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Looking Inside the Unemployment Spell

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Abstract

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1. Introduction and Background

If a government committee were to present a labour economist with a brief to document the nature of unemployment in Australia, the economist could readily compile a voluminous set of statistical tables describing the incidence and duration of unemployment conditional upon individual, geographical, socioeconomic and other dimensions. Upon considering the report, the committee would be pleased to find that a great deal is known about unemployment. But were the committee then to press the economist as to what this implied in terms of policies or solutions, more than likely it would then find the available evidence to be seriously deficient. While a comprehensive descriptive picture of unemployment has been accumulated, the understanding of the inner workings and processes that generate that picture is far more limited.

Many characteristics are associated with a higher incidence of unemployment in Australia, as demonstrated recently by Miller and Le (1999), and thus these characteristics are often assumed by association to contribute to unemployment. There is evidence that the state of unemployment displays negative duration dependence (Stromback and Dockery, 2000). There are several intuitively appealing explanations for this, including declining motivation or job search intensity, depreciation of jobseekers' work skills and human capital, and employers' use of unemployment duration as a screening tool. However, there is very little empirical evidence as to the actual causes of duration dependence and their

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As data from multiple waves of HILDA become available, Australian researchers will be able to study the unemployment spell in detail never before possible, hopefully leading to an improved understanding of the nature and impact of unemployment. This paper makes an initial contribution in analysing the experience of unemployed Australians based on a range of variables available in the Wave 1 data, largely with a view to highlighting HILDA's potential for future research in this area. Aspects of unemployment investigated include the perceived barriers to employment, job search methods, financial circumstances, subjective measures of 'wellbeing' and the role of social support and 'social network capital' in shaping the unemployment experience. The initial findings show that the unemployed are clearly worse off than other Australians on a range of measures, however no pronounced deterioration in their circumstances with time in unemployment is observed.

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relative importance. Further, the experience with major policy innovations such as *Working Nation* and the Job Network have thus far failed to garner clear evidence on what measures do and do not work for the unemployed and the conditions under which different policy remedies should be applied (see, Dockery and Webster, 2002; and Martin, 1998).

In neo-classical economics search theory has been the main analytical framework for explaining the processes that generate the incidence and nature of unemployment. Typically, however, the parameters of search theory are imputed from the outcomes in terms of incidence and duration — the theory does not say much about how an individual's perception of the wage-offer distribution is formed, or how their offer arrival rate or search intensity are determined. Research from disciplines such as psychology suggest there is a much richer story to be told, one that includes aspects of joblessness that economists do not normally focus upon, such as the effects of unemployment on physical and mental wellbeing, perceptions of the 'self' and the stress it places on family and social interactions.

This paper uses data from the first wave of the Household, Income and Labour Dynamics in Australia (HILDA) Survey¹ to more fully explore the unemployment experience, how it changes over the duration of an unemployment spell and how this may relate to parameters of the search model. The analysis is largely exploratory and highlights a number of promising research avenues to pursue in more detail and with more rigorous methodologies as longitudinal data become available. One important limitation must be borne in mind. As the data are currently cross-sectional, the distribution of variables conditional on individuals' duration of unemployment is used to suggest that those characteristics may change over time. In each case, it may be that the variable remains constant over time for each individual, for example, the intensity of job search, but that those with lower intensities simply have longer average durations. It will not be possible to distinguish between the two explanations until observations are available for the same individuals at different durations.

The next section provides a snapshot of the sample of unemployed persons identified by HILDA, along with comparisons between the unemployed and those in the different labour market states on a range of measures including wellbeing, financial stress and access to social support. Section 3 concentrates on differences within the sample of unemployed with respect to measures that the economic search literature and the psychological literature suggest may be important in shaping the unemployment experience or that may contribute to duration dependence. The final section offers some tentative conclusions (and some interesting non-conclusions), policy implications and potential avenues for further research.

2. Unemployment – A Descriptive Overview

To provide a background context to the situation faced by unemployed Australians, it seems useful to first present comparisons between the

¹ Details on the survey and sampling frame can be found in the HILDA Discussion Paper and HILDA Technical Paper series published jointly by the Melbourne Institute and the Department of Family and Community Services. See <http://www.melbourneinstitute.com/hilda/>.

unemployed and persons in the other major labour market states (employed and not-in-the-labour force). Table 1 summarises the labour force status of the individuals. In total, 65 per cent of working-age individuals were participating in the labour force at the time of the interviews, leaving 35 per cent who were not in the labour force (NILF). Of those participating, 6.7 per cent were unemployed. The fieldwork for the HILDA survey was carried out between August of 2001 and January of 2002. The trend estimates from the Australian Bureau of Statistics' Labour Force Survey over this period show an average participation rate of 63.7 per cent (72.4 per cent for males and 55.3 per cent for females) and an average unemployment rate of 6.8 per cent (7.0 per cent for males and 6.5 per cent for females)². Hence, even without applying the weights provided in HILDA, there is a strong concordance with the official statistics.

