Final Report

Project 3/2009
Successful and Unsuccessful Pathways to Employment

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List of Abbreviations

ABS: Australian Bureau of Statistics

DEEWR: Department of Education, Employment and Workplace Relations

DSP: Disability Support Pension

HILDA: Household, Income and Labour Dynamics in Australia

LPS: Longitudinal Pathways Survey

NSA: NewStart Allowance

OLS: Ordinary Least Squares

PPP: Parenting Payment Partnered

PPS: Parenting Payment Single

RED: Research and Evaluation Database

SEIFA: Socio-economic Indexes for Areas

Executive Summary

- This report examines the roles that activities, attitudes and social networks play in helping long-term income support recipients make the transition off income support into employment and become more socially included. We also compare the characteristics of income support recipients who manage to make a successful transition off income support into employment, with the characteristics of those who remain on income support.

- The analysis in this report is primarily based on five waves of data from the Longitudinal Pathways Survey (LPS), which collects detailed information about participation in employment, education and training even if individuals are no longer receiving income support. The use of data from the LPS enables us to analyse the employment outcomes of income support recipients. Additional data used in this project (e.g., postcodes, income support history) were obtained from the Research and Evaluation Database (RED), which contains unit record level data for all persons on income support payments (excluding the Age Pension and DVA pensions) with a duration of at least one day since 1 July 2002. In addition, data on Socio-economic Indexes for Areas (SEIFA) constructed by the Australian Bureau of Statistics (ABS) were utilised to help shed light on the effects of locational characteristics.

- The initial descriptive analysis results suggest that attitudes and social support networks are important factors for successful transitions for income support recipients. Individuals who have high levels of confidence and who are less interested in keeping the concessions they obtain on income support are more likely to transition off income support into employment, a state which we refer to as "success" in this report. In addition, "successful" individuals appear to have adequate social support as they were not very likely to have no one to lean on in times of trouble and could often rely on family and friends. The descriptive statistics also suggest that an individual's location can be a factor in helping them retain employment. In general, areas with low levels of unemployment, above average house prices and in the higher SEIFA deciles tend to have a

higher proportion of income support recipients successfully transitioning into employment.

- The results from the cross-sectional regression modelling, which focuses on outcomes in Wave 5, suggest that the different types of activities that people undertake to look for a job, such as answering an advertisement for a job from touch screen at Centrelink, are not particularly important in determining whether a person is off income support and employed by Wave 5. After controlling for a range of individual and household factors, it appears that social support is no longer associated with the likelihood of leaving income support and finding employment by Wave 5 (except for some relatively weak associations for subgroups). In contrast, attitudes show stronger associations. Having the attitude that "given my current situation, work just isn't worth my while" is associated with an 8.3 percentage point reduction in the probability of leaving income support and finding employment, while having "a lot of confidence in myself and my skills and abilities" is associated with a 10.9 percentage point increase in the likelihood of leaving income support and finding employment.

- An issue of interest is whether different types of activities, attitudes, social support and location make a difference for different groups of people, such as people with disabilities, principal carer parents, very long term unemployed, mature age income support recipients, and other income support recipients. These sub-group results are important because regression models estimated using aggregate data would not reveal some of the heterogeneous effects that potentially exist. The cross-sectional regressions focusing on outcomes in Wave 5 show that persons with disabilities who do not always have family and friends to rely on were significantly less likely (by 6.6 percentage points) to exit income support and find employment by Wave 5. For principal carers, two major factors that appear to be beneficial are; answering job advertisements on the internet between Waves 1 to 4 (which increases the probability of "success" by 13.4 percentage points), and having a lot of confidence in themselves (which increases the probability of "success" by 16.9 percentage points). For the very long term unemployed, it appears that a lack of social support is a significant hindrance to them being able to make a successful transition to the workforce.

Often needing help from others but not being able to get it decreases the probability of "success" by 9.7 percentage points. For mature age persons, it is found that having an attitude that 'people in my situation should not work' is a major factor in decreasing the likelihood of exiting income support and finding employment by Wave 5 (by 26.7 percentage points).

- The dynamic panel regression models account for observed and unobserved heterogeneity. This type of model focuses on the factors that are associated with wave to wave changes. The results suggest there is a high level of state dependence – that is, current "success" is highly correlated with past "success". Once state dependence is accounted for in the dynamic panel regression models, attitudes, social support networks and activities undertaken for each of the groups of income support recipients do not show any statistically significant influence on "success".

- Overall this report provides an initial understanding of the characteristics of income support recipients who make the transition off income support into employment and the role that activities, attitudes and social networks play. It appears that attitudes are important for some groups of income support recipients and that helping reshape some of the negative attitudes as well as promoting self-esteem could lead to better labour market outcomes over time. However, it is possible that attitudes are linked to other social inclusion barriers that could be overcome through education, vocational training, getting local industry on board and job creation. Once these barriers are overcome, attitudes might improve at the same time. This was not examined in this report, but exploring this issue in further research would be useful.

1. Introduction

In 2000, the Final Report of the Reference Group on Welfare Reform, entitled 'Participation Support for a More Equitable Society' (also known as the McClure Report) concluded that the goal of welfare reform should be to minimise social and economic exclusion.[1] At the national level, the federal government has in the past few years made progress on these goals by adopting a social inclusion approach to policy making. For example, the Australian Social Inclusion Board and a Social Inclusion Unit in the Department of the Prime Minister and Cabinet have both recently been established. In her media release on 21 May 2008, Deputy Prime Minister Julia Gillard stated that: "Promoting social inclusion requires a new way of governing. Australia must rethink how policy and programs across portfolios and levels of government can work together to combat economic and social disadvantage."

It is not a trivial task to specifically identify which groups or individuals are socially excluded and the dimensions of their exclusion, as no generally agreed definition of social exclusion exists and because social exclusion can occur on many levels. For example, Levitas *et al*. (2007 p. 9) state that: "Social exclusion is a complex and multi-dimensional process. It involves the lack or denial of resources, rights, goods and services, and the inability to participate in the normal relationships and activities, available to the majority of people in society, whether in economic, social, cultural, or political arenas." According to the Social Inclusion Unit in the Department of the Prime Minister and Cabinet, "being socially included means that people have the resources (skills and assets, including good health), opportunities and capabilities they need to: ... participate in education and training; ... participate in employment, unpaid or voluntary work including family and carer responsibilities; ... connect with people, use local services and participate in local, cultural, civic and recreational activities; and ... [can] influence decisions that affect them." (Social Inclusion Unit, 2009 p. 3). Social exclusion has also been defined as a shorthand label for what can happen when individuals or areas suffer from a combination of linked problems such as

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[1] The report further noted that "the success of doing this should be measured by three outcomes. 1. A significant reduction in the incidence of jobless families and jobless households. 2. A significant reduction in the proportion of the working age population that needs to rely heavily on income support. 3. Stronger communities that generate more opportunities for social and economic participation." Reference Group on Welfare Reform (2000), p. 4.

unemployment, poor skills, low incomes, poor housing, high crime environments, bad health and family breakdown. (UK Social Exclusion Unit, 1997).

From a survey of definitions of social exclusion used in the literature, Hayes *et al*. (2008) find that there are some aspects that are common to most definitions. In general, they find that restriction of access to opportunities and limitations of the capabilities required to capitalise on these, along with reference to the social and economic dimensions of exclusion, seem to characterise most of the definitions that have been used. Scutella *et al.* (2009) propose a framework for measuring social exclusion in Australia arranged around the broad areas of resource availability and participation. Their proposed framework distinguishes seven 'life domains' for the measurement of social exclusion: (i) material resources; (ii) employment; (iii) education and skills; (iv) health and disability; (v) social; (vi) community; and (vii) personal safety. They also note that it is important to examine social exclusion at the individual level, allowing an examination of the nature of exclusion at a point in time and over time.

In order to make a contribution to the social inclusion agenda, this project focuses on the employment aspect of the agenda and on a specific group of individuals who could be regarded as socially excluded in terms of this aspect – long-term income support recipients who are unemployed. With the aim of better understanding what factors are related to helping individuals become socially included, we examine the characteristics of the recipients who manage to successfully transition off income support and find employment, and compare their characteristics to the characteristics of those who remain on income support. In particular, this report provides information about the combined income support and employment outcomes of income support recipients over time. Employment is chosen as the outcome that is focused on because it builds self-esteem and social connectedness and is an important factor in addressing poverty and disadvantage; it can be viewed as one of the foundations to social inclusion.

Using data from the Longitudinal Pathways Survey (LPS) that was undertaken as part of an evaluation of the Howard government's Welfare to Work measures.[2] This report

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[2] The Welfare to Work initiative was introduced in July 2006 to increase workforce participation and reduce welfare dependence among working-age income support recipients with a focus on people in four

should be seen in this context, and it does not reflect the current situation in which the Job Network has been replaced by Job Services Australia. This report examines the roles that activities, attitudes and social networks play in helping income support recipients make the transition off income support and become more socially included.[3] More specifically, this report addresses the following research questions:

(1) What are the characteristics of income support recipients who are initially unemployed, but who find employment and have exited income support by Wave 5?

(2) How different are they to those who cycle off and on income support in the 2.5 years, and those who remain on income support continuously?

(3) What types of activities (job search, formal education, accredited training and non-vocational training, voluntary work, part-time employment) help lead to full-time employment and have exited income support by Wave 5?

(4) Do different types of activities make a difference for different groups of people (people with disabilities, principal carers, very long term unemployed, mature age income support recipients, other income support recipients)?

(5) Does the method used to look for a job and obtain jobs (e.g., through newspaper advertisements, Centrelink, Job Network Agency etc.) make a difference?

(6) Does having a positive attitude (e.g., about work and having self-confidence) make a difference? Or do barriers to participation in employment and training mean attitudes hardly matter?

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groups: principal carers, people with a disability, mature age job seekers, and the very long-term unemployed.

[3] Activities, attitudes and social support networks are restricted to the definition and questions asked in the Longitudinal Pathways Survey. Activities are loosely defined as approaches to seeking employment. Attitudes are broadly defined around the personal outlook on work and study, self-confidence and abilities. Social support is defined on the ability to seek help and rely on others.

(7) Does having a strong social support network make a difference? Does this help income support recipients to obtain and/or retain employment?

(8) Is an income support recipient's location an important factor in helping to obtain and/or retain employment?

2. Background

With the substantive introduction of the Welfare to Work measures in July 2006, the Howard government embarked on a dramatic reshaping of its social support system for low-income families. The measures aimed to increase workforce participation through a balance of improved services, increased financial incentives, and newly defined obligations upon the targeted income support recipients. Theoretically, the revisions in the income support system could lead to eventual improvements in the living standards and self-sufficiency of income support recipients if most of them were to enter the labour market and have little difficulty finding work. On the other hand, there are also legitimate concerns that income support recipients might encounter high rates of unemployment and frequent job turnover, and cycle off and on income support repeatedly. Unemployment or economic inactivity may result in reliance on low levels of welfare income and, as a consequence, it could lead to social exclusion through low income and/or wealth. This study assesses this issue in further detail by analysing the outcomes of income support recipients after the introduction of Welfare to Work.[4]

On behalf of the Department of Education, Employment and Workplace Relations (DEEWR), Centrelink provides a range of services to income support recipients who are looking for work. For example, individually tailored *Employment Pathway Plans* currently help set out the services and training that the job seeker needs to find and keep a job. These have replaced the Activity Agreements which were in place at the time that

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[4] According to the toolkit released by the Social Inclusion Unit of the Department of the Prime Minister and Cabinet (2009), the following are currently identified as social inclusion priority groups: (i) homeless people; (ii) children at risk of long term disadvantage; (iii) indigenous Australians; (iv) people living with mental illness or disability; (v) communities experiencing concentrations of disadvantage and exclusion; (vi) jobless families, including the long-term unemployed and the recently unemployed ('the vulnerable unemployed'); and (vii) low skilled adults who are at greater risk of unemployment. Income support recipients who we focus on in this report would primarily be in priority groups (vi) and (vii), although some recipients could have multiple disadvantages and be in multiple groups.

the data for the analysis in this report were collected. Disadvantaged job seekers receive more intensive services and access to resources commensurate with their needs, which may include non-vocational services such as personal support services, to address barriers to employment. *Career Information Centres* that are available in all states and territories provide a range of services including information about jobs, employment trends and opportunities, job search strategies and advice on writing resumés and applications, industry associations and training bodies, as well as about education and training providers, courses and qualifications. This information can help individuals make informed decisions about their education, training and employment options and pathways. At the time our data was collected, *Job Network programs* existed to help job seekers develop a resumé, match skills to a national network of employment service providers (Job Network members) and provide general job search assistance. Job Network members typically advertised their job vacancies on touch-screen kiosk facilities available in Centrelink, which job seekers can use to look for and apply for jobs. In addition, Centrelink also provides many other facilities to job seekers who might need them, such as phones (for contacting employers, providers and recruiters), fax machines, e-mail facilities (to send resumés to employers), printers, newspapers and photocopiers. Some individuals can also undertake approved volunteer work via the *Community Work* program which might help volunteers gain valuable work experience and develop new important networks.

To date, little evidence outside government reports (Research Branch and Evaluation and Program Performance Branch, 2008) is available in the Australian context regarding how income support recipients fare after leaving income support.[5] This is primarily due to a lack of access to relevant administrative or survey data by researchers outside the government departments. As a result, the effectiveness of the various Centrelink job services described above and the effects of a range of individual and household characteristics is not analysed much. One of the aims of this report is to help fill this void using the recently available LPS data, which collects data on income support recipients' characteristics, how they are engaging in job search or training, and what their employment outcomes are, even if they are no longer on income support.

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[5] In addition, there is a quarterly publication reporting on the outcomes three months after the labour market assistance is finished, analysing information collected through the Post Program Monitoring Survey. The latest available publication in this series is DEEWR (2009). Note that this group of people could still be on income support.

To gain better insight with regards to how income support recipients might be faring after they leave welfare, we turn to a related area of literature – welfare leaver studies from the US – and review some of their main conclusions. These studies were mainly conducted a few years following the introduction of the Temporary Assistance to Needy Families (TANF) act in 1996, which led to a dramatic decrease in the welfare caseload.[6] Albeit in a different context, many of the findings on the experiences of welfare leavers in the US are likely to be relevant to income support recipients in Australia who are trying to become self-sufficient.

Welfare recipients encounter many barriers to employment. Danziger *et al.* (2002) discussed the many barriers faced by welfare recipients in their attempt to gain and keep employment. It appears that the ability of welfare recipients to gain and keep employment and to progress in the labour market reflects a range of personal characteristics and barriers, such as physical and mental health, child care needs, and transportation problems. They found that the number of barriers is strongly and negatively associated with employment status.

Many welfare recipients cycle in and out of the low-wage labour market with little opportunity to advance to higher-paying positions. Welfare recipients were typically found to have lower job tenure rates, compared to other workers. Tenuous attachment to the labour market, in turn, resulted in many families returning to public assistance. Holzer and Martinson (2005) found that of the clients who left the US welfare system between 2000 and 2002, approximately one quarter had returned to cash assistance by the end of a two-year study.

Job loss is common. Various studies show that about one quarter of recipients who become employed stop working within three months and that at least half are no longer working within one year (e.g., Hershey and Pavetti, 1997; Rangarajan *et al.*, 1998b).

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[6] Blank (2002) and Strawn *et al.* (2001) provide useful discussions of the features of TANF and welfare reform in the US. As the various states implemented TANF, there was a historically unprecedented decline in the numbers of families receiving assistance in the US. Much of the caseload decline was associated with increased labour force participation by female-headed households. Studies have consistently found that most families leaving welfare had found work (Loprest, 1999) and that labour force participation had increased among female-headed families. In addition, an increasing share of TANF adults were employed while receiving assistance – 28 per cent in 1999, as compared with 8 per cent in 1994.

There are often long periods of unemployment between jobs. Most welfare recipients who lose jobs are eventually re-employed, but how quickly this happens varies widely. Rangarajan *et al*. (1998b) showed that while many found new jobs quickly (30 per cent within three months), a substantial minority (40 per cent) did not return to work for at least one year.

Working steadily initially may be linked to sustaining employment over time. Cancian and Meyer (2000) found that women who worked more in the first year after leaving welfare were more likely to be employed four and five years after leaving welfare, particularly if they worked full time, all year.

Starting out in certain occupations may be linked to sustaining employment over time. Cancian and Meyer (2000) found that among women who began working in sales in the first year after leaving welfare, 73 per cent worked at some time in the fourth and fifth years. By contrast, among women who started in other common occupations – such as private housekeeping, cleaning/maintenance, clerical, and private sector care (which includes health care and formal child care) – 83 to 95 per cent worked in the fourth and fifth years after leaving welfare. In addition, Holzer (2004) reported that clients working in transportation, utilities, construction, and manufacturing were more likely to advance to higher-wage employment and retain jobs longer relative to clients who were first employed in other industries.

Starting out in jobs with higher wages may be linked to sustaining employment over time. In a study of women who left welfare for work in four cities, Rangarajan *et al*. (1998a) found that those with higher wages were more likely to stay employed.

Starting out in jobs with employer-provided benefits may be linked to sustaining employment over time. Rangarajan *et al*. (1998b) found that those who began jobs that offered paid vacation leave stayed employed for an average of twelve months at a time, compared to seven months among those without such leave. Similarly, those who began working in jobs that offered health insurance worked 77% of the following two years, compared to 56% of the time for those without insurance.

There is only a small amount of Australian research on the experiences of income support recipients in the labour market over time, and much of the Australian research is on the progression and wage transitions of low-wage workers in general. Nevertheless, this is of interest, since income support recipients are likely to be low-wage workers if they manage to enter employment. These low-wage-worker studies were either based on data obtained from national household surveys such as the Household Income and Labour Dynamics in Australia (HILDA) or those conducted by the Australian Bureau of Statistics (ABS), such as the Survey of Employment and Unemployment Patterns (SEUP). The findings appear to be mixed. For example, Dunlop (2000) and Perkins and Scutella (2008) found that many labour force participants cycle between joblessness and low quality employment, in what has often been described as a 'no pay, low pay cycle' in which low-paid work is no guarantee that income is raised enough to escape poverty. However, examining the dynamics of low-paid employment, the recent findings reported in Buddelmeyer *et al*. (2010) lend some support to the 'work first' approach. After statistically controlling for unobserved heterogeneity and initial conditions, Buddelmeyer *et al*. (2010) found that there were only weak scarring effects exerted by low-paid employment. Instead, they found that the best predictor of whether someone is presently unemployed is whether they experienced unemployment in the past.

