12.87 | 14.01 | 11.16 |
| Missing (%) | 17.96 | 31.37 | 15.68 | 21.21 | 20.00 | 23.93 |
| Year 10 or year 11 (%) | 21.79 | 23.77 | 22.01 | 28.77 | 30.96 | 28.45 |
| Year 12 (%) | 24.46 | 18.35 | 24.96 | 17.65 | 18.06 | 14.79 |
| Non degree post school qualification (%) | 14.03 | 10.84 | 14.79 | 11.10 | 11.67 | 12.26 |
| Degree (%) | 14.85 | 6.21 | 16.46 | 8.40 | 5.30 | 9.42 |

Table C2a: Estimation results for models with education variables – Males

| | *All Males* | | *Indigenous* | | *NESC* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -2.832*** | 0.079 | -2.928*** | 0.342 | -3.300*** | 0.257 |
| 4-7 | -2.737*** | 0.079 | -2.967*** | 0.341 | -3.181*** | 0.257 |
| 8-11 | -2.978*** | 0.079 | -3.106*** | 0.342 | -3.437*** | 0.257 |
| 12-15 | -3.031*** | 0.079 | -3.179*** | 0.342 | -3.497*** | 0.257 |
| 16-19 | -3.121*** | 0.080 | -3.259*** | 0.344 | -3.571*** | 0.258 |
| 20-23 | -3.265*** | 0.080 | -3.449*** | 0.346 | -3.725*** | 0.258 |
| 24-27 | -3.327*** | 0.080 | -3.497*** | 0.346 | -3.757*** | 0.259 |
| 28-31 | -3.407*** | 0.080 | -3.563*** | 0.348 | -3.842*** | 0.258 |
| 32-35 | -3.467*** | 0.081 | -3.496*** | 0.348 | -3.912*** | 0.260 |
| 36-39 | -3.520*** | 0.081 | -3.637*** | 0.350 | -3.930*** | 0.259 |
| 40-43 | -3.606*** | 0.082 | -3.666*** | 0.351 | -4.046*** | 0.261 |
| 44-47 | -3.669*** | 0.082 | -3.761*** | 0.354 | -4.106*** | 0.261 |
| 48-51 | -3.732*** | 0.083 | -3.829*** | 0.356 | -4.130*** | 0.263 |
| 52-55 | -3.740*** | 0.084 | -3.634*** | 0.355 | -4.114*** | 0.263 |
| 56-59 | -3.859*** | 0.085 | -4.114*** | 0.365 | -4.404*** | 0.268 |
| 60-63 | -3.847*** | 0.085 | -3.993*** | 0.364 | -4.250*** | 0.267 |
| 64-67 | -3.892*** | 0.086 | -3.932*** | 0.368 | -4.334*** | 0.270 |
| 68-71 | -3.909*** | 0.088 | -4.094*** | 0.375 | -4.254*** | 0.270 |
| 72-75 | -3.873*** | 0.089 | -4.051*** | 0.376 | -4.243*** | 0.274 |
| 76-79 | -4.036*** | 0.092 | -4.157*** | 0.389 | -4.381*** | 0.276 |
| 80-91 | -4.077*** | 0.085 | -4.340*** | 0.364 | -4.458*** | 0.265 |
| 92-103 | -4.171*** | 0.088 | -4.496*** | 0.382 | -4.609*** | 0.272 |
| 104-131 | -4.268*** | 0.087 | -4.244*** | 0.366 | -4.822*** | 0.270 |
| 131+ | -4.431*** | 0.122 | -5.280*** | 0.615 | -4.876*** | 0.329 |
| *Age (20-24 omitted)* | | | | | | |
| Age 25-34 | -0.336*** | 0.062 | -0.247 | 0.274 | -0.547** | 0.224 |
| Age 35-44 | -0.447*** | 0.062 | -0.311 | 0.275 | -0.651*** | 0.224 |
| Age 45-49 | -0.519*** | 0.062 | -0.387 | 0.280 | -0.700*** | 0.225 |
| Age 50-54 | -0.646*** | 0.063 | -0.442 | 0.283 | -0.793*** | 0.225 |
| Age 55+ | -0.883*** | 0.064 | -0.716** | 0.301 | -1.011*** | 0.227 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.056*** | 0.012 | 0.183*** | 0.057 | 0.062** | 0.027 |
| Youngest child aged 6-12 | 0.104*** | 0.015 | 0.151** | 0.066 | 0.102*** | 0.033 |
| Youngest child aged 13 or older | 0.163*** | 0.022 | 0.414*** | 0.101 | 0.133*** | 0.047 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.058*** | 0.010 | 0.128** | 0.060 | 0.195*** | 0.023 |
| Other homeowner | 0.175*** | 0.010 | 0.157** | 0.063 | 0.279*** | 0.025 |
| Government rent | -0.129*** | 0.017 | -0.137*** | 0.047 | -0.027 | 0.036 |
| Other rent | 0.043*** | 0.006 | 0.026 | 0.029 | 0.118*** | 0.018 |
| Missing | 0.030** | 0.012 | -0.037 | 0.059 | 0.091*** | 0.030 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.424*** | 0.013 | 0.423*** | 0.064 | 0.253*** | 0.027 |
| Partner on IS | -0.099*** | 0.011 | -0.110** | 0.055 | -0.305*** | 0.026 |
| *Private income* | | | | | | |
| Avg private income – current | 0.033*** | 0.010 | -0.031 | 0.056 | 0.067*** | 0.026 |
| Have earnings | 0.474*** | 0.010 | 0.416*** | 0.049 | 0.457*** | 0.029 |
| Avg earnings – current | -0.041*** | 0.011 | -0.005 | 0.058 | -0.097*** | 0.028 |
| Earnings – Time (spell) | -0.453*** | 0.016 | -0.043 | 0.089 | -0.375*** | 0.044 |
| Earnings – Amount (spell) | 0.073*** | 0.002 | 0.105*** | 0.011 | 0.094*** | 0.005 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 0.681*** | 0.048 | 0.703*** | 0.196 | 1.020*** | 0.118 |
| UB – Low search | 0.376*** | 0.049 | 0.876*** | 0.197 | 0.698*** | 0.118 |
| UB – No search | -0.277*** | 0.035 | -0.177 | 0.141 | 0.080 | 0.091 |
| Pension/PPS | -1.235*** | 0.048 | -0.986*** | 0.177 | -1.031*** | 0.124 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.018 | 0.020 | 0.046 | 0.073 | 0.050 | 0.067 |
| No search * Avg earn current | 0.051*** | 0.016 | -0.017 | 0.064 | 0.067 | 0.044 |
| No search * Have earnings | 0.255*** | 0.042 | 0.250 | 0.169 | 0.362*** | 0.111 |
| No search * Earn amount (spell) | 0.032*** | 0.012 | 0.031 | 0.054 | 0.047 | 0.041 |
| No search * Earn time (spell) | -0.513*** | 0.175 | -0.137 | 0.579 | -1.427** | 0.700 |
| Incapacity within 4 fortnights | -0.242*** | 0.015 | -0.156*** | 0.061 | -0.216*** | 0.038 |
| Local unemployment rate | -0.028*** | 0.005 | 0.004 | 0.019 | -0.030** | 0.012 |
| Job search * unemployment rate | 0.001 | 0.005 | -0.024 | 0.020 | 0.004 | 0.013 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Live in major city | 0.065*** | 0.006 | 0.061** | 0.027 | 0.028 | 0.018 |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | -0.035** | 0.015 | -0.106* | 0.064 | 0.025 | 0.039 |
| 2000 | 0.042*** | 0.015 | -0.137** | 0.067 | 0.148*** | 0.040 |
| 2001 | 0.017 | 0.015 | -0.134** | 0.067 | 0.078* | 0.040 |
| 2002 | 0.096*** | 0.015 | -0.161** | 0.069 | 0.160*** | 0.040 |
| 2003 | 0.074*** | 0.015 | -0.053 | 0.070 | 0.101** | 0.041 |
| 2004 | -0.765*** | 0.021 | -0.960*** | 0.094 | -0.725*** | 0.053 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.211*** | 0.007 | -0.228*** | 0.032 | -0.220*** | 0.019 |
| 3rd quarter | -0.056*** | 0.007 | -0.116*** | 0.032 | -0.051*** | 0.019 |
| 4th quarter | -0.291*** | 0.008 | -0.370*** | 0.035 | -0.297*** | 0.020 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5}$ ≤ 0.25 | -0.106*** | 0.013 | -0.014 | 0.059 | -0.041 | 0.034 |
| 0.25 < Pre-$TTO_{3.5}$ ≤ 0.5 | -0.338*** | 0.015 | -0.269*** | 0.066 | -0.225*** | 0.040 |
| 0. 5< Pre-$TTO_{3.5}$ ≤ 0.75 | -0.516*** | 0.016 | -0.496*** | 0.067 | -0.383*** | 0.043 |
| Pre-$TTO_{3.5}$ > 0.75 | -0.499*** | 0.018 | -0.579*** | 0.078 | -0.403*** | 0.050 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1$ ≤ 0.25 | 0.045*** | 0.010 | 0.091** | 0.043 | 0.044* | 0.027 |
| 0.25 < Pre-$TTO_1$ ≤ 0.5 | -0.060*** | 0.014 | 0.098* | 0.057 | -0.154*** | 0.039 |
| Pre-$TTO_1$ > 0.5 | -0.173*** | 0.016 | 0.045 | 0.064 | -0.247*** | 0.044 |
| Job search – 3.5 years pre-spell | -0.121*** | 0.011 | -0.202*** | 0.048 | -0.051* | 0.029 |
| Job search – 1 year pre-spell | -0.025** | 0.012 | -0.064 | 0.048 | 0.048 | 0.032 |
| Earnings time > 0.5 – 3.5-yrs | 0.025** | 0.012 | -0.135** | 0.056 | 0.059* | 0.034 |
| Earnings time > 0.5 – 1-yr | 0.043*** | 0.008 | 0.055 | 0.034 | 0.043* | 0.022 |
| Multiple spells in 3.5 yrs | 0.221*** | 0.010 | 0.173*** | 0.041 | 0.215*** | 0.025 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | 0.014 | 0.012 | | | | |
| ESC | 0.038*** | 0.009 | | | | |
| NESC | -0.167*** | 0.008 | | | | |
| *Educational qualification (less than year 10 omitted)* | | | | | | |
| Missing | 0.202*** | 0.010 | 0.124*** | 0.034 | 0.224*** | 0.027 |
| Year 10 or year 11 | 0.090*** | 0.009 | 0.024 | 0.034 | 0.120*** | 0.026 |
| Year 12 | 0.123*** | 0.010 | 0.106** | 0.046 | 0.140*** | 0.025 |
| Non degree post school qualification | 0.219*** | 0.010 | 0.182*** | 0.048 | 0.250*** | 0.027 |
| Degree | 0.204*** | 0.012 | 0.281*** | 0.089 | 0.270*** | 0.027 |

