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Workforce Transitions Following Unemployment

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Abstract

This paper uses data from waves 1-3 of the HILDA survey to describe and analyse patterns of transitions between labour force states for a sample of unemployed persons in Australia. A general overview of patterns of transitions is presented, and the main factors associated with finding and keeping employment are examined. Experiences of persons who find a job and remain unemployed are compared, as well as experiences of unemployed and marginally attached persons. A focus of the paper is to seek to use a range of potential explanatory variables for labour market outcomes such as labour force history and job search activity not available from other data sources.

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1. Introduction

This paper uses data from waves 1-3 of the HILDA survey to describe and analyse patterns of transitions between labour force states for a sample of unemployed persons in Australia. The main motivation for studying transitions is to provide a long run perspective on the experiences of disadvantaged labour force participants, and to better understand the main influences on obtaining and retaining employment. Although analyses using cross-section data can provide insights into factors associated with unemployment, it is increasingly being recognized that a deeper understanding of issues critical for effective policy design, such as whether persons who spend a large amount of time unemployed primarily experience problems in finding jobs or in keeping jobs, can only be answered using longitudinal data.

There are a variety of types of existing studies of the labour market experiences of unemployed persons in Australia. One type of study, duration or hazard modeling, has sought to establish the determinants of the 'time to exit' from an unemployment spell for various populations (for example, Chapman and Smith, 1992; Heath and Swann, 1999; and Carroll, 2005; for a review see Borland, 2000). A second type of study has examined the determinants of labour force status for various populations including measures of previous unemployment experience as explanatory variables (for example, Harris, 1996; Le and Miller, 2001; and Knights et al., 2002). A third type of study has analysed transitions between labour force states. Marks et al (2003), as part of a more general study of youth labour market outcomes, describe patterns of transitions between labour force states between 1996 and 2000 for a cohort born in 1975. Le and Miller (1999) and Carino-Abello et al. (2000) use the ABS SEUP to describe aspects of transitions. The latter study provides a general perspective on the extent of labour market flows, and undertakes regression modeling of the determinants of transitions. The former study characterizes the labour force dynamics of a sample of persons who were job seekers in the base period (1995), compares the types of jobs obtained by job seekers and a group that is representative of the Australian population, and examines the effect of job quality

on the likelihood of labour turnover. Other related studies are Gaston and Timcke (1999) which examines transitions from casual employment for youth in the early 1990s using the AYS; and Dunlop (2001) which examines transitions from low pay jobs (including to jobless) for workers in the mid-1990s using the SEUP.

This study is distinguished from the previous literature in several main ways. First, the focus of the study is exclusively on characterizing the experience of a group of unemployed persons – selecting a cohort of unemployed persons in the initial wave of HILDA, and following that cohort through subsequent waves. Second, we integrate a range of questions of interest regarding the labour market experience of unemployed persons into a common framework. Using the first three waves of HILDA it is possible to (i) provide a general overview of the main stylized facts regarding patterns of transitions; (ii) examine the determinants of whether unemployed persons find jobs, and the types of jobs obtained; (iii) examine the subsequent experiences of those unemployed persons who find a job, including analysis of whether finding a ‘low-quality’ job provides an advantage over not finding a job for subsequent employment outcomes; (iv) examine how those persons who remain unemployed alter their behaviour and perceptions about their labour market prospects; and (v) compare the experiences of unemployed and persons who are marginally attached to the labour force. Third, in this study, we emphasise analysis of the influence on labour market outcomes of a set of explanatory variables that have not been available in previous studies. It is possible to include a quite rich set of controls for labour force history, for characteristics of last job for those unemployed persons who had a previous job, for the types of search activity undertaken by an unemployed person, and other factors such as an individual’s self-assessed probability of finding a job in the next 12 months.

Several limitations of the analysis that is undertaken need to be acknowledged. First, the study examines only a single cohort. Hence it is not possible to separate duration effects such as the effect of a longer period of unemployment from year effects such as the state of the macro-economy. Second, sample sizes are fairly small with, for example, just over 300 observations for most of the analysis of unemployed persons that is undertaken. This

is likely to have implications for the capacity of the study to properly test the significance of potential explanatory variables for labour market outcomes.

Section 2 describes the samples of data from HILDA used in this study. Section 3 presents the findings from the empirical analysis organized into the same five topics described above.

2. Data source

This study uses waves 1-3 from the HILDA survey (see Watson and Wooden, 2004 for an overview). The main sample is a balanced panel of persons from those waves who were of working age (15-64 years), unemployed and not full-time students in wave 1. Data for wave 1 were collected between late August 2001 and early January 2002, with the majority of data from September to October 2001. The sample size of unemployed persons consists originally of 609 observations. Restricting to persons of working age in wave 1 who are not full-time students reduces the sample to 494 observations. Further deleting observations that do not appear in all waves, and are not of workforce age in both waves 2 and 3, restricts the sample to 323 observations. This sample is used for descriptive analysis in the paper. For undertaking regression analysis a sample of 306 observations is used, which excludes observations that have missing values for explanatory variables. Details are provided in Appendix Table A1. Longitudinal population weights are applied to both samples that are used in the empirical analysis. [Say something about attrition bias?] The other sample that is used is a balanced panel of persons who were marginally attached to the labour force in wave 1. For the descriptive analysis that is undertaken this sample consists of 546 observations.

Descriptive information on the full samples of unemployed and marginally attached persons in wave 1 is presented in Appendix Table A2. Comparison of the characteristics of these groups with employed persons corresponds with what is known from previous studies – for example, unemployed persons are on average younger, have lower levels of education attainment, more likely to have parents who are immigrants and in low-skill

occupations, more likely to be ATSI, and more likely to have a history of unemployment (see for example, Borland and Kennedy, 1998).

Table 1 presents information on the job search experience and employment history of the balanced panel samples of persons unemployed and marginally attached to the labour force in wave 1. Definitions of unemployment and marginal attachment match those used by the ABS. A person is defined as unemployed if they were not employed (that is, worked at least one hour) during the reference week and (i) had actively looked for work in the four weeks prior to the reference week; and (ii) were available for work in the reference week, or waiting to start a new job within four weeks of the reference week, or were waiting to be called back to a job from which they had been stood down for less than four weeks. A person not in the labour force is considered marginally attached if they: (i) want to work and are actively looking for work, but not available to start work in the reference week; or (ii) want to work and are not actively looking for work, but are available to start within 4 weeks (of the reference week).

The majority of unemployed persons had last worked in paid employment in the previous year; whereas almost two-thirds of marginally attached had not worked for the previous 2 years. Job tenure in last job is relatively short for both groups – over one-half of unemployed and one-third of marginally attached had job tenure of less than one year. The main types of employment in previous job are permanent and casual, and there are similar proportions whose job was skilled and unskilled.