3. Data

The analysis in this report is primarily based on data from the LPS, which collects detailed information about participation in employment, education and training. Importantly, information on activities that could help individuals transition from unemployment to employment, such as volunteering, job search, and social support networks, is also available in the LPS. Before the LPS became available, such an analysis was not possible because administrative data did not include information on individuals who had left income support. Although information on non-welfare recipients is available in HILDA, it is an annual survey and not ideal for monitoring income support and job transitions. In addition, relatively few of the respondents are on income support resulting in a sample of analysis which is fairly small in size. While there are limitations to the LPS, it provides valuable information about how income support recipients are progressing over time, whether they are on or off income support,

and additional insight into the transitions of income support recipients, particularly during the critical period shortly after they leave income support and attempt to make ends meet. Using two and a half years (or 5 waves) of follow-up data on income support recipients, this report examines the roles that activities, attitudes and social networks play in helping income support recipients transition off income support.

The LPS was undertaken as part of the Howard government's Welfare to Work initiative and tracks the experiences of income support recipients over time. An important feature of the LPS is that, unlike administrative data, it also continues to track income support recipients who leave income support. This is important as it provides useful information of the transitions people make that can help shed light on why some people manage to stay off income support, and why others return to income support. This report uses data for Cohort 1 from the LPS. The sample for this cohort was drawn from existing customers during the period September 2005 to February 2006, and prior to the Welfare to Work reforms. The LPS Cohort 1 sample was created by sampling sequentially from five strata: people with disabilities; principal carers; the very long-term unemployed; mature age income support recipients, and all other income support recipients. The first four strata were key target groups of the Welfare to Work policy. The five strata are defined in Appendix Table 1. Respondents were first interviewed in May/June of 2006 and interviewed every six months until May/June of 2008, providing a total of five waves of data. About half of the sample is lost through attrition from Wave 1 to Wave 5.

The table below shows the sample sizes for each of the waves.

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
Sample Size	10,217	8,192	6,757	5,785	5,147

Notes: Wave 4 and Wave 5 have different sample sizes to those documented in the quick reference guide.

Additional data used in this project (e.g., postcodes, income support history) were obtained from the Research and Evaluation Database (RED), which contains unit record level data for all persons on income support payments (excluding the Age Pension and DVA pensions) with a duration of at least one day since 1 July 2002.

4. Characteristics of Income Support Recipients Who Make a Successful Transition Off Income Support

In this section, we examine a number of descriptive statistics on the characteristics of individuals who make a successful transition off income support (Research Question 1). Table 1 shows the mean characteristics by employment status and income support status. The first column focuses on individuals who were unemployed in Wave 1 of the LPS and who remain unemployed in Wave 5. The second column concentrates on individuals who were unemployed in Wave 1 of the LPS but employed in Wave 5. The third and fourth columns are based on splitting up the second column into two further groups – those on and off income support. The third column focuses on individuals who were unemployed in Wave 1 of the LPS but employed and still on income support in Wave 5 of the LPS. The last column of Table 1 presents the characteristics of income support recipients who are initially unemployed, but who find employment and have exited income support by Wave 5 of the LPS. This last combination of outcomes is defined as "success" in the remainder of the report.[7] These descriptive statistics provide an initial understanding of the characteristics of those individuals who manage to make a successful transition to employment and off income support, and those who do not.

From Table 1, we notice that individuals who are "successful" have an average age of 38.0 years and are on average younger than those who remain unemployed in Wave 5 (41.1 years). In the raw data, being partnered appears to have some importance as there is a lower proportion of those unemployed in Waves 1 and 5 (32 per cent) who are partnered than amongst those who are "successful" (38 per cent). On the other hand, education appears to contribute to successful transitions. Relative to those who are unemployed in Waves 1 and 5, the "successful" group has a higher proportion of individuals with Year 12, certificate or diploma, and undergraduate degree or higher qualifications.

Type of income support shows some interesting patterns with regards to whether individuals make a successful transition to employment and off income support. A large

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[7] Table A2 in the Appendix shows that the majority of individuals who are employed and off income support in Wave 5, had been employed and off income support for at least three of the Waves.

Table 1: Mean Characteristics by Employment Status and Income Support Status

Characteristics in Wave 1	Unemp in Wave 1 and Wave 5	Unemp in Wave 1, Emp in Wave 5	Unemp in Wave 1, Emp and on income support in Wave 5	Unemp in Wave 1, Emp and off income support in Wave 5
Age	41.14	38.18	38.41	38.02
Male	0.66	0.53	0.40	0.62
Partnered	0.32	0.35	0.30	0.38
Undergraduate Degree or Higher	0.14	0.17	0.16	0.17
Certificate or Diploma	0.04	0.06	0.07	0.06
Trade or TAFE	0.40	0.39	0.40	0.39
Year 12	0.14	0.14	0.11	0.17
Capital City	0.35	0.40	0.31	0.45
English Speaking Household	0.93	0.95	0.98	0.93
Number of Children in the Household	0.64	0.96	1.13	0.85
Number of People in the Household	2.75	3.00	2.96	3.04
Indigenous	0.03	0.03	0.03	0.03
Health (1=Excellent, 5 = Poor)	2.92	2.78	2.94	2.67
NSW	0.39	0.31	0.29	0.33
VIC	0.26	0.20	0.20	0.21
QLD	0.13	0.26	0.24	0.27
SA	0.07	0.08	0.11	0.07
WA	0.06	0.06	0.04	0.07
ACT, NT, TAS	0.09	0.08	0.11	0.07
No Income Support Waves 1 to 4	0.05	0.11	0.05	0.15
Any NSA Waves 1 to 4	0.67	0.49	0.38	0.56
Any PPP Waves 1 to 4	0.06	0.08	0.10	0.08
Any PPS Waves 1 to 4	0.04	0.13	0.23	0.07
Any DSP Waves 1 to 4	0.12	0.10	0.21	0.03
Any Other Income Support Waves 1 to 4	0.07	0.09	0.05	0.12
Attitude: Studying and training is good	0.90	0.92	0.97	0.90
Attitude: Work isn't worth while	0.16	0.13	0.11	0.13
Attitude: Don't think people in my situation should work	0.14	0.11	0.12	0.10
Attitude: Have a lot of confidence in myself	0.81	0.82	0.76	0.85
Attitude: Want to keep the concessions	0.14	0.12	0.16	0.09
Support: Often need help from others but can't get it	0.37	0.34	0.43	0.28
Support: Have no one to lean on in times of trouble	0.28	0.26	0.31	0.23
Support: I can always rely on my family and friends	0.76	0.78	0.80	0.77
N	232	347[a]	134	212

Note: The descriptive statistics are weighted using the sample weights provided in the LPS.

    a) One respondent, who was employed in wave 5, had a missing value for income support status in wave 5. As a result, columns 3 and 4 do not add up to column 2.

proportion of individuals who remain unemployed in Wave 5 had received NewStart Allowance (NSA) at some point during Wave 1 to Wave 4 (67 per cent). Of those who do manage to become employed by Wave 5, a smaller proportion (49 per cent) had received NSA at some point during Wave 1 to Wave 4. The proportion of those who had received NSA at some point was 56 per cent amongst those who were employed and off income support. This seems to be a reflection of the expectation that NSA recipients look for full-time work, or at least a job with sufficient hours to take them off income support while the other income support recipients have no activity test or a part-time activity test only, allowing them to combine part-time work with income support without the continued need to search for full-time employment. According to

expectation, a higher proportion of individuals unemployed in Wave 5 were on a Disability Support Pension (DSP). Of those unemployed in Waves 1 and 5, 12 per cent were on DSP some time between Waves 1 to 4, whereas of those unemployed in Wave 1 but employed and off income support in Wave 5, only 3 per cent had been on DSP at some point between Waves 1 to 4. A relatively large proportion of individuals combining being employed and being on income support in Wave 5 were DSP recipients.

Individuals still on income support but who found employment in Wave 5 have strong positive attitudes towards studying and training, which may help them bridge this gap from unemployment to employment. Confidence, self-esteem and motivation appear to be important factors. A high proportion of individuals who make a successful transition off income support and into employment have high levels of confidence in themselves (85 per cent) compared to those who are also employed but yet to get off income support (76 per cent) or those who are still unemployed (81 per cent). A non-negligible proportion of individuals who are unemployed in Wave 5 (14 per cent) tend to be rather interested in keeping the concessions they obtain on income support. A smaller proportion of individuals who are "successful" appear to have such an attitude (9 per cent).

With regards to social support, individuals who are unemployed in Wave 1 and who continue to be unemployed in Wave 5 are more likely to be often needing help from others but not being able to get it (37 per cent). This is 3 percentage points more than those who are employed in Wave 5. The small difference hides a much lower percentage for those who are employed and off income support (28 per cent), whereas those in employment and on income support appear to have the highest need for help from others which they are not able to obtain. Conversely, "successful" individuals are least likely to have no one to lean on in times of trouble (only 23 per cent state that they do not).

In Table 2, we focus on examining how individuals who stay on income support for differing lengths of time compare with individuals who remain on income support continuously (Research Question 2) within the observed timeframe of 2.5 years. Individuals who are on income support for over 25 months are, on average, 4 to 7 years

older than individuals who are on income support for less than 25 months. With respect to education, individuals who are observed as being on income support for shorter periods of time are more likely to have higher educational qualifications.

There is some evidence that location matters, as a higher proportion of those with shorter income support spells tend to live in a capital city (47 per cent) than those who are on income support for more than half a year (39 to 42 per cent). Individuals who are on income support for over 25 months were most likely to have received DSP at some point between Waves 1 to 4. Individuals receiving NSA at some point between Waves 1 and 4 are more likely to be observed with income support durations between 7 and 18 months.

Table 2: Mean Characteristics by Cumulative Income Support Duration

Characteristics in Wave 1	On IS 0-6 Months	On IS 7-12 Months	On IS 13-18 Months	On IS 19-24 Months	On IS 25+ Months
Age	38.78	37.13	35.97	38.31	42.65
Male	0.38	0.39	0.39	0.42	0.43
Partnered	0.56	0.41	0.34	0.41	0.37
Undergraduate Degree or Higher	0.24	0.19	0.19	0.18	0.14
Certificate or Diploma	0.09	0.10	0.10	0.08	0.07
Trade or TAFE	0.35	0.36	0.35	0.36	0.35
Year 12	0.15	0.17	0.17	0.18	0.16
Capital City	0.47	0.42	0.39	0.40	0.41
English Speaking Household	0.94	0.95	0.95	0.96	0.94
Number of Children in the Household	1.20	1.08	0.99	1.16	0.99
Number of People in the Household	3.29	3.21	3.06	3.25	2.84
Indigenous	0.02	0.03	0.03	0.02	0.03
Health (1=Excellent, 5 = Poor)	2.48	2.64	2.71	2.76	3.32
NSW	0.24	0.25	0.26	0.31	0.32
VIC	0.23	0.19	0.24	0.21	0.23
QLD	0.27	0.31	0.24	0.22	0.22
SA	0.09	0.09	0.08	0.07	0.09
WA	0.10	0.11	0.10	0.09	0.08
ACT, NT, TAS	0.07	0.05	0.08	0.09	0.07
No Income Support Waves 1 to 4	0.79	0.29	0.23	0.28	0.04
Any NSA Waves 1 to 4	0.05	0.28	0.30	0.25	0.25
Any PPP Waves 1 to 4	0.07	0.12	0.10	0.12	0.08
Any PPS Waves 1 to 4	0.03	0.13	0.19	0.17	0.18
Any DSP Waves 1 to 4	0.02	0.06	0.07	0.06	0.37
Any Other Income Support Waves 1 to 4	0.07	0.12	0.13	0.13	0.09
Attitude: Studying and training is good	0.89	0.87	0.87	0.87	0.82
Attitude: Work isn't worth while	0.20	0.22	0.19	0.25	0.37
Attitude: Don't think people in my situation should work	0.19	0.24	0.22	0.25	0.41
Attitude: Have a lot of confidence in myself	0.91	0.87	0.85	0.85	0.74
Attitude: Want to keep the concessions	0.11	0.15	0.14	0.14	0.26
Support: Often need help from others but can't get it	0.19	0.26	0.28	0.26	0.36
Support: Have no one to lean on in times of trouble	0.17	0.19	0.22	0.21	0.26
Support: I can always rely on my family and friends	0.85	0.80	0.81	0.80	0.78
N	1232	368	334	340	2873

Notes: Income support duration is measured as the total time on income support beginning from September 2005 (as the Cohort 1 sample reference period was from September 2005 to February 2006) to June 2008 (when Wave 5 was conducted). The descriptive statistics are weighted using the sample weights provided in the LPS.

Amongst individuals on income support for more than 25 months, 41 per cent have the view that people in their situation should not work and more than a quarter (26 per cent) are interested in keeping the concessions associated with the type of income support they received. On the contrary, individuals on income support for less than 6 months are less likely to have the attitude that people in their situation should not work (19 per cent) or want to keep the concessions (11 per cent). Overall, it appears that individuals also tend to show declining levels of self confidence the longer is their duration on income support.

Long-term income support recipients (> 25 months) tend to be most likely to often need help from others but not be able to obtain it. About a third (36 per cent) report that this is the case. About a quarter (26 per cent) also report having no one to lean on in times of trouble. Shorter income support spells appear to be associated with being more likely to have some social support.

Table 3 further examines the differences between "cyclers" and those who remain on income support continuously by focusing on a different dimension of income support duration. The first and second columns consist of individuals who are observed to be on or off income support, respectively, in all waves. The third column features those individuals who are observed mostly off income support in Waves 1 to 4 and also off income support in Wave 5. These are compared to those individuals classified as "cyclers" in the fourth column. These are individuals who transition on and off income support throughout the 2.5 years, such as those who are on income support in Wave 1, off in Wave 2, on in Wave 3 and off in Waves 4 and 5. Individuals who are "mostly off" income support can at most have one wave on income support or two waves if these are the first two waves. "Cyclers" are individuals who have two or three periods on income support over the five waves, with at least two transitions from income support off income support or vice versa. After categorising individuals into these four groups, 738 individuals remain unclassified and are not included in Table 3 (see Table A2 in the Appendix for the detailed definition of all patterns).

On average, individuals who are observed to be on income support in all five waves are likely to be older by 4 or 6 years than those individuals who are observed to be off income support for all waves or who are mostly off income support, and they are, on

average, about 5 years older than those individuals who cycle on and off income support. Individuals on income support in all waves are also less likely to have obtained an undergraduate degree or higher, with only 13 per cent having such qualifications, which is half of the proportion of individuals observed to be off income support in all waves with such qualifications (26 per cent). Those individuals on income support for all waves tend to have received either Parenting Payment Single (PPS) or DSP at some point between Waves 1 to 4. Conversely, cyclers are more likely to have received NSA at some point between Waves 1 to 4, reflecting the activity test which obliges individuals on NSA to look for work and accept suitable job offers.

Table 3: Mean Characteristics by Sequence of Income Support Receipt

Characteristics in Wave 1	On IS all waves	Off IS all waves	Mostly off IS and off IS in Wave 5	Cyclers
Age	43.13	39.20	37.52	37.86
Male	0.41	0.42	0.39	0.40
Partnered	0.37	0.54	0.44	0.45
Undergraduate Degree or Higher	0.13	0.26	0.21	0.17
Certificate or Diploma	0.07	0.10	0.09	0.08
Trade or TAFE	0.34	0.34	0.36	0.34
Year 12	0.16	0.13	0.17	0.20
Capital City	0.40	0.47	0.43	0.39
English Speaking Household	0.94	0.95	0.94	0.95
Number of Children in the Household	0.98	1.06	1.16	1.20
Number of People in the Household	2.82	3.16	3.24	3.31
Indigenous	0.03	0.02	0.03	0.02
Health (1=Excellent, 5 = Poor)	3.39	2.45	2.60	2.77
NSW	0.32	0.23	0.27	0.23
VIC	0.22	0.23	0.22	0.26
QLD	0.22	0.27	0.26	0.27
SA	0.09	0.09	0.09	0.05
WA	0.08	0.10	0.10	0.09
ACT, NT, TAS	0.07	0.08	0.06	0.10
No Income Support Waves 1 to 4	0.00	1.00	0.14	0.35
Any NSA Waves 1 to 4	0.24	0.00	0.30	0.26
Any PPP Waves 1 to 4	0.08	0.00	0.15	0.11
Any PPS Waves 1 to 4	0.19	0.00	0.15	0.11
Any DSP Waves 1 to 4	0.40	0.00	0.08	0.06
Any Other Income Support Waves 1 to 4	0.10	0.00	0.17	0.10
Attitude: Studying and training is good	0.81	0.88	0.88	0.88
Attitude: Work isn't worth while	0.39	0.18	0.21	0.23
Attitude: Don't think people in my situation should work	0.44	0.16	0.23	0.20
Attitude: Have a lot of confidence in myself	0.73	0.92	0.87	0.85
Attitude: Want to keep the concessions	0.28	0.11	0.14	0.16
Support: Often need help from others but can't get it	0.37	0.18	0.23	0.24
Support: Have no one to lean on in times of trouble	0.26	0.17	0.19	0.19
Support: I can always rely on my family and friends	0.78	0.85	0.82	0.82
N	2429	891	685	280

Notes: Individuals who are "mostly off" income support can at most have one wave on income support or two waves if these are the first two waves. "Cyclers" are individuals who have two or three periods on income support over the five waves, with at least two transitions from income support off income support or vice versa. The descriptive statistics are weighted using the sample weights provided in the LPS.