Table C2a: Estimation results for models with education variables – Males (continued)

| | High Unemployment | | Regional Areas | | Mature age | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -3.584*** | 0.170 | -2.773*** | 0.112 | -3.548*** | 0.164 |
| 4-7 | -3.479*** | 0.170 | -2.712*** | 0.112 | -3.590*** | 0.164 |
| 8-11 | -3.705*** | 0.170 | -2.928*** | 0.112 | -3.762*** | 0.165 |
| 12-15 | -3.734*** | 0.170 | -2.956*** | 0.113 | -3.831*** | 0.166 |
| 16-19 | -3.792*** | 0.170 | -3.063*** | 0.113 | -3.885*** | 0.166 |
| 20-23 | -3.953*** | 0.171 | -3.247*** | 0.113 | -4.152*** | 0.168 |
| 24-27 | -4.022*** | 0.171 | -3.317*** | 0.114 | -4.317*** | 0.169 |
| 28-31 | -4.070*** | 0.172 | -3.385*** | 0.114 | -4.544*** | 0.171 |
| 32-35 | -4.141*** | 0.172 | -3.435*** | 0.115 | -4.497*** | 0.173 |
| 36-39 | -4.223*** | 0.173 | -3.525*** | 0.115 | -4.478*** | 0.173 |
| 40-43 | -4.224*** | 0.173 | -3.567*** | 0.116 | -4.623*** | 0.175 |
| 44-47 | -4.331*** | 0.175 | -3.601*** | 0.117 | -4.826*** | 0.180 |
| 48-51 | -4.363*** | 0.176 | -3.713*** | 0.118 | -4.822*** | 0.181 |
| 52-55 | -4.413*** | 0.177 | -3.689*** | 0.119 | -5.005*** | 0.189 |
| 56-59 | -4.551*** | 0.179 | -3.891*** | 0.122 | -5.001*** | 0.193 |
| 60-63 | -4.483*** | 0.179 | -3.763*** | 0.122 | -5.101*** | 0.199 |
| 64-67 | -4.458*** | 0.180 | -3.790*** | 0.123 | -5.036*** | 0.199 |
| 68-71 | -4.516*** | 0.182 | -3.853*** | 0.125 | -5.118*** | 0.202 |
| 72-75 | -4.495*** | 0.184 | -3.794*** | 0.126 | -5.286*** | 0.218 |
| 76-79 | -4.638*** | 0.188 | -4.073*** | 0.133 | -5.313*** | 0.221 |
| 80-91 | -4.666*** | 0.176 | -3.987*** | 0.120 | -5.480*** | 0.196 |
| 92-103 | -4.710*** | 0.180 | -4.165*** | 0.127 | -5.294*** | 0.200 |
| 104-131 | -4.823*** | 0.179 | -4.269*** | 0.125 | -5.561*** | 0.200 |
| 131+ | -4.992*** | 0.229 | -4.578*** | 0.188 | -6.297*** | 0.407 |
| *Age (20-24 omitted)* | | | | | | |
| Age 25-34 | -0.309** | 0.129 | -0.269*** | 0.084 | | |
| Age 35-44 | -0.431*** | 0.130 | -0.380*** | 0.085 | | |
| Age 45-49 | -0.518*** | 0.131 | -0.456*** | 0.086 | | |
| Age 50-54 | -0.567*** | 0.132 | -0.587*** | 0.086 | | |
| Age 55+ | -0.843*** | 0.135 | -0.823*** | 0.089 | -0.205*** | 0.019 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.129*** | 0.026 | 0.067*** | 0.018 | 0.051 | 0.061 |
| Youngest child aged 6-12 | 0.208*** | 0.030 | 0.136*** | 0.021 | 0.081** | 0.039 |
| Youngest child aged 13 or older | 0.336*** | 0.042 | 0.201*** | 0.031 | 0.183*** | 0.040 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.063*** | 0.022 | 0.017 | 0.015 | -0.033 | 0.024 |
| Other homeowner | 0.180*** | 0.022 | 0.157*** | 0.016 | 0.145*** | 0.029 |
| Government rent | -0.067* | 0.036 | -0.142*** | 0.026 | -0.193*** | 0.059 |
| Other rent | 0.070*** | 0.014 | 0.034*** | 0.010 | 0.005 | 0.030 |
| Missing | 0.068** | 0.027 | 0.015 | 0.020 | -0.034 | 0.066 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.506*** | 0.028 | 0.463*** | 0.019 | 0.467*** | 0.029 |
| Partner on IS | -0.111*** | 0.023 | -0.079*** | 0.016 | -0.131*** | 0.023 |
| *Private income* | | | | | | |
| Avg private income – current | 0.041* | 0.022 | 0.037** | 0.015 | 0.002 | 0.020 |
| Have earnings | 0.443*** | 0.020 | 0.447*** | 0.014 | 0.406*** | 0.035 |
| Avg earnings – current | -0.040* | 0.023 | -0.048*** | 0.016 | -0.057** | 0.023 |
| Earnings – Time (spell) | -0.308*** | 0.032 | -0.362*** | 0.023 | -0.220*** | 0.051 |
| Earnings – Amount (spell) | 0.077*** | 0.004 | 0.069*** | 0.003 | 0.092*** | 0.006 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 0.420*** | 0.106 | 0.577*** | 0.071 | 0.700*** | 0.154 |
| UB – Low search | 0.108 | 0.106 | 0.307*** | 0.072 | 0.410*** | 0.154 |
| UB – No search | -0.348*** | 0.067 | -0.298*** | 0.050 | -0.170 | 0.126 |
| Pension/PPS | -1.201*** | 0.087 | -1.248*** | 0.069 | -1.377*** | 0.151 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.043 | 0.033 | 0.058** | 0.027 | 0.165*** | 0.059 |
| No search * Avg earn current | 0.035 | 0.031 | 0.048** | 0.022 | 0.024 | 0.048 |
| No search * Have earnings | 0.270*** | 0.083 | 0.258*** | 0.061 | 0.435*** | 0.121 |
| No search * Earn amount (spell) | 0.015 | 0.021 | 0.031* | 0.019 | 0.014 | 0.031 |
| No search * Earn time (spell) | -0.525* | 0.272 | -0.750*** | 0.243 | -1.915*** | 0.583 |
| Incapacity within 4 fortnights | -0.248*** | 0.033 | -0.238*** | 0.023 | -0.218*** | 0.047 |
| Local unemployment rate | 0.008 | 0.010 | -0.031*** | 0.007 | -0.031** | 0.014 |
| Job search * unemployment rate | 0.028*** | 0.010 | 0.006 | 0.007 | 0.016 | 0.014 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Live in major city | 0.139*** | 0.013 | 0.207*** | 0.017 | 0.099*** | 0.019 |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | 0.041 | 0.033 | -0.071*** | 0.022 | 0.040 | 0.052 |
| 2000 | 0.132*** | 0.034 | -0.015 | 0.023 | 0.128** | 0.053 |
| 2001 | 0.118*** | 0.034 | 0.004 | 0.023 | 0.097* | 0.053 |
| 2002 | 0.284*** | 0.034 | 0.071*** | 0.023 | 0.153*** | 0.053 |
| 2003 | 0.352*** | 0.035 | 0.049** | 0.023 | 0.134** | 0.054 |
| 2004 | -0.398*** | 0.046 | -0.808*** | 0.032 | -0.736*** | 0.070 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.173*** | 0.015 | -0.181*** | 0.011 | -0.178*** | 0.024 |
| 3rd quarter | 0.000 | 0.016 | -0.054*** | 0.011 | -0.034 | 0.025 |
| 4th quarter | -0.240*** | 0.017 | -0.281*** | 0.012 | -0.252*** | 0.025 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5}$ ≤ 0.25 | -0.128*** | 0.029 | -0.117*** | 0.020 | -0.161*** | 0.045 |
| 0.25 < Pre-$TTO_{3.5}$ ≤ 0.5 | -0.378*** | 0.033 | -0.357*** | 0.023 | -0.390*** | 0.052 |
| 0. 5< Pre-$TTO_{3.5}$ ≤ 0.75 | -0.580*** | 0.034 | -0.543*** | 0.024 | -0.473*** | 0.056 |
| Pre-$TTO_{3.5}$ > 0.75 | -0.619*** | 0.039 | -0.552*** | 0.027 | -0.532*** | 0.066 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1$ ≤ 0.25 | 0.047** | 0.021 | 0.042*** | 0.014 | 0.130*** | 0.036 |
| 0.25 < Pre-$TTO_1$ ≤ 0.5 | -0.049 | 0.030 | -0.016 | 0.021 | -0.026 | 0.052 |
| Pre-$TTO_1$ > 0.5 | -0.153*** | 0.034 | -0.131*** | 0.024 | -0.156*** | 0.061 |
| Job search – 3.5 years pre-spell | -0.092*** | 0.024 | -0.105*** | 0.016 | -0.049 | 0.036 |
| Job search – 1 year pre-spell | -0.028 | 0.025 | -0.053*** | 0.017 | -0.006 | 0.045 |
| Earnings time > 0.5 – 3.5-yrs | 0.022 | 0.023 | 0.017 | 0.016 | -0.012 | 0.043 |
| Earnings time > 0.5 – 1-yr | 0.068*** | 0.016 | 0.043*** | 0.011 | 0.036 | 0.030 |
| Multiple spells in 3.5 yrs | 0.213*** | 0.020 | 0.234*** | 0.015 | 0.333*** | 0.036 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | -0.020 | 0.027 | -0.008 | 0.015 | 0.134** | 0.058 |
| ESC | 0.039* | 0.021 | 0.010 | 0.015 | 0.051** | 0.025 |
| NESC | -0.127*** | 0.022 | -0.132*** | 0.017 | -0.096*** | 0.024 |
| *Educational qualification (less than year 10 omitted)* | | | | | | |
| Missing | 0.192*** | 0.021 | 0.192*** | 0.015 | 0.161*** | 0.029 |
| Year 10 or year 11 | 0.109*** | 0.019 | 0.085*** | 0.013 | 0.034 | 0.028 |
| Year 12 | 0.141*** | 0.022 | 0.113*** | 0.016 | 0.070** | 0.035 |
| Non degree post school qualification | 0.238*** | 0.021 | 0.202*** | 0.015 | 0.134*** | 0.029 |
| Degree | 0.209*** | 0.030 | 0.225*** | 0.022 | 0.075** | 0.038 |