Unemployed persons have primarily been searching for any job (compared to searching for only full-time or part-time work), and have used both ‘active’ and ‘passive’ job search methods. On average unemployed persons assess their chance of finding a suitable job in the next 12 months to be about 60 per cent; and the main perceived source of difficulty for obtaining a job is ‘human capital’ reasons. At the time of wave 1 data being collected 26% of unemployed persons were receiving Intensive Assistance from a Job Network provider.

3. Transitions from unemployment

a. Description of transitions

Descriptive information on transitions is presented in Figure 1 and Table 2. This information provides a general overview of the likelihood that unemployed persons will exit from that state and their destinations, as well as the likelihood of remaining in those destinations. Of course, in making comparisons between transitions from wave 1 to wave 2, and wave 2 to wave 3, it is important to keep in mind that effects of unemployment duration (or lagged unemployment status) are being confounded with year effects.

Between wave 1 and wave 2 only about 30 per cent remain unemployed, with 45 per cent moving to employment, and 25 per cent moving out of the labour force. Movement to employment or out of the labour force is associated with a relatively high probability of remaining in that state in wave 3 (about 80 per cent and 60 per cent respectively); although 13 per cent of those unemployed who had exited by wave 2 have returned to unemployment by wave 3. For those who remained unemployed in wave 2 there is a slightly higher probability of remaining unemployed in wave 3 (than compared to the transition from wave 1 to wave 2).

Looking at the more disaggregated classification of labour force states provides some further insights. First, a larger proportion of unemployed move to full-time than part-time employment between wave 1 and wave 2; and a larger proportion move to being marginally attached than not in the labour force. Second, looking at mobility between wave 2 and wave 3 there is a low rate of transition between labour force states for full-time employed; by contrast less than 50 per cent of part-time employed in wave 2 remain in that state – about 25 per cent move to full-time employment, and over 15 per cent move to unemployment (double the extent of movement to unemployment for full-time employed). Persons who move to not in labour force predominantly remain in that state or shift to being marginally attached; whereas those who move to being marginally

attached in wave 2 have a probability of about 50 per cent of moving to being in the labour force in wave 3.

b. Determinants of employment outcomes in wave 2

The initial topic that is addressed is the employment experience in wave 2 of persons unemployed in wave 1. Three issues are considered: the determinants of whether an unemployed person obtains employment in wave 2; whether the types of jobs obtained by unemployed persons differ from an ‘average’ job; and determinants of the hours of work of a job obtained by an unemployed person.

In analysis of determinants of employment status and type of job a variety of potential explanatory variables are incorporated. The ‘standard’ set of variables included are gender; a set of dummy variables for age; ATSI status; education attainment; and immigrant status. Four main categories of other explanatory variables are included. One category is a set of controls for labour force history – whether a person had worked in the previous 6 years; time since working (conditional on having worked in last 6 years); recent employment experience (percentage of time in past financial year spent employed); and unemployment history (percentage of time spent unemployed since leaving full-time employment). Previous work has indicated the important role of labour force history in explaining future labour market outcomes for unemployed (for example, Le and Miller, 2001, and Knights et al., 2002). The main point of differentiation in this study is that we are able to include a more extensive set of controls for different aspects of labour force history. The second category of variables is details of last job for those unemployed who had worked in the previous 6 years – hours of work; type of employment; tenure; and skilled/unskilled job. The third category is job search methods. We distinguish between active methods (for example, answering an advertisement or applying in person); passive methods (for example, using touchscreens at Centrelink or checking with an employment agency); and contacting friends and/or relatives. The fourth category is other factors – the unemployed person’s perception of their chance of finding a suitable job in the next 12 months, and their main difficulty in finding a job; as

well as whether the person was receiving unemployment benefits or another type of income support payment.

Table 3 reports findings from a probit model for whether a person unemployed in wave 1 shifts to employment in wave 2. Marginal effects are reported. Overall, there does not appear to be an especially strong relation between transition to employment and the set of explanatory variables. Of the sets of extra variables, only labour force history and ‘other factors’ are marginally jointly significant (using a Wald test). The main variables that are related to the transition to employment are that persons who have worked in the previous 6 months are significantly more likely to move to employment than those who had only worked in the previous 2-5 years; persons who believe that labour market issues constitute the main source of difficulty in obtaining a job are less likely to move to employment; persons receiving either unemployment benefits or other income support payments are less likely to move to employment; and those with relatively short job tenure in their last job are relatively more likely to move to employment. Other factors that are marginally significant as determinants of moving to employment (negatively related) are: being aged 55 to 64 years; being a NESB immigrant; having a low level of education attainment; and having worked in an unskilled occupation.

Table 4 shows the types of jobs obtained by unemployed persons compared to jobs for all persons employed at wave 2 in September 2002 to January 2003. Those who move to employment from unemployment obtain jobs that are more likely to be part-time, and less likely to involve working at home, than for all jobs. Jobs obtained by unemployed are more likely to be casual, have a lower average hourly wage, and be in the private sector with a small employer. Unemployed persons who obtain jobs are less likely to be trade union members than other employed persons, and assess themselves as having a higher chance of losing their job in the next 12 months.

Table 5 presents findings from a probit model of the determinants of whether an unemployed person obtained a full-time or part-time job (conditional on obtaining employment). Again, there are only relatively few variables that appear related to the

outcome. None of the sets of extra variables are jointly significantly related to the type of job obtained. The main variables that are (positively) associated with finding a full-time job are having used an active search method, and the self-assessed chance of finding a job. Full-time/part-time and casual/permanent status of last job are also marginally significant. In interpreting these results, however, it is important to take into account the relatively small number of observations.

c. What happens after finding a job?

For unemployed persons who have obtained a job at wave 2, the availability of data for a subsequent time period (wave 3), means that it is possible to examine the short-run effects or consequences of moving to employment. Three issues are considered: first, what factors are related to whether a person who moved to a job in wave 2 remains in employment in wave 3?; second, how the type of job changes for persons who remain in employment in wave 2; and third, how employment outcomes differ between persons who remain unemployed in both waves 1 and 2 and who were unemployed in wave 1 but obtained employment in wave 2?