Cyclers, those off income support in all waves, and those mostly off income support have relatively more positive attitudes towards studying and training compared to those

who remain on income support continuously. The same three groups also show higher levels of self confidence compared to individuals on income support for all waves. Individuals on income support in all waves tend to be most likely to often need help from others but not be able to get it, and to have no one to lean on in times of trouble.

So far, the discussion of the descriptive statistics in Tables 1 to 3 has focused on individual level characteristics. However, it is important to keep in mind that macro level factors, such as an individual's location, can also play an important role. For example, localities with low unemployment rates and many businesses hiring low-skilled labour would clearly be beneficial to a income support recipient looking to transition to employment. For this reason, in the next two tables, we focus on examining which areas tend to be associated with "successful" individuals (Research Question 8).

Socio-economic Indexes for Areas (SEIFA) are indices of social advantage and disadvantage constructed by the Australian Bureau of Statistics (ABS) using the 2001 Census data, whereby a low SEIFA value indicates lower social and human capital in an area. The ABS provides four types of SEIFA measures: index of relative socioeconomic disadvantage; index of relative socioeconomic advantage and disadvantage; index of economic resources; and, index of education and occupation. After considering the variables involved in the construction of each index, the index of relative socioeconomic disadvantage appears to be the most appropriate for looking at issues related to poverty and unemployment. The reason for this is that it identifies areas with low income, high unemployment, poor education, poor English-language skills, and large proportions of unskilled workers and persons of Aboriginal descent. To supplement the information contained in the LPS, we combine it with information (by postcode and ABS statistical region in which the individual lives) on local unemployment rates, population sizes, job vacancies and the 2001 SEIFA measure.

In Table 4, we present the outcomes and selected descriptive statistics by labour force statistical region in Australia for each wave. The first column focuses on the outcome of "success" defined in the previous section – a transition to full-time employment and an exit from income support by Wave 5. Each labour force statistical region is ranked according to the highest rate of "success" for each wave. The other columns show

selected descriptive statistics on economic conditions and SEIFA deciles.[8] The SEIFA decile provides an index of relative socioeconomic disadvantage for each labour force statistical region (1 = most disadvantaged and 10 = most advantaged). The unemployment rate provides some indication of the job market and prospects of "success" for each labour force statistical region. Finally, mean house and unit prices provide an indication of housing costs for each location.

In Wave 1, it can be seen that a majority of the top ten labour force statistical regions, as ranked by the rates of "success", have high SEIFA deciles and relatively low unemployment rates. The only exceptions are the Northern Territory (NT), South and East BSD Balance (QLD) and Northern-North West (QLD). Similarly in Wave 2, it is mainly the highly advantaged areas that are the highest ranked in terms of "success", although disadvantaged areas such as the Northern Territory (NT), Far North (QLD) and South and East Moreton (QLD) feature in the top ten.

Of note in Waves 3, 4 and 5 is the fact that the Northern Territory (NT) now ranks highest in terms of "success", with a success rate averaging 68 per cent. This persistent presence in the top ten most successful areas is interesting given the high levels of unemployment and relatively high socioeconomic disadvantaged status of the NT. Given the relatively high proportion of income support recipients of Aboriginal/Torres Strait Islander descent in the NT, this is likely to be due to the success of the Community Development Employment Projects (CDEP) Program. People participating in this program are no longer counted as income support recipients, since income from CDEP is regarded as a wage. Another notable result are the high rankings of the Australian Capital Territory (ACT) in most waves. The ACT has typically very low unemployment rates (around 3 per cent).

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[8] Deciles divide a distribution into ten equal-sized groups. In the case of SEIFA, the distribution of scores is divided into ten equal-sized groups. The lowest scoring 10% of areas are given a decile number of 1, the second-lowest 10% of areas are given a decile number of 2 and so on, up to the highest 10% of areas which are given a decile number of 10.

Table 4: Outcomes and Selected Statistics by Location and Wave

Wave 1

Labour Force Statistical Region	Success	Unemployment rate	Mean house price	Mean unit price	SEIFA decile
Lower Northern Sydney, NSW	0.37	3.37	966817	457395	9.26
Australian Capital Territory, ACT	0.27	3.08	404163	323564	8.88
Northern Territory, NT	0.27	4.68	295662	281213	5.91
South and East BSD Balance, QLD	0.22	5.43	315214	213080	3.66
Inner Eastern Melbourne, VIC	0.22	4.54	524079	346612	8.54
Eastern Adelaide, SA	0.21	3.60	426408	262864	8.56
Eastern Suburbs, NSW	0.20	2.99	1284047	511236	7.92
Brisbane City Inner Ring, QLD	0.20	3.19	485413	339579	8.12
Northern-North West, QLD	0.19	5.36	262145	248164	4.43
Central Northern Sydney, NSW	0.19	2.84	685415	404271	9.52
South and East Moreton, QLD	0.19	3.97	450363	335052	4.92
Mackay-Fitzroy-Central West, QLD	0.19	3.37	290321	243584	3.99
Southern Adelaide, SA	0.18	5.16	291808	240914	4.39
Darling Downs-South West, QLD	0.17	3.92	234847	206212	4.49
Southern Melbourne, VIC	0.16	3.99	568977	335119	8.06
Goulburn-Ovens-Murray, VIC	0.16	4.63	225125	194137	4.89
Western Adelaide, SA	0.16	5.38	322128	213730	3.53
Fairfield-Liverpool & Outer South Western Sydney, NSW	0.15	7.42	346736	231552	2.54
South East Metropolitan, WA	0.15	3.95	391867	300371	5.23
Northern Beaches, NSW	0.14	2.48	902156	476046	9.19
Far North, QLD	0.14	5.93	293244	204861	3.72
Murray-Murrumbidgee, NSW/VIC	0.14	5.09	212913	176791	4.86
Wide Bay-Burnett, QLD	0.14	6.91	241702	274224	2.46
Central Highlands-Wimmera, VIC	0.14	8.02	195495	168425	4.95
Barwon-Western District, VIC	0.14	6.36	265665	257025	5.44
North and West Moreton, QLD	0.13	5.63	382163	346936	4.50
Central Western Sydney, NSW	0.13	5.91	414103	311336	2.72
All Gippsland, VIC	0.13	4.70	202615	205616	4.67
East Metropolitan, WA	0.13	3.89	376535	252662	4.83
Canterbury-Bankstown, NSW	0.13	5.64	439837	262043	2.48
Inner Melbourne, VIC	0.13	3.89	626499	353249	6.12
St George-Sutherland, NSW	0.13	3.38	585149	347113	6.40
Outer Western Melbourne, VIC	0.13	5.99	313775	243609	3.89
North Eastern Melbourne, VIC	0.13	4.27	350165	264259	5.55
Hunter, NSW	0.12	6.12	306301	304346	3.48
Gosford-Wyong, NSW	0.12	6.67	361198	320531	4.16
Remainder-Balance WA	0.12	3.40	275728	256997	2.69
South West Metropolitan, WA	0.12	3.01	418907	328606	4.61
Illawarra & South Eastern, ACT/NSW	0.11	7.14	340323	266246	4.43
Mornington Peninsula, VIC	0.11	4.09	316679	230675	6.14
Brisbane City Outer Ring, QLD	0.10	3.87	352356	279995	5.28
North and West BSD Balance, QLD	0.10	4.75	296715	252506	3.63
Northern, Far West-North Western & Central West, NSW	0.10	5.30	197449	191471	3.78
Richmond-Tweed & Mid-North Coast, NSW	0.10	7.48	316183	272049	2.76
Northern Adelaide, SA	0.10	6.41	236151	154281	3.02
Tasmania, TAS	0.10	6.39	222602	204397	3.54
Inner Sydney & Inner Western Sydney, NSW	0.10	3.60	692990	438623	7.04
Southern and Eastern SA	0.09	3.81	228088	170666	4.42
Outer Eastern Melbourne, VIC	0.09	3.70	303457	251932	7.35
Central Metropolitan, WA	0.08	2.63	812966	339660	8.13
North Metropolitan, WA	0.08	3.88	441442	324227	6.22
South Eastern Melbourne, VIC	0.08	5.01	261405	201365	3.54
Lower Western, WA	0.07	3.55	353342	302449	3.57
North Western Sydney, NSW	0.07	4.79	337923	268742	4.63
Loddon-Mallee, VIC	0.07	6.32	214430	186276	4.72
Northern and Western SA	0.06	4.38	185670	114544	4.14
North Western Melbourne, VIC	0.05	6.17	300778	249359	3.74

(continued)

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Wave 2

Labour Force Statistical Region	Success	Unemployment rate	Mean house price	Mean unit price	SEIFA decile
Lower Northern Sydney, NSW	0.48	3.37	966817	457395	9.39
Northern Beaches, NSW	0.42	2.48	902156	476046	9.32
Central Metropolitan, WA	0.41	2.63	812966	339660	8.10
Australian Capital Territory, ACT	0.39	3.08	404163	323564	8.88
Northern Territory, NT	0.39	4.68	295662	281213	5.67
Far North, QLD	0.35	5.93	293244	204861	3.58
South and East Moreton, QLD	0.34	3.97	450363	335052	4.90
Inner Melbourne, VIC	0.33	3.89	626499	353249	6.37
North and West Moreton, QLD	0.32	5.63	382163	346936	4.31
Eastern Suburbs, NSW	0.32	2.99	1284047	511236	7.91
Central Western Sydney, NSW	0.31	5.91	414103	311336	2.50
Eastern Adelaide, SA	0.31	3.60	426408	262864	8.72
Inner Sydney & Inner Western Sydney, NSW	0.30	3.60	692990	438623	7.27
Northern-North West, QLD	0.29	5.36	262145	248164	4.41
South and East BSD Balance, QLD	0.28	5.43	315214	213080	3.60
Mornington Peninsula, VIC	0.27	4.09	316679	230675	6.20
Brisbane City Inner Ring, QLD	0.26	3.19	485413	339579	8.02
Southern Adelaide, SA	0.26	5.16	291808	240914	4.35
Goulburn-Ovens-Murray, VIC	0.25	4.63	225125	194137	4.69
South East Metropolitan, WA	0.25	3.95	391867	300371	5.18
Darling Downs-South West, QLD	0.24	3.92	234847	206212	4.60
Inner Eastern Melbourne, VIC	0.24	4.54	524079	346612	8.54
Central Highlands-Wimmera, VIC	0.23	8.02	195495	168425	4.79
Wide Bay-Burnett, QLD	0.23	6.91	241702	274224	2.42
South Eastern Melbourne, VIC	0.22	5.01	261405	201365	3.76
Northern and Western SA	0.22	4.38	185670	114544	4.12
Barwon-Western District, VIC	0.21	6.36	265665	257025	5.46
Fairfield-Liverpool & Outer South Western Sydney, NSW	0.21	7.42	346736	231552	2.70
South West Metropolitan, WA	0.21	3.01	418907	328606	4.00
Brisbane City Outer Ring, QLD	0.20	3.87	352356	279995	5.32
Mackay-Fitzroy-Central West, QLD	0.20	3.37	290321	243584	3.89
Northern Adelaide, SA	0.20	6.41	236151	154281	2.78
Loddon-Mallee, VIC	0.19	6.32	214430	186276	4.87
Gosford-Wyong, NSW	0.19	6.67	361198	320531	4.12
Central Northern Sydney, NSW	0.19	2.84	685415	404271	9.48
All Gippsland, VIC	0.19	4.70	202615	205616	4.73
Outer Eastern Melbourne, VIC	0.18	3.70	303457	251932	7.37
Southern Melbourne, VIC	0.18	3.99	568977	335119	8.31
Western Adelaide, SA	0.18	5.38	322128	213730	3.31
Canterbury-Bankstown, NSW	0.18	5.64	439837	262043	2.87
Remainder-Balance WA	0.18	3.40	275728	256997	2.60
Illawarra & South Eastern, ACT/NSW	0.18	7.14	340323	266246	4.39
Hunter, NSW	0.17	6.12	306301	304346	3.50
North Metropolitan, WA	0.17	3.88	441442	324227	6.38
Northern, Far West-North Western & Central West, NSW	0.17	5.30	197449	191471	3.79
East Metropolitan, WA	0.17	3.89	376535	252662	4.93
North and West BSD Balance, QLD	0.16	4.75	296715	252506	3.75
Richmond-Tweed & Mid-North Coast, NSW	0.16	7.48	316183	272049	2.79
North Western Sydney, NSW	0.15	4.79	337923	268742	4.60
Outer Western Melbourne, VIC	0.15	5.99	313775	243609	4.07
North Eastern Melbourne, VIC	0.15	4.27	350165	264259	5.82
Tasmania, TAS	0.14	6.39	222602	204397	3.54
Murray-Murrumbidgee, NSW/VIC	0.13	5.09	212913	176791	4.80
Southern and Eastern SA	0.12	3.81	228088	170666	4.12
St George-Sutherland, NSW	0.10	3.38	585149	347113	6.22
Lower Western, WA	0.07	3.55	353342	302449	3.47
North Western Melbourne, VIC	0.06	6.17	300778	249359	3.94

(continued)

Wave 3

Labour Force Statistical Region	Success	Unemployment rate	Mean house price	Mean unit price	SEIFA decile
Northern Territory, NT	0.61	4.32	348780	305995	5.69
Australian Capital Territory, ACT	0.58	2.77	450098	359722	8.86
Remainder-Balance WA	0.50	3.55	352970	309831	3.27
Eastern Suburbs, NSW	0.47	2.51	1461076	564439	7.36
Lower Northern Sydney, NSW	0.47	2.85	1127903	482749	9.64
Northern Beaches, NSW	0.45	2.37	962760	496310	8.98
Eastern Adelaide, SA	0.43	3.89	503538	289517	9.03
Far North, QLD	0.43	4.16	351845	252345	3.55
Inner Sydney & Inner Western Sydney, NSW	0.39	4.54	761724	457462	7.44
South and East Moreton, QLD	0.38	3.30	499226	382824	5.15
Brisbane City Inner Ring, QLD	0.36	2.95	569712	389759	8.15
Southern Adelaide, SA	0.34	4.77	338360	266019	4.13
Inner Melbourne, VIC	0.33	3.65	829191	398057	6.58
Northern-North West, QLD	0.33	3.94	332346	333662	4.36
Southern Melbourne, VIC	0.33	3.35	688340	373049	7.95
Central Western Sydney, NSW	0.32	4.90	423338	317888	2.38
Outer Eastern Melbourne, VIC	0.32	3.63	348046	272272	7.44
North and West Moreton, QLD	0.31	4.38	424573	369616	4.28
Mornington Peninsula, VIC	0.31	4.04	352378	258562	5.56
Outer Western Melbourne, VIC	0.29	6.28	344755	270053	4.03
North Metropolitan, WA	0.29	3.07	492760	368745	6.10
South Eastern Melbourne, VIC	0.27	5.68	284731	213868	3.80
Wide Bay-Burnett, QLD	0.27	5.36	271803	275026	2.41
Mackay-Fitzroy-Central West, QLD	0.27	2.93	340056	304909	3.86
Central Northern Sydney, NSW	0.26	2.68	728568	422100	9.44
North and West BSD Balance, QLD	0.25	3.71	340133	295058	3.85
South and East BSD Balance, QLD	0.25	5.04	363185	285294	3.24
Northern and Western SA	0.24	4.51	197677	155820	3.74
Goulburn-Ovens-Murray, VIC	0.23	3.09	235207	189301	4.90
Fairfield-Liverpool & Outer South Western Sydney, NSW	0.23	6.63	345779	226753	2.83
Barwon-Western District, VIC	0.23	4.95	291861	247799	5.21
Northern, Far West-North Western & Central West, NSW	0.23	5.24	208295	201631	3.67
Central Metropolitan, WA	0.22	1.90	957594	392340	8.74
Gosford-Wyong, NSW	0.22	6.90	358417	333546	4.00
Inner Eastern Melbourne, VIC	0.22	3.85	669157	401368	8.37
North Eastern Melbourne, VIC	0.22	4.41	395371	303061	5.80
Southern and Eastern SA	0.22	3.89	246164	185332	4.10
Brisbane City Outer Ring, QLD	0.22	3.43	413070	343137	5.50
Hunter, NSW	0.21	4.96	324181	313004	3.56
South West Metropolitan, WA	0.21	3.29	463916	375579	4.14
Northern Adelaide, SA	0.21	6.85	261510	190494	3.16
Central Highlands-Wimmera, VIC	0.20	7.02	206059	177699	5.05
East Metropolitan, WA	0.20	3.17	421172	286277	4.57
North Western Sydney, NSW	0.20	5.95	340233	263498	4.57
North Western Melbourne, VIC	0.20	5.19	328522	282211	4.08
Western Adelaide, SA	0.20	5.12	365403	236054	3.30
Loddon-Mallee, VIC	0.20	5.37	225009	185057	4.74
Illawarra & South Eastern, ACT/NSW	0.19	5.21	349998	275971	4.54
Canterbury-Bankstown, NSW	0.19	5.60	442219	252607	3.02
Darling Downs-South West, QLD	0.18	2.96	248857	221379	4.50
South East Metropolitan, WA	0.18	3.44	436863	341320	5.22
Richmond-Tweed & Mid-North Coast, NSW	0.18	6.98	352623	300431	2.82
All Gippsland, VIC	0.17	5.87	216587	199003	4.02
Lower Western, WA	0.17	3.56	389155	329433	3.63
St George-Sutherland, NSW	0.16	2.94	606283	347236	6.00
Tasmania, TAS	0.16	5.24	251752	229420	3.36
Murray-Murrumbidgee, NSW/VIC	0.15	4.27	224869	187798	4.62

(continued)