Table C2b: Estimation results for models with education variables – Males

| | *Incap.* | | *Earned income* | | *Ptnr. On IS* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* | *Coef.* | *Std. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -3.004*** | 0.304 | -3.494*** | 0.157 | -4.049*** | 0.365 |
| 4-7 | -2.494*** | 0.303 | -3.188*** | 0.157 | -4.045*** | 0.365 |
| 8-11 | -2.593*** | 0.303 | -3.229*** | 0.157 | -4.251*** | 0.365 |
| 12-15 | -2.712*** | 0.304 | -3.374*** | 0.158 | -4.332*** | 0.365 |
| 16-19 | -2.775*** | 0.304 | -3.429*** | 0.158 | -4.416*** | 0.365 |
| 20-23 | -2.876*** | 0.305 | -3.558*** | 0.158 | -4.601*** | 0.365 |
| 24-27 | -2.941*** | 0.305 | -3.608*** | 0.159 | -4.684*** | 0.365 |
| 28-31 | -3.049*** | 0.306 | -3.667*** | 0.159 | -4.770*** | 0.366 |
| 32-35 | -3.150*** | 0.306 | -3.725*** | 0.159 | -4.828*** | 0.366 |
| 36-39 | -3.102*** | 0.307 | -3.763*** | 0.160 | -4.937*** | 0.367 |
| 40-43 | -3.294*** | 0.309 | -3.875*** | 0.161 | -5.000*** | 0.367 |
| 44-47 | -3.318*** | 0.310 | -3.901*** | 0.161 | -4.940*** | 0.367 |
| 48-51 | -3.333*** | 0.311 | -3.928*** | 0.162 | -5.139*** | 0.368 |
| 52-55 | -3.332*** | 0.313 | -3.929*** | 0.163 | -5.105*** | 0.369 |
| 56-59 | -3.358*** | 0.314 | -4.086*** | 0.165 | -5.345*** | 0.370 |
| 60-63 | -3.441*** | 0.317 | -4.002*** | 0.165 | -5.232*** | 0.370 |
| 64-67 | -3.628*** | 0.321 | -4.074*** | 0.167 | -5.183*** | 0.371 |
| 68-71 | -3.561*** | 0.323 | -4.069*** | 0.168 | -5.230*** | 0.371 |
| 72-75 | -3.427*** | 0.323 | -4.115*** | 0.171 | -5.283*** | 0.373 |
| 76-79 | -3.643*** | 0.330 | -4.262*** | 0.175 | -5.400*** | 0.375 |
| 80-91 | -3.693*** | 0.316 | -4.225*** | 0.164 | -5.513*** | 0.369 |
| 92-103 | -3.836*** | 0.324 | -4.341*** | 0.170 | -5.518*** | 0.371 |
| 104-131 | -3.943*** | 0.321 | -4.471*** | 0.169 | -5.670*** | 0.370 |
| 131+ | -4.100*** | 0.409 | -4.518*** | 0.212 | -5.775*** | 0.399 |
| *Age ( 20-24 omitted)* | | | | | | |
| 25-34 | -0.509* | 0.283 | -0.524*** | 0.119 | 0.945*** | 0.354 |
| 35-44 | -0.653** | 0.284 | -0.610*** | 0.119 | 0.880** | 0.354 |
| 45-49 | -0.702** | 0.285 | -0.704*** | 0.121 | 0.790** | 0.354 |
| 50-54 | -0.840*** | 0.286 | -0.784*** | 0.121 | 0.661* | 0.354 |
| 55+ | -1.134*** | 0.288 | -0.944*** | 0.123 | 0.349 | 0.355 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.031 | 0.045 | 0.045** | 0.022 | 0.077*** | 0.016 |
| Youngest child aged 6-12 | 0.084* | 0.051 | 0.110*** | 0.027 | 0.091*** | 0.018 |
| Youngest child aged 13 or older | 0.193*** | 0.071 | 0.184*** | 0.036 | 0.170*** | 0.026 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | -0.002 | 0.034 | 0.010 | 0.018 | 0.085*** | 0.015 |
| Other homeowner | 0.122*** | 0.038 | 0.107*** | 0.019 | 0.166*** | 0.015 |
| Government rent | -0.182*** | 0.053 | -0.052* | 0.029 | -0.113*** | 0.025 |
| Other rent | 0.047** | 0.023 | 0.066*** | 0.011 | 0.051** | 0.021 |
| Missing | -0.017 | 0.057 | 0.022 | 0.022 | 0.030 | 0.042 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.473*** | 0.047 | 0.322*** | 0.024 | 0.352*** | 0.034 |
| Partner on IS | -0.110*** | 0.039 | -0.104*** | 0.020 | -0.298*** | 0.027 |
| *Private income* | | | | | | |
| Avg private income – current | 0.062** | 0.027 | 0.049** | 0.021 | 0.038** | 0.017 |
| Have earnings | 0.566*** | 0.047 | 0.866*** | 0.014 | 0.338*** | 0.019 |
| Avg earnings – current | -0.060* | 0.035 | -0.160*** | 0.022 | -0.072*** | 0.018 |
| Earnings – Time (spell) | -0.673*** | 0.083 | 0.356*** | 0.019 | -0.168*** | 0.029 |
| Earnings – Amount (spell) | 0.083*** | 0.010 | 0.144*** | 0.003 | 0.074*** | 0.003 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 0.517*** | 0.105 | 0.262*** | 0.100 | 0.815*** | 0.082 |
| UB – Low search | 0.313*** | 0.109 | -0.009 | 0.101 | 0.557*** | 0.083 |
| UB – No search | -0.652*** | 0.084 | -0.229*** | 0.069 | -0.147*** | 0.053 |
| Pension/PPS | -1.749*** | 0.099 | -1.488*** | 0.125 | -1.246*** | 0.084 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.024 | 0.032 | 0.053** | 0.026 | 0.036 | 0.029 |
| No search * Avg earn current | 0.060* | 0.034 | 0.075*** | 0.019 | 0.067*** | 0.025 |
| No search * Have earnings | 0.190** | 0.087 | -0.296*** | 0.059 | 0.219*** | 0.078 |
| No search * Earn amount (spell) | 0.027 | 0.025 | 0.040** | 0.019 | 0.030 | 0.021 |
| No search * Earn time (spell) | -0.752** | 0.328 | -0.400** | 0.193 | -0.471 | 0.294 |
| Incapacity within 4 fortnights | 0.115*** | 0.025 | -0.324*** | 0.034 | -0.216*** | 0.030 |
| Local unemployment rate | -0.032*** | 0.008 | -0.028*** | 0.011 | -0.028*** | 0.009 |
| Job search * unemployment rate | 0.001 | 0.010 | 0.006 | 0.011 | 0.005 | 0.010 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Live in major city | 0.028 | 0.021 | 0.076*** | 0.010 | 0.086*** | 0.012 |
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | -0.099 | 0.072 | 0.108*** | 0.033 | -0.017 | 0.029 |
| 2000 | 0.018 | 0.072 | 0.194*** | 0.034 | 0.071** | 0.030 |
| 2001 | -0.025 | 0.072 | 0.220*** | 0.034 | 0.046 | 0.030 |
| 2002 | 0.093 | 0.073 | 0.276*** | 0.034 | 0.147*** | 0.031 |
| 2003 | 0.042 | 0.073 | 0.284*** | 0.034 | 0.136*** | 0.031 |
| 2004 | -0.812*** | 0.087 | -0.558*** | 0.041 | -0.696*** | 0.043 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.212*** | 0.026 | -0.227*** | 0.012 | -0.206*** | 0.014 |
| 3rd quarter | -0.042 | 0.027 | -0.061*** | 0.013 | -0.080*** | 0.015 |
| 4th quarter | -0.283*** | 0.027 | -0.311*** | 0.013 | -0.362*** | 0.016 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | -0.088** | 0.043 | -0.090*** | 0.023 | -0.088*** | 0.026 |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | -0.300*** | 0.051 | -0.288*** | 0.027 | -0.329*** | 0.030 |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | -0.458*** | 0.054 | -0.447*** | 0.028 | -0.541*** | 0.032 |
| Pre-$TTO_{3.5} > 0.75$ | -0.562*** | 0.068 | -0.444*** | 0.035 | -0.494*** | 0.037 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.066** | 0.033 | 0.043** | 0.017 | 0.054*** | 0.021 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | 0.054 | 0.045 | -0.048* | 0.028 | -0.034 | 0.030 |
| Pre-$TTO_1 > 0.5$ | -0.061 | 0.057 | -0.077** | 0.031 | -0.159*** | 0.035 |
| Job search – 3.5 years pre-spell | -0.109*** | 0.033 | -0.078*** | 0.019 | -0.108*** | 0.021 |
| Job search – 1 year pre-spell | -0.055 | 0.040 | -0.006 | 0.022 | -0.002 | 0.025 |
| Earnings time > 0.5 – 3.5-yrs | -0.019 | 0.049 | -0.011 | 0.018 | -0.011 | 0.023 |
| Earnings time > 0.5 – 1-yr | 0.033 | 0.030 | -0.005 | 0.014 | 0.048*** | 0.017 |
| Multiple spells in 3.5 yrs | 0.184*** | 0.035 | 0.188*** | 0.017 | 0.214*** | 0.020 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | 0.153*** | 0.048 | 0.195*** | 0.025 | 0.054** | 0.024 |
| ESC | 0.076** | 0.033 | 0.026 | 0.016 | 0.029 | 0.018 |
| NESC | -0.086*** | 0.029 | -0.155*** | 0.015 | -0.285*** | 0.015 |
| *Educational qualification (less than year 10 omitted)* | | | | | | |
| Missing | 0.163*** | 0.032 | 0.099*** | 0.020 | 0.183*** | 0.019 |
| Year 10 or year 11 | 0.006 | 0.033 | 0.057*** | 0.017 | 0.101*** | 0.018 |
| Year 12 | 0.073* | 0.040 | 0.046** | 0.019 | 0.140*** | 0.022 |
| Non degree post school qualification | 0.149*** | 0.038 | 0.128*** | 0.019 | 0.227*** | 0.019 |
| Degree | 0.134** | 0.057 | 0.050** | 0.022 | 0.260*** | 0.025 |