Table 6 presents findings from a probit model on the determinants of remaining in employment in wave 3 conditional on being in employment in wave 2. The sets of extra variables for labour force history, details of last job, and other factors are all jointly significant; and as well, a range of variables for the characteristics of the job in wave 2 are significant. Remaining in employment is significantly negatively related to being an ESB immigrant, the percentage of time spent unemployed since leaving full-time education, and having been in receipt of unemployment payments. Persons who had worked in the previous 6 years and whose job had lasted for 10 years or more are significantly more likely to remain in employment than persons who had not worked or whose job had lower years of tenure. Being in a full-time job at wave 2 increases the likelihood of remaining in employment, and being self-employed, in a private sector job, or working on a fixed term contract make remaining in employment less likely.

Information on transitions between jobs from wave 2 to wave 3 is presented in Table 7. Full-time workers predominantly remain in full-time jobs in wave 3; but about one-third of part-time workers in wave 2 move to full-time jobs. As well, workers in permanent jobs in wave 2 are very likely to remain in a job with that status; whereas workers in casual or fixed term jobs are much more likely to shift to a permanent job. The average hourly wage increases by about 8 per cent between wave 2 and wave 3, although there is considerable heterogeneity in wage outcomes between individual workers. Similarly, there is significant heterogeneity in changes in workers' expectations about their likelihood of losing their job in the next 12 months.

Another important question relates to whether – from the vantage point of wave 3 - there appear to be benefits from having obtained employment in wave 2 compared to not being employed at that time. This question is often specifically asked with regard to persons who obtain what are often interpreted as 'low quality' jobs – part-time and casual. Hence, Table 8 presents information on outcomes in wave 3 for persons who obtained part-time/casual jobs in wave 2, compared to persons who did not obtain employment in wave 2. It is clear that there is a much higher probability of employment in wave 3 for persons who were employed in wave 2 (about 75 per cent compared to just over 30 per cent). Interestingly, however, there do not appear to be significant differences in the types of jobs between the groups for persons who were employed in wave 3. Average wages, distribution of jobs by type of work schedule, and hours of work seem fairly similar. Persons not employed in wave 2 appear somewhat more likely to work in a casual job and an unskilled job in wave 3, and are less likely to be working for a private sector organization.

d. Consequences of continued unemployment

Using information from waves 1 and 2 it is possible to examine how the experience of continued unemployment affects perceptions and behaviour of persons who remain unemployed in waves 1 and 2. Perhaps surprisingly, reservation wages and self-assessed probability of finding a suitable job in the next 12 months increase between wave 1 and

wave 2. However, there is considerable heterogeneity between individuals in stated changes in these variables; and it also must be recalled that these changes confound effects of unemployment experience and year effects such as changes to macroeconomic conditions. There appears to be quite a high degree of switching in job search strategies. Unemployed persons who had restricted search to full-time or part-time jobs have a probability of about 50 per cent of switching to search for any job; whereas 30 per cent of unemployed who had been searching for any job in wave 1 were restricting their type of search to either full-time or part-time by wave 2. The proportion of unemployed persons using active methods increases from wave 1 to wave 2, whereas usage of passive methods decreases. At the same time, more than 25 per cent of unemployed persons change their stated types of job search methods.

e. Transitions from marginal attachment

Persons with marginal attachment to the labour force are similar to the unemployed in having an interest in employment, but differ in that they are either not actively searching for a job or would not be able to commence work if offered a job. Hence it is of interest to compare their pattern of transitions to unemployed persons. Descriptive information on these patterns is shown in Figure 2 and Table 10.

Persons with marginal attachment are more likely to be out of the labour force in wave 2, and less likely to be in employment or unemployment, than persons who were unemployed. Nevertheless, over a third of the group of persons marginally attached in wave 1 has shifted to the labour force by wave 2. Marginally attached persons are more likely to move to part-time than full-time employment; but the opposite holds for persons unemployed in wave 1. Out of the group who are out of the labour force, about one-third remain marginally attached, and one-third move to being not in the labour force. Within the groups of persons employed, unemployed and not in the labour force in wave 2, transitions to wave 3 are similar to the case of persons unemployed in wave 1 – but with higher probabilities of remaining or returning to being not in the labour force for wave 3.

Similar to unemployed persons, those employed full-time in wave 2 are much more likely to remain in that state in wave 3 than persons employed part-time in wave 2.

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Table 1: Employment History and Job Search Activities of working-age persons Not Employed Wave 1

Descriptive variables	Unemployed	Marginally Attached
<i>Time since last worked in paid employment</i>		
Less than 6 months	41.2%	15.9%
Between 6 and 12 months	14.2%	6.6%
Between 1 and 2 years	16.6%	15.9%
Between 2 and 5 years	18.1%	27.6%
Between 6 and 10 years	6.8%	14.3%
11 years or more	2.7%	19.7%
<i>Job search in last 4 weeks</i>		
Looked for full-time work only	18.9%	0.7%
Looked for part-time work only	18.7%	4.1%
Looked for any work	62.4%	4.6%
Have not looked for any work	0.0%	90.6%
<i>Job search activities undertaken in last 4 weeks</i>		
Active	81.2%	4.6%
Passive	84.5%	6.8%
Friends/ Relatives	21.9%	1.3%
<i>Main difficulty getting job</i>		
Human Capital reasons	49.2%	4.2%
Labour Market reasons	29.3%	1.8%
Personal reasons	11.5%	2.5%
No difficulties experienced	9.7%	91.4%
<i>Job seeker factors</i>		
Currently receiving Intensive Assistance from Job Network provider	26.0%	12.8%
If had found job, could have started last week	99.7%	28.2%
If work was available, could start work in next 4 weeks	98.5%	77.4%
Self-assessed percent chance of finding a suitable job in the next 12 months	59.4%	40.6%
<i>Hours worked in last job</i>		
Full-time hours (35+ per week)	63.8%	55.0%
Part-time hours	36.2%	45.0%
<i>Type of employment contract in last job</i>		
Permanent/On-going basis	34.4%	39.3%
Fixed term	8.9%	7.0%
Casual	48.5%	45.5%
Self-employed	6.8%	7.6%
<i>Job Tenure in last job</i>		
Less than 6 months	38.3%	23.1%
Between 6 and 12 months	14.8%	11.7%
Between 1 and 2 years	12.3%	12.7%
Between 2 and 3 years	10.7%	13.3%

Between 3 and 9 years	14.5%	14.8%
10 years or more	7.7%	16.7%
<i>Classification of last job (occupation)</i>		
Skilled	20.4%	21.5%
Unskilled	26.3%	18.2%

Notes: Figures are weighted so that they are representative of the Australian population, using cross-sectional population weights in HILDA. Variables that refer to prior employment are expressed as proportions of those persons that have previously been in paid employment.

Definition of Job Search variables:

Active job search; write, phone or apply in person to employer; answer an advertisement for a job; advertise or tender for work.

Passive job search; check factory noticeboards or use touchscreens at Centrelink; check or register with an employment agency; look in newspaper but not answer an advertisement.