Wave 4

Labour Force Statistical Region	Success	Unemployment rate	Mean house price	Mean unit price	SEIFA decile
Northern Territory, NT	0.73	4.32	348780	305995	5.54
Australian Capital Territory, ACT	0.56	2.77	450098	359722	8.86
Inner Sydney & Inner Western Sydney, NSW	0.56	4.54	761724	457462	7.43
Remainder-Balance WA	0.55	3.55	352970	309831	3.25
Lower Northern Sydney, NSW	0.54	2.85	1127903	482749	9.70
Northern Beaches, NSW	0.50	2.37	962760	496310	9.01
Eastern Adelaide, SA	0.45	3.89	503538	289517	8.99
Far North, QLD	0.44	4.16	351845	252345	3.50
Eastern Suburbs, NSW	0.42	2.51	1461076	564439	7.20
Inner Melbourne, VIC	0.38	3.65	829191	398057	6.59
Wide Bay-Burnett, QLD	0.35	5.36	271803	275026	2.37
South Eastern Melbourne, VIC	0.34	5.68	284731	213868	3.88
South East Metropolitan, WA	0.34	3.44	436863	341320	5.44
North Eastern Melbourne, VIC	0.33	4.41	395371	303061	5.86
South and East Moreton, QLD	0.33	3.30	499226	382824	5.11
Brisbane City Inner Ring, QLD	0.32	2.95	569712	389759	7.90
Northern-North West, QLD	0.31	3.94	332346	333662	4.48
Barwon-Western District, VIC	0.30	4.95	291861	247799	5.12
North and West Moreton, QLD	0.30	4.38	424573	369616	4.52
North and West BSD Balance, QLD	0.30	3.71	340133	295058	3.66
Darling Downs-South West, QLD	0.29	2.96	248857	221379	4.49
East Metropolitan, WA	0.29	3.17	421172	286277	4.52
Inner Eastern Melbourne, VIC	0.29	3.85	669157	401368	8.73
Outer Western Melbourne, VIC	0.29	6.28	344755	270053	3.74
Outer Eastern Melbourne, VIC	0.28	3.63	348046	272272	7.37
North Western Melbourne, VIC	0.28	5.19	328522	282211	4.36
North Western Sydney, NSW	0.28	5.95	340233	263498	4.73
Northern Adelaide, SA	0.27	6.85	261510	190494	3.33
Brisbane City Outer Ring, QLD	0.27	3.43	413070	343137	5.59
Central Northern Sydney, NSW	0.27	2.68	728568	422100	9.45
Gosford-Wyong, NSW	0.27	6.90	358417	333546	3.78
North Metropolitan, WA	0.26	3.07	492760	368745	6.87
Southern Adelaide, SA	0.26	4.77	338360	266019	4.07
St George-Sutherland, NSW	0.26	2.94	606283	347236	5.70
South and East BSD Balance, QLD	0.26	5.04	363185	285294	3.05
Fairfield-Liverpool & Outer South Western Sydney, NSW	0.26	6.63	345779	226753	3.15
South West Metropolitan, WA	0.26	3.29	463916	375579	4.20
Southern Melbourne, VIC	0.26	3.35	688340	373049	7.82
Illawarra & South Eastern, ACT/NSW	0.25	5.21	349998	275971	4.69
Mornington Peninsula, VIC	0.25	4.04	352378	258562	5.49
Northern and Western SA	0.24	4.51	197677	155820	4.14
Murray-Murrumbidgee, NSW/VIC	0.24	4.27	224869	187798	4.56
Southern and Eastern SA	0.24	3.89	246164	185332	4.03
Central Western Sydney, NSW	0.22	4.90	423338	317888	2.56
Mackay-Fitzroy-Central West, QLD	0.22	2.93	340056	304909	3.80
Central Highlands-Wimmera, VIC	0.22	7.02	206059	177699	5.11
Goulburn-Ovens-Murray, VIC	0.21	3.09	235207	189301	4.88
Northern, Far West-North Western & Central West, NSW	0.21	5.24	208295	201631	3.75
Hunter, NSW	0.21	4.96	324181	313004	3.57
Loddon-Mallee, VIC	0.19	5.37	225009	185057	4.86
Tasmania, TAS	0.17	5.24	251752	229420	3.32
Lower Western, WA	0.15	3.56	389155	329433	3.68
Richmond-Tweed & Mid-North Coast, NSW	0.15	6.98	352623	300431	2.81
Canterbury-Bankstown, NSW	0.14	5.60	442219	252607	3.15
Western Adelaide, SA	0.14	5.12	365403	236054	3.25
All Gippsland, VIC	0.12	5.87	216587	199003	3.77
Central Metropolitan, WA	0.06	1.90	957594	392340	8.72

(continued)

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Wave 5

Labour Force Statistical Region	Success	Unemployment rate	Mean house price	Mean unit price	SEIFA decile
Northern Territory, NT	0.70	3.70	397958	336642	5.36
Eastern Suburbs, NSW	0.66	2.80	1411896	529550	6.66
Australian Capital Territory, ACT	0.63	2.74	459973	370099	8.85
Northern Beaches, NSW	0.60	2.16	965672	488570	9.18
Lower Northern Sydney, NSW	0.53	2.80	1065045	484808	9.71
Remainder-Balance WA	0.50	3.50	372827	333136	2.80
Inner Sydney & Inner Western Sydney, NSW	0.49	3.00	769656	448826	6.79
Mornington Peninsula, VIC	0.48	4.53	380969	273430	6.01
Northern-North West, QLD	0.46	3.10	345828	324814	4.52
Eastern Adelaide, SA	0.43	3.54	544308	304324	9.03
East Metropolitan, WA	0.43	2.53	409615	269679	4.66
South and East BSD Balance, QLD	0.42	4.35	393093	304232	3.15
Outer Eastern Melbourne, VIC	0.41	3.39	373141	294823	7.31
North Eastern Melbourne, VIC	0.40	4.06	416910	313279	5.30
South West Metropolitan, WA	0.39	3.55	440540	359310	4.06
Darling Downs-South West, QLD	0.39	2.53	258358	224358	4.50
Wide Bay-Burnett, QLD	0.39	5.85	288993	286013	2.36
St George-Sutherland, NSW	0.38	3.69	602642	352993	5.73
South Eastern Melbourne, VIC	0.38	5.79	305128	236288	3.68
Murray-Murrumbidgee, NSW/VIC	0.33	4.22	220832	178022	4.85
North and West BSD Balance, QLD	0.33	3.40	371084	304210	3.39
Barwon-Western District, VIC	0.32	3.33	296363	262589	5.08
Brisbane City Outer Ring, QLD	0.32	3.05	443818	355158	5.77
South and East Moreton, QLD	0.32	4.03	511883	388877	5.26
Central Northern Sydney, NSW	0.32	3.12	719057	426272	9.47
Mackay-Fitzroy-Central West, QLD	0.32	3.91	350257	332389	3.78
Central Highlands-Wimmera, VIC	0.31	6.63	212758	184238	5.00
North Metropolitan, WA	0.31	2.61	465198	358689	5.97
Inner Melbourne, VIC	0.31	3.04	807134	407546	5.78
Gosford-Wyong, NSW	0.30	4.97	345007	298083	3.62
Northern Adelaide, SA	0.30	5.80	292486	221465	3.28
Inner Eastern Melbourne, VIC	0.30	3.58	690444	405994	8.84
Illawarra & South Eastern, ACT/NSW	0.29	5.18	341318	264812	4.80
Brisbane City Inner Ring, QLD	0.29	2.80	608562	401813	8.11
Outer Western Melbourne, VIC	0.29	5.23	359489	274344	4.23
North and West Moreton, QLD	0.27	4.03	443580	373880	4.45
South East Metropolitan, WA	0.27	2.89	427454	345440	5.32
Central Western Sydney, NSW	0.26	5.52	412564	301044	2.57
Loddon-Mallee, VIC	0.26	5.48	229185	182749	4.54
Southern Adelaide, SA	0.26	4.79	375743	281654	4.41
Southern Melbourne, VIC	0.26	4.26	716154	379961	7.64
Western Adelaide, SA	0.26	5.25	403639	267295	3.16
Fairfield-Liverpool & Outer South Western Sydney, NSW	0.25	6.28	338246	219274	3.19
Lower Western, WA	0.25	3.66	372011	314545	3.59
North Western Sydney, NSW	0.25	6.08	336518	244308	4.70
Southern and Eastern SA	0.24	4.01	263809	191984	3.97
Hunter, NSW	0.24	4.84	318333	305777	3.32
All Gippsland, VIC	0.22	4.39	225674	186688	4.19
Far North, QLD	0.21	5.39	351764	247864	3.44
Tasmania, TAS	0.21	4.27	263405	219744	3.25
Richmond-Tweed & Mid-North Coast, NSW	0.18	7.09	347833	302201	2.78
North Western Melbourne, VIC	0.18	5.37	345956	293285	4.33
Goulburn-Ovens-Murray, VIC	0.18	4.83	235263	195361	4.84
Northern and Western SA	0.17	5.96	218612	200530	3.92
Northern, Far West-North Western & Central West, NSW	0.16	5.22	211172	186345	3.83
Canterbury-Bankstown, NSW	0.13	6.14	443195	259498	2.49
Central Metropolitan, WA	0.05	3.42	956726	372246	8.32

Notes: The descriptive statistics are weighted using the sample weights provided in the LPS.

In order to provide a summary of the information contained in Table 4 without having noisy wave to wave variations, in Table 5, the sums of the ranks and average ranks across waves as well as the average outcome of "success" for all 5 waves are shown. With the exception of the Northern Territory, the top five labour force statistical regions that are observed with the highest rates of "success" also experience relatively low levels of unemployment (within a range of 2 and 3 per cent), well above average house and unit prices ($951,031 for houses and $460,797 for units) and are in highly advantaged areas (high SEIFA deciles ranging from 7.4 to 9.5). The success of income support recipients living in a disadvantaged area like the Northern Territory seems an indication of the level of success of the CDEP program.

In Section 2, in the context of the US, we reported that Cancian and Meyer (2000) had found that starting work in certain occupations was related to a higher probability of sustaining employment over time. Exploiting the information contained in the LPS with regards to the type of occupation, we present the top ten occupations of individuals who are employed and off income support in Wave 5 in Table 6. Although not a specific focus in this project, such information can potentially be valuable to income support recipients who are deciding in which industry or occupation they should aim to obtain employment.

Sales ranks number one on our list with seven per cent of "successful" individuals employed as sales assistants or salespersons. Other common occupations of individuals who manage to transition into employment by Wave 5 include education, clerical/administrative work, hospitality/retail and cleaners.

Table 5: Outcomes and Selected Statistics by Location and across all Waves (1 to 5)

Labour Force Statistical Region	Sum Rank	Average Rank	Average Success	Average Unemployment rate	Average house price	Average unit price	Average SEIFA decile
Northern Territory, NT	9	2	0.54	4.34	337368	302212	5.63
Australian Capital Territory, ACT	13	3	0.49	2.89	433699	347334	8.87
Lower Northern Sydney, NSW	16	3	0.48	3.05	1050897	473019	9.54
Eastern Suburbs, NSW	31	6	0.41	2.76	1380428	536180	7.41
Northern Beaches, NSW	38	8	0.42	2.37	939101	486656	9.14
Eastern Adelaide, SA	41	8	0.37	3.70	480840	281817	8.87
South and East Moreton, QLD	62	12	0.31	3.71	482212	364926	5.07
Northern-North West, QLD	62	12	0.32	4.34	306962	297693	4.44
Inner Sydney & Inner Western Sydney, NSW	72	14	0.37	3.86	735817	448199	7.19
Brisbane City Inner Ring, QLD	84	17	0.29	3.02	543762	372098	8.06
Inner Melbourne, VIC	84	17	0.30	3.62	743703	382032	6.29
Remainder-Balance WA	85	17	0.37	3.48	326045	293358	2.92
South and East BSD Balance, QLD	89	18	0.29	5.06	349978	260196	3.34
Far North, QLD	90	18	0.31	5.11	328388	232455	3.56
Wide Bay-Burnett, QLD	91	18	0.28	6.08	263201	276903	2.40
North and West Moreton, QLD	107	21	0.27	4.81	411410	361397	4.41
Inner Eastern Melbourne, VIC	109	22	0.25	4.07	615383	380391	8.60
Southern Adelaide, SA	112	22	0.26	4.93	327216	259104	4.27
Barwon-Western District, VIC	116	23	0.24	5.19	282283	254447	5.26
Central Northern Sydney, NSW	117	23	0.25	2.83	709405	415803	9.47
Mornington Peninsula, VIC	120	24	0.28	4.16	343817	250381	5.88
Darling Downs-South West, QLD	121	24	0.25	3.26	245153	215908	4.52
Mackay-Fitzroy-Central West, QLD	127	25	0.24	3.30	322202	285875	3.86
South Eastern Melbourne, VIC	127	25	0.26	5.43	279480	213351	3.73
Central Western Sydney, NSW	135	27	0.25	5.43	417489	311898	2.55
Southern Melbourne, VIC	135	27	0.24	3.79	646158	359259	7.96
South East Metropolitan, WA	135	27	0.24	3.53	416983	325764	5.28
North Eastern Melbourne, VIC	136	27	0.25	4.28	381596	289584	5.67
Outer Eastern Melbourne, VIC	139	28	0.26	3.61	335229	268646	7.37
East Metropolitan, WA	142	28	0.24	3.33	401006	269511	4.70
South West Metropolitan, WA	148	30	0.24	3.23	441237	353536	4.20
Fairfield-Liverpool & Outer South Western Sydney, NSW	149	30	0.22	6.88	344655	227177	2.88
Outer Western Melbourne, VIC	149	30	0.23	5.95	335310	260334	3.99
North and West BSD Balance, QLD	152	30	0.23	4.06	328956	279868	3.66
Brisbane City Outer Ring, QLD	154	31	0.22	3.53	394934	320284	5.49
Central Highlands-Wimmera, VIC	156	31	0.22	7.34	203173	175297	4.98
Gosford-Wyong, NSW	159	32	0.22	6.42	356847	321247	3.94
Goulburn-Ovens-Murray, VIC	161	32	0.21	4.05	231185	192447	4.84
Northern Adelaide, SA	168	34	0.22	6.46	257562	182203	3.11
North Metropolitan, WA	172	34	0.22	3.30	466720	348927	6.31
Western Adelaide, SA	186	37	0.19	5.25	355740	233373	3.31
St George-Sutherland, NSW	186	37	0.21	3.27	597101	348338	6.01
Murray-Murrumbidgee, NSW/VIC	191	38	0.20	4.59	219279	181440	4.74
Illawarra & South Eastern, ACT/NSW	196	39	0.20	5.98	344392	269849	4.57
Central Metropolitan, WA	200	40	0.16	2.50	899569	367249	8.40
Northern and Western SA	204	41	0.19	4.75	197061	148252	4.01
Hunter, NSW	210	42	0.19	5.40	315859	308095	3.49
North Western Sydney, NSW	212	42	0.19	5.51	338566	261758	4.65
Northern, Far West-North Western & Central West, NSW	215	43	0.17	5.26	204532	194510	3.76
All Gippsland, VIC	216	43	0.17	5.11	212816	199185	4.28
Loddon-Mallee, VIC	216	43	0.18	5.77	221613	185083	4.75
Canterbury-Bankstown, NSW	221	44	0.15	5.72	441461	257760	2.80
Southern and Eastern SA	222	44	0.18	3.88	242463	180796	4.13
North Western Melbourne, VIC	232	46	0.15	5.62	320911	271285	4.09
Richmond-Tweed & Mid-North Coast, NSW	241	48	0.15	7.20	337089	289432	2.79
Tasmania, TAS	248	50	0.16	5.51	242423	217476	3.40
Lower Western, WA	257	51	0.14	3.58	371401	315662	3.59

Notes: Rank is based on the ordering in Table 4 for Waves 1 to 5. The descriptive statistics are weighted using the sample weights provided in the LPS.

Table 6: Top Ten Occupations of Individuals who are Employed and Off Income Support in Wave 5

	Per cent
Sales assistants and salespersons	7.12
Education professionals	5.82
Other clerical and administrative workers	5.12
Hospitality, retail and service managers	4.41
Cleaners and laundry workers	4.21
Carers and aides	3.99
Road and rail drivers	3.83
Business, human resource and marketing professionals	3.80
Health professionals	3.72
Office managers and program administrators	3.48

Notes: The descriptive statistics are weighted using the sample weights provided in the LPS.

We next turn to the activities that people do to look for a job. For each of the survey strata (see the Appendix for definitions), Table 7 summarises the places that income support recipients have looked for jobs. The following four activities – "looked at job ads in the newspaper", "looked at job ads on the internet", "used touch screens at Centrelink, Job Network or somewhere else", and "looked at job ads on workplace notice boards" were the four possible responses given in the LPS.

"People with disabilities"[9] are increasingly using the internet as a source of searching for a job (from 42 per cent in Wave 1 to 55 per cent in Wave 5). Whereas, their use of newspapers to look for a job declined considerably (from 82 per cent in Wave 1 to 70 per cent in Wave 5) as did their use of touch screens at Centrelink, Job Network or somewhere else (from 24 per cent in Wave 1 to 10 per cent in Wave 5).

Principal carers (of children under 16 years if age) seem to be more reliant on using newspapers as their primary method of searching for a job. However, over time they have started to use the internet (an increase of 15.8 percentage points from Wave 1 to Wave 5) and workplace notice boards (an increase of 11.1 percentage points from Wave 1 to Wave 5) more.

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[9] In Cohort 1, the stratum "people with disabilities" includes people who were DSP recipients during the reference period from September 2005 to February 2006. They could fall into the 0 to 14 hours or the 15 to 29 hours work capacity category.