Table C2b: Estimation results for models with education variables – Males (continued)

| | *IS >50%* | | *Parents* | |
|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | |
| 0-3 | -4.675*** | 1.138 | -4.080*** | 0.695 |
| 4-7 | -4.570*** | 1.138 | -4.082*** | 0.695 |
| 8-11 | -4.776*** | 1.138 | -4.265*** | 0.695 |
| 12-15 | -4.727*** | 1.138 | -4.360*** | 0.695 |
| 16-19 | -4.801*** | 1.138 | -4.464*** | 0.695 |
| 20-23 | -4.922*** | 1.138 | -4.587*** | 0.696 |
| 24-27 | -5.012*** | 1.139 | -4.663*** | 0.696 |
| 28-31 | -5.067*** | 1.138 | -4.723*** | 0.696 |
| 32-35 | -5.126*** | 1.138 | -4.786*** | 0.696 |
| 36-39 | -5.167*** | 1.139 | -4.920*** | 0.696 |
| 40-43 | -5.167*** | 1.139 | -4.974*** | 0.697 |
| 44-47 | -5.240*** | 1.139 | -4.868*** | 0.697 |
| 48-51 | -5.305*** | 1.139 | -5.082*** | 0.697 |
| 52-55 | -5.276*** | 1.139 | -5.064*** | 0.698 |
| 56-59 | -5.534*** | 1.140 | -5.303*** | 0.699 |
| 60-63 | -5.497*** | 1.140 | -5.145*** | 0.698 |
| 64-67 | -5.403*** | 1.140 | -5.257*** | 0.699 |
| 68-71 | -5.399*** | 1.140 | -5.147*** | 0.699 |
| 72-75 | -5.363*** | 1.140 | -5.185*** | 0.700 |
| 76-79 | -5.588*** | 1.141 | -5.360*** | 0.702 |
| 80-91 | -5.616*** | 1.139 | -5.422*** | 0.698 |
| 92-103 | -5.756*** | 1.140 | -5.570*** | 0.699 |
| 104-131 | -5.831*** | 1.140 | -5.646*** | 0.698 |
| 131+ | -5.856*** | 1.150 | -5.785*** | 0.719 |
| *Age ( 20-24 omitted)* | | | | |
| 25-34 | 1.167 | 1.129 | 1.063 | 0.689 |
| 35-44 | 1.068 | 1.129 | 0.984 | 0.689 |
| 45-49 | 1.000 | 1.130 | 0.891 | 0.690 |
| 50-54 | 0.951 | 1.130 | 0.739 | 0.690 |
| 55+ | 0.644 | 1.131 | 0.561 | 0.691 |
| *Dependent children (no dependent child omitted)* | | | | |
| Youngest child aged 0-5 | 0.039 | 0.038 | -0.075** | 0.034 |
| Youngest child aged 6-12 | 0.083* | 0.045 | -0.056 | 0.034 |
| Youngest child aged 13 or older | 0.182*** | 0.066 | -0.001 | 0.037 |
| *Housing/living circumstances (private rent omitted)* | | | | |
| Homeowner outright | 0.020 | 0.035 | 0.097*** | 0.016 |
| Other homeowner | 0.076* | 0.041 | 0.141*** | 0.016 |
| Government rent | -0.121*** | 0.034 | -0.128*** | 0.026 |
| Other rent | -0.016 | 0.018 | -0.016 | 0.025 |
| Missing | -0.008 | 0.044 | 0.002 | 0.048 |
| *Partner status (single omitted)* | | | | |
| Partner not on IS | 0.359*** | 0.045 | 0.309*** | 0.037 |
| Partner on IS | -0.169*** | 0.034 | -0.118*** | 0.035 |
| *Private income* | | | | |
| Avg private income – current | 0.147*** | 0.039 | 0.064*** | 0.019 |
| Have earnings | 0.465*** | 0.028 | 0.320*** | 0.021 |
| Avg earnings – current | -0.123*** | 0.040 | -0.095*** | 0.020 |
| Earnings – Time (spell) | -0.325*** | 0.048 | -0.146*** | 0.031 |
| Earnings – Amount (spell) | 0.087*** | 0.007 | 0.065*** | 0.003 |
| *Payment/activity type (Other allowance omitted)* | | | | |
| UB – High search | 0.432*** | 0.124 | 0.741*** | 0.085 |
| UB – Low search | 0.305** | 0.125 | 0.478*** | 0.086 |
| UB – No search | -0.209** | 0.091 | -0.187*** | 0.052 |
| Pension/PPS | -1.031*** | 0.113 | -1.069*** | 0.084 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | |
| No search * Avg private income | 0.134** | 0.052 | 0.030 | 0.031 |
| No search * Avg earn current | -0.015 | 0.041 | 0.085*** | 0.027 |
| No search * Have earnings | 0.187* | 0.103 | 0.200** | 0.081 |
| No search * Earn amount (spell) | -0.009 | 0.036 | 0.025 | 0.024 |
| No search * Earn time (spell) | -1.134*** | 0.407 | -0.769** | 0.328 |
| Incapacity within 4 fortnights | -0.309*** | 0.040 | -0.277*** | 0.033 |
| Local unemployment rate | -0.029** | 0.013 | -0.022** | 0.010 |
| Job search * unemployment rate | 0.004 | 0.013 | 0.001 | 0.010 |

| | | | | |
|---|---|---|---|---|
| Live in major city | 0.076*** | 0.016 | 0.074*** | 0.013 |
| *Calendar year dummy (1998 omitted)* | | | | |
| 1999 | 0.024 | 0.055 | -0.071** | 0.030 |
| 2000 | 0.102* | 0.056 | 0.038 | 0.031 |
| 2001 | 0.052 | 0.056 | 0.030 | 0.031 |
| 2002 | 0.154*** | 0.056 | 0.120*** | 0.032 |
| 2003 | 0.172*** | 0.056 | 0.111*** | 0.032 |
| 2004 | -0.677*** | 0.068 | -0.727*** | 0.046 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | |
| 2nd quarter | -0.246*** | 0.021 | -0.185*** | 0.015 |
| 3rd quarter | -0.075*** | 0.021 | -0.061*** | 0.016 |
| 4th quarter | -0.269*** | 0.022 | -0.348*** | 0.017 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | | | -0.109*** | 0.027 |
| $0.25 <$ Pre-$TTO_{3.5} \leq 0.5$ | | | -0.363*** | 0.032 |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | | | -0.537*** | 0.034 |
| Pre-$TTO_{3.5} > 0.75$ | -0.148*** | 0.025 | -0.519*** | 0.040 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.014 | 0.030 | 0.043** | 0.022 |
| $0.25 <$ Pre-$TTO_1 \leq 0.5$ | -0.034 | 0.036 | -0.061** | 0.031 |
| Pre-$TTO_1 > 0.5$ | -0.148*** | 0.038 | -0.174*** | 0.036 |
| Job search – 3.5 years pre-spell | -0.279*** | 0.052 | -0.113*** | 0.022 |
| Job search – 1 year pre-spell | 0.011 | 0.028 | -0.028 | 0.026 |
| Earnings time > 0.5 – 3.5-yrs | 0.012 | 0.022 | 0.010 | 0.025 |
| Earnings time > 0.5 – 1-yr | 0.067*** | 0.018 | 0.055*** | 0.018 |
| Multiple spells in 3.5 yrs | 0.164*** | 0.020 | 0.215*** | 0.021 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | |
| Indigenous | 0.029 | 0.028 | 0.092*** | 0.024 |
| ESC | 0.072** | 0.030 | 0.022 | 0.020 |
| NESC | -0.015 | 0.024 | -0.277*** | 0.017 |
| *Educational qualification (less than year 10 omitted)* | | | | |
| Missing | 0.095*** | 0.024 | 0.209*** | 0.021 |
| Year 10 or year 11 | 0.071*** | 0.022 | 0.111*** | 0.019 |
| Year 12 | 0.048* | 0.027 | 0.150*** | 0.023 |
| Non degree post school qualification | 0.123*** | 0.029 | 0.239*** | 0.021 |
| Degree | 0.090** | 0.046 | 0.266*** | 0.028 |

Table C2c: Estimation results for models with education variables – Females

| | *All Females* | | *Indigenous* | | *NESC* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -3.522*** | 0.097 | -4.220*** | 0.626 | -3.874*** | 0.356 |
| 4-7 | -3.399*** | 0.097 | -4.172*** | 0.624 | -3.735*** | 0.356 |
| 8-11 | -3.617*** | 0.097 | -4.291*** | 0.627 | -3.898*** | 0.357 |
| 12-15 | -3.701*** | 0.098 | -4.567*** | 0.629 | -3.985*** | 0.357 |
| 16-19 | -3.834*** | 0.098 | -4.619*** | 0.633 | -4.106*** | 0.359 |
| 20-23 | -3.941*** | 0.099 | -4.702*** | 0.630 | -4.121*** | 0.359 |
| 24-27 | -4.008*** | 0.099 | -4.912*** | 0.632 | -4.246*** | 0.359 |
| 28-31 | -4.051*** | 0.100 | -4.790*** | 0.632 | -4.310*** | 0.360 |
| 32-35 | -4.115*** | 0.100 | -4.923*** | 0.636 | -4.437*** | 0.361 |
| 36-39 | -4.166*** | 0.102 | -4.723*** | 0.637 | -4.300*** | 0.360 |
| 40-43 | -4.274*** | 0.103 | -4.820*** | 0.641 | -4.562*** | 0.365 |
| 44-47 | -4.409*** | 0.105 | -5.112*** | 0.649 | -4.804*** | 0.370 |
| 48-51 | -4.398*** | 0.105 | -5.321*** | 0.654 | -4.763*** | 0.371 |
| 52-55 | -4.452*** | 0.107 | -5.450*** | 0.660 | -4.837*** | 0.375 |
| 56-59 | -4.412*** | 0.109 | -5.208*** | 0.658 | -4.774*** | 0.377 |
| 60-63 | -4.513*** | 0.112 | -5.146*** | 0.658 | -4.922*** | 0.385 |
| 64-67 | -4.657*** | 0.116 | -5.359*** | 0.668 | -4.887*** | 0.385 |
| 68-71 | -4.639*** | 0.117 | -5.198*** | 0.671 | -4.889*** | 0.393 |
| 72-75 | -4.523*** | 0.116 | -5.332*** | 0.688 | -4.531*** | 0.371 |
| 76-79 | -4.542*** | 0.121 | -5.548*** | 0.699 | -4.622*** | 0.388 |
| 80-91 | -4.676*** | 0.108 | -5.554*** | 0.650 | -4.843*** | 0.371 |
| 92-103 | -4.835*** | 0.116 | -5.703*** | 0.669 | -5.184*** | 0.386 |
| 104-131 | -5.009*** | 0.115 | -5.683*** | 0.650 | -5.273*** | 0.381 |
| 131+ | -4.881*** | 0.168 | -5.705*** | 0.782 | -5.439*** | 0.502 |
| *Age (20-24omitted)* | | | | | | |
| Age 25-34 | -0.168** | 0.073 | 0.370 | 0.552 | -0.372 | 0.322 |
| Age 35-44 | -0.303*** | 0.073 | 0.380 | 0.554 | -0.537* | 0.323 |
| Age 45-49 | -0.360*** | 0.074 | 0.305 | 0.560 | -0.642** | 0.323 |
| Age 50-54 | -0.534*** | 0.075 | 0.232 | 0.566 | -0.722** | 0.325 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.047 | 0.029 | 0.105 | 0.118 | 0.103 | 0.065 |
| Youngest child aged 6-12 | 0.095* | 0.051 | 0.240* | 0.129 | 0.116 | 0.084 |
| Youngest child aged 13 or older | 0.125*** | 0.041 | 0.182 | 0.163 | 0.154* | 0.086 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.052*** | 0.018 | 0.179 | 0.113 | 0.122*** | 0.040 |
| Other homeowner | 0.193*** | 0.018 | 0.115 | 0.135 | 0.277*** | 0.045 |
| Government rent | -0.114*** | 0.031 | -0.132 | 0.088 | -0.116* | 0.060 |
| Other rent | 0.086*** | 0.009 | 0.022 | 0.053 | 0.078*** | 0.027 |
| Missing | 0.076*** | 0.016 | -0.081 | 0.116 | 0.102** | 0.040 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.426*** | 0.018 | 0.491*** | 0.091 | 0.338*** | 0.038 |
| Partner on IS | -0.203*** | 0.016 | -0.235*** | 0.077 | -0.335*** | 0.038 |
| *Private income* | | | | | | |
| Avg private income – current | 0.066*** | 0.016 | 0.107 | 0.140 | 0.079** | 0.040 |
| Have earnings | 0.454*** | 0.014 | 0.543*** | 0.094 | 0.436*** | 0.041 |
| Avg earnings – current | -0.073*** | 0.017 | -0.151 | 0.146 | -0.091** | 0.042 |
| Earnings – Time (spell) | -0.552*** | 0.022 | -0.642*** | 0.141 | -0.432*** | 0.057 |
| Earnings – Amount (spell) | 0.090*** | 0.005 | 0.174*** | 0.022 | 0.115*** | 0.008 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 1.225*** | 0.060 | 0.842*** | 0.245 | 1.342*** | 0.138 |
| UB – Low search | 0.761*** | 0.061 | 0.989*** | 0.248 | 0.844*** | 0.139 |
| UB – No search | 0.069* | 0.041 | 0.100 | 0.165 | 0.398*** | 0.094 |
| Pension/PPS | -1.127*** | 0.050 | -0.930*** | 0.182 | -0.880*** | 0.117 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.031 | 0.026 | 0.178 | 0.115 | 0.131* | 0.076 |
| No search * Avg earn current | 0.042** | 0.021 | -0.028 | 0.111 | 0.013 | 0.058 |
| No search * Have earnings | 0.225*** | 0.054 | 0.176 | 0.237 | 0.309** | 0.146 |
| No search * Earn amount (spell) | 0.010 | 0.018 | -0.061 | 0.061 | -0.087 | 0.054 |
| No search * Earn time (spell) | -0.324* | 0.174 | -1.157* | 0.674 | -0.297 | 0.587 |
| Incapacity within 4 fortnights | -0.294*** | 0.022 | -0.259** | 0.102 | -0.307*** | 0.056 |
| Local unemployment rate | -0.022*** | 0.007 | -0.053** | 0.026 | -0.033* | 0.017 |
| Job search * unemployment rate | -0.009 | 0.007 | 0.019 | 0.028 | -0.002 | 0.018 |
| Live in major city | 0.090*** | 0.009 | 0.094* | 0.051 | 0.007 | 0.029 |