Friends/ Relatives; contact friends or relatives.

Definition of Main Difficulties getting job variables:

Human capital reasons; lack required education, training or skills; too old/too young; not enough work experience; language difficulties; overqualified; own ill health/disability.

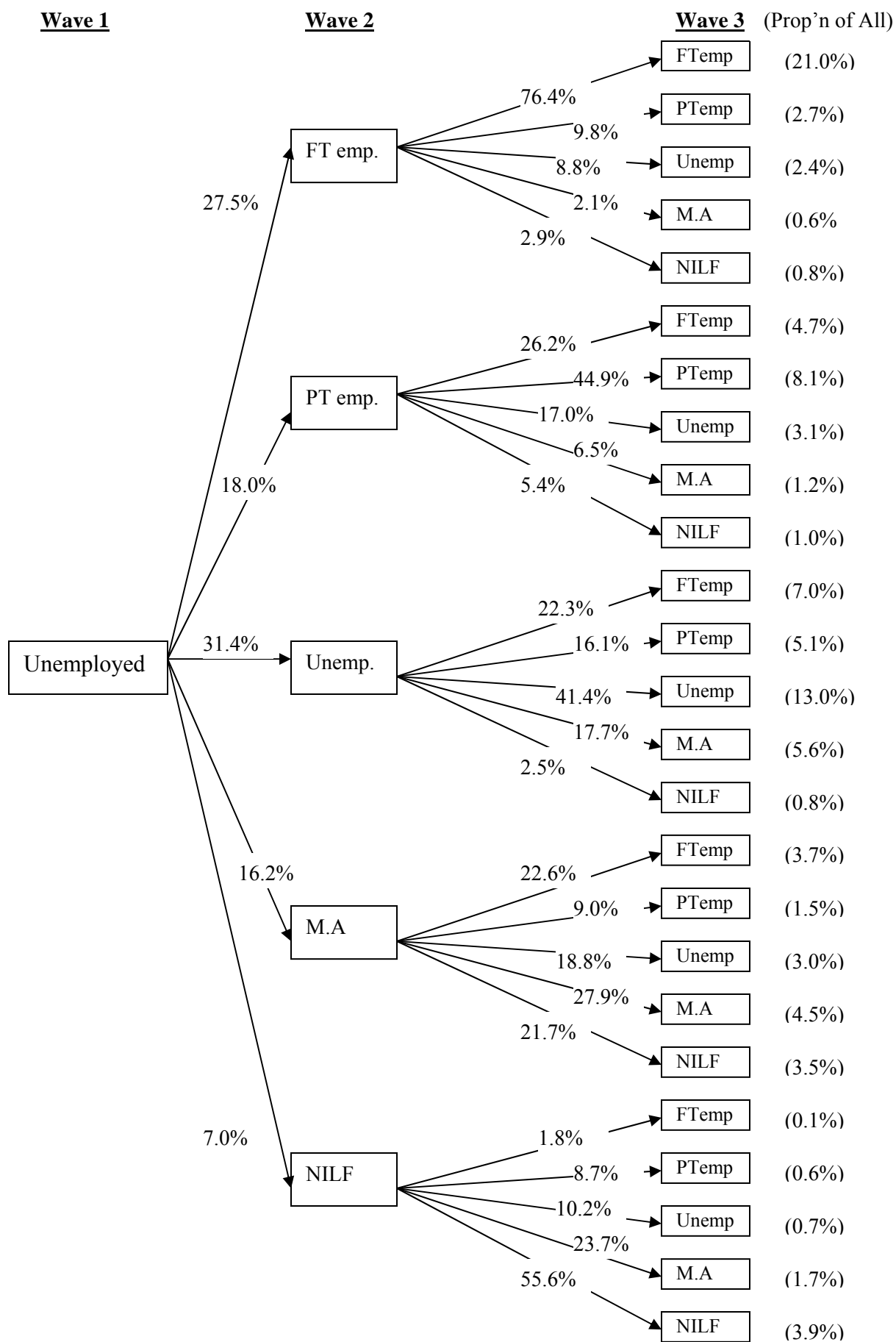
Labour market reasons; no jobs in line of work; too many applicants for available jobs; just no jobs at all; hours unsuitable.

Personal reasons; transport problems/ too far to travel; difficulties finding child care; other family responsibilities; other 'specific' difficulties.

Definition of skill:

Classifications of skilled and unskilled are derived using the ABS Australian Standard Classification of Occupations (2nd edition, 1997). Skilled refers to persons who were employed in an occupation as manager and administrator; professional; or associate professional. Unskilled refers to persons whose occupation is classified as labourer or below.

Figure 1: Employment Status Transitions – Persons Unemployed Wave 1



Note: Figures are based upon an analysis of a balanced panel of observations across HILDA Waves 1 to 3 of working age (15-64) persons who are not full-time students in Wave 1, with *longitudinal population weights* applied to produce values representative of the Australian population (N= 323).

Table 2: Employment Status Transitions of working-age persons Unemployed Wave 1

Wave 1	Wave 2	Wave 3		
		<i>Employed</i>	<i>Unemployed</i>	<i>NILF</i>
Unemployed (323 persons)	Employed 45.4%	80.2%	12.0%	7.7%
	Unemployed 31.4%	38.4%	41.4%	20.3%
	NILF 23.2%	25.2%	16.2%	58.6%

Note: Figures are based upon an analysis of a balanced panel of observations across HILDA Waves 1 to 3 of working age (15-64) persons who are not full-time students in Wave 1, with *longitudinal population weights* applied to produce values representative of the Australian population.