Table 1 Labour Force Status by Gender (Per cent), HILDA

	<i>Female</i>	<i>Male</i>	<i>Persons</i>
Employed FT	27.4	57.2	41.5
Employed PT	26.9	11.4	19.5
Employed Total	54.2	68.6	61.0
Unemployed LFFT	1.8	4.3	3.0
Unemployed LFPT	1.7	1.0	1.4
Unemployed Total	3.5	5.3	4.4
NILF - marginally attached	10.3	5.1	7.8
NILF - not marginally attached	32.0	21.0	26.8
NILF Total	42.2	26.1	34.6
Total	100.0	100.0	100.0
Unemployment Rate	6.1	7.2	6.7
Participation Rate	57.8	73.9	65.4
n (individuals)	7347	6622	13969

A total of 609 persons are recorded as being unemployed at the time of their interview. Of these, 11.5 per cent had never been in paid work. Table 2 shows the distribution of the elapsed time spent in unemployment for the current spells. Almost one-quarter had been unemployed for a year or more - the standard definition of long-term unemployment - and 15 per cent had been unemployed for two years or longer.

Table 2 Duration of Unemployment for Those Currently Unemployed, HILDA

	<i>Frequency</i>	<i>Per cent</i>	<i>Cumulative Per cent</i>
Less than 4 weeks	107	18.3	18.3
4 weeks but less than 13 weeks	157	26.8	45.1
13 weeks but less than 52 weeks	179	30.5	75.6
1 year but less than 2 years	56	9.6	85.2
2 years or more	87	14.8	100.0
Total	586	100.0	

Notes: missing=23 (non-response or could not be ascertained with certainty)

²Based upon simple averages of the August 2001 - January 2002 monthly trend estimates from the ABS Catalogue 6202.0.

Table 3 presents the barriers most commonly nominated by the unemployed as the 'main difficulty' they had in getting a job. Twelve per cent indicated that they would have no difficulty. No one barrier is prominent, with even the most commonly cited difficulty — not having the required education, training or skills — being nominated by only 12.5 per cent of the unemployed. Amalgamating the options into broader categories, 37.3 per cent of individuals cited barriers relating to how their own 'human capital' attributes impact upon their employability, such as a lack of education, skills or experience, their age or being overqualified. Factors relating to external labour market demand and supply conditions — no jobs at all, no jobs in line of work or too many applicants — were nominated by 29.6 per cent of respondents. Just under 20 per cent cited personal circumstances such as transport problems, childcare or other family responsibilities. Note that 'own ill health or disability' is included here (6.4 per cent), but could arguably be placed instead into the human capital category.

Table 3 Main Difficulty in Getting a Job – Unemployed Persons

<i>Description</i>	<i>Per cent</i>
Did not have required education, training or skills	12.5
No difficulty	12.0
Employers thought you were too old/young	11.3
There were just no jobs at all	11.3
Do not have enough work experience	10.5
Too many applicants for the available jobs	9.9
No jobs in line of work	8.4
Had transport problems/it was too far to travel	7.2
Own ill health or disability	6.4
Others	10.5

It is commonly argued that the true extent of unemployment and its impact is partially hidden because the most disadvantaged and entrenched jobseekers simply give up looking for work. As they no longer meet the criteria of having actively sought work, they are then no longer counted among the unemployed. To assess this concern, outcomes for 'discouraged jobseekers' are also investigated. Discouraged jobseekers are defined as people who are not in the labour force but who indicated that they wanted to work³ and the main reason given for not looking for work in the previous four weeks was either that they were too young/too old; lacked the necessary experience, training or qualifications; difficulties with language, ethnic background, reading or writing; or there were no jobs available (at all, in line of work, locality, etc). There are 126 such discouraged jobseekers in the sample.

Mental and Physical Health and Wellbeing

Previous studies have shown time in unemployment to be associated with deteriorating mental and physical health, and that this may in turn reduce the chance of obtaining a job. See Stewart (2001) and Waters and Moore (2002) for recent contributions. Flatau, Galea and Petridis (2000) use Australian data from the 1995 National Health Survey and the 1997 National Survey of Mental Health and Wellbeing of Adults to find that the

³This includes those who indicated in the survey that they wanted to work or 'maybe' wanted to work.

unemployed do experience worse mental health and wellbeing than those in full-time employment, and this includes an increased prevalence of certain mental disorders. HILDA provides a range of variables relating to mental and physical 'wellbeing', including questions common to the instruments used in the 1997 National Health Survey.⁴ Individuals were asked to indicate how satisfied they are with a range of aspects of their life using a scale ranging from 0 (totally dissatisfied) to 10 (totally satisfied). The mean responses by labour force status are presented in table 4, and the results are much as one might expect. On average unemployed persons indicated lower levels of satisfaction when compared to employed persons on all aspects listed with the exception of 'the amount of free time you have'.⁵ Dissatisfaction amongst the unemployed is most evident with respect to their employment opportunities and financial situation. The means for the unemployed are also lower than for those not participating in the labour force on all aspects with the exception of 'your health'. Discouraged workers are similarly dissatisfied with employment opportunities and their financial situations, but actually rank quite highly, along with others not in the labour force, with respect to the home and neighbourhood in which they live and the amount of free time they have. Note that discouraged workers and 'others not in the labour force' are defined in the table as mutually exclusive subsets of persons not in the labour force.