| | | | | | | |
|---|---|---|---|---|---|---|
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | -0.037 | 0.023 | -0.053 | 0.131 | 0.080 | 0.068 |
| 2000 | 0.088*** | 0.024 | 0.012 | 0.137 | 0.208*** | 0.069 |
| 2001 | 0.064*** | 0.024 | 0.015 | 0.137 | 0.191*** | 0.070 |
| 2002 | 0.108*** | 0.024 | 0.090 | 0.139 | 0.229*** | 0.069 |
| 2003 | 0.012 | 0.024 | 0.031 | 0.139 | 0.035 | 0.070 |
| 2004 | -0.794*** | 0.031 | -0.815*** | 0.174 | -0.713*** | 0.086 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.270*** | 0.011 | -0.322*** | 0.060 | -0.282*** | 0.029 |
| 3rd quarter | -0.128*** | 0.011 | -0.298*** | 0.063 | -0.092*** | 0.028 |
| 4th quarter | -0.414*** | 0.012 | -0.441*** | 0.063 | -0.416*** | 0.031 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5}$ ≤ 0.25 | -0.094*** | 0.019 | -0.068 | 0.091 | 0.065 | 0.051 |
| 0.25 < Pre-$TTO_{3.5}$ ≤ 0.5 | -0.328*** | 0.022 | -0.225** | 0.104 | -0.144** | 0.058 |
| 0. 5< Pre-$TTO_{3.5}$ ≤ 0.75 | -0.483*** | 0.024 | -0.290*** | 0.106 | -0.248*** | 0.062 |
| Pre-$TTO_{3.5}$ > 0.75 | -0.389*** | 0.027 | -0.220* | 0.126 | -0.361*** | 0.073 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1$ ≤ 0.25 | 0.044*** | 0.015 | 0.021 | 0.075 | 0.056 | 0.041 |
| 0.25 < Pre-$TTO_1$ ≤ 0.5 | -0.040* | 0.022 | -0.079 | 0.100 | -0.053 | 0.060 |
| Pre-$TTO_1$ > 0.5 | -0.152*** | 0.026 | -0.211* | 0.113 | -0.156** | 0.068 |
| Job search – 3.5 years pre-spell | -0.145*** | 0.015 | -0.156** | 0.075 | -0.068* | 0.041 |
| Job search – 1 year pre-spell | -0.064*** | 0.019 | 0.066 | 0.081 | -0.036 | 0.051 |
| Earnings time > 0.5 – 3.5-yrs | 0.057*** | 0.017 | -0.066 | 0.094 | 0.010 | 0.051 |
| Earnings time > 0.5 – 1-yr | 0.052*** | 0.013 | 0.110* | 0.064 | 0.103*** | 0.036 |
| Multiple spells in 3.5 yrs | 0.166*** | 0.015 | 0.163** | 0.069 | 0.119*** | 0.042 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | -0.124*** | 0.023 | | | | |
| ESC | 0.000 | 0.016 | | | | |
| NESC | -0.203*** | 0.012 | | | | |
| *Educational qualification (less than year 10 omitted)* | | | | | | |
| Missing | 0.283*** | 0.021 | 0.377*** | 0.077 | 0.301*** | 0.047 |
| Year 10 or year 11 | 0.124*** | 0.020 | 0.374*** | 0.080 | 0.152*** | 0.049 |
| Year 12 | 0.208*** | 0.020 | 0.513*** | 0.087 | 0.213*** | 0.045 |
| Non degree post school qualification | 0.279*** | 0.021 | 0.593*** | 0.095 | 0.326*** | 0.047 |
| Degree | 0.389*** | 0.021 | 0.777*** | 0.110 | 0.450*** | 0.048 |

Table C2c: Estimation results for models with education variables – Females (continued)