Table 7: Places looked for job, by Survey Stratum

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
Stratum 1: People with Disabilities					
Looked at job ads in the newspaper	82.1	73.8	73.9	70.6	70.2
Looked at job ads on the internet	42.1	47.6	52.2	63.3	55.0
Use touch screens at Centrelink, Job Network or somewhere else	23.8	33.5	22.6	19.6	9.6
Looked at job ads on workplace notice boards	27.1	27.0	24.7	39.7	23.2
N	389	310	236	207	186
Stratum 2: Principal Carers					
Looked at job ads in the newspaper	85.8	83.3	80.2	83.0	93.8
Looked at job ads on the internet	50.3	50.7	58.7	53.9	66.1
Use touch screens at Centrelink, Job Network or somewhere else	35.0	32.6	29.8	29.0	33.8
Looked at job ads on workplace notice boards	33.4	42.9	38.2	38.2	44.5
N	763	544	485	366	379
Stratum 3: Very Long Term Unemployed					
Looked at job ads in the newspaper	92.7	91.8	92.3	92.9	86.2
Looked at job ads on the internet	57.8	61.3	63.8	62.8	63.2
Use touch screens at Centrelink, Job Network or somewhere else	70.1	63.2	61.1	56.7	53.6
Looked at job ads on workplace notice boards	48.0	54.1	49.0	52.8	48.1
N	896	625	463	372	312
Stratum 4: Mature Age					
Looked at job ads in the newspaper	94.0	88.6	88.7	87.6	86.4
Looked at job ads on the internet	54.2	48.2	53.8	58.4	51.0
Use touch screens at Centrelink, Job Network or somewhere else	60.8	43.6	43.6	31.1	43.1
Looked at job ads on workplace notice boards	43.8	44.4	45.7	44.0	43.7
N	345	260	190	136	110
Stratum 5: Not in Target Group					
Looked at job ads in the newspaper	81.9	76.7	79.9	74.3	77.3
Looked at job ads on the internet	59.9	66.4	67.3	64.4	70.7
Use touch screens at Centrelink, Job Network or somewhere else	44.8	35.8	34.4	26.1	27.6
Looked at job ads on workplace notice boards	33.5	33.4	35.9	32.6	29.0
N	750	488	352	237	191

Note: Sample is restricted to those looking for a new job or second job (multiple responses were allowed). The descriptive statistics are weighted using the sample weights provided in the LPS.

The very long term unemployed tend to rely heavily on the use of newspapers to look for jobs, although there was a slight decline in their usage over time (by 6.5 percentage points from Wave 1 to Wave 5). The story was similar for mature age income support recipients, who prefer looking at job advertisements in newspapers. Across all five groups, the residual group of income support recipients (not in target group) were the most likely to prefer using the internet to look for job ads, with 60 per cent of this group using the internet in their job search in Wave 1.

Table 8 shows the activities undertaken by income support recipients to look for a job. The following nine ways of applying for a job were possible – "written, phoned or applied in person to an employer", "answered an advertisement for a job in a newspaper", "answered an advertisement for a job on the internet", "answered an advertisement for a job from touch screen at Centrelink, Job Network or some where else", "answered advertisement for a job on workplace notice boards", "word of

mouth", "advertised or tendered for work", "checked with a Job Network employment agency", "checked with other employment agency". The results are once again shown by wave for each survey stratum. People with disabilities are most likely to have written, phoned or applied in person when looking for a job (between 46 and 60 per cent). This was followed by using word of mouth to look for a job (between 38 and 52 per cent).

Similarly, a high proportion of principal carers of children under 16 years of age (between 60 and 70 per cent) preferred writing, phoning or applying in person to an employer when looking for a job. Responding to advertisements in the newspaper (between 43 and 54 per cent) or using word of mouth (between 44 and 52 per cent) was also a popular approach. Over time, an increasing proportion of principal carers were applying for jobs using newspapers (43.2 per cent in Wave 1 to 53.9 per cent in Wave 5) and the internet (an increase from 26.6 per cent in Wave 1 to 41.6 per cent in Wave 5). The latter is an increasingly important source of information on vacancies.

For the very long term unemployed, the traditional approach to looking for a job (writing, phoning or applying in person to an employer) is also used most often. Unlike the two groups discussed above, however, a large proportion of the very long term unemployed also used a Job Network employment agency to look for a job. This is related to their requirement and eligibility to use Job Network since they are NSA (or YA other) recipients. Other income support recipients without a requirement to seek employment would usually not be eligible to access Job Network vacancies.

Mature age income support recipients also tended to look for a job by writing, phoning or applying in person to an employer, as well as using a Job Network employment agency. Only a quarter tended to use the internet as a job search tool which is only slightly higher than for people with disabilities. These two groups are on average older than the other groups which may be an explanation for this lower usage.

Like principal carers of children, the residual group of income support recipients (not in target group) used writing, phoning or applying in person most often as their approach to apply for a job, followed by using the word of mouth approach.

Table 8: Job Search Activities by Survey Stratum (each person appears once only)

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
Stratum 1: People with Disabilities					
Written, phoned or applied in person to an employer	55.8	60.4	46.3	56.3	49.4
Answered an advertisement for a job in a newspaper	27.6	37.6	32.2	28.8	25.0
Answered an advertisement for a job on the internet	19.3	19.4	25.4	27.7	28.1
Answered an advertisement for a job from a touch screen at Centrelink, Job Network or somewhere else	9.5	10.3	12.2	10.1	3.5
Answered an advertisement for a job on workplace notice boards	10.5	5.9	6.3	19.0	2.0
Word of Mouth	38.0	51.2	43.3	52.1	43.0
Advertised or tendered for work	9.8	10.2	7.6	4.7	3.6
Checked with a Job Network employment agency	32.7	22.6	26.3	25.1	20.9
Checked with other employment agency	18.5	14.3	7.2	14.4	14.3
N	389	310	236	207	186
Stratum 2: Principal Carers					
Written, phoned or applied in person to an employer	67.0	60.8	58.7	70.3	63.6
Answered an advertisement for a job in a newspaper	43.2	45.0	43.2	47.8	53.9
Answered an advertisement for a job on the internet	26.6	26.5	33.3	26.4	41.6
Answered an advertisement for a job from a touch screen at Centrelink, Job Network or somewhere else	13.6	18.6	18.4	10.3	10.6
Answered an advertisement for a job on workplace notice boards	9.6	8.6	11.7	9.5	19.6
Word of Mouth	45.1	49.5	52.1	46.8	44.1
Advertised or tendered for work	10.0	10.1	7.4	7.5	5.4
Checked with a Job Network employment agency	27.9	42.7	28.3	27.0	40.5
Checked with other employment agency	15.5	15.8	17.9	9.1	19.2
N	763	544	485	366	379
Stratum 3: Very Long Term Unemployed					
Written, phoned or applied in person to an employer	77.6	78.2	81.1	79.1	78.0
Answered an advertisement for a job in a newspaper	57.2	59.8	62.8	56.8	55.0
Answered an advertisement for a job on the internet	35.1	36.6	41.0	39.3	41.1
Answered an advertisement for a job from a touch screen at Centrelink, Job Network or somewhere else	38.4	40.6	35.9	32.0	27.6
Answered an advertisement for a job on workplace notice boards	15.8	19.9	19.0	19.0	18.3
Word of Mouth	53.2	53.7	50.3	51.4	55.6
Advertised or tendered for work	19.7	17.7	20.4	21.5	17.8
Checked with a Job Network employment agency	68.3	72.1	69.1	67.2	61.1
Checked with other employment agency	23.0	36.4	32.4	25.7	26.5
N	896	625	463	372	312
Stratum 4: Mature Age					
Written, phoned or applied in person to an employer	75.5	70.8	69.7	70.1	66.6
Answered an advertisement for a job in a newspaper	55.4	55.4	50.8	56.4	47.6
Answered an advertisement for a job on the internet	27.0	26.8	35.6	29.2	24.0
Answered an advertisement for a job from a touch screen at Centrelink, Job Network or somewhere else	28.2	20.7	19.6	16.8	19.7
Answered an advertisement for a job on workplace notice boards	14.2	14.2	12.3	7.0	13.4
Word of Mouth	48.2	52.7	49.6	51.4	58.6
Advertised or tendered for work	16.3	12.8	14.5	14.1	9.1
Checked with a Job Network employment agency	62.2	58.0	54.2	54.3	53.4
Checked with other employment agency	24.0	23.4	27.9	24.2	23.3
N	345	260	190	136	110
Stratum 5: Not in Target Group					
Written, phoned or applied in person to an employer	72.0	68.9	63.0	56.0	68.5
Answered an advertisement for a job in a newspaper	48.9	45.6	45.2	39.6	41.7
Answered an advertisement for a job on the internet	38.3	41.5	43.2	36.1	49.7
Answered an advertisement for a job from a touch screen at Centrelink, Job Network or somewhere else	24.4	23.1	17.1	13.6	12.0
Answered an advertisement for a job on workplace notice boards	11.1	13.2	15.5	10.8	9.0
Word of Mouth	53.5	56.7	54.5	48.4	50.3
Advertised or tendered for work	11.3	11.5	11.6	9.6	11.5
Checked with a Job Network employment agency	40.6	42.4	39.5	36.2	36.3
Checked with other employment agency	15.8	19.4	23.6	15.5	22.6
N	750	488	352	237	191

Note: Sample is restricted to those looking for a new job or second job (multiple responses were allowed). The descriptive statistics are weighted using the sample weights provided in the LPS.

5. OLS Regression Results

In this section, we employ multivariate regression analysis to further explore the relationship between the characteristics of income support recipients and their subsequent labour market outcomes. Given that 5 waves of survey data are available from the LPS, the latest possible outcome that we can examine in the data occurs at Wave 5. One way of analysing the data is to focus on Wave 5 (using the outcome in Wave 5 as the basis for the dependent variable means that these regressions are based on the smaller sample at the end of the survey). For instance, it is interesting to build on the descriptive analysis in the previous section to determine how activities, attitudes and type of income support payment received prior to Wave 5 are related to outcomes in Wave 5. These are not necessarily causal relations, since this analysis cannot determine the direction of the relationship.

The binary outcome we focus on in this section is called "success." It takes on a value of 1 if a person is employed and not on income support in Wave 5. Conversely, it takes on a value of 0 if an individual is either: (i) unemployed or not in the labour force and not on income support in Wave 5; or (ii) employed but on income support in Wave 5; or (iii) unemployed or not in the labour force and on income support in Wave 5. The regressions are cross-sectional based on characteristics measured in Wave 5 unless otherwise indicated (i.e., based on Waves 1 to 4).

Many econometrics textbooks argue that, while ordinary least squares (OLS) is fine for continuous dependent variables, when the outcome of interest is a binary variable, linear regression models are inappropriate and nonlinear models such as logit and probit are preferred. However, it is often the case that OLS estimates and marginal effects obtained from logit and probit models are similar, and the added complexity and extra work required to interpret the results from nonlinear models may not be worth the trouble (Angrist and Pischke, 2008). Hence, for the purposes of clarity of exposition in this report, we focus on providing interpretations of OLS estimates that are easy to understand.

Table 9 presents the results of six alternative regression models examining the relationship between individual level characteristics and "success" by Wave 5. The

sample is restricted to those who are unemployed in Wave 1 so that all persons begin in a similar disadvantaged state. In all models, a standard set of characteristics is used to control for individual level differences. These include age, gender, education, capital city, language spoken in household, number of children in the household, number of people in the household, race, health status, state, and type of income support received in Waves 1 to 4. The first column focuses on whether the places people looked for jobs assist in finding full-time employment and exiting from income support by Wave 5 (Research Question 3). As is evident from the signs of the coefficients, none of the following four activities – "looked at job ads in the newspaper", "looked at job ads on the internet", "used touch screens at Centrelink, Job Network or somewhere else", and "looked at job ads on workplace notice boards" – positively contribute to a person becoming more likely to leave income support and find employment.

The second column focuses on whether certain activities that people undertake when looking for a job helps lead to full-time employment and an exit from income support by Wave 5 (Research Question 5). Once again, it does not appear that any of the activities undertaken to look for a job make it more likely that a person leaves income support and finds employment.

Moving on to whether different attitudes of individuals are important in labour market outcomes, in the third column we consider the relative importance of five different attitudes (Research Question 6). Some of these attitudes are going to be correlated with other characteristics. For example, someone with a severe disability would be expected to agree with the statement "I don't think people in my situation should have to work or look for work". Society and the government would not judge this to be unreasonable. Controlling for individual circumstances (such as health or the number of children), as is done here, is therefore important for an appropriate interpretation of the results. Of the five attitudes, we find that two are statistically significant. Having the attitude that "given my current situation, work just isn't worth my while" is associated with an 8.3 percentage point reduction in the probability of leaving income support and finding employment. On the other hand, having "a lot of confidence in myself and my skills and abilities" is associated with a 10.9 percentage point increase in the likelihood of leaving income support and finding employment. The remaining three attitudes – "for me,

Table 9: Hierarchical OLS Specifications (conditional on being unemployed in Wave 1)

Dependent variable: success in Wave 5

	Places Looked	Things Done	Attitudes	Social Support	Location	Full Model
Age	0.008	0.009	0.002	0.008	0.005	0.000
Age Squared	0.000	0.000	0.000	0.000	0.000	0.000
Male	0.125***	0.135***	0.119***	0.116***	0.123***	0.115**
Partnered	0.125**	0.118**	0.113**	0.139***	0.126**	0.118**
Undergraduate Degree or Higher	0.088	0.079	0.092	0.116*	0.091	0.068
Certificate or Diploma	0.076	0.075	0.118	0.074	0.091	0.089
Trade or TAFE	0.059	0.043	0.036	0.052	0.050	0.031
Year 12	0.068	0.060	0.063	0.071	0.050	0.040
Capital City	0.050	0.054	0.052	0.054	0.037	0.003
English Speaking Household	0.039	0.040	-0.088	0.031	-0.001	-0.078
Number of Children in the Household	0.012	0.015	0.013	0.002	0.015	0.017
Number of People in the Household	-0.013	-0.014	-0.007	-0.008	-0.012	-0.010
Indigenous	0.011	0.024	0.005	0.017	0.002	0.059
Health (1=Excellent, 5 = Poor)	-0.073***	-0.074***	-0.056***	-0.070***	-0.073***	-0.052***
NSW	-0.003	0.017	0.047	0.012	0.048	0.109
VIC	0.020	0.025	0.078	0.039	0.033	0.096
QLD	0.118	0.125*	0.180**	0.136*	0.177**	0.224***
SA	-0.017	-0.009	0.066	-0.027	-0.035	0.074
WA	0.047	0.036	0.118	0.061	0.037	0.062
Any NSA Waves 1 to 4	-0.105*	-0.095*	-0.149***	-0.136**	-0.139**	-0.092*
Any PPP Waves 1 to 4	-0.120	-0.108	-0.118	-0.110	-0.118	-0.102
Any PPS Waves 1 to 4	-0.199***	-0.210***	-0.170**	-0.186**	-0.196***	-0.175**
Any DSP Waves 1 to 4	-0.304***	-0.307***	-0.259***	-0.298***	-0.305***	-0.256***
Any Other Income Support Waves 1 to 4	-0.015	-0.017	-0.010	-0.016	-0.010	0.005
Access to Newspapers Waves 1 to 4	-0.051					-0.098
Access to Internet Waves 1 to 4	-0.010					-0.041
Access to Screens Waves 1 to 4	-0.050					-0.036
Access to Noticeboards Waves 1 to 4	-0.092**					-0.074*
Did Apply Waves 1 to 4		0.028				-0.014
Searched Newspaper Waves 1 to 4		0.011				0.046
Searched Internet Waves 1 to 4		0.045				0.026
Searched Screens Waves 1 to 4		-0.041				0.020
Searched Noticeboard Waves 1 to 4		-0.076*				-0.044
Asked by Word of Mouth Waves 1 to 4		0.064				0.050
Searched Advertisements Waves 1 to 4		-0.081*				-0.060
Searched Job Agency Waves 1 to 4		-0.050				0.016
Searched Other Agency Waves 1 to 4		-0.043				-0.034
Attitude: Studying and training is good			-0.029			0.004
Attitude: Work isn't worth while			-0.083*			-0.087*
Attitude: Don't think people in my situation should work			-0.073			-0.073
Attitude: Have a lot of confidence in myself			0.109*			0.103*
Attitude: Want to keep the concessions			-0.069			-0.049
Support: Often need help from others but can't get it				-0.061		-0.041
Support: Have no one to lean on in times of trouble				-0.042		0.025
Support: I can always rely on my family and friends				-0.071		-0.037
Skilled Worker Vacancy Rate in LFSR					0.000	0.000
Unskilled Worker Vacancy Rate in LFSR					0.000	0.000
SEIFA 2001 (a low value indicates disadvantage)					0.000	0.000
SEIFA Decile (a low value indicates disadvantage)					0.016*	0.007
Total Population					0.000	0.000
Total Unemployment Rate in LFSR					-0.010	-0.021
Constant	0.445*	0.277	0.372	0.368	0.683	0.458
R-squared	0.141	0.147	0.172	0.133	0.139	0.191
N	767	767	668	753	764	658

Notes: Statistical significance is shown as * significant at 10%; ** significant at 5%; *** significant at 1%. Only coefficients are shown.

studying and training is a good way of getting ahead", "I don't think people in my situation should have to work or look for work", "I don't want to work too much as I want to keep the concessions I get" – are not significant factors related to the outcome.

Social networks and support are often regarded as integral parts of facilitating social inclusion and employment. In the fourth column of Table 9 we examine how access to different types of social support can be helpful (Research Question 7). The three survey questions in the LPS related to social support ask about the extent to which individuals agree or disagree with the following statements: "I often need help from other people but can't get it", "I have no one to lean on in times of trouble", "I can always rely on my family and friends (outside of this household) for support." The regression estimates suggest that none of the three social support variables are important and significantly associated with the likelihood of leaving income support and finding employment.

In the fifth column we examine the relative importance of an income support recipient's location and whether it is an important factor in helping to obtain employment (Research Question 8). The results of including the location variables reveal that most of the location variables are not important with the exception of the SEIFA decile. It is found that a one decile improvement in SEIFA is related to a 1.6 percentage point increase in the likelihood of leaving income support and finding employment. Although this effect seems small in magnitude, the cumulative effect of this can be quite large. For instance, when we compare a person living in a location belonging to SEIFA decile 10 (the highest decile) with a person living in a SEIFA decile one location (the lowest decile), the difference is 14.4 percentage points (16 - 1.6 = 14.4).