When it comes to overall satisfaction with one's life, the employed, discouraged workers and those not-in-the-labour force all have similar mean ratings of 7.9 or 8.0. The unemployed, however, display markedly lower levels of satisfaction, with a mean rating of 7.3. For the unemployed it is also evident that it is the levels of satisfaction with their employment opportunities and financial situations that deteriorate most markedly with duration of unemployment.

Table 4 Level of Satisfaction with Various Life Aspects: Means by Labour Force Status (0=totally dissatisfied, 10=totally satisfied)

	<i>Employed</i>	<i>Unemployed</i>	<i>Discouraged Jobseekers</i>	<i>Others not in Labour Force</i>
The home in which you live	7.9	7.5	8.3	8.4
Your employment opportunities	7.3	4.2	3.0	5.2
Your financial situation	6.3	3.8	5.0	6.1
How safe you feel	8.0	7.7	7.8	7.8
Feeling part of your local community	6.7	6.0	6.7	6.8
Your health	7.7	7.5	7.5	6.8
The neighbourhood in which you live	8.0	7.4	8.2	8.1
The amount of free time you have	6.0	7.1	8.1	7.7
How satisfied are you with your life	7.9	7.3	7.9	8.1

Notes: Number of observations varies from 8331-8525 for employed, 602-609 unemployed, 100-126 discouraged jobseekers and 2280-4702 for those otherwise not in the labour force according to frequency of non-applicable/non-response.

⁴ The analysis of 'happiness' or subjective wellbeing is receiving growing attention in economics. See Frey and Stutzer (2002) for a recent review and Clark and Oswald (1994) for a paper relating specifically to unemployment and happiness.

⁵ All differences between the means for the employed and unemployed are highly significant according to the standard t-tests; and the differences in the distributions of the employed and unemployed across the ordinal scales are highly significant according to the appropriate Mantel-Haenszel chi-square statistic.

A range of other indicators of wellbeing is available. For simplicity, each indicator discussed here is recoded to ensure a higher number represents a more favourable situation. On a five-point scale ranging from poor current health to excellent current health, the mean response for unemployed persons was 3.63 – somewhere between good and very good. This is slightly lower than the mean for employed persons (3.77), and the differences in the pattern of responses over the scale is highly significant in statistical terms. Discouraged jobseekers (3.45) and other persons not in the labour force (3.13) reported lower current health status.⁶ Close to 40 per cent of discouraged jobseekers and others NILF reported having a long-term health condition or disability, compared to 22 per cent and 14 per cent for unemployed and employed persons, respectively.

HILDA includes the set of questions that comprise the Medical Outcomes Study 36-Item Short-Form Health Survey (the 'SF-36'), a well-tested and commonly applied instrument to generate indices of aspects of physical and mental health from self-reported responses. The responses are transformed to standardised scales ranging from 0-100 for eight different aspects of physical and emotional health. The means for two of these scales, vitality and mental health, are reported in table 5 conditional upon labour force status.⁷ The vitality scale measures perceived personal energy levels (see, Daly 1997) while the components of the mental health index include a series of questions relating to how often the individual feels emotions relating to being nervous, calm and depressed or happy.

There is no statistically significant difference between the means for the unemployed and the employed on the vitality index, but the unemployed score markedly lower on the mental health index. Looking at the individual constructs of the vitality index, the unemployed report on average feeling 'tired' and 'worn out' less often than the employed. It seems those in work may get weary, but are emotionally happier than the unemployed. Those not in the labour force score particularly low on the vitality scale. Again the generally positive results for discouraged jobseekers seem quite remarkable.

Table 5 Indicators of Vitality and Mental Health by Labour Force Status; Means for Indices of 0 to 100

<i>Variable</i>	<i>Employed</i>	<i>Unemployed</i>	<i>Discouraged Jobseekers</i>	<i>Others not in Labour Force</i>
SF-36 Vitality Index	62.4	62.2	62.8	57.1
SF-36 Mental Health Index	75.0	68.4	72.8	72.0

Notes: Number of observations 7961 employed, 550 unemployed, 119 discouraged jobseekers and varies from 4300-4308 NILF.

⁶ For the overall measure of health status I concentrate on that derived from the person questionnaire rather than the self-completion questionnaire due to the lower incidence of missing data. Just over 900 self-completion questionnaires were either not returned or could not be matched to the individual.

⁷ These correspond closely to population estimates for Australia from the 1995 National Health Survey (ABS 1997), although the distinction between discouraged workers and others NILF was not made.