| | High Unemployment | | Regional Areas | | Mature age | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -4.508*** | 0.214 | -3.446*** | 0.149 | -4.388*** | 0.223 |
| 4-7 | -4.418*** | 0.214 | -3.331*** | 0.149 | -4.448*** | 0.223 |
| 8-11 | -4.610*** | 0.214 | -3.527*** | 0.150 | -4.713*** | 0.225 |
| 12-15 | -4.679*** | 0.214 | -3.616*** | 0.150 | -4.836*** | 0.227 |
| 16-19 | -4.786*** | 0.215 | -3.759*** | 0.151 | -4.984*** | 0.231 |
| 20-23 | -4.884*** | 0.216 | -3.894*** | 0.151 | -5.111*** | 0.233 |
| 24-27 | -4.914*** | 0.217 | -3.993*** | 0.152 | -5.159*** | 0.234 |
| 28-31 | -4.975*** | 0.218 | -3.970*** | 0.153 | -5.216*** | 0.239 |
| 32-35 | -5.031*** | 0.220 | -4.045*** | 0.154 | -5.252*** | 0.241 |
| 36-39 | -5.195*** | 0.222 | -4.155*** | 0.156 | -5.308*** | 0.247 |
| 40-43 | -5.265*** | 0.225 | -4.170*** | 0.157 | -5.617*** | 0.260 |
| 44-47 | -5.243*** | 0.225 | -4.264*** | 0.159 | -5.251*** | 0.250 |
| 48-51 | -5.231*** | 0.226 | -4.326*** | 0.161 | -5.284*** | 0.256 |
| 52-55 | -5.387*** | 0.230 | -4.366*** | 0.164 | -5.921*** | 0.295 |
| 56-59 | -5.324*** | 0.233 | -4.417*** | 0.167 | -5.957*** | 0.307 |
| 60-63 | -5.394*** | 0.235 | -4.346*** | 0.169 | -5.892*** | 0.296 |
| 64-67 | -5.575*** | 0.244 | -4.642*** | 0.178 | -6.314*** | 0.342 |
| 68-71 | -5.453*** | 0.241 | -4.586*** | 0.178 | -6.450*** | 0.370 |
| 72-75 | -5.361*** | 0.241 | -4.467*** | 0.177 | -5.731*** | 0.306 |
| 76-79 | -5.273*** | 0.247 | -4.518*** | 0.186 | -6.132*** | 0.366 |
| 80-91 | -5.596*** | 0.231 | -4.626*** | 0.166 | -5.962*** | 0.269 |
| 92-103 | -5.627*** | 0.241 | -4.676*** | 0.175 | -6.160*** | 0.305 |
| 104-131 | -5.810*** | 0.235 | -5.006*** | 0.176 | -6.793*** | 0.339 |
| 131+ | -5.639*** | 0.308 | -4.961*** | 0.255 | -6.953*** | 0.615 |
| *Age (20-24 omitted)* | | | | | | |
| Age 25-34 | -0.145 | 0.150 | -0.151 | 0.112 | | |
| Age 35-44 | -0.256* | 0.151 | -0.244** | 0.113 | | |
| Age 45-49 | -0.323** | 0.153 | -0.313*** | 0.115 | | |
| Age 50-54 | -0.507*** | 0.155 | -0.523*** | 0.116 | | |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.086 | 0.055 | 0.066 | 0.042 | -0.936 | 0.605 |
| Youngest child aged 6-12 | 0.206*** | 0.075 | 0.091 | 0.072 | 0.202 | 0.232 |
| Youngest child aged 13 or older | 0.291*** | 0.078 | 0.135** | 0.061 | -0.015 | 0.132 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.057 | 0.037 | -0.034 | 0.027 | -0.024 | 0.043 |
| Other homeowner | 0.196*** | 0.039 | 0.143*** | 0.029 | 0.124** | 0.052 |
| Government rent | -0.072 | 0.070 | -0.093* | 0.054 | -0.090 | 0.084 |
| Other rent | 0.154*** | 0.022 | 0.087*** | 0.016 | 0.012 | 0.055 |
| Missing | 0.106*** | 0.038 | 0.083*** | 0.028 | -0.073 | 0.116 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.607*** | 0.038 | 0.518*** | 0.028 | 0.441*** | 0.056 |
| Partner on IS | -0.195*** | 0.032 | -0.135*** | 0.023 | -0.244*** | 0.046 |
| Avg private income – current | 0.066** | 0.033 | 0.060** | 0.026 | 0.028 | 0.038 |
| Have earnings | 0.479*** | 0.031 | 0.419*** | 0.022 | 0.531*** | 0.060 |
| Avg earnings – current | -0.089** | 0.035 | -0.064** | 0.027 | -0.076* | 0.042 |
| Earnings – Time (spell) | -0.449*** | 0.049 | -0.442*** | 0.034 | -0.483*** | 0.074 |
| Earnings – Amount (spell) | 0.092*** | 0.012 | 0.084*** | 0.008 | 0.094*** | 0.009 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 1.338*** | 0.138 | 1.091*** | 0.093 | 1.384*** | 0.193 |
| UB – Low search | 0.896*** | 0.139 | 0.678*** | 0.094 | 1.066*** | 0.195 |
| UB – No search | 0.186** | 0.083 | 0.100 | 0.062 | 0.429*** | 0.121 |
| Pension/PPS | -1.078*** | 0.104 | -1.159*** | 0.080 | -1.063*** | 0.201 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | -0.037 | 0.054 | 0.005 | 0.038 | 0.262*** | 0.077 |
| No search * Avg earn current | 0.079* | 0.042 | 0.049 | 0.030 | 0.023 | 0.047 |
| No search * Have earnings | 0.226** | 0.112 | 0.155* | 0.080 | 0.189 | 0.159 |
| No search * Earn amount (spell) | -0.022 | 0.039 | 0.050** | 0.024 | 0.043 | 0.055 |
| No search * Earn time (spell) | 0.225 | 0.315 | -0.172 | 0.251 | -1.340** | 0.612 |
| Incapacity within 4 fortnights | -0.416*** | 0.050 | -0.319*** | 0.036 | -0.332*** | 0.079 |
| Local unemployment rate | 0.038*** | 0.013 | -0.027*** | 0.010 | -0.027 | 0.022 |
| Job search * unemployment rate | -0.012 | 0.014 | 0.002 | 0.010 | -0.006 | 0.024 |
| Live in major city | 0.171*** | 0.021 | 0.205*** | 0.025 | 0.140*** | 0.036 |
| *Calendar year dummy (1998 omitted)* | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1999 | -0.027 | 0.054 | -0.063* | 0.037 | 0.127 | 0.096 |
| 2000 | 0.140** | 0.057 | 0.043 | 0.038 | 0.279*** | 0.098 |
| 2001 | 0.103* | 0.056 | 0.032 | 0.038 | 0.293*** | 0.098 |
| 2002 | 0.216*** | 0.057 | 0.071* | 0.038 | 0.381*** | 0.098 |
| 2003 | 0.229*** | 0.058 | -0.013 | 0.039 | 0.252** | 0.099 |
| 2004 | -0.520*** | 0.072 | -0.797*** | 0.049 | -0.614*** | 0.125 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.259*** | 0.024 | -0.253*** | 0.017 | -0.175*** | 0.044 |
| 3rd quarter | -0.150*** | 0.025 | -0.123*** | 0.018 | -0.080* | 0.044 |
| 4th quarter | -0.376*** | 0.026 | -0.402*** | 0.019 | -0.344*** | 0.046 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | -0.051 | 0.039 | -0.093*** | 0.029 | 0.018 | 0.072 |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | -0.301*** | 0.047 | -0.324*** | 0.034 | -0.165** | 0.083 |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | -0.433*** | 0.049 | -0.478*** | 0.036 | -0.381*** | 0.092 |
| Pre-$TTO_{3.5} > 0.75$ | -0.320*** | 0.056 | -0.429*** | 0.042 | -0.260** | 0.102 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.039 | 0.035 | 0.089*** | 0.024 | 0.191*** | 0.062 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | 0.020 | 0.049 | -0.007 | 0.035 | 0.062 | 0.088 |
| Pre-$TTO_1 > 0.5$ | -0.227*** | 0.058 | -0.164*** | 0.041 | -0.040 | 0.101 |
| Job search – 3.5 years pre-spell | -0.156*** | 0.033 | -0.126*** | 0.024 | -0.074 | 0.057 |
| Job search – 1 year pre-spell | -0.071* | 0.042 | -0.076*** | 0.030 | 0.006 | 0.075 |
| Earnings time > 0.5 – 3.5-yrs | 0.075** | 0.037 | 0.063** | 0.026 | 0.046 | 0.074 |
| Earnings time > 0.5 – 1-yr | 0.041 | 0.028 | 0.047** | 0.020 | 0.001 | 0.056 |
| Multiple spells in 3.5 yrs | 0.178*** | 0.031 | 0.151*** | 0.023 | 0.206*** | 0.062 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | -0.137*** | 0.053 | -0.173*** | 0.031 | 0.011 | 0.112 |
| ESC | -0.062 | 0.038 | -0.024 | 0.029 | 0.030 | 0.047 |
| NESC | -0.177*** | 0.037 | -0.127*** | 0.026 | -0.162*** | 0.045 |
| *Educational qualification (less than year 10 omitted)* | | | | | | |
| Missing | 0.262*** | 0.045 | 0.252*** | 0.030 | 0.205*** | 0.057 |
| Year 10 or year 11 | 0.153*** | 0.043 | 0.110*** | 0.029 | 0.159*** | 0.052 |
| Year 12 | 0.218*** | 0.044 | 0.182*** | 0.030 | 0.177*** | 0.063 |
| Non degree post school qualification | 0.324*** | 0.045 | 0.253*** | 0.031 | 0.264*** | 0.062 |
| Degree | 0.414*** | 0.048 | 0.363*** | 0.033 | 0.334*** | 0.069 |

Table C2d: Estimation results for models with education variables – Females

| | *Incap.* | | *Earned income* | | *Ptnr. On IS* | |
|---|---|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* | *Coef.* | *Std. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | | | |
| 0-3 | -4.931*** | 0.440 | -4.189*** | 0.184 | -4.423*** | 0.319 |
| 4-7 | -4.271*** | 0.440 | -3.904*** | 0.184 | -4.384*** | 0.318 |
| 8-11 | -4.343*** | 0.440 | -3.973*** | 0.184 | -4.576*** | 0.319 |
| 12-15 | -4.441*** | 0.441 | -4.103*** | 0.185 | -4.693*** | 0.319 |
| 16-19 | -4.600*** | 0.442 | -4.203*** | 0.185 | -4.756*** | 0.320 |
| 20-23 | -4.676*** | 0.442 | -4.297*** | 0.186 | -4.980*** | 0.321 |
| 24-27 | -4.764*** | 0.442 | -4.366*** | 0.187 | -5.074*** | 0.322 |
| 28-31 | -4.746*** | 0.443 | -4.372*** | 0.186 | -5.069*** | 0.322 |
| 32-35 | -4.765*** | 0.444 | -4.382*** | 0.187 | -5.201*** | 0.323 |
| 36-39 | -4.920*** | 0.446 | -4.508*** | 0.188 | -5.170*** | 0.327 |
| 40-43 | -4.848*** | 0.446 | -4.561*** | 0.190 | -5.304*** | 0.328 |
| 44-47 | -5.215*** | 0.450 | -4.716*** | 0.192 | -5.487*** | 0.333 |
| 48-51 | -5.115*** | 0.451 | -4.647*** | 0.191 | -5.544*** | 0.335 |
| 52-55 | -5.045*** | 0.452 | -4.671*** | 0.194 | -5.511*** | 0.336 |
| 56-59 | -5.227*** | 0.457 | -4.639*** | 0.195 | -5.429*** | 0.340 |
| 60-63 | -5.213*** | 0.458 | -4.773*** | 0.199 | -5.611*** | 0.346 |
| 64-67 | -5.421*** | 0.464 | -4.960*** | 0.205 | -5.715*** | 0.349 |
| 68-71 | -5.376*** | 0.467 | -4.885*** | 0.205 | -5.716*** | 0.355 |
| 72-75 | -5.362*** | 0.470 | -4.672*** | 0.202 | -5.406*** | 0.348 |
| 76-79 | -5.318*** | 0.473 | -4.741*** | 0.209 | -5.792*** | 0.372 |
| 80-91 | -5.541*** | 0.455 | -4.815*** | 0.196 | -5.846*** | 0.340 |
| 92-103 | -5.461*** | 0.459 | -5.062*** | 0.206 | -6.202*** | 0.363 |
| 104-131 | -5.863*** | 0.466 | -5.194*** | 0.203 | -5.748*** | 0.334 |
| 131+ | -5.125*** | 0.508 | -4.995*** | 0.267 | -6.053*** | 0.462 |
| *Age ( 20-24 omitted)* | | | | | | |
| 25-34 | 0.284 | 0.407 | -0.369*** | 0.127 | 0.535** | 0.272 |
| 35-44 | 0.183 | 0.408 | -0.519*** | 0.128 | 0.532* | 0.273 |
| 45-49 | 0.044 | 0.409 | -0.532*** | 0.129 | 0.525* | 0.274 |
| 50-54 | -0.054 | 0.410 | -0.713*** | 0.130 | 0.234 | 0.275 |
| *Dependent children (no dependent child omitted)* | | | | | | |
| Youngest child aged 0-5 | 0.286*** | 0.069 | -0.018 | 0.054 | 0.063 | 0.043 |
| Youngest child aged 6-12 | 0.169 | 0.149 | -0.045 | 0.123 | 0.076 | 0.049 |
| Youngest child aged 13 or older | 0.183 | 0.128 | 0.081 | 0.063 | 0.151** | 0.064 |
| *Housing/living circumstances (private rent omitted)* | | | | | | |
| Homeowner outright | 0.071 | 0.050 | -0.011 | 0.032 | -0.058* | 0.035 |
| Other homeowner | 0.256*** | 0.052 | 0.115*** | 0.030 | 0.163*** | 0.036 |
| Government rent | -0.153* | 0.082 | -0.014 | 0.043 | -0.122* | 0.070 |
| Other rent | 0.104*** | 0.034 | 0.096*** | 0.014 | 0.096** | 0.041 |
| Missing | 0.114 | 0.073 | 0.100*** | 0.024 | 0.126 | 0.082 |
| *Partner status (single omitted)* | | | | | | |
| Partner not on IS | 0.541*** | 0.052 | 0.409*** | 0.037 | 0.952*** | 0.059 |
| Partner on IS | -0.198*** | 0.053 | -0.128*** | 0.029 | -0.098* | 0.054 |
| *Private income* | | | | | | |
| Avg private income – current | 0.041 | 0.042 | 0.125*** | 0.026 | 0.076* | 0.041 |
| Have earnings | 0.395*** | 0.066 | 0.862*** | 0.018 | 0.391*** | 0.045 |
| Avg earnings – current | -0.080 | 0.050 | -0.232*** | 0.027 | -0.129*** | 0.043 |
| Earnings – Time (spell) | -0.534*** | 0.092 | 0.096*** | 0.023 | -0.177*** | 0.060 |
| Earnings – Amount (spell) | 0.137*** | 0.009 | 0.170*** | 0.006 | 0.079*** | 0.009 |
| *Payment/activity type (Other allowance omitted)* | | | | | | |
| UB – High search | 1.542*** | 0.121 | 0.915*** | 0.122 | 1.147*** | 0.125 |
| UB – Low search | 1.138*** | 0.130 | 0.519*** | 0.123 | 0.771*** | 0.128 |
| UB – No search | 0.202** | 0.084 | 0.203** | 0.082 | 0.174** | 0.080 |
| Pension/PPS | -1.197*** | 0.093 | -1.465*** | 0.122 | -1.270*** | 0.140 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | | | |
| No search * Avg private income | 0.129*** | 0.046 | 0.058** | 0.029 | 0.088 | 0.057 |
| No search * Avg earn current | 0.007 | 0.044 | 0.064*** | 0.023 | 0.023 | 0.044 |
| No search * Have earnings | 0.219** | 0.106 | -0.187*** | 0.070 | 0.100 | 0.130 |
| No search * Earn amount (spell) | -0.027 | 0.031 | 0.018 | 0.022 | 0.056 | 0.043 |
| No search * Earn time (spell) | -0.616* | 0.317 | 0.051 | 0.186 | 0.138 | 0.388 |
| Incapacity within 4 fortnights | 0.012 | 0.036 | -0.280*** | 0.039 | -0.162*** | 0.059 |
| Local unemployment rate | -0.018* | 0.011 | -0.028** | 0.013 | -0.030** | 0.014 |
| Job search * unemployment rate | -0.026* | 0.013 | 0.001 | 0.013 | 0.003 | 0.015 |
| Live in major city | 0.052* | 0.031 | 0.089*** | 0.013 | 0.037 | 0.028 |