Table 3: Determinants of Obtaining Employment Wave 2

	Marginal Effect	Standard Error
Female	-0.032	0.077
Aged 15-19	0.023	0.135
Aged 20-24	-0.086	0.121
Aged 25-34	-0.077	0.106
Aged 45-54	0.092	0.101
Aged 55-64	-0.235*	0.120
Aboriginal or Torres Strait Islander	-0.183	0.157
Immigrant (ESC)	-0.043	0.113
Immigrant (NESC)	-0.172*	0.089
Diploma	-0.253*	0.127
Trade certificate	-0.200	0.123
Year 12	-0.031	0.151
Year 11 or below	-0.224*	0.122
<i>Labour Force History</i> ^{##}		
Unemployment history	0.041	0.166
Recent employment experience	0.001	0.001
Have worked (in last 6 years)	-0.099	0.197
Less than 6 months since last worked*Have worked	0.349**	0.132
6-12 months since last worked*Have worked	0.203	0.141
1-2 years since last worked*Have worked	0.148	0.119
<i>Job Search methods</i>		
Active	0.084	0.101
Passive	0.151	0.092
Friends/ Relatives	-0.061	0.087
<i>Other Factors</i> ^{##}		
Main difficulty: Human Capital reasons	-0.070	0.129
Main difficulty: Labour Market reasons	-0.247**	0.117
Main difficulty: Personal reasons	-0.165	0.134
Self-assessed chance of finding suitable job	0.001	0.001
Received Unemployment benefits	-0.198**	0.079
Received Other Income Support benefits	-0.178*	0.095
<i>Last Job details(*Have worked)</i>		
Full-time hours	0.075	0.087
Fixed Term contract	-0.129	0.132
Casual employment	-0.059	0.100
Self-employed	0.023	0.176
Tenure less than 6 months	0.206	0.159
Tenure 6-12 months	0.348**	0.153
Tenure 1-2 years	0.104	0.170
Tenure 2-3 years	0.098	0.175
Tenure 3-9 years	0.043	0.157
Skilled occupation	0.073	0.102
Unskilled occupation	-0.159*	0.090
$\chi^2(39)$	109.45**	
Sample size	306	

Note: * indicates significance at 10% level, ** indicates significance at 5% level.
 #, ## indicate joint significance of variables at 10% and 5% levels respectively.

Omitted groups of above regression: Male, Aged 35-44, Australian-born, Bachelor degree or higher, time since last job 2-5 years (for those that have worked in last 6 years), Main difficulty: None, received no IS benefits, last job PT hours, last job permanent/ongoing basis, last job tenure 10+ years, last job in between skilled and unskilled occupation.

Table 4: Types of jobs obtained by persons that move from Unemployment to Employment, compared to jobs of All Employed persons in Wave 2

Descriptive variables	Persons that Obtain Job	All persons Employed
<i>Hours</i>		
Full-time job (35+ hours per week)	60.5%	74.8%
Part-time job	39.5%	25.2%
Some of usual working hours worked at home	11.8%	27.0%
<i>Wages</i>		
Average hourly wage rate	\$15.52	\$20.61
<i>Work schedule</i>		
Regular daytime schedule	70.3%	73.5%
Regular evening shift	5.0%	2.6%
Regular night shift	2.7%	1.8%
Rotating shifts (changes from days to evenings to nights)	6.3%	7.2%
Split shift (two distinct periods each day)	2.1%	1.3%
On call	1.8%	2.2%
Irregular schedule	11.3%	10.4%
<i>Employee status</i>		
Employee	90.4%	81.5%
Employee of own business	2.2%	7.0%
Employer/ Self-employed	6.9%	11.1%
Unpaid family worker	0.5%	0.4%
<i>Type of employment contract (employees only)</i>		
Permanent / Ongoing	40.4%	71.1%
Fixed term	8.1%	10.2%
Casual	51.5%	18.3%
<i>Factors associated with job</i>		
Employer provides paid holiday leave	36.0%	63.7%
Employer provides paid sick leave	37.7%	64.0%
Employee belongs to trade union or employee association	11.1%	27.5%
Percent chance of losing job in next 12 months	16.6%	10.8%
<i>Type of employer / business</i>		
Private sector for profit organization	84.3%	71.8%
Private sector not-for-profit organization	2.8%	4.5%
Government business enterprise or commercial statutory authority	2.2%	6.3%
Other government organization (public service department, councils, schools, universities)	8.7%	15.7%
<i>Size of employer (No. employed at place of work)</i>		
Less than 10	42.1%	35.0%
Between 10 and 49	31.6%	27.5%
Between 50 and 99	7.5%	9.6%

Between 100 and 199	5.9%	8.5%
Between 200 and 499	4.3%	8.7%
500 or more	4.7%	9.6%
Employer has more than 1 workplace in Australia	50.1%	55.6%
<i>Classification of occupation</i>		
Skilled	20.6%	45.1%
Unskilled	26.9%	7.5%
<i>Industry of job</i>		
Agriculture, Forestry and Fishing	3.6%	4.2%
Mining	0.8%	1.4%
Manufacturing	21.0%	13.5%
Electricity, Gas and Water supply	0.5%	0.8%
Construction	6.5%	6.5%
Wholesale Trade	8.0%	3.9%
Retail Trade	10.9%	10.3%
Accommodation, Cafes and Restaurants	7.1%	4.4%
Transport and Storage	2.2%	4.4%
Communication Services	1.4%	2.7%
Finance and Insurance	0.9%	3.5%
Property and Business Services	16.7%	11.9%
Government Administration and Defence	3.9%	5.2%
Education	3.1%	9.7%
Health and Community Services	7.9%	10.9%
Cultural and Recreational Services	3.4%	2.8%
Personal and Other services	2.1%	3.9%
Observations	142	5,954

Notes: - Figures are based upon an analysis of a balanced panel of observations across HILDA Waves 1 to 3 of working age (15-64) persons who are not full-time students in Wave 1, with *longitudinal population weights* applied to produce values representative of the Australian population.

- Average hourly wage rate was constructed using persons' usual wages and salaries and usual hours worked in all jobs, and is 'missing' for persons that do not report either their usual income or usual hours worked per week (which includes persons that are 'self-employed' and report they earn zero income).

Table 5: Determinants of Obtaining Full-Time Job, given Obtained Job Wave 2

	Marginal Effect	Standard Error
Female	-0.152	0.125
Aged 15-19	-0.004	0.230
Aged 20-24	0.193	0.186
Aged 25-34	-0.166	0.193
Aged 45-54	-0.010	0.182
Aged 55-64	-0.182	0.363
Aboriginal or Torres Strait Islander	-0.257	0.408
Immigrant (ESC)	-0.227	0.206
Immigrant (NESC)	-0.163	0.181
Diploma	-0.060	0.315
Trade certificate	-0.033	0.204
Year 12	-0.155	0.243
Year 11 or below	-0.085	0.199
<i>Labour Force History</i>		
Unemployment history	-0.004	0.261
Recent employment experience	0.001	0.002
Have worked (in last 6 years)	-0.080	0.358
Less than 6 months since last worked*Have worked	-0.258	0.281
6-12 months since last worked*Have worked	-0.070	0.338
1-2 years since last worked*Have worked	-0.386	0.249
<i>Job Search methods</i>		
Active	0.421**	0.178
Passive	0.170	0.169
Friends/ Relatives	0.091	0.150
<i>Other Factors</i>		
Main difficulty: Human Capital reasons	0.048	0.207
Main difficulty: Labour Market reasons	-0.028	0.203
Main difficulty: Personal reasons	0.033	0.247
Self-assessed chance of finding suitable job	0.005**	0.002
Received Unemployment benefits	0.011	0.139
Received Other Income Support benefits	-0.152	0.192
<i>Last Job details(*Have worked)</i>		
Full-time hours	0.230*	0.138
Fixed Term contract	0.190	0.197
Casual employment	-0.315*	0.160
Self-employed	0.215	0.228
Tenure less than 6 months	0.284	0.222
Tenure 6-12 months	0.202	0.243
Tenure 1-2 years	0.148	0.246
Tenure 2-3 years	0.110	0.253
Tenure 3-9 years	0.059	0.250
Skilled occupation	0.066	0.145
Unskilled occupation	0.145	0.168
$\chi^2(39)$		60.36**
Sample size		137

Note: * indicates significance at 10% level, ** indicates significance at 5% level.
 #, ## indicate joint significance of variables at 10% and 5% levels respectively.