Financial Stress

As would be expected, unemployed persons reported living in less prosperous families and greater incidences of personal financial difficulties. It is known that persons from lower socio-economic backgrounds are already more likely to experience unemployment, but it is also likely that unemployment will compound or entrench poverty. In respect to their families' current needs and financial responsibilities, 70 per cent of employed persons indicated that their family was reasonably comfortable, very comfortable or prosperous. This compares to 44 per cent for the unemployed. The greater financial stress experienced by the unemployed is starkly apparent in table 6, which shows the percentage of individuals who reported certain events occurring due to a shortage of money between January 2001 and the interview. The greater financial difficulty faced by the unemployed relative to each other labour force group holds across all seven measures. Particularly alarming is that 17.1 per cent of unemployed persons responding to the self-completion questionnaire reported going without meals at some time due to a shortage of money.

Table 6 Proportion Reporting Incidences of Financial Stress by Labour Force Status (Per cent)

<i>Variable</i>	<i>Employed</i>	<i>Unemployed</i>	<i>Discouraged Jobseekers</i>	<i>Others not in Labour Force</i>
Could not pay bills on time	18.3	37.3	19.5	18.5
Could not pay mortgage/ rent on time	8.9	16.5	14.8	8.2
Pawned or sold something	5.4	20.1	8.5	7.1
Went without meals	3.7	17.1	3.4	5.0
Was unable to heat home	2.6	10.7	8.5	5.0
Asked for financial help from friends or family	16.2	37.9	14.4	15.2
Asked for help from welfare/ community organisations	3.4	22.4	6.7	6.8

Social Interaction and Support

A series of questions in the self-completion questionnaire related to individuals' levels of social interaction and the degree of social support available from friends and family. Thirty-five per cent of unemployed persons reported being active members of a sporting, hobby or community-based club or association. Given the extra time available to unemployed persons, one might expect this to be higher than for employed workers. In fact 40 per cent of employed workers were active members of such clubs. Having greater free time does seem to increase club or association involvement for discouraged workers (48 per cent), while others not in the labour force have a similar rate of involvement as employed persons (39 per cent). However, unemployed persons do appear to get together more often with friends or relatives (other than those they live with) - 46 per cent of the unemployed reported doing so several times a week or more, compared to 30 per cent of employed persons and around 35 per cent of discouraged workers and others NILF.

Table 7 reveals that the unemployed generally feel that they have a lower level of social support available to them. On the other hand, the unemployed may be in greater need of social support and the results indicative of a perceived deficiency in social support relative to their needs, as opposed to an actual lower level of support. On each measure in the table, respondents were asked the degree to which they agree or disagree with the statement on a 7 point scale. Again, each has been coded such that a higher number indicates a more positive outcome. On nine of the ten measures the unemployed fare worse than the employed, particularly those relating to the availability of people to turn to when help is required and on feeling lonely.⁸ While unemployed persons were more likely than people in jobs to agree with the statement 'I seem to have a lot of friends', the difference is not statistically significant. The unemployed also fare significantly worse than those NILF on most measures.

Table 7 Indicators of Social Support by Labour Force Status^a

<i>Variable</i>	<i>Employed</i>	<i>Unemployed</i>	<i>Discouraged Jobseekers</i>	<i>Others not in Labour Force</i>
People don't visit me as often as I would like.	4.49	4.25	4.43	4.46
I often need help from other people but can't get it.	5.69	5.08	5.49	5.47
I seem to have a lot of friends	4.64	4.67	4.46	4.61
I don't have anyone that I can confide in.	5.64	5.12	5.27	5.38
I have no one to lean on in times of trouble.	5.76	5.24	5.32	5.44
There is someone who can always cheer me up when I'm down.	5.21	5.01	5.20	5.15
I often feel lonely.	5.31	4.77	5.02	5.08
I enjoy the time I spend with the people who are important to me.	6.34	6.18	6.13	6.29
When something's on my mind, just talking with people I know can make me feel better.	5.59	5.47	5.74	5.67
When I need someone to help me out, I can usually find someone.	5.60	5.23	5.22	5.60

Notes: a. Original scales range from 1 (strongly disagree) to 7 (strongly agree). Each has been recoded such that a higher number is a more positive response. Number of observations varies from 7921-7966 for employed, 541-548 unemployed, 114-118 discouraged jobseekers and 4205-4302 NILF.

⁸ In each case the difference in the means between employed and unemployed persons is statistically significant at the one per cent or five per cent level, with the exception of 'When something's on my mind, just talking ...' (weakly significant), according to standard t-tests. Mantel-Haenszel chi-square statistics show a highly significant and worse pattern of responses to all statements for the unemployed relative to the employed except for that same statement (weakly significant) and 'I seem to have a lot of friends' (insignificant).