Finally, we estimate a model with all the factors that were examined separately before included together (column 6 of Table 9). Simultaneously controlling for all the variables generally leads to the same results already seen, with the only exception being that the SEIFA decile is no longer statistically significant once all other characteristics are controlled for. Several statistically significant characteristics are worth highlighting in the full model. Not surprisingly, being partnered (relative to being single) and having an undergraduate degree or better are positively associated with the likelihood of leaving income support and finding employment. Poor health is found to reduce the probability of success. Similarly, being on DSP for any time during waves 1 to 4 is associated with

the lowest likelihood of leaving income support and finding employment, followed by being on PPS and then NSA.

The previous set of regression models in Table 9 were based on a sample of individuals who were initially unemployed in Wave 1. However, this could mask a considerable amount of the heterogeneous effects on different subgroups within the income support population. An issue of interest is whether types of activities, attitudes, social support and location make a difference for different groups of people, such as people with disabilities, principal carers, very long term unemployed, mature age income support recipients, and other income support recipients (Research Question 4).[10] In Table 10 we examine the extent to which factors are associated with "success" in Wave 5 for the different groups of income support recipients. Unlike Table 9, we do not condition on being unemployed in Wave 1, as sample sizes would be too small for some subgroups. Therefore, the results cannot be directly compared to Table 9.

In the first column, we focus on persons with disabilities. Factors that reduce the probability of exiting income support and finding employment by Wave 5 include having: poor health (6.9 percentage points for a 1-unit decrease in the health indicator), an attitude that work isn't worthwhile (7.6 percentage points), an attitude that people in their situation should not work (5.2 percentage points), or an attitude of wanting to keep the concessions (10.1 percentage points). These attitudes may reflect the individual's severity of disability. Of particular note is the fact that persons with disabilities who do not always have family and friends to rely on are significantly less likely (by 6.6 percentage points) to exit income support and find employment by Wave 5.

In the second column of Table 10 we focus on principal carers of children. Two major factors that appear to be beneficial to principal carers are answering job advertisements on the internet between Waves 1 to 4 (which increases the probability of "success" by 13.4 percentage points) and having a lot of confidence in themselves (which increases the probability of "success" by 16.9 percentage points). These two factors are worth highlighting as it is possible that policy can be formulated to encourage principal carers

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[10] These groups correspond to the five survey strata that were used in drawing the sample for the LPS (see the Appendix).

Table 10: OLS regressions by Survey Stratum (not conditional on being unemployed in Wave 1)

Dependent variable: "success" in Wave 5

	People with Disabilities	Principal Carers	Very Long Term Unemp	Mature Age	Not in Target Group
Age	0.015*	0.049***	0.030**	0.154	0.005
Age Squared	-0.000*	-0.001***	-0.000**	-0.001	0.000
Male	0.010	0.129***	0.032	0.019	0.050
Partnered	0.012	0.278***	0.160***	0.036	0.100**
Undergraduate Degree or Higher	0.048	0.006	0.157*	0.218**	0.183***
Certificate or Diploma	0.006	0.000	0.148*	0.261*	0.035
Trade or TAFE	0.028	-0.003	0.013	0.135*	0.048
Year 12	-0.005	-0.049	0.023	0.176*	-0.103
Capital City	0.009	-0.015	-0.009	-0.014	-0.009
English Speaking Household	0.058	0.016	-0.255**	0.037	0.047
Number of Children in the Household	-0.005	-0.047*	-0.042	0.032	0.008
Number of People in the Household	-0.006	-0.002	0.025	-0.001	-0.002
Indigenous	0.145*	0.079	0.126	0.135	-0.087
Health (1=Excellent, 5 = Poor)	-0.069***	-0.044***	-0.059***	-0.071**	-0.041**
NSW	-0.035	0.012	-0.069	0.116	-0.006
VIC	-0.019	-0.036	0.014	0.120	-0.021
QLD	-0.011	0.146**	0.150*	0.069	0.001
SA	-0.060	0.032	-0.067	0.071	-0.109
WA	0.008	0.086	0.017	-0.008	-0.032
Access to Newspapers Waves 1 to 4	-0.096*	-0.006	-0.053	0.105	-0.049
Access to Internet Waves 1 to 4	0.065	-0.037	0.053	-0.078	0.025
Access to Screens Waves 1 to 4	0.024	-0.081	-0.153**	-0.153	0.015
Access to Noticeboards Waves 1 to 4	-0.040	0.045	-0.017	-0.234**	-0.023
Did Apply Waves 1 to 4	-0.025	-0.066	-0.180*	0.007	0.018
Searched Newspaper Waves 1 to 4	0.011	0.011	0.110*	0.151	0.051
Searched Internet Waves 1 to 4	-0.029	0.134**	-0.117*	-0.010	0.040
Searched Screens Waves 1 to 4	-0.059	0.035	0.057	0.008	-0.055
Searched Noticeboard Waves 1 to 4	0.115*	-0.041	-0.005	0.082	-0.003
Asked by Word of Mouth Waves 1 to 4	0.030	-0.033	0.030	0.079	0.024
Searched Advertisements Waves 1 to 4	-0.029	-0.057	0.009	0.032	-0.188**
Searched Job Agency Waves 1 to 4	0.019	-0.060	0.015	-0.111	-0.032
Searched Other Agency Waves 1 to 4	-0.028	0.063	-0.067	0.063	-0.102
Attitude: Studying and training is good	0.034	-0.034	-0.010	-0.030	-0.008
Attitude: Work isn't worth while	-0.076**	-0.163***	-0.087	-0.071	-0.060
Attitude: Don't think people in my situation should work	-0.052*	-0.143***	-0.053	-0.267***	-0.256***
Attitude: Have a lot of confidence in myself	0.086***	0.169***	0.083	0.087	0.084
Attitude: Want to keep the concessions	-0.101***	-0.146***	-0.074	-0.041	-0.168***
Support: Often need help from others but can't get it	-0.023	-0.033	-0.097*	-0.031	-0.093
Support: Have no one to lean on in times of trouble	-0.009	0.027	0.046	0.009	0.079
Support: I can always rely on my family and friends	-0.066*	-0.025	0.021	-0.026	0.102
Skilled Worker Vacancy Rate in LFSR	0.000	0.000	0.000	0.000	0.000
Unskilled Worker Vacancy Rate in LFSR	0.000	0.000	0.000	0.000	0.000
SEIFA 2001 (a low value indicates disadvantage)	-0.001	0.001*	0.001	0.000	-0.001
SEIFA Decile (a low value indicates disadvantage)	0.004	-0.004	-0.014	0.019	0.000
Total Population	0.000	0.000	0.000	-0.000*	0.000
Total Unemployment Rate in LFSR	-0.016	0.019	0.020	-0.012	-0.046*
Constant	1.114	-1.784**	-0.817	-4.078	1.633*
R-squared	0.151	0.287	0.254	0.235	0.354
N	851	1351	547	344	699

Notes: Statistical significance is shown as * significant at 10%; ** significant at 5%; *** significant at 1%. Only coefficients are shown.

to be more pro-active in their job search activities and to promote self-esteem. In addition, being partnered also makes it more likely that principal carers exit income support and find employment by Wave 5. This is consistent with expectations, as having a partner typically would allow one to share the care burden and provide either partner more flexibility with time.

The third column of Table 10 focuses on the very long term unemployed. It appears that a lack of social support is a significant hindrance for them to make a successful transition to the workforce. Often needing help from others but not being able to get it decreases the probability of "success" by 9.7 percentage points. On the other hand, having higher educational qualifications such as an undergraduate degree or a certificate/diploma is positively correlated with the probability of "success." Interestingly, it also appears that many of the long term unemployed who do not make a transition into employment by Wave 5 are from English-speaking households (coefficient of -0.255).

We next examine mature age persons in the fourth column of Table 10. For this group of recipients, having an attitude that people in my situation should not work is a major factor that reduces the likelihood of exiting income support and finding employment by Wave 5 (by 26.7 percentage points). As in the case of the long term unemployed, mature age persons with higher educational qualifications stand a much greater chance of being able to make a successful transition into employment.

Finally, in the fifth column of Table 10 we present the coefficient estimates for persons who were not in any of the above target groups or strata. Once again, attitudes towards work and income support are seen to play a significant role. Having an attitude that people in my situation should not need to work or an attitude of wanting to keep concessions significantly reduces the probability of exiting income support and finding employment by 25.6 and 16.8 percentage points respectively.

To further explore heterogeneous subgroup results, in Table 11 we divide our sample based on the type of income support individuals were receiving in Wave 1. The logic behind this is that the different income support programs cater to very different types of individuals who often have diverse needs. From a policy perspective, any interesting

results found also have more immediate implications as caseworkers deal with these easily identifiable groups of income support recipients on a regular basis.

Table 11: OLS regressions by Income Support Program in Wave 1 (not conditional on being unemployed in Wave 1)

Dependent variable: "success" in Wave 5	NSA	PPP	PPS	DSP	Other
Age	0.010	0.021	0.039**	0.004	0.014
Age Squared	0.000	0.000	-0.000**	0.000	0.000
Male	0.048	0.248**	0.098	0.018	-0.003
Partnered	0.115***	0.104	0.362***	-0.007	0.114*
Undergraduate Degree or Higher	0.118*	-0.012	-0.018	0.055*	0.166*
Certificate or Diploma	0.109	0.064	0.026	0.017	-0.042
Trade or TAFE	0.026	0.141*	0.012	0.017	-0.043
Year 12	0.064	0.009	-0.021	-0.009	-0.026
Capital City	0.008	-0.102	-0.004	-0.026	-0.120*
English Speaking Household	-0.047	0.002	-0.035	0.031	0.022
Number of Children in the Household	0.010	0.015	-0.050*	0.000	-0.033
Number of People in the Household	-0.004	-0.034	0.004	-0.002	0.011
Indigenous	0.115	-0.132	0.213**	0.076	-0.058
Health (1=Excellent, 5 = Poor)	-0.080***	-0.025	-0.014	-0.052***	-0.025
NSW	0.119	0.051	0.033	0.030	0.038
VIC	0.121	-0.033	-0.015	0.045	0.098
QLD	0.194**	0.159	0.091	0.033	0.232*
SA	0.008	0.245	0.017	0.026	0.108
WA	0.182*	0.123	0.034	0.082	0.043
Access to Newspapers Waves 1 to 4	0.013	-0.015	0.073	-0.036	-0.085
Access to Internet Waves 1 to 4	-0.017	-0.024	-0.086	-0.037	0.032
Access to Screens Waves 1 to 4	-0.095*	-0.190	-0.082	0.012	-0.022
Access to Noticeboards Waves 1 to 4	-0.084*	0.091	-0.012	-0.003	0.004
Did Apply Waves 1 to 4	-0.001	-0.115	-0.019	0.043	-0.032
Searched Newspaper Waves 1 to 4	0.087	-0.011	0.003	0.001	-0.013
Searched Internet Waves 1 to 4	-0.034	0.142	0.095	0.000	0.132
Searched Screens Waves 1 to 4	0.009	-0.057	0.029	-0.068	0.081
Searched Noticeboard Waves 1 to 4	0.011	0.069	-0.103	0.022	-0.072
Asked by Word of Mouth Waves 1 to 4	0.049	-0.100	-0.038	-0.011	0.031
Searched Advertisements Waves 1 to 4	-0.051	-0.063	0.011	-0.029	-0.060
Searched Job Agency Waves 1 to 4	0.018	0.064	-0.046	0.010	-0.008
Searched Other Agency Waves 1 to 4	-0.046	0.136	0.000	-0.043	0.049
Attitude: Studying and training is good	-0.025	-0.075	-0.090	0.025	0.098
Attitude: Work isn't worth while	-0.075	-0.189**	-0.083*	-0.043*	-0.141*
Attitude: Don't think people in my situation should work	-0.083*	-0.109	-0.073	-0.005	-0.189**
Attitude: Have a lot of confidence in myself	0.100*	0.181*	0.130**	0.028	0.035
Attitude: Want to keep the concessions	-0.057	-0.124*	-0.133***	-0.060***	-0.095
Support: Often need help from others but can't get it	-0.114**	-0.117	-0.037	-0.006	-0.047
Support: Have no one to lean on in times of trouble	0.045	0.016	0.018	0.016	-0.088
Support: I can always rely on my family and friends	-0.015	-0.116	-0.055	-0.029	0.026
Skilled Worker Vacancy Rate in LFSR	0.000	0.000	-0.000*	0.000	0.000
Unskilled Worker Vacancy Rate in LFSR	0.000	0.000	0.000	0.000	0.000
SEIFA 2001 (a low value indicates disadvantage)	0.000	0.001	0.001	0.000	0.001
SEIFA Decile (a low value indicates disadvantage)	0.001	0.000	0.001	0.001	-0.008
Total Population	0.000	0.000	0.000	0.000	0.000
Total Unemployment Rate in LFSR	-0.023	-0.004	0.007	-0.013	0.012
Constant	0.421	-0.660	-1.722*	0.655	-0.662
R-squared	0.185	0.221	0.255	0.092	0.244
N	808	309	561	795	359

Notes: Statistical significance is shown as * significant at 10%; ** significant at 5%; *** significant at 1%. Only coefficients are shown.

In the first column of Table 11 we focus on persons on NSA. NSA recipients with an attitude that people in my situation should not work were 8.3 percentage points less likely to be off income support and working by Wave 5. In addition, those who often need help from others but can not get it were 11.4 percentage points less likely to transition to employment by Wave 5.

In the second column we focus on persons on PPP. Partnered males were 24.8 percentage points more likely to be off income support and employed than partnered females. Once again, attitudes towards work matter to a certain extent. Those who felt that work was not worth their while or who wanted to keep their concessions were significantly less likely to be employed at the end of our observation period. On the other hand, confidence in oneself was again found to be positively related to finding employment.

The third column examines persons on the PPS. Those who were on PPS in Wave 1 but were partnered in Wave 5 had a large increase in the probability of getting off income support and finding employment by Wave 5 (36.2 percentage points). This result indicates that re-partnering has a large positive impact on transitions from welfare to work. Older single principal carers of children are more likely to find employment and exit income support. This can be explained by the fact that their own age may reflect their children's age, and as children grow older, single parents are more likely to be in employment. Again, those who felt that work was not worth their while or who wanted to keep their concessions were significantly less likely to be employed at the end of our observation period. On the other hand, confidence in oneself was again found to be positively related to finding employment.

In the fourth column we focus on persons on DSP. The R^2 for this model was by far the lowest among all subgroups considered (R^2=0.092), perhaps suggesting that observed characteristics and attitudinal variables can only explain a small component of the variation in outcomes and are not ideally suited in helping account for the particular challenges faced by DSP recipients. Although those who felt that work was not worth their while or who wanted to keep their concessions were significantly less likely to be employed at the end of our observation period, the effects are quite small for this group.

In the fifth column we focus on persons receiving other types of income support payments in Wave 1. Attitudes towards work and income support are seen to play a significant role. Having an attitude that people in my situation should not need to work or an attitude that work was not worthwhile significantly reduces the probability of exiting income support and finding employment by 18.9 and 14.1 percentage points respectively.

6. Dynamic Panel Model Regression Results

Dynamic panel model regression models are particularly suited to analyse transitions from one period to the next. As LPS is a panel survey recording respondents' employment and income support outcomes, we also estimate several panel data models in order to exploit the panel dimension of the data. In addition to the advantage of being able to examine each period's transitions in detail, compared to the cross-sectional regression models in the previous section, another well-known advantage of panel data models is that they can account for unobserved heterogeneity, which is not possible in cross-sectional models. This is because repeated observations for the same individuals often allow either differencing out of the time-invariant variables (fixed effects models) or the estimation of intercept terms that vary by person (random effects models).

The question examined in this section is how prior "success" (exits from income support and finding a job) can improve the likelihood of staying in such a state. An important difference between the issue addressed by panel models and by the cross-sectional models in Section 5 (using Wave 5 outcomes) is that with panel models, we focus on how factors are associated with wave to wave changes and not at a particular point in time. Therefore the regressions in this section are based on all respondents for whom we have at least two consecutive observations. The cross-sectional models in the previous section had an explicit focus on outcomes at the end of our observation period (Wave 5) and how prior activities and receipt of income support payments might affect outcomes at Wave 5 (thus limiting our sample of analysis to those respondents who were still in the sample in Wave 5).

The latent equation for the random effects dynamic panel probit model can be written as:

$$y_{it}^* = \gamma y_{it-1} + x_{it}'\beta + \alpha_i + u_{it} \tag{1}$$

where the subscript $i = 1, 2, \ldots, N$ indexes individuals, the subscript $t = 2, \ldots, T$ indexes time periods, y_{it}^* is the latent dependent variable for having exited income support and being employed, x_{it} is a vector of exogenous characteristics, α_i are unobserved individual-specific random effects, and the u_{it} are assumed to be distributed $N(0, \sigma_u^2)$. The observed binary outcome is:

$$y_{it} = \begin{cases} 1 & \text{if } y_{it}^* \geq 0 \\ 0 & \text{otherwise} \end{cases}$$

The standard random effects model assumes that α_i is uncorrelated with x_{it}. As this is potentially restrictive, we adopt the Mundlak-Chamberlain approach and allow a correlation between α_i and the observed characteristics in the model by assuming a relationship between α_i and the means of the time-varying x-variables:

$$\alpha_i = \overline{x_i}'a + v_i$$

where v_i is distributed $N(0, \sigma_v^2)$.

An important technical issue when estimating dynamic panel models is that addressing the so-called initial conditions problem is required. This problem arises because the start of the observation period (Wave 1 in mid-2006) does not coincide with the start of the stochastic process generating the outcome. Estimation of the model therefore requires a further assumption about the relationship between y_{i1} and α_i. If the initial conditions are correlated with α_i, as is likely in our context, not addressing the initial conditions problem will lead to overstating the level of state dependence (i.e., the estimate of γ in (1) will be larger than it actually should be).

The approach used to address the initial conditions problem follows Wooldridge (2005) where the relationship between y_{i1} and α_i is accounted for by modelling the

distribution of α_i given y_{i1}. The assumption in Wooldridge's approach is that the distribution of the individual specific effects conditional on the exogenous individual characteristics is correctly specified.