Table 6: Determinants of Retaining Employment Wave 3, given Obtained Job Wave 2

	Marginal Effect	S.E	Marginal Effect	S.E
Female	-0.044	0.056	0.007	0.024
Aged 15-19	-0.018	0.111	-0.010	0.075
Aged 20-24	-0.123	0.175	-0.359	0.348
Aged 25-34	-0.016	0.090	-0.010	0.056
Aged 45-54	-0.197*	0.139	-0.238*	0.189
Aged 55-64	0.056	0.063	0.024	0.023
Aboriginal or Torres Strait Islander	-0.044	0.227	-0.076	0.308
Immigrant (ESC)	-0.464**	0.216	-0.381**	0.289
Immigrant (NESC)	-0.066	0.107	-0.040	0.076
Bachelor Degree or higher	0.025	0.074	-0.098	0.182
Year 12	0.079	0.036	0.032*	0.029
Year 11 or below	0.042	0.057	0.022	0.033
<i>Labour Force History^{###}</i>				
Unemployment history	-0.263**	0.132	-0.175**	0.132
Recent employment experience	0.000	0.001	0.000	0.000
Have worked (in last 6 years)	0.973**	0.015	0.994**	0.007
Less than 6 months since last worked*Have worked	-0.146	0.122	-0.026	0.069
6-12 months since last worked*Have worked	-0.273	0.362	-0.163	0.358
1-2 years since last worked*Have worked	-0.383*	0.313	-0.022	0.109
<i>Job Search methods</i>				
Active	-0.046	0.049	-0.028	0.026
Passive	0.182	0.158	0.143	0.150
Friends/ Relatives	-0.010	0.073	-0.016	0.046
<i>Other Factors[#]</i>				
Main difficulty: Human Capital reasons	-0.044	0.085	-0.011	0.045
Main difficulty: Labour Market reasons	-0.061	0.113	-0.013	0.058
Main difficulty: Personal reasons	-0.025	0.144	0.024	0.027
Self-assessed chance of finding suitable job	0.002**	0.001	0.001	0.001
Received Unemployment benefits	-0.195**	0.088	-0.159**	0.104
Received Other Income Support benefits	-0.090	0.141	-0.043	0.095
<i>Last Job details(*Have worked)^{###, ##}</i>				
Full-time hours	0.054	0.066	0.076*	0.064
Fixed Term contract	-0.011	0.105	-0.038	0.097
Casual employment	0.021	0.066	0.049	0.041
Self-employed	-0.087	0.213	-0.007	0.087
Tenure less than 6 months	-0.969**	0.028	-0.988**	0.032
Tenure 6-12 months	-0.985**	0.009	-0.999**	0.002
Tenure 1-2 years	-0.984**	0.007	-0.999**	0.003
Tenure 2-3 years	-0.975**	0.013	-0.997**	0.005
Tenure 3-9 years	-0.980**	0.014	-0.998**	0.005
Skilled occupation	0.034	0.057	0.011	0.030
Unskilled occupation	-0.026	0.084	-0.118	0.145
<i>Details of Wave 2 Job</i>				
Full-time hours			0.081*	0.069
Self-employed			-0.325*	0.293
Fixed Term contract			-0.806**	0.293

Casual employment	-0.069	0.056
Skilled occupation	0.012	0.033
Unskilled occupation	0.029	0.029
Private Sector	-0.045*	0.032
	$\chi^2(38) = 48.76$	$\chi^2(45) = 68.16^{**}$
Sample size	137	137

Note: * indicates significance at 10% level, ** indicates significance at 5% level.
 #, ## indicate joint significance of variables at 10% and 5% levels respectively.

Table 7: Change in Job Characteristics of persons that Obtained Employment Wave 2 and Remained Employed Wave 3

Wave 2	Wave 3		
<i>Employment transitions</i>	Full-time employed	Part-time employed	
Full-time employed (65.0%)	88.7%	11.3%	
Part-time employed (35.0%)	36.9%	63.1%	
<i>Employment contracts (employees only)</i>	Permanent/ Ongoing	Fixed Term	Casual
Permanent/ Ongoing (46.4%)	80.1%	1.8%	18.1
Fixed-Term (7.1%)	25.6%	49.1%	25.3%
Casual (46.5%)	46.3%	7.3%	46.4%
<i>Self-assessed employment prospects for next 12 months</i>	Higher chance	Same chance	Lower chance
Change in percent chance lose job	38.9%	29.0%	32.1%
<i>Average hourly wage rate (in W2 (2002) prices)</i>			
\$15.77		\$17.02	
<i>Percentage changes in average hourly wage rates W2 to W3</i>	Decrease 5% or more	Approx. Same (within 5% change)	Increase 5% or more
Change in average hourly wage rate	33.3%	20.3%	46.4%
	Decrease 10% or more	Approx. Same (within 10% change)	Increase 10% or more
Change in average hourly wage rate	30.9%	32.7%	36.4%
Observations	110		

Notes: - Figures are based upon an analysis of a balanced panel of observations across HILDA Waves 1 to 3 of working age (15-64) persons who are not full-time students in Wave 1, with *longitudinal population weights* applied to produce values representative of the Australian population.

- Average hourly wage rates and their changes across waves calculated only for persons that reported their usual income and hours worked per week in Waves 2 and 3 (N = 94).