3. The Experience During the Unemployment Spell

This section focuses on the experiences among the unemployed and over the duration of the unemployment spell, rather than in relation to persons in other labour market states. Part of the intent is to identify factors that may contribute to negative duration dependence and a major strength of the HILDA data is the availability of variables to capture effects that are posited in the psychological literature to be important in determining how time in unemployment impacts upon different individuals. Thus variables relating to emotional wellbeing and financial and social support, not normally used in economic analyses of unemployment, are investigated in addition to parameters of the neo-classical job search model.⁹

To stress again, it is not possible here to establish whether characteristics are truly time variant. If job search intensity, for example, is observed in the cross-section data to decline with unemployment duration this may be because individuals' job search intensity does actually decline with time in unemployment. Observationally equivalent is the hypothesis that job search intensity is time-invariant for each individual, but those with lower job search intensity have a lower escape rate from unemployment. While it is difficult to prove empirically, the weight of evidence does support the presence of negative duration dependency in unemployment (for an Australian example see, Stromback and Dockery, 2000). For negative duration dependency to be explained by the search model, at least one parameter determining the exit rate must be duration dependent. Thus, while observing a cross-sectional relationship between a variable and unemployment duration is not *sufficient* to establish a duration effect, it can be considered a *necessary* condition. The presence or absence of relationships between relevant variables and unemployment duration in Wave 1 of HILDA may help to identify potential avenues for research as further waves of the data become available and the longitudinal nature of the data can be exploited.

There is an extensive literature relating to the psychological effects of unemployment and the discussion below draws principally on the review by Feather (1990). A number of studies attempt to identify psychological stages that a person passes through upon becoming unemployed, such as an initial shock, followed by periods of optimism, pessimism and fatalism. Other studies seek to identify the particular characteristics of the unemployment experience that impact upon an individual's psychological wellbeing. For example, Jahoda's Functional Approach posits that participation in paid employment generates a range of functions in addition to income that are important for psychological wellbeing, such as a time-structure to the day, social interaction, self-identity and purpose (Jahoda, 1982). An important observation to be drawn from the literature is that the effect of unemployment is very different for different individuals.

Some of the potential mediating or compounding factors include the availability of financial resources and the ability to legitimise unemployment, such as by those close to retirement age or who take on

⁹ See, for example, Devine and Kiefer (1991), for a thorough exposition of the model.

child-minding activities (Harrison, 1976), the level of social support available and the individual's attitudes towards work (work ethic) and their role as a 'breadwinner'. Warr (1987) notes that the impact of unemployment on middle aged men is much worse than for youth because older men have greater financial responsibilities and a sense of their role as provider, and because work plays a far more important part in their concept of self. The ability to legitimise unemployment may explain why many of the results for discouraged workers reported above are not as severe as for unemployed workers. Many discouraged workers may have ceased looking because they have alternative activities or roles. From these studies, too, there are grounds to expect that involvement in mutual obligation activities may act as a mediating factor.

Also of value is Feather's discussion of the wider theoretical frameworks that enable a conceptualisation of how people respond to unemployment. Three in particular stand-out as having potential application in the analysis of unemployment based on HILDA data (Feather, 1990, chapter 4):

- *Attribution theory* predicts that life events will have different impacts upon a person depending upon what they perceive to be the cause of the event (their attributions). For example, a person will experience feelings of pride and greater self-esteem following a successful outcome if they can attribute that outcome to their own qualities or efforts, rather than if they perceive the outcome to have come about by chance. Similarly, a person may feel differently about becoming unemployed in times of a recession when many others are unemployed and their situation can be attributed to external factors beyond their control. These people may feel anger or frustration, while someone who attributed their unemployment to their own personal characteristics or efforts may feel a loss of self-esteem.
- *Helplessness theory* is similar to attribution theory. Helplessness occurs when an individual perceives outcomes to be unrelated to responses. Personal helplessness occurs when the perception is that outcomes cannot be effected by anything the individual does, while others do have the ability to influence outcomes. Universal or global helplessness occurs when the expectation is that outcomes cannot be changed no matter what anybody does. Personal helplessness is thought to lead to a loss of self-esteem, while stable and global helplessness may lead to a generalisation of the feeling of helplessness across situations.
- *Self-efficacy theory* makes an important distinction between self-efficacy and outcome expectations. If I believe strongly that a set of actions, X, will be adequate to bring about a desired result, Y, I have a strong outcome expectation. However, if I am doubtful of my ability to execute that set of necessary actions, I have low self-efficacy. The influence of self-efficacy on the individual is seen to depend upon whether the individual perceives the outcome environment to be rewarding. In the context of unemployment, a person who has high confidence in their ability to find a job and believes doing so would provide large benefits will persist in job search, although repeated

failures may lead to a revision of their perception of their self-efficacy. On the other hand, a person who has a low perception of self-efficacy while believing a job would offer high benefits may experience self-devaluation. Apathy and resignation occurs when there is a combination of perceived low self-efficacy and perceived low rewards (see, Bandura, 1982).