| | | | | | | |
|---|---|---|---|---|---|---|
| *Calendar year dummy (1998 omitted)* | | | | | | |
| 1999 | -0.043 | 0.099 | 0.102** | 0.044 | 0.043 | 0.074 |
| 2000 | 0.026 | 0.099 | 0.272*** | 0.045 | 0.174** | 0.076 |
| 2001 | -0.024 | 0.099 | 0.268*** | 0.046 | 0.145* | 0.076 |
| 2002 | 0.051 | 0.099 | 0.290*** | 0.045 | 0.225*** | 0.077 |
| 2003 | -0.037 | 0.101 | 0.227*** | 0.045 | 0.155** | 0.077 |
| 2004 | -0.969*** | 0.121 | -0.564*** | 0.054 | -0.802*** | 0.099 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | | | |
| 2nd quarter | -0.248*** | 0.037 | -0.276*** | 0.015 | -0.248*** | 0.033 |
| 3rd quarter | -0.157*** | 0.038 | -0.129*** | 0.016 | -0.150*** | 0.033 |
| 4th quarter | -0.389*** | 0.039 | -0.403*** | 0.017 | -0.443*** | 0.035 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | -0.140** | 0.056 | -0.104*** | 0.030 | 0.012 | 0.050 |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | -0.228*** | 0.066 | -0.312*** | 0.035 | -0.189*** | 0.059 |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | -0.346*** | 0.073 | -0.433*** | 0.037 | -0.362*** | 0.060 |
| Pre-$TTO_{3.5} > 0.75$ | -0.314*** | 0.086 | -0.375*** | 0.043 | -0.322*** | 0.076 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | -0.027 | 0.049 | 0.069*** | 0.023 | 0.094** | 0.047 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | -0.013 | 0.067 | -0.020 | 0.034 | -0.027 | 0.063 |
| Pre-$TTO_1 > 0.5$ | -0.188** | 0.083 | -0.102*** | 0.040 | -0.161** | 0.075 |
| Job search – 3.5 years pre-spell | -0.173*** | 0.046 | -0.119*** | 0.023 | -0.109*** | 0.042 |
| Job search – 1 year pre-spell | -0.132** | 0.062 | -0.032 | 0.027 | -0.008 | 0.060 |
| Earnings time > 0.5 – 3.5-yrs | -0.038 | 0.065 | -0.021 | 0.024 | -0.008 | 0.056 |
| Earnings time > 0.5 – 1-yr | 0.069 | 0.043 | 0.047** | 0.020 | 0.048 | 0.040 |
| Multiple spells in 3.5 yrs | 0.248*** | 0.049 | 0.135*** | 0.023 | 0.129*** | 0.043 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | | | |
| Indigenous | -0.133* | 0.073 | 0.079** | 0.038 | -0.276*** | 0.060 |
| ESC | 0.019 | 0.049 | -0.045 | 0.029 | 0.033 | 0.044 |
| NESC | -0.182*** | 0.044 | -0.108*** | 0.020 | -0.295*** | 0.035 |
| *Educational qualification (less than year 10 omitted)* | | | | | | |
| Missing | 0.221*** | 0.057 | 0.151*** | 0.032 | 0.251*** | 0.047 |
| Year 10 or year 11 | 0.064 | 0.059 | 0.033 | 0.031 | 0.162*** | 0.045 |
| Year 12 | 0.182*** | 0.062 | 0.096*** | 0.031 | 0.257*** | 0.049 |
| Non degree post school qualification | 0.186*** | 0.064 | 0.143*** | 0.032 | 0.353*** | 0.052 |
| Degree | 0.294*** | 0.071 | 0.238*** | 0.032 | 0.521*** | 0.057 |

Table C2d: Estimation results for models with education variables – Females (continued)

| | *IS >50%* | | *Parents* | |
|---|---|---|---|---|
| | *Coef.* | *St. Err.* | *Coef.* | *St. Err.* |
| *Baseline hazard estimate (duration interval per fortnight)* | | | | |
| 0-3 | 1.467*** | 0.415 | 1.780*** | 0.663 |
| 4-7 | 1.505*** | 0.414 | 1.748*** | 0.661 |
| 8-11 | 1.414*** | 0.414 | 1.689** | 0.662 |
| 12-15 | 1.350*** | 0.415 | 1.476** | 0.664 |
| 16-19 | 1.254*** | 0.415 | 1.320** | 0.667 |
| 20-23 | 1.263*** | 0.416 | 1.333** | 0.667 |
| 24-27 | 1.022** | 0.417 | 1.257* | 0.669 |
| 28-31 | 1.049** | 0.417 | 1.106* | 0.671 |
| 32-35 | 0.932** | 0.419 | 1.123* | 0.672 |
| 36-39 | 1.038** | 0.419 | 1.233* | 0.672 |
| 40-43 | 0.849** | 0.421 | 1.257* | 0.676 |
| 44-47 | 0.740* | 0.423 | 0.905 | 0.684 |
| 48-51 | 0.848** | 0.424 | 0.690 | 0.694 |
| 52-55 | 0.588 | 0.429 | 0.816 | 0.691 |
| 56-59 | 0.785* | 0.427 | 1.031 | 0.690 |
| 60-63 | 0.745* | 0.430 | 1.085 | 0.692 |
| 64-67 | 0.609 | 0.434 | 1.010 | 0.697 |
| 68-71 | 0.568 | 0.438 | 0.523 | 0.722 |
| 72-75 | 0.889** | 0.433 | 0.822 | 0.714 |
| 76-79 | 0.646 | 0.444 | 0.966 | 0.710 |
| 80-91 | 0.655 | 0.426 | 0.696 | 0.692 |
| 92-103 | 0.359 | 0.438 | -0.037 | 0.738 |
| 104-131 | 0.448 | 0.432 | 0.709 | 0.705 |
| 131+ | 1.467*** | 0.415 | 1.780*** | 0.663 |
| *Age ( 20-24 omitted)* | | | | |
| 25-34 | -5.986*** | 0.457 | -5.626*** | 0.704 |
| 35-44 | -6.051*** | 0.458 | -5.502*** | 0.708 |
| 45-49 | -6.090*** | 0.458 | -5.661*** | 0.711 |
| 50-54 | -6.208*** | 0.459 | -5.801*** | 0.714 |
| *Dependent children (no dependent child omitted)* | | | | |
| Youngest child aged 0-5 | 0.177** | 0.079 | 0.088 | 0.085 |
| Youngest child aged 6-12 | 0.093 | 0.089 | 0.022 | 0.078 |
| Youngest child aged 13 or older | 0.158* | 0.093 | 0.076 | 0.073 |
| *Housing/living circumstances (private rent omitted)* | | | | |
| Homeowner outright | 0.104** | 0.051 | -0.057 | 0.058 |
| Other homeowner | 0.123* | 0.063 | 0.102* | 0.057 |
| Government rent | -0.067 | 0.054 | -0.213** | 0.090 |
| Other rent | 0.027 | 0.032 | 0.058 | 0.085 |
| Missing | 0.116* | 0.066 | 0.071 | 0.123 |
| *Partner status (single omitted)* | | | | |
| Partner not on IS | 0.523*** | 0.055 | 0.472*** | 0.077 |
| Partner on IS | -0.218*** | 0.049 | -0.075 | 0.060 |
| *Private income* | | | | |
| Avg private income – current | 0.204*** | 0.053 | -0.010 | 0.061 |
| Have earnings | 0.470*** | 0.045 | 0.301*** | 0.070 |
| Avg earnings – current | -0.217*** | 0.055 | -0.051 | 0.063 |
| Earnings – Time (spell) | -0.425*** | 0.063 | -0.131 | 0.107 |
| Earnings – Amount (spell) | 0.109*** | 0.009 | 0.100*** | 0.019 |
| *Payment/activity type (Other allowance omitted)* | | | | |
| UB – High search | 1.168*** | 0.178 | 1.124*** | 0.212 |
| UB – Low search | 0.886*** | 0.179 | 0.802*** | 0.216 |
| UB – No search | 0.240** | 0.120 | -0.016 | 0.139 |
| Pension/PPS | -0.819*** | 0.138 | -0.906*** | 0.168 |
| *Payment/activity type interacted with private income variables (Search omitted)* | | | | |
| No search * Avg private income | 0.115 | 0.070 | 0.031 | 0.083 |
| No search * Avg earn current | 0.034 | 0.061 | 0.140** | 0.071 |
| No search * Have earnings | 0.175 | 0.149 | -0.065 | 0.203 |
| No search * Earn amount (spell) | -0.092* | 0.049 | -0.107* | 0.064 |
| No search * Earn time (spell) | -0.274 | 0.434 | 0.539 | 0.443 |
| Incapacity within 4 fortnights | -0.364*** | 0.065 | -0.202** | 0.102 |
| Local unemployment rate | -0.009 | 0.019 | 0.001 | 0.024 |
| Job search * unemployment rate | -0.010 | 0.020 | -0.021 | 0.026 |
| Live in major city | 0.090*** | 0.028 | 0.069 | 0.047 |