Table 8: Employment Status and Job Characteristics in Wave 3, for persons Part-time or Casual employed and persons Not employed in Wave 2

Employment Status/ Job Characteristics (of those employed) Wave 3	P-T or Casual Employed W2	Not Employed W2
<i>Employment status W3</i>		
Full-time employed	41.8%	19.7%
Part-time employed	32.3%	13.0%
Unemployed	17.5%	30.7%
Marginally Attached	4.8%	21.5%
Not in Labour Force	3.7%	15.0%
<i>Hours</i>		
Full-time job (35+ hours per week)	56.4%	60.2%
Part-time job	43.6%	39.8%
Some of usual working hours worked at home	10.1%	8.3%
<i>Wages</i>		
Average hourly wage rate	\$14.73	\$14.97
<i>Work schedule</i>		
Regular daytime schedule	70.8%	70.8%
Regular evening shift	7.5%	6.5%
Regular night shift	2.0%	7.0%
Rotating shifts (changes from days to evenings to nights)	8.5%	0.7%
Split shift (two distinct periods each day)	0.8%	1.8%
On call	1.1%	1.1%
Irregular schedule	5.6%	12.1%
<i>Employee status</i>		
Employee	95.6%	91.0%
Employer/ Self-employed	4.4%	9.0%
<i>Type of employment contract (employees only)</i>		
Permanent / Ongoing	44.8%	45.0%
Fixed term	8.2%	2.3%
Casual	46.9%	50.9%
<i>Factors associated with job</i>		
Employer provides paid holiday leave	44.0%	36.0%
Employer provides paid sick leave	45.8%	36.6%
Employee belongs to trade union or employee association	13.8%	8.6%
Percent chance of losing job in next 12 months	22.3%	13.0%
<i>Type of employer / business</i>		
Private sector for profit organization	88.1%	80.7%
Private sector not-for-profit organization	2.6%	6.6%
Government business enterprise or commercial statutory authority	0%	5.6%
Other government organization (public service department, councils, schools, universities)	8.7%	2.5%

<i>Classification of occupation</i>		
Skilled	25.1%	12.0%
Unskilled	17.9%	23.6%
<i>Industry of job</i>		
Agriculture, Forestry and Fishing	3.4%	2.8%
Mining	0%	2.4%
Manufacturing	12.0%	20.6%
Electricity, Gas and Water supply	0%	1.2%
Construction	11.0%	8.7%
Wholesale Trade	10.0%	1.2%
Retail Trade	9.9%	20.9%
Accommodation, Cafes and Restaurants	8.7%	5.1%
Transport and Storage	3.5%	2.6%
Communication Services	0%	0%
Finance and Insurance	1.9%	0%
Property and Business Services	21.4%	10.5%
Government Administration and Defence	1.1%	3.3%
Education	3.9%	1.6%
Health and Community Services	6.3%	13.0%
Cultural and Recreational Services	2.4%	0.7%
Personal and Other services	4.6%	5.4%
Observations (Persons employed W3)	86 (62)	181 (55)

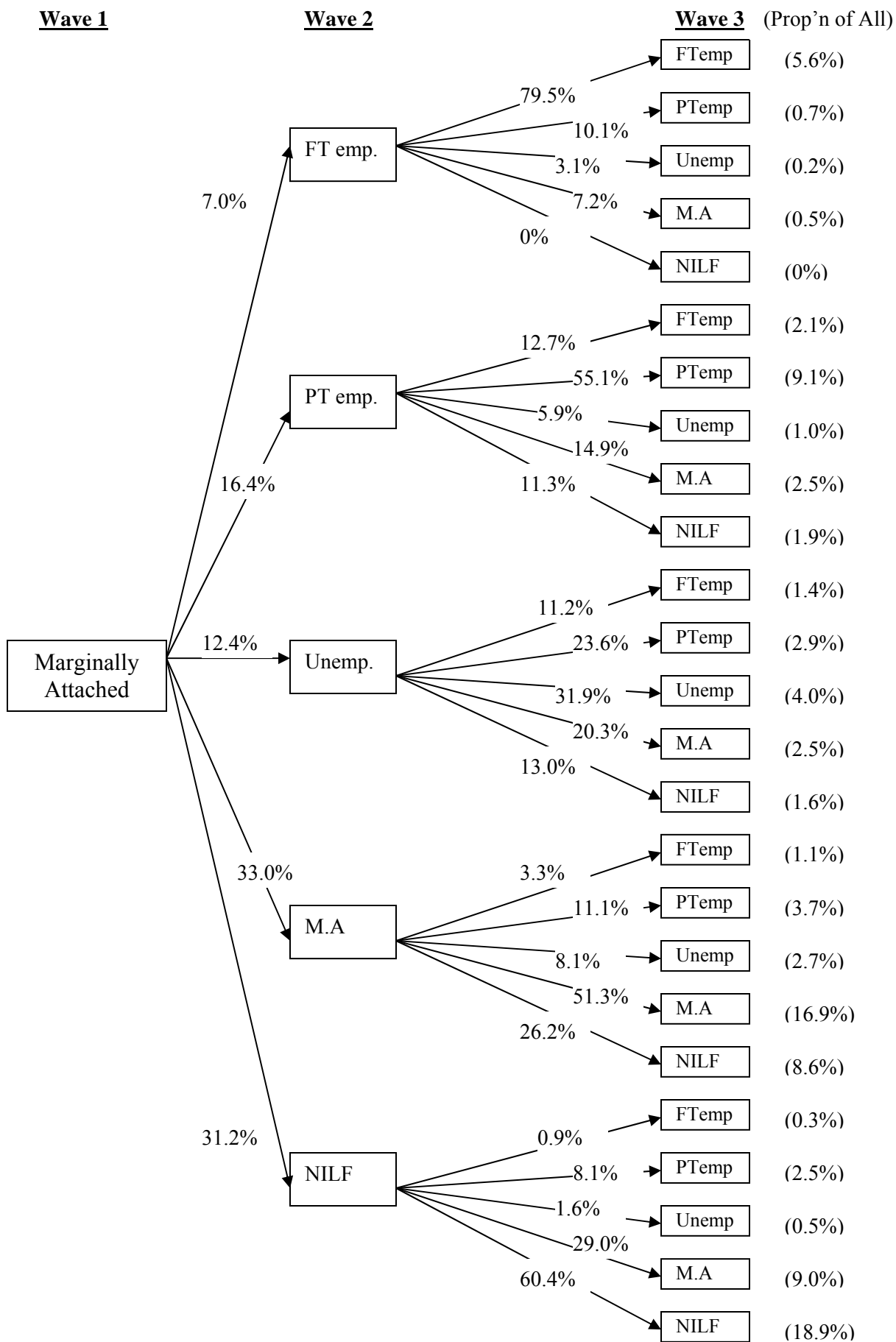
Notes: Figures are based upon an analysis of a balanced panel of observations across HILDA Waves 1 to 3 of working age (15-64) persons who are not full-time students in Wave 1, with *longitudinal population weights* applied to produce values representative of the Australian population.