These and other theories suggest that the impact of unemployment on psychological wellbeing is influenced by the unemployed person's perceptions of the reason they became unemployed, the main causes of their ongoing unemployment and their likelihood of finding a job in the near future. It does seem that the unemployed may revise their perceptions of their main difficulty in finding work as the duration of their spell progresses. The large proportion of the unemployed perceiving themselves to face no difficulty at all or their main difficulty to relate to external labour market conditions gives way to the perception that their own skills and experience are the main barrier (see, table 8). Note, however, that the same pattern can also be explained if those who perceive their human capital attributes to be the main difficulty are the ones who have the lowest escape rate from unemployment. Most obviously the decline in the proportion of those who perceive themselves to have no difficulties at all with duration is likely to be because these people do indeed exit after only short spells. Again, only with further waves of HILDA will it be possible to distinguish between these influences.

Table 8 Nominated Main Difficulty in Finding Work by Duration: Per cent of Unemployed

	<i>Own Human Capital Attributes</i>	<i>Labour Market Conditions</i>	<i>Other Personal Circumstances</i>	<i>No Difficulties At All</i>
Less than 4 weeks	18.7	33.6	19.6	26.2
4 weeks but less than 13 weeks	33.8	30.6	17.2	15.9
13 weeks but less than 52 weeks	40.8	30.7	17.3	8.9
1 year but less than 2 years	39.3	25.0	25.0	5.4
2 years or more	54.0	24.1	19.5	1.1
All unemployed	37.3	29.6	18.9	12.0

Table 5 revealed that the unemployed fare worse than those in employment on a standardised measure of mental wellbeing, but similar in terms of vitality. Table 9 shows means for the SF-36 indices by duration of unemployment. It can be seen that there is no clear association between either measure and duration of unemployment. Standard t-tests confirm that there are no significant differences between the means for the recently unemployed and those in other duration categories. Flatau, *et al.*, likewise fail to identify a clear linear trend with duration using these measures of mental wellbeing, but rather an oscillation between 'poor and poorer outcomes' relative to the employed (2000, p. 177).

Table 9 Vitality and Mental Health: Means of SF-36 Indices by Duration of Unemployment

	<i>Vitality</i>	<i>Mental Health</i>
Less than 4 weeks	61.5	70.2
4 weeks but less than 13 weeks	62.2	67.5
13 weeks but less than 52 weeks	61.9	67.4
1 year but less than 2 years	60.3	66.8
2 years or more	63.4	69.8
All unemployed	62.2	68.4

To develop further constructs in investigating the unemployment experience, factor analyses are also carried out on the set of measures of social support and financial stress.¹⁰ Two factors are identified for social support. The first loads on the questionnaire statements relating to feeling lonely and having no one to turn to in time of need. The second relates to enjoying or utilising the available social support – feeling better from just talking to people, enjoying the time spent with people, having people there and to cheer you up when needed. Being married is an important factor in social support – married persons score significantly higher means for both factors, but the difference is most pronounced for the factor relating to close social support (or, inversely, loneliness). For financial stress only one factor contributes much to explaining the variance and relates to missing payments for bills, mortgages etc. However, a second factor is retained which loads heavily on indicators which one would relate to more dire financial emergencies of going without meals or heating, pawning goods or needing help from welfare organisations.

The factor scores generated are standardised to have a mean of zero and a standard deviation of one for the full sample of individuals across all labour market states. A clear trend of increasing financial stress seems apparent (table 10). However, for each of these factor scores except the enjoyment/ utilisation of social support for persons unemployed for two years or more, standard t-tests reject the null hypotheses of a significant difference in the means when compared to those recently unemployed.

Table 10 Social Support and Financial Stress Factor Scores: Means by Duration of Unemployment

	<i>Close Social Support</i>	<i>Enjoy/utilises Social Support</i>	<i>Difficulty Meeting Expenses</i>	<i>Financial Emergencies</i>
Less than 4 weeks	-0.262	-0.073	0.401	0.632
4 weeks but less than 13 weeks	-0.218	-0.143	0.424	0.415
13 weeks but less than 52 weeks	-0.311	-0.027	0.578	0.944
1 year but less than 2 years	-0.131	-0.123	0.636	1.009
2 years or more	-0.484	-0.462*	0.619	1.062
All unemployed	-0.291	-0.146	0.534	0.801

Notes: * significantly different from the figure for 0-4 weeks at the 5 per cent level.

¹⁰ More specifically, the principal factor method with promax rotation was used with SAS software. See, Kline, 1994 for a discussion of factor analysis

Simple linear regression models are estimated to isolate factors that impact upon unemployed individuals' levels of vitality and mental health, and a sample of the results presented in table 11. These models should be considered exploratory and are included largely to highlight HILDA's rich potential for multivariate analyses. More robust conclusions will be possible once techniques exploiting the longitudinal nature of the data can be applied, such as fixed effects models, models specified in first differences of the dependent and independent variables and the use of instrumental variables or lags to control for endogeneity.