| | | | | |
|---|---|---|---|---|
| *Calendar year dummy (1998 omitted)* | | | | |
| 1999 | 0.094 | 0.095 | -0.039 | 0.110 |
| 2000 | 0.166* | 0.097 | -0.016 | 0.115 |
| 2001 | 0.137 | 0.097 | 0.005 | 0.117 |
| 2002 | 0.181* | 0.098 | 0.131 | 0.117 |
| 2003 | 0.135 | 0.098 | 0.092 | 0.117 |
| 2004 | -0.725*** | 0.117 | -0.936*** | 0.164 |
| *Calendar quarter dummy (1st quarter omitted)* | | | | |
| 2nd quarter | -0.273*** | 0.035 | -0.248*** | 0.053 |
| 3rd quarter | -0.093*** | 0.035 | -0.228*** | 0.056 |
| 4th quarter | -0.396*** | 0.037 | -0.497*** | 0.059 |
| *3.5-year pre-spell TTO ('Pre-$TTO_{3.5}$ = 0' omitted)* | | | | |
| 0 < Pre-$TTO_{3.5} \leq 0.25$ | | | -0.084 | 0.077 |
| 0.25 < Pre-$TTO_{3.5} \leq 0.5$ | | | -0.154* | 0.085 |
| 0. 5< Pre-$TTO_{3.5} \leq 0.75$ | | | -0.262*** | 0.082 |
| Pre-$TTO_{3.5} > 0.75$ | -0.059 | 0.041 | -0.238** | 0.102 |
| *1-year pre-spell TTO ('Pre-$TTO_1$ = 0' omitted)* | | | | |
| 0 < Pre-$TTO_1 \leq 0.25$ | 0.061 | 0.047 | 0.027 | 0.075 |
| 0.25 < Pre-$TTO_1 \leq 0.5$ | 0.027 | 0.056 | -0.093 | 0.088 |
| Pre-$TTO_1 > 0.5$ | -0.122** | 0.060 | -0.307*** | 0.102 |
| Job search – 3.5 years pre-spell | -0.216*** | 0.048 | -0.290*** | 0.074 |
| Job search – 1 year pre-spell | -0.055 | 0.044 | 0.365*** | 0.101 |
| Earnings time > 0.5 – 3.5-yrs | 0.063* | 0.035 | 0.023 | 0.087 |
| Earnings time > 0.5 – 1-yr | 0.153*** | 0.034 | 0.045 | 0.066 |
| Multiple spells in 3.5 yrs | 0.093*** | 0.034 | 0.172*** | 0.062 |
| *Place of birth and indigenous status (Non-indigenous Australian-born omitted)* | | | | |
| Indigenous | | | | |
| ESC | 0.063 | 0.053 | -0.125 | 0.084 |
| NESC | 0.126** | 0.050 | -0.132 | 0.081 |
| *Educational qualification (less than year 10 omitted)* | | | | |
| Missing | 0.175*** | 0.047 | 0.291*** | 0.078 |
| Year 10 or year 11 | 0.126*** | 0.044 | 0.167** | 0.075 |
| Year 12 | 0.225*** | 0.048 | 0.293*** | 0.086 |
| Non degree post school qualification | 0.222*** | 0.052 | 0.325*** | 0.087 |
| Degree | 0.195*** | 0.067 | 0.590*** | 0.098 |

# 12 Appendix D: Description of variables

| Variable name | Description |
|---|---|
| Age (time invariant) | Refers to the age at the commencement of unemployment benefits |
| | |
| Dependent children (time-varying) | |
| No dependent | Have no dependent children |
| Youngest 0-5 | Youngest dependent child aged under 5 years |
| Youngest 6-12 | Youngest dependent child aged between 6 and 12 years |
| Youngest 13+ | Youngest dependent child aged 13 years or over |
| | |
| Housing/living circumstances (time-varying) | |
| Private rent (omitted) | Renting from private market |
| Homeowner outright | Homeowners and living in the owned home |
| Other homeowner | Joint owners, purchasing own homes, home owners living elsewhere |
| Government rent | Renting from government housing authorities |
| Other rent | Board and/lodging, free board and/or lodging, or no rent paid |
| Missing | housing/renting information missing |
| | |
| Partner status (time-varying) | |
| Single (omitted) | Have no partner |
| Partner not on IS | Partnered and the partner is not on income support |
| Partner on IS | Partnered and the partner is on income support |
| | |
| Private income (time-varying) | |
| Avg private income - current | Average private (earned plus unearned) income in the three fortnights preceding the current fortnight. |
| Have earnings | Have reported earnings in any of the three fortnights preceding the current fortnight. |
| Avg earnings – current | Average earnings in the three fortnights preceding the current fortnight. |
| Earnings – Time (spell) | Proportion of spell so far that the person has reported earned income, calculated as the number of fortnights up to the present with earned income as a proportion of the total number of fortnights in the spell so far. |
| Earnings – Amount (spell) | Average earnings in those fortnights in which the person has earned income so far in the spell, calculated as total earnings divided by the total number of fortnights with reported earnings up to that point in the spell. |
| | |
| Current payment type and job search requirement (time-varying) | |
| Other allowance (omitted) | Currently on an allowance other than UB. |
| UB – High search | Currently on UB and has a reported activity type that requires engaging in significant job search or involves significant contact with the labour market through part-time work, self-employment or other forms of employment. |
| UB – Low search | Currently on UB and has a reported activity type that involves minimal contact with the labour market because of such activities as education, training and voluntary work. |
| UB – No search | Currently on UB and has a reported activity type that involves no job search requirements for the reasons of caring responsibilities, incapacity or claiming DSP. |
| Pension/PPS | Currently on a pension or PPS. |
| | |
| Payment/activity type interacted with private income variables (time-varying) | |
| No search | Dummy equal to one if not on ‘UB – Low job search’ or ‘UB – High job search’ |
| No search * Avg private income | ‘No search’ interacted with ‘Average private income – current’ |
| No search * Avg earn current | ‘No search’ interacted with ‘Average earnings – current’ |
| No search * Have earnings | ‘No search’ interacted with ‘Have earnings’ |
| No search * Earn amount (spell) | ‘No search’ interacted with ‘Earnings – Amount (spell to date)’ |
| No search * Earn time (spell) | ‘No search’ interacted with ‘Earnings – Time (spell to date)’ |

| Variable name | Description |
|---|---|
| Incapacity within 4 fortnights (time-varying) | Recorded as incapacitated in any of the current and previous 3 fortnights. |
| Local unemployment rate (time-varying) | Current unemployment rate in the person's labour force statistical region |
| Job search * unemployment rate | Interaction between unemployment rate and having job search requirements (including both low and high search) |
| Major city (time-varying) | Currently living in a major city |
| Calendar year (time-varying) | The current calendar year |
| Calendar quarter (time-varying) | |
| 1st quarter (omitted) | The spell is currently in the first quarter of a calendar year |
| 2nd quarter | currently in the 2nd quarter |
| 3rd quarter | currently in the 3rd quarter |
| 4th quarter | currently in the 4th quarter |
| 3.5-year pre-spell TTO (time invariant) | |
| $Pre\text{-}TTO_{3.5} = 0$ (omitted) | Did not receive income support in the 3.5 years prior to the commencement of the unemployment benefit spell. |
| $0 < Pre\text{-}TTO_{3.5} \leq 0.25$ | The proportion of total time on income support in the 3.5 years prior to the commencement of the unemployment benefit spell is greater than 0, but less than or equal 0.25. |
| $0.25 < Pre\text{-}TTO_{3.5} \leq 0.5$ | The proportion of total time on income support in the 3.5 years prior to the commencement of the unemployment benefit spell is greater than 0.25, but less than or equal 0.5. |
| $0.5 < Pre\text{-}TTO_{3.5} \leq 0.75$ | The proportion of total time on income support in the 3.5 years prior to the commencement of the unemployment benefit spell is greater than 0.5, but less than or equal 0.75. |
| $Pre\text{-}TTO_{3.5} > 0.75$ | The proportion of total time on income support in the 3.5 years prior to the commencement of the unemployment benefit spell is greater than 0.75. |
| 1-year pre-spell TTO (time invariant) | |
| $Pre\text{-}TTO_1 = 0$' (omitted) | Had no income support in the one year prior to the commencement of the unemployment benefit spell |
| $0 < Pre\text{-}TTO_1 \leq 0.25$ | The proportion of total time on income support in the one year prior to the commencement of the unemployment benefit spell is greater than 0, but less than or equal 0.25. |
| $0.25 < Pre\text{-}TTO_1 \leq 0.5$ | The proportion of total time on income support in the one year prior to the commencement of the unemployment benefit spell is greater than 0.25, but less than or equal 0.5. |
| $Pre\text{-}TTO_1 > 0.5$ | The proportion of total time on income support in the one year prior to the commencement of the unemployment benefit spell is greater than 0.5. |
| Job search – 3.5 years pre-spell | When on income support in the 3.5 years prior to the commencement of the unemployment benefit spell, for at least 4 fortnights the person was required to undertake job search. |
| Job search – 1 year pre-spell | When on income support in the year prior to the commencement of the unemployment benefit spell, for at least 4 fortnights the person was required to undertake job search. |
| Earnings time > 0.5 – 3.5-yrs pre-spell | Dummy variable equal to one if the proportion of fortnights with earned income when on income support in the 3.5 years prior to entering the unemployment benefit spell is greater than 50%. |

| Variable name | Description |
|---|---|
| Earnings time > 0.5 – 1-yr pre-spell | Dummy variable equal to one if the proportion of fortnights with earned income when on income support in the year prior to entering the unemployment benefit spell is greater than 50% |
| Multiple spells in 3.5 yrs pre-spell | Had more than one income support spell in the 3.5 years prior to entering the unemployment benefit spell. |
| Place of birth and indigenous status (time invariant) | |
| Non-indigenous Australian-born (omitted) | Born in Australia and is not indigenous |
| Indigenous | Aboriginal or Torres Strait Islander |
| ESC | Immigrant from an English-speaking country |
| NESC | Immigrant from a non-English-speaking country |