This model addresses the issue of whether prior "success" increases the likelihood of experiencing "success" in the future (i.e., how permanent a state is being employed and off income support). It does so by decomposing the state dependence of success into true state dependence versus unobserved heterogeneity across the units (i.e., differences in individuals) and adds to the findings of the cross-sectional regression analyses reported in the previous section.

For the same five strata of income support recipients considered in Table 10, Tables 12 and 13 present the dynamic panel probit model results. In Table 12, the estimated model coefficients and indicators for the levels of statistical significance are displayed. As the coefficients from probit models do not have a direct interpretation, Table 13 presents marginal effects, which are evaluated at the mean of the observed variables, or which can also be thought of as being evaluated for the average person. The marginal effect represents the effect of an infinitesimal small change in the value of the relevant independent variable which is expressed as the change in the dependent variable per one-unit change in the independent variable.

The lagged dependent variable for all groups (lagged success) is large and highly statistically significant. It implies that one of the best predictors of being off income support and working today is that a person was off income support and working in the previous time period. This has implications for policy as it suggests that it would be useful to have policies designed to promote attachment to the labour force.

Curiously, across all groups it appears that looking for a job by checking with a Job Network employment agency was uniformly negatively related to the probability of getting off income support and finding a job in the next time period. Why this is the case is not clear and it might be worth further exploring the role that Job Network agencies played in trying to help income support recipients become more socially included by entering employment and getting off income support. For principal carers

and the very long term unemployed, answering advertisements using touch screens at Centrelink also appears to be not very useful.

Table 12: Dynamic Panel Probit Model Results (Dependent variable: "success")

	People with Disabilities	Principal Carers	Very Long Term Unemp	Mature Age	Not in Target Group
Lagged success	1.819***	1.975***	1.779***	6.193***	1.429***
Age	-0.038	0.046	0.187**	9.950	0.075
Age Squared	0.000	0.000	-0.003**	-0.092	-0.001
Male	0.138	0.008	-0.078	1.674	-0.080
Partnered	0.603*	0.573**	0.790**	6.130***	0.240
Undergraduate Degree or Higher	-0.396	-0.275	0.173	-1.612	0.331
Certificate or Diploma	-1.049*	0.237	0.369	-8.955**	0.547
Trade or TAFE	-0.046	-0.029	0.070	-1.019	0.654**
Year 12	-0.785	-0.171	0.224	-3.045	0.104
Capital City	0.112	0.535	0.398	-9.162	1.188*
English Speaking Household	-0.860	0.020	0.007	-0.417	-0.098
Number of Children in the Household	-0.828	-0.254	0.220	11.928**	-0.603
Number of People in the Household	-0.311	0.055	0.045	-9.118***	0.130
Indigenous	1.088	-0.181	0.856	32.012***	0.297
Health (1=Excellent, 5 = Poor)	-0.384*	0.093	0.074	-0.637	-0.164
NSW	0.499	0.146	-0.155	9.710**	-0.768*
VIC	0.407	-0.129	0.273	9.243*	-1.020**
QLD	0.445	0.254	0.215	9.139*	-0.497
SA	0.025	0.233	0.400	-5.049	-0.641
WA	0.405	0.020	-0.404	7.547	-0.557
Attitude: Studying and training is good	0.473	-0.389	-0.299	-5.232**	-0.470
Attitude: Work isn't worth while	-0.176	0.261	0.328	-6.263*	-0.221
Attitude: Don't think people in my situation should work	-0.275	0.120	-0.065	4.138	-0.134
Attitude: Have a lot of confidence in myself	0.427	0.361	0.174	-14.939***	-0.280
Attitude: Want to keep the concessions	-0.707	-0.235	0.078	-2.154	-0.265
Support: Often need help from others but can't get it	0.098	0.092	0.014	-2.937	0.208
Support: Have no one to lean on in times of trouble	-0.060	-0.104	0.071	-4.028*	-0.555
Support: I can always rely on my family and friends	0.142	-0.136	0.073	-3.822*	-0.463
Access to Newspapers	0.562	-0.643	-0.012	-5.844	-0.311
Access to Internet	0.274	0.010	-0.494	-8.026***	-0.235
Access to Screens	-0.742	-1.096***	-0.967**	3.669	-0.568
Access to Noticeboards	0.411	0.204	0.184	0.628	-0.081
Did Apply	-0.090	0.093	-0.672*	-1.429	-0.706**
Searched Newspaper	-1.110**	-0.071	-0.041	-15.457***	0.191
Searched Internet	0.277	0.048	0.527	5.091*	-0.709*
Searched Screens	-1.621*	-0.397	0.771*	0.889	-0.240
Searched Noticeboards	0.873	-0.797*	-0.537	-6.473*	-0.064
Asked by Word of Mouth	0.016	-0.595**	0.005	-3.366	-0.106
Searched Advertisements	-0.959	-0.404	-0.696*	-1.566	-0.190
Searched Job Agency	-0.923*	-0.288	-1.230***	-7.852***	-0.983***
Searched Other Agency	0.063	0.197	-0.369	-2.974	0.056
Skilled Worker Vacancy Rate in LFSR	0.000	0.000	0.000	0.000	0.000
Unskilled Worker Vacancy Rate in LFSR	0.000	0.000	0.000	0.000	0.000

	People with Disabilities	Principal Carers	Very Long Term Unemp	Mature Age	Not in Target Group
SEIFA 2001 (a low value indicates disadvantage)	-0.005	0.000	0.004	0.038	-0.002
SEIFA Decile (a low value indicates disadvantage)	0.174**	-0.033	-0.047	0.635*	0.028
Total Population	0.000	0.000	0.000	-0.000*	0.000
Total Unemployment Rate in LFSR	0.002	-0.166*	-0.107	0.891	-0.130
m(Capital City)	-0.433	-0.858	-0.503	8.096	-1.463**
m(Number of Children in the Household)	1.265**	0.315	-0.231	-11.701*	0.658
m(Number of People in the Household)	-0.100	-0.141	-0.216	7.206**	-0.093
m(Health)	0.209	-0.170	-0.245	-1.493	0.037
m(Attitude: Studying and training is good)	-0.688	-0.061	0.009	7.168*	0.837
m(Attitude: Work isn't worth while)	-1.021	-0.392	0.052	15.242**	-0.146
m(Attitude: Don't think people in my situation should work)	0.134	-0.603	-0.590	-17.201***	-1.521*
m(Attitude: Have a lot of confidence in myself)	-0.124	0.291	0.482	24.060***	1.054
m(Attitude: Want to keep the concessions)	-0.780	-0.827*	-0.957	-23.633***	-0.436
m(Support: Often need help from others but can't get it)	0.055	-0.518	0.351	0.720	0.366
m(Support: Have no one to lean on in times of trouble)	1.077	0.553	-0.268	4.317	0.272
m(Support: I can always rely on my family and friends)	0.384	-0.115	-0.522	-1.744	0.870
m(Access to Newspapers)	-1.132	0.135	-0.289	6.967	-0.006
m(Access to Internet)	-0.179	0.685*	0.850	9.531**	-0.275
m(Access to Screens)	0.652	0.589	0.341	-8.202*	-0.338
m(Access to Noticeboards)	-0.238	-0.524	0.068	-5.196	-0.335
m(Did Apply)	-0.352	-0.825**	0.129	4.887	0.086
m(Searched Newspaper)	1.500**	0.316	0.379	14.890***	-0.446
m(Searched Internet)	0.451	-0.382	-1.186*	-5.337	1.393**
m(Searched Screens)	0.860	0.301	-0.868	0.694	0.220
m(Searched Noticeboards)	-0.781	1.117*	-0.025	17.602***	-0.480
m(Asked by Word of Mouth)	0.001	0.867**	0.099	6.983**	0.699*
m(Searched Advertisements)	0.368	0.365	0.461	-3.054	-0.035
m(Searched Job Agency)	-0.461	-0.206	0.182	-9.559**	0.272
m(Searched Other Agency)	-0.181	-0.078	0.339	-2.931	0.378
Initial success	0.535	0.335	0.548	3.390	0.720**
Wave 3 dummy	0.104	0.115	-0.029	2.139	0.161
Wave 4 dummy	-0.263	-0.020	0.173	4.440**	0.171
Wave 5 dummy	-0.217	0.062	-0.208	1.907	-0.133
Constant	5.257	0.041	-6.864	-317.385*	0.669
N	709	1344	1440	501	1025
Log likelihood	-130.25	-316.97	-225.92	-83.11	-292.10

Note: Statistical significance is shown as * significant at 10%; ** significant at 5%; *** significant at 1%. The variables m(.) are the means over time of the variables in parentheses.

Table 13: Marginal Effects in Percentage Points (Dependent variable: "success")

	People with Disabilities	Principal Carers	Very Long Term Unemp	Mature Age	Not in Target Group
Lagged success	28.90	43.11	23.05	11.41	27.16
Age	0.00	0.08	0.17	0.00	0.08
Age Squared	0.00	0.00	0.00	0.00	0.00
Male	1.36	0.11	-0.64	2.76	-1.13
Partnered	6.49	7.84	7.29	9.75	3.48
Undergraduate Degree or Higher	-3.62	-3.43	1.46	-2.60	4.88
Certificate or Diploma	-7.91	3.23	3.26	-12.54	8.24
Trade or TAFE	-0.46	-0.38	0.58	-1.67	9.44
Year 12	-6.50	-2.17	1.90	-4.80	1.48
Capital City	1.13	7.20	3.36	-13.78	17.88
English Speaking Household	-10.96	0.25	0.06	-0.69	-1.39
Number of Children in the Household	-0.05	-0.46	0.20	0.00	-0.62
Number of People in the Household	-0.02	0.10	0.04	0.00	0.13
Indigenous	14.57	-2.28	8.35	56.09	4.34
Health (1=Excellent, 5 = Poor)	-0.02	0.17	0.07	0.00	-0.17
NSW	5.31	1.92	-1.26	15.03	-10.79
VIC	4.41	-1.66	2.30	16.19	-13.88
QLD	4.82	3.43	1.82	15.16	-6.79
SA	0.25	3.19	3.52	-7.70	-8.52
WA	4.46	0.27	-3.07	13.15	-7.44
Attitude: Studying and training is good	4.25	-5.48	-2.58	-8.55	-6.92
Attitude: Work isn't worth while	-1.70	3.51	2.83	-9.73	-3.08
Attitude: Don't think people in my situation should work	-2.64	1.59	-0.53	6.90	-1.89
Attitude: Have a lot of confidence in myself	3.96	4.49	1.39	-24.29	-4.05
Attitude: Want to keep the concessions	-6.02	-2.97	0.64	-3.45	-3.72
Support: Often need help from others but can't get it	0.99	1.20	0.11	-4.70	2.96
Support: Have no one to lean on in times of trouble	-0.59	-1.35	0.58	-6.41	-7.61
Support: I can always rely on my family and friends	1.39	-1.80	0.59	-6.30	-6.75
Access to Newspapers	5.16	-9.33	-0.10	-10.66	-4.57
Access to Internet	2.73	0.13	-4.13	-13.33	-3.37
Access to Screens	-6.68	-13.14	-8.50	5.78	-8.26
Access to Noticeboards	4.27	2.69	1.51	1.03	-1.15
Did Apply	-0.90	1.20	-6.05	-2.39	-10.54
Searched Newspaper	-10.31	-0.93	-0.34	-24.61	2.67
Searched Internet	2.90	0.62	4.49	8.18	-10.22
Searched Screens	-10.68	-4.84	6.67	1.46	-3.38
Searched Noticeboards	10.65	-9.03	-4.07	-9.91	-0.91
Asked by Word of Mouth	0.16	-7.84	0.04	-5.61	-1.51
Searched Advertisements	-7.46	-4.92	-5.19	-2.52	-2.67
Searched Job Agency	-8.34	-3.68	-11.76	-13.95	-15.22
Searched Other Agency	0.65	2.65	-2.94	-4.82	0.79
Skilled Worker Vacancy Rate in LFSR	0.00	0.00	0.00	0.00	0.00
Unskilled Worker Vacancy Rate in LFSR	0.00	0.00	0.00	0.00	0.00
SEIFA 2001 (a low value indicates disadvantage)	0.00	0.00	0.00	0.00	0.00
SEIFA Decile (a low value indicates disadvantage)	0.01	-0.06	-0.04	0.00	0.03
Total Population	0.00	0.00	0.00	0.00	0.00
Total Unemployment Rate in LFSR	0.00	-0.30	-0.10	0.00	-0.13
Initial success	6.20	4.80	5.12	5.83	11.69

Some interesting results were obtained for mature age persons. In our relatively small sample of mature age persons (N=501), indigenous persons are found to be over 50 percentage points more likely to be off income support and employed in the next wave as compared to non-indigenous persons. The results also suggest that mature age persons who searched for jobs using the internet tended to be more successful in finding jobs, which perhaps is a reflection of their skills and general attitudes towards learning, as being able to use the internet at a more advanced age is not common as learning new computer skills is not a trivial task.

Tables 14 and 15 present the results (coefficients and marginal effects) of models that are similar to those estimated in Tables 12 and 13, the only difference being that here we include three additional interaction terms. These are the interactions between the lagged dependent variable and our three measures of social support available in the LPS. The aim of including these variables is to further examine how social support might be interacting with past "success" and helping to contribute to any recent exit from income support and attachment to the labour force.

On the whole, we do not find that the interaction terms are statistically significant, except for the subgroup that includes persons who do not belong to any of the specific strata. For this group, it is found that even if one managed to get off income support and find employment in the past, having no one to lean on in times of trouble can significantly reduce the likelihood of them continuing to persist in such a state.

Table 14: Dynamic Panel Probit Model Results (Dependent variable: "success")

	People with Disabilities	Principal Carers	Very Long Term Unemp	Mature Age	Not in Target Group
Lagged success* Support: Often need help from others but can't get it	-0.096	0.017	0.100	3.344	0.515
Lagged success* Support: Have no one to lean on in times of trouble	0.756	0.179	-0.435	3.750	-1.303*
Lagged success* Support: I can always rely on my family and friends	0.469	0.041	-0.083	1.228	-0.379
Lagged success	1.308*	1.895***	1.908**	3.092	1.767***
Age	-0.049	0.047	0.187**	9.322	0.079
Age Squared	0.000	0.000	-0.003**	-0.086	-0.001
Male	0.161	0.010	-0.080	1.653	-0.060
Partnered	0.586	0.571**	0.792**	6.081*	0.230
Undergraduate Degree or Higher	-0.418	-0.278	0.186	-1.153	0.379
Certificate or Diploma	-1.193*	0.235	0.351	-7.408	0.543
Trade or TAFE	-0.062	-0.029	0.077	-0.252	0.693**
Year 12	-0.840	-0.174	0.234	-2.245	0.155
Capital City	0.140	0.517	0.338	-11.813	1.206*
English Speaking Household	-0.866	0.014	0.019	0.287	-0.054
Number of Children in the Household	-0.776	-0.258	0.244	9.943	-0.595
Number of People in the Household	-0.311	0.061	0.051	-7.366*	0.136
Indigenous	1.064	-0.172	0.854	32.177**	0.250
Health (1=Excellent, 5 = Poor)	-0.393*	0.093	0.075	-0.642	-0.162
NSW	0.539	0.142	-0.153	6.981	-0.808*
VIC	0.426	-0.138	0.285	6.753	-1.048**
QLD	0.507	0.244	0.212	5.884	-0.525
SA	0.066	0.230	0.402	-5.705	-0.638
WA	0.477	-0.005	-0.397	4.285	-0.576
Attitude: Studying and training is good	0.488	-0.382	-0.342	-3.839	-0.503
Attitude: Work isn't worth while	-0.192	0.256	0.335	-6.629*	-0.192
Attitude: Don't think people in my situation should work	-0.224	0.121	-0.065	4.264	-0.180
Attitude: Have a lot of confidence in myself	0.423	0.359	0.147	-12.573**	-0.287
Attitude: Want to keep the concessions	-0.637	-0.218	0.100	-2.530	-0.266
Support: Often need help from others but can't get it	0.131	0.085	-0.020	-3.669	-0.024
Support: Have no one to lean on in times of trouble	-0.312	-0.172	0.159	-5.239*	-0.061
Support: I can always rely on my family and friends	-0.057	-0.146	0.064	-2.836	-0.303
Access to Newspapers	0.545	-0.639	-0.040	-4.859	-0.352
Access to Internet	0.264	0.004	-0.510	-6.450*	-0.202
Access to Screens	-0.760	-1.105***	-0.967**	4.729	-0.547
Access to Noticeboards	0.390	0.202	0.207	0.821	-0.025
Did Apply	-0.063	0.094	-0.682*	-2.203	-0.657**
Searched Newspaper	-1.093**	-0.077	-0.023	-13.072***	0.152
Searched Internet	0.247	0.045	0.536	5.001	-0.732*
Searched Screens	-1.589*	-0.387	0.775*	1.096	-0.241
Searched Noticeboards	0.775	-0.799*	-0.549	-6.402	-0.107
Asked by Word of Mouth	0.032	-0.594**	-0.008	-4.066	-0.107
Searched Advertisements	-0.893	-0.399	-0.712*	-0.919	-0.202
Searched Job Agency	-0.885*	-0.284	-1.218***	-6.588*	-0.956***
Searched Other Agency	0.036	0.201	-0.375	-3.752	0.076
Skilled Worker Vacancy Rate in LFSR	0.000	0.000	0.000	0.000	0.000
Unskilled Worker Vacancy Rate in LFSR	0.000	0.000	0.000	0.000	-0.000*

Table 14: (Continued)