Two models of mental health are reported, the second including a variable on the individual's wage rate in their last job which leads to a drop in the number of observations available for estimation. Males score higher on both the vitality and mental health indices than females, consistent with previous Australian estimates using the SF-36 (ABS, 1997). No significant relationship between marital status or age is identified for vitality. However, when the gender and marital status terms are interacted, it is married females who are most depressed, and married men who have the strongest mental health among the unemployed. This differential impact of marriage by gender has also been observed in previous research (see, for example, Mowbray, Nicholson and Bellamy, 2003, p.105). Persons aged 25-34 appear to have the lowest mental health scores.

Of the factor scores discussed above, the social support factor indicating the presence of close friends to offer support has the largest impact, and has a positive association with both vitality and mental health. The factor relating to the occurrence of financial emergencies is associated with lower levels of wellbeing. Attitudes also matter – the more strongly one indicated that 'It is important to have a paying job in order to be happy', the more depressed they were in unemployment.

Surprisingly, the multivariate results confirm the null-finding above, with no real evidence that an individual's level of vitality or mental health declines with time in unemployment. Duration was insignificant in all models whether entered as a continuous variable (in weeks) or as dummy variables (short, medium and long-term unemployed). The broad categories relating to the perceived main barrier to finding work (see discussion of table 3) were tested and found not to be significant. Current involvement in a mutual obligation activity does not appear to have any significant effect on mental wellbeing, while there is some evidence that being in intensive assistance is associated with lower levels of mental health. This latter finding holds irrespective of the inclusion of variables capturing duration but may still be a result of other factors associated with those who find themselves in long term unemployment and intensive assistance and which are not adequately controlled for. Jahoda's Functional Approach would suggest that unemployed persons are less happy the higher their previous wage level. There is only weak evidence of such an effect. A further surprising result is that unemployment appears to have a lesser impact on mental wellbeing for those who were involuntarily put off from their last job, such as through retrenchment or dismissal.

Table 11 Factors Affecting SF-36 Vitality and Mental Health Indices for Unemployed Persons: OLS Estimates

Variable	SF-36 Vitality Index		SF-36 Mental Health Index			
	Estimate	Pr > t	Estimate	Pr > t	Estimate	Pr > t
Intercept	64.9474	0.000	76.0922	0.000	79.3966	0.000
Male	6.0205	0.000				
Married male			6.0563	0.008	4.4173	0.095
Single male			4.0474	0.040	3.1671	0.188
Married woman			-4.4168	0.056	-7.9450	0.004
Single woman			—		—	
Aged 15-19	2.3484	0.356	-1.2837	0.599	-4.1064	0.177
Aged 20-24	3.6954	0.183	-2.6968	0.284	-3.7759	0.183
Aged 25-34	-1.5027	0.553	-3.4979	0.121	-4.2500	0.100
Aged 35-44	—		—		—	
Aged 45-54	-3.4168	0.208	-0.2920	0.903	-0.6724	0.810
Aged 55 plus	-0.8832	0.797	0.4110	0.893	1.0128	0.769
In Intensive Assistance			-2.8600	0.106	-3.9017	0.061
Index of education and occupation of cd (decile)	-0.6078	0.034				
Constructed factors ^a						
- has close social support	4.4961	0.000	7.0935	0.000	7.6527	0.000
- enjoys support	4.3070	0.000	2.9835	0.000	2.9376	0.001
- can't pay bills	-2.7684	0.000	-1.8498	0.002	-2.2062	0.001
It is important to have job ^b			-0.9552	0.013	-0.8240	0.066
Left last job involuntarily			3.3961	0.034	2.8057	0.122
Wage in last job					-0.1152	0.123
Observations	499		495		372	
Degrees of freedom	10		14		15	
R-squared	0.2471		0.3561		0.3744	
Adjusted R-sq.	0.2317		0.3374		0.3481	
F statistic	16.05		19		14.24	
p(>f)	0.000		0.000		0.000	

Notes: a. Factors scores have a mean of zero and standard deviation of 1; b. Full statement was 'It is important to have a paying job in order to be happy', with responses ranging from 1 (strongly disagree) to 7 (strongly agree).

The important initial findings with respect to the effect of unemployment on mental wellbeing are that having close social support matters, while time in unemployment does not appear to have a strong depressive effect. This latter and unexpected result certainly requires more attention as later waves of HILDA become available.¹¹ The literature suggests that a factor such as social support may impact upon the state of wellbeing directly, but also on the relationship between time in unemployment and mental wellbeing. To investigate this, a series of correlation coefficients are calculated between the mental health score and unemployment duration in weeks. This is close to zero and insignificant for the full sample, and for a range of subsets of the sample tested, including subsets defined by age, gender, marital status and scores on the social support and financial stress factors.

¹¹ Further exploration can be found in Dockery (2003).

Job Search Experience

By definition those classed as unemployed must have actively looked for work in the previous four weeks. Table 12 shows the steps taken by those persons to look for work in the past four weeks, ordered by their reported incidence. Three quarters of the unemployed indicated that they had contacted an employer in person for work, and this was the most common method used. Typically, jobseekers reported using three of these methods of job search in the past four weeks. Only around 10 per cent reported using 6 or more different methods.