Table 9: Responses to Unemployment in Wave 1 and Wave 2

<i>Change in Reservation Wage from W1 to W2 (in W2 (2002) prices)</i>				
	5% or more	10% or more	25% or more	
Decline	26.0%	22.6%	9.3%	
Approx. Same	21.4%	31.8%	60.7%	
Increase	52.6%	45.6%	29.9%	
Average Change		+ 8.2%		
<i>Change in self-assessed employment prospects for next 12 months</i>				
	5% or more	10% or more	25% or more	
Decline	36.0%	32.1%	14.3%	
Approx. Same	23.9%	30.5%	65.6%	
Increase	40.1%	37.4%	20.1%	
Average Change		+ 4.5%		
<i>Change in type of job searching for</i>				
Wave 1				
Looking for F-T only (27.6%)	F-T only	Wave 2	Any	
Looking for P-T only (11.0%)	39.6%	P-T only	0%	
Looking for Any job (61.4%)	11.7%		60.4%	
	15.2%		29.3%	
			70.0%	
<i>Job search activities undertaken</i>				
	Wave 1	Wave 2	Wave 1 to Wave 2	
Active	75.7%	89.2%	Cease	Start
Passive	89.9%	82.0%	5.8%	19.3%
Friends/ Relatives	21.7%	13.2%	16.1%	8.2%
Multiple types of search	70.8%	72.4%	11.6%	3.1%
			13.8%	15.4%
Observations	104			

Notes: Figures are based upon an analysis of a balanced panel of observations across HILDA Waves 1 to 3 of working age (15-64) persons who are not full-time students in Wave 1, with *longitudinal population weights* applied to produce values representative of the Australian population.

Figure 2: Employment Status Transitions – Persons Marginally Attached Wave 1



Note: Figures are based upon an analysis of a balanced panel of observations across HILDA Waves 1 to 3 of working age (15-64) persons who are not full-time students in Wave 1, with *longitudinal population weights* applied to produce values representative of the Australian population (N= 546).

Table 10: Employment Status Transitions of working-age persons Marginally Attached Wave 1

Wave 1	Wave 2	Wave 3		
		<i>Employed</i>	<i>Unemployed</i>	<i>NILF</i>
Marginally	Employed 23.4%	74.4%	5.1%	20.6%
Attached	Unemployed 12.4%	34.8%	31.9%	33.3%
(546 persons)	NILF 64.2%	11.8%	4.9%	83.3%

Note: Figures are based upon an analysis of a balanced panel of observations across HILDA Waves 1 to 3 of working age (15-64) persons who are not full-time students in Wave 1, with *longitudinal population weights* applied to produce values representative of the Australian population.

Appendix.**Table A1: Description of Sample Creation**

	Number of Observations Lost	Sample size (Persons Unemployed W1)
Cross-section of Wave 1 only (without any restrictions)	-	609
Restrict to persons working-age (15-64) W1	3	606
Restrict to no full-time students W1 (Attending Secondary school)	60	546
Restrict to no full-time students W1 (Attending post-school full-time)	52	494 *
Restrict to persons that appear in W1 and W2	107	387
Restrict to persons that appear in all 3 Waves	60	327
Restrict to persons working-age (15-64) in all 3 Waves	4	323 **
Restrict to persons with non-missing values for all variables in estimations	17	306 ***

* Number of observations used in Wave 1 cross-section analysis of unemployed

** Number of observations used in balanced panel analysis of unemployed

*** Number of observations used in probit estimations

Table A2: Characteristics of working-age persons by Employment Status Wave 1

Descriptive variables	Employed	Unemployed	Marginally Attached
<i>Demographics</i>			
Males	56.3%	63.0%	24.2%
Females	43.7%	37.0%	75.8%
Average Age (years)	38.7	34.5	38.8
<i>Age categories (years)</i>			
15-19	3.6%	15.5%	5.4%
20-24	9.7%	14.3%	10.1%
25-34	25.6%	23.0%	26.7%
35-44	27.2%	20.6%	24.7%
45-54	24.0%	18.8%	17.2%
55-64	9.9%	7.9%	16.0%
<i>Background</i>			
Australian-born (non-ATSI)	73.4%	63.7%	66.0%
Aboriginal or Torres Strait Islander (ATSI)	1.1%	5.2%	5.4%
Immigrant (English Speaking Country)	11.2%	11.2%	10.4%
Immigrant (Non-English Speaking Country)	14.3%	20.0%	18.1%
<i>Marital status</i>			
Married	68.9%	43.9%	63.1%
Separated, Divorced or Widowed	8.6%	12.3%	15.2%
Never married (Single)	22.4%	43.8%	21.7%
<i>Location of Residence</i>			
Major city	64.2%	62.8%	59.8%
Inner regional	24.8%	23.8%	28.1%
Outer regional	9.3%	12.6%	10.7%
Remote area	1.7%	0.8%	1.4%
<i>Education</i>			
Bachelor degree or higher	24.8%	9.3%	10.7%
Diploma	9.5%	5.4%	6.2%
Trade certificate	30.3%	31.7%	25.7%
Year 12	12.9%	10.7%	13.4%
Year 11 or below	22.4%	42.9%	44.0%
<i>Family Background</i>			
Father was an immigrant	39.0%	46.0%	42.9%
Father was employed when person was age 14	92.3%	84.6%	86.0%
Father employed in 'skilled' occupation when person age 14	43.1%	28.6%	31.7%
Father unemployed for 6 months or more (total) when person was growing up	10.0%	22.3%	15.5%
Mother was an immigrant	36.8%	43.4%	39.2%
Mother was employed when person was age 14	51.7%	44.9%	43.3%
Mother employed in 'skilled' occupation when person age 14	23.2%	16.5%	17.0%

Person has resident child(ren) aged 0-4 years	13.6%	12.2%	30.1%
Person has resident child(ren) aged 0-14 years	32.2%	23.9%	53.2%
<i>Labour Force History</i>			
Work experience (% time spent in paid employment since left F-T education)	86.1%	60.8%	52.4%
Unemployment history (% time spent unemployed since left F-T education)	2.8%	23.9%	7.8%
Recent employment (% time of previous financial year spent employed)	94.3%	34.9%	15.0%
Recent unemployment (% time of previous financial year spent unemployed)	1.9%	46.0%	11.3%
Have been in paid employment at least once	100.0%	92.8%	93.2%
<i>Government Benefits</i>			
Receive Unemployment Benefits payment	1.5%	47.3%	9.1%
Receive other Income Support payment	5.0%	15.5%	40.0%
Do not receive any Income Support payment	93.5%	37.1%	50.9%
Observations	7,726	494	741

Notes: Figures are weighted so that they are representative of the Australian population, using cross-sectional population weights in HILDA.