	People with Disabilities	Principal Carers	Very Long Term Unemp	Mature Age	Not in Target Group
SEIFA 2001 (a low value indicates disadvantage)	-0.004	0.000	0.004	0.023	-0.002
SEIFA Decile (a low value indicates disadvantage)	0.175**	-0.034	-0.047	0.585	0.033
Total Population	0.000	0.000	0.000	0.000	0.000
Total Unemployment Rate in LFSR	0.011	-0.165*	-0.109	0.386	-0.128
m(Capital City)	-0.464	-0.831	-0.429	10.818	-1.475**
m(Number of Children in the Household)	1.248**	0.314	-0.254	-9.403	0.651
m(Number of People in the Household)	-0.113	-0.143	-0.222	5.369	-0.092
m(Health)	0.209	-0.170	-0.247	-1.111	0.035
m(Attitude: Studying and training is good)	-0.684	-0.073	0.049	6.326	0.888
m(Attitude: Work isn't worth while)	-1.051	-0.386	0.060	14.475*	-0.099
m(Attitude: Don't think people in my situation should work)	0.135	-0.594	-0.584	-17.291**	-1.509*
m(Attitude: Have a lot of confidence in myself)	-0.154	0.294	0.526	20.621*	1.081
m(Attitude: Want to keep the concessions)	-0.767	-0.840*	-0.990	-19.782*	-0.467
m(Support: Often need help from others but can't get it)	0.066	-0.505	0.373	0.280	0.403
m(Support: Have no one to lean on in times of trouble)	1.097	0.551	-0.275	3.462	0.309
m(Support: I can always rely on my family and friends)	0.426	-0.126	-0.537	-3.304	0.846
m(Access to Newspapers)	-1.059	0.132	-0.269	7.234	0.092
m(Access to Internet)	-0.197	0.689*	0.868	6.905	-0.343
m(Access to Screens)	0.654	0.592	0.332	-8.690	-0.378
m(Access to Noticeboards)	-0.200	-0.512	0.060	-4.668	-0.323
m(Did Apply)	-0.362	-0.820**	0.132	4.996	0.031
m(Searched Newspaper)	1.472**	0.317	0.351	12.477**	-0.459
m(Searched Internet)	0.502	-0.375	-1.208*	-3.374	1.436***
m(Searched Screens)	0.823	0.283	-0.847	0.612	0.236
m(Searched Noticeboards)	-0.707	1.115*	-0.039	16.260*	-0.524
m(Asked by Word of Mouth)	0.001	0.859**	0.133	6.801	0.648*
m(Searched Advertisements)	0.349	0.354	0.455	-3.339	-0.074
m(Searched Job Agency)	-0.534	-0.215	0.170	-8.930*	0.227
m(Searched Other Agency)	-0.122	-0.082	0.352	-3.141	0.412
Initial success	0.595*	0.332	0.557	2.403	0.726**
Wave 3 dummy	0.099	0.122	-0.026	1.425	0.154
Wave 4 dummy	-0.268	-0.018	0.175	3.715	0.179
Wave 5 dummy	-0.209	0.064	-0.213	1.965	-0.130
Constant	4.701	0.057	-7.016	-280.160	1.090
N	709	1344	1440	501	1025
Log likelihood	-129.55	-316.82	-225.62	-82.30	-288.99

Note: : Statistical significance is shown as * significant at 10%; ** significant at 5%; *** significant at 1%. The variables m(.) are the means over time of the variables in parentheses.

Table 15: Marginal Effects in Percentage Points (Dependent variable: "success")

	People with Disabilities	Principal Carers	Very Long Term Unemp	Mature Age	Not in Target Group
Lagged success* Support: Often need help from others but can't get it	-0.92	0.23	0.83	6.62	7.81
Lagged success* Support: Have no one to lean on in times of trouble	9.59	2.44	-3.22	7.41	-15.87
Lagged success* Support: I can always rely on my family and friends	5.42	0.55	-0.66	2.38	-4.81
Lagged success	18.96	41.12	25.06	6.23	34.99
Age	0.00	0.09	0.21	0.00	0.07
Age Squared	0.00	0.00	0.00	0.00	0.00
Male	1.57	0.13	-0.66	3.11	-0.85
Partnered	6.24	7.83	7.23	11.01	3.33
Undergraduate Degree or Higher	-3.78	-3.47	1.56	-2.14	5.60
Certificate or Diploma	-8.56	3.21	3.07	-11.94	8.19
Trade or TAFE	-0.62	-0.38	0.62	-0.47	9.97
Year 12	-6.82	-2.21	1.97	-4.08	2.21
Capital City	1.40	6.96	2.81	-18.92	18.17
English Speaking Household	-10.96	0.18	0.16	0.54	-0.76
Number of Children in the Household	-0.06	-0.47	0.28	0.00	-0.54
Number of People in the Household	-0.02	0.11	0.06	0.00	0.12
Indigenous	14.09	-2.18	8.25	60.57	3.64
Health (1=Excellent, 5 = Poor)	-0.03	0.17	0.09	0.00	-0.15
NSW	5.70	1.87	-1.23	12.51	-11.32
VIC	4.60	-1.77	2.38	13.47	-14.26
QLD	5.51	3.30	1.78	11.25	-7.14
SA	0.66	3.14	3.51	-9.76	-8.46
WA	5.30	-0.06	-2.99	8.42	-7.65
Attitude: Studying and training is good	4.35	-5.37	-2.94	-7.26	-7.43
Attitude: Work isn't worth while	-1.83	3.45	2.86	-11.32	-2.67
Attitude: Don't think people in my situation should work	-2.15	1.61	-0.52	8.19	-2.53
Attitude: Have a lot of confidence in myself	3.90	4.47	1.17	-23.68	-4.17
Attitude: Want to keep the concessions	-5.49	-2.77	0.83	-4.58	-3.72
Support: Often need help from others but can't get it	1.32	1.12	-0.16	-6.62	-0.34
Support: Have no one to lean on in times of trouble	-2.93	-2.21	1.31	-9.17	-0.86
Support: I can always rely on my family and friends	-0.57	-1.93	0.51	-5.34	-4.37
Access to Newspapers	4.99	-9.28	-0.32	-10.17	-5.19
Access to Internet	2.61	0.05	-4.23	-12.46	-2.88
Access to Screens	-6.76	-13.25	-8.42	8.31	-7.93
Access to Noticeboards	4.03	2.67	1.68	1.54	-0.36
Did Apply	-0.63	1.21	-6.09	-4.25	-9.76
Searched Newspaper	-10.14	-1.00	-0.18	-24.10	2.13
Searched Internet	2.56	0.59	4.53	9.05	-10.53
Searched Screens	-10.50	-4.73	6.65	2.06	-3.39
Searched Noticeboards	9.21	-9.08	-4.11	-11.04	-1.50
Asked by Word of Mouth	0.32	-7.84	-0.06	-7.72	-1.52
Searched Advertisements	-7.04	-4.87	-5.25	-1.70	-2.82
Searched Job Agency	-7.94	-3.64	-11.51	-13.51	-14.74
Searched Other Agency	0.36	2.70	-2.96	-6.88	1.08
Skilled Worker Vacancy Rate in LFSR	0.00	0.00	0.00	0.00	0.00
Unskilled Worker Vacancy Rate in LFSR	0.00	0.00	0.00	0.00	0.00

Table 15: (Continued)

	People with Disabilities	Principal Carers	Very Long Term Unemp	Mature Age	Not in Target Group
SEIFA 2001 (a low value indicates disadvantage)	0.00	0.00	0.00	0.00	0.00
SEIFA Decile (a low value indicates disadvantage)	0.01	-0.06	-0.05	0.00	0.03
Total Population	0.00	0.00	0.00	0.00	0.00
Total Unemployment Rate in LFSR	0.00	-0.30	-0.12	0.00	-0.12
Initial success	6.97	4.77	5.16	4.68	11.81

7. Conclusion

The Australian Government has recently placed a strong emphasis on having a social inclusion agenda in the policy-making process. The research undertaken in this report analyses a specific group of individuals who may be regarded as socially excluded with respect to the employment aspect of the agenda – (potentially) long-term income support recipients who are not employed. This group includes people with disabilities, people with principal caring responsibilities for children under 16 years of age, mature age income support recipients and the very long-term unemployed. In addition, income support recipients who did not fall into any of these four categories and received a working-age income support payment were included in the analysis as well. All individuals in our sample were on income support during a reference period from September 2005 to February 2006, which predated the Welfare to Work reforms.

We examined the characteristics of those income support recipients who managed to make a successful transition off income support and into employment, and compared them with the characteristics of those who remained on income support. We also examined the roles that activities, attitudes and social networks play in helping income support recipients make the transition off income support into employment and become more socially included.

The use of five waves of panel data from the LPS, which collects detailed information on income support recipients about participation in employment, education and training, enabled us to analyse outcomes of income support recipients. Results from the initial descriptive analyses suggest that attitudes and social support networks are important factors for successful transitions for income support recipients. Individuals who have high levels of confidence and who are less interested in keeping the concessions they

obtain on income support are more likely to transition off income support into employment. In addition, "successful" individuals appear to have adequate social support as they were not very likely to have no one to lean on in times of trouble and could usually rely on family and friends. The descriptive statistics also suggest that an individual's location can be a factor in helping them retain employment. In general, areas with low levels of unemployment, above average house prices and located in the higher SEIFA deciles tend to have a higher proportion of income support recipients successfully transitioning into employment.

While descriptive analyses are useful in showing potential associations in the data, we also performed several types of multivariate analyses to simultaneously control for multiple background characteristics. The results from the cross-sectional regression modelling which focuses on outcomes in Wave 5 suggest that the different types of activities that people undertake to look for a job, such as answering an advertisement for a job from a touch screen at Centrelink, are not particularly important in determining whether a person is off income support and employed by Wave 5. Neither does social support appear to be significantly associated with the likelihood of leaving income support and finding employment by Wave 5. Instead, attitudes appear to be most strongly associated with the likelihood of leaving income support and finding employment by Wave 5. Having the attitude that "given my current situation, work just isn't worth my while" is associated with an 8.3 percentage point reduction in the probability of leaving income support and finding employment, while having "a lot of confidence in myself and my skills and abilities" is associated with a 10.9 percentage point increase in the likelihood of leaving income support and finding employment.

An issue of interest is whether different types of activities, attitudes, social support and location make a difference for different groups of people, such as people with disabilities, principal carers of children, very long term unemployed, mature age income support recipients, and other income support recipients. These subgroup results are important because regression models estimated on aggregate data would not reveal all the heterogeneous effects that potentially exist. The cross-sectional regressions focusing on outcomes in Wave 5 found that persons with disabilities who do not always have family and friends to rely on were significantly less likely (by 6.6 percentage points) to exit income support and find employment by Wave 5. For principal carers, two major

factors that appear to be beneficial are answering job advertisements on the internet between Waves 1 to 4 (which increases the probability of "success" by 13.4 percentage points) and having a lot of confidence in themselves (which increases the probability of "success" by 16.9 percentage points). For the very long term unemployed, it appears that a lack of social support is a significant hindrance to making a successful transition to the workforce. Often needing help from others but not being able to get it decreases the probability of "success" by 9.7 percentage points. For mature age persons, it was found that having an attitude that people in my situation should not work is a major factor in decreasing the likelihood of exiting income support and finding employment by Wave 5 (by 26.7 percentage points).

Results from the dynamic panel regression models, which account for observed characteristics and unobserved heterogeneity and which focus on the shorter term wave to wave changes, suggest that there is a high level of state dependence – current "success" is highly correlated with having achieved "success" in prior waves. The influence of attitudes, social support networks and activities undertaken on whether an income support recipient will be a "success" is different for the different groups of income support recipients, but, in general, does not appear to significantly account for wave to wave transitions off income support once lagged "success" is included as an explanatory variable. Furthermore, the finding that the interaction terms between previous "success" and the three social support variables are not statistically significant suggests that "success" could be largely independently of the type of social support received.

Overall this report provides an initial understanding of the characteristics of income support recipients who make the transition off income support into employment and the role that activities, attitudes and social networks play. It appears that attitudes are important for some groups of income support recipients and that helping reshape some of the negative attitudes as well as promoting self-esteem could lead to better labour market outcomes over time. However, it is possible that attitudes are linked to other social inclusion barriers which could be overcome through education, vocational training, getting local industry on board and job creation. Once these barriers are overcome, attitudes might improve at the same time. This was not examined in this report, but exploring this issue in further research would be useful.

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Appendix 1: Cohort 1 Strata Definitions

Cohort 1 sample reference period: September 2005 to February 2006
General definition:
Exiters – anyone who was cancelled or suspended from income support for at least 6 weeks during the reference period, or who was cancelled or suspended from income support during the last 6 weeks of the reference period and who didn't return during that time.

Table A1. Subgroup definitions:

Strata	Group	Subgroup / Movement Characteristic	Definition
1	**PWD WC 15-29**	New entrants	Anyone whose first 'participation assessment' with a DSP related assessment reason: • was in the 6 month reference period and a maximum WC of 15-29 hours under the WtW rules or a WC of 15-29 under the old rules and a WC of 30+ under WtW rules OR • was NOT in the 6 month reference period but who had a second or subsequent assessment in the reference period (with a DSP related assessment reason) that had maximum WC of 15-29 hours under the WtW rules or a WC of 15-29 under the old rules and a WC of 30+ under WtW rules; AND • Had a DIFFERENT WC recorded under WtW rules than their last assessment.
2		Assessed before reference period [11]	Anyone who had a 'participation assessment' with a DSP related assessment reason any time before the 6 month reference period and has • a maximum WC of 15-29 hours under the WtW rules; OR • a maximum WC of 15-29 under the old rules, but a WC of 30+ under the WtW rules OR Anyone whose: • first 'participation assessment' with a DSP related assessment reason was before the reference period; AND • had a DSP related assessment within the reference period, but whose WC remained the same

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[11] Assessment process commenced in September 2002.

Strata	Group	Subgroup / Movement Characteristic	Definition
3		Exiters	Anyone who has a 'participation assessment' [12] with a DSP related participation reason and has: • A WC of 15-29 hours under the WtW rules [13] recorded; OR • A WC of 15-29 under the old rules and a WC of 30+ under WtW rules AND who is an exiter
4		Non-exits	Anyone with: • a 'participation assessment' recorded with a DSP related assessment reason at any time up to the end of the reference period; AND • a maximum WC of 0-14 hours under the WtW rules
5	**PWD WC 0-14**	Exiter	Anyone with: • a 'participation assessment' recorded with a DSP related assessment reason at any time up to the end of the reference period; AND • a maximum WC of 0-14 hours under the WtW rules AND • who is an exiter
6		Exiter	Anyone who: • is a primary carer of a youngest PP eligible child aged <6; AND • is an 'exiter'
7	**Principal carers YC <6** [14]	New entrants	Anyone who moved into this group during the 6 month reference period due to: • becoming primary carer of a PP eligible child aged <6 • transferring to a 'primary carer' payment type from another payment and has a youngest PP eligible child aged <6 • being granted income support as a primary carer and has a youngest PP eligible child aged <6
8		All others	All other primary carers of a youngest PP eligible child aged <6
9	**Principal carers YC 6-15**	Exiter	Anyone who: • is a primary carer of a youngest PP eligible child aged 6-15'; AND • is an 'exiter'

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[12] Most recent participation assessment will be used for all groups of PWD.

[13] WtW rules require that the recipient has 15-29 hours recorded in the '6-24 month category' in one or more of the 'nil intervention' 'vocational intervention' and 'specialist intervention' category. The WC recorded in any of these 3 categories (in the 6-24 month range) cannot exceed 24 hours.

[14] Status allocated based on last event during the 6 month reference period

Strata	Group	Subgroup / Movement Characteristic	Definition
10		New entrants	Those who move into this group during the 6 month reference period due to: • becoming primary carer of a youngest PP eligible child aged 6-15 • transferring to a 'primary carer' payment type from another payment, with a youngest PP eligible child aged 6-15 • being granted income support as a primary carer, with a youngest PP eligible child aged 6-15
11		All others	All other primary carers of a youngest PP eligible child aged 6-15
12	**Mature Age**	Exiter	Anyone who fits ALL of the following criteria: • aged 50 and over • receiving NSA or NMA during the reference period • is an 'exiter'
13		All others	All others aged 50 and over who are receiving NSA or NMA during the reference period
14	**VLTU**	Exiter	Anyone who • received NSA or YA(other) and has completed ISCA 2 before, or within, the 6 month reference period AND • is an 'exiter'
15		New entrants	Anyone who received NSA or YA(other) and has completed ISCA 2 within the 6 month reference period
16		All others	All others who received NSA or YA(other) and has completed ISCA 2 before the 6 month reference period
17	**All other working age income support recipients**	NSA and YA(O) only	Anyone who fits all of the following criteria: • received NSA or YA(O) during the 6 month reference period • does not fall into one of the above groups • is aged 15 or older
18		Other	Anyone who fits ALL of the following criteria: • received a working age income support payment during the 6 month reference period • does not fall into one of the above groups • is aged 15 or older
19		Exiter	Anyone who fits ALL of the following criteria: • received a working age income support payment during the 6 month reference period • does not fall into one of the above groups • is aged 15 or older • is an 'exiter'

Source: Research and Projects Section (2007) *Longitudinal Pathways Survey, Quick Reference Guide,* Department of Education, Employment and Workplace Relations, Canberra.

Appendix 2: Income support dynamics

Table A2.   Frequency of different income support patterns based on a balanced panel (1 stands for a period off income support and 0 stands for a period on income support)

IS group	Income support pattern	Number of obs.	Percentage out of total
Always on income support	00000	2,429	47.19%
Never on income support	11111	891	17.31%
Mostly off IS and off IS in Wave 5	00111	203	
	01111	386	
	10111	42	
	11011	32	
	11101	22	
	Total:	685	13.31%
Cyclers	00101	21	
	00110	35	
	01001	21	
	01010	10	
	01011	25	
	01100	21	
	01101	8	
	01110	40	
	10001	20	
	10010	8	
	10011	21	
	10100	7	
	10101	1	
	10110	8	
	11001	30	
	11010	4	
	Total	280	5.44%
Not classified	00001	198	
	00010	53	
	00011	162	
	00100	44	
	01000	59	
	10000	88	
	11000	64	
	11100	33	
	11110	66	
	Total	738	14.90%
Full pattern unknown (missing data)	Total	95	1.85%
Total number of obs.		5,147	100.00%