Table 12 Methods of Job Search Used: Per Cent of Unemployed Persons

Had done the following in the last 4 weeks:	Per cent
Written, phoned or applied in person to an employer	75.0
Answered an advertisement for a job	51.9
Been registered with Centrelink as a jobseeker	50.4
Checked or registered with an employment agency	45.5
Checked factory noticeboards or used the touchscreens at Centrelink offices	41.5
Looked in newspapers, but did not actually answer an advertisement for a job	28.6
Contacted friends/relatives	20.2
Other	7.9

Individuals who were either looking for work or wanting to work were asked what they saw their chances were of finding a suitable job in the coming 12 months, expressed as a per cent. Almost half of the 'discouraged jobseekers' sample described above rated themselves as having no chance of finding a job. The unemployed are far more optimistic, with almost half giving themselves an even chance. On average (taking the mean of the responses) the unemployed rated themselves as having a 60 per cent chance of finding work in the coming year, while discouraged jobseekers gave themselves a chance of only 20 per cent. The long-term unemployed are also more pessimistic. The means for those who had been unemployed between 1 and 2 years was 46 per cent, dropping to 39 per cent for those who had been out of work for 2 years or longer (table 13).

Table 13 Mean Offer Rate and Perceived Chance of Finding Suitable Work: Unemployed Persons by Duration

	Job Offer Rate (Per Year in Unemployment)	Chance of Finding Suitable Work in Next 12 Months (Per cent)
Less than 4 weeks	14.3	65.5
4 weeks but less than 13 weeks	3.9*	69.9
13 weeks but less than 52 weeks	1.1*	63.4
1 year but less than 2 years	0.5*	45.8*
2 years or more	0.2*	38.7*
All unemployed	4.5	59.8

Notes: * significantly different from the figure for 0-4 weeks at the 5 per cent level.

Contrary to a literal interpretation of the job search model, the unemployed report receiving very few job offers. Almost three-quarters of those unemployed at the time of the survey reported they had received no job offers in their current spell of unemployment. Seven per cent report having received three or more offers. Many will have ignored job vacancies that they were not interested in because these were not in their vocational field or because the offered wage was too low. Of course it is pointless to apply for a job one is not going to accept. In the sense that the unemployed may have been offered (but rejected) such jobs had they applied, the arrival rate and rejection rate in the spirit of the job search model will be much higher than the reported number of offers in HILDA. Also, accepted job offers are not observed due to the fact that the sample is of current spells of unemployment and not completed spells. With these qualifications, an 'implied' offer arrival rate based upon the reported number of offers and duration of unemployment can be calculated and is also reported in table 13. The figure has a mean of 4.5 offers per year in unemployment for the sample overall, and it can be seen that this also declines with duration of unemployment.

Dockery and Strathdee (2002) investigated the factors that influenced the methods of job search used by young jobseekers. An initial objective of that analysis was to identify the role of 'social network capital' — networks of friends and family and regional neighbourhood effects — following work by Granovetter (1995) and Rosenbaum (2001). However, the poor constructs available in the data for these factors contributed to inconclusive results. Use of the Commonwealth Employment Service was found to be associated with 'inferior' labour market characteristics and in turn tended to lead to poorer employment outcomes. Contacting friends or relatives was found to be a highly successful means of finding work, as Heath (1999) found using data from the Australian Youth Survey, but it often lead to part-time and otherwise lower quality jobs.

HILDA offers potentially robust measures of social network capital, including the indices of 'socio-economic disadvantage', 'economic resources' and 'education and occupation' for each individual's collection district. Table 14 presents the results of simple logit models of the probability that an unemployed person used selected job search methods in the past four weeks. The methods modelled are writing, phoning or applying in person to an employer; answering an advertisement for a job; being registered with Centrelink; and contacting friends or relatives. Table 15 reports the results of a Poisson regression model of the count of different methods persons reported using in the past four weeks, other than being registered with Centrelink. As we are interested in the effect of being registered with Centrelink on job search activity, Centrelink registration is tested among the explanatory variables in explaining utilisation of the other three job search methods, and excluded in the summation to generate the dependent variable for the Poisson regression. Including Centrelink registration in the summation of the dependent variable would, by construction, generate a positive relationship between registration and the number of job search methods used. On a note of caution, these are less

than perfect measures of job search intensity, since a person may have searched exhaustively but have used only one particular method.

Although the analysis must again be considered exploratory rather than definitive, some interesting initial results emerge. In terms of the public employment services offered to the unemployed, registration with Centrelink does appear to be associated with higher job search effort. Persons reporting that they had been a registered jobseeker during the past four weeks were more likely to have made an application to an employer and to have answered an advertisement. Registration also has a very large impact on the number of different job search methods reported. There is also a positive effect on the number of job search methods tried from being in Intensive Assistance under the Job Network, which should be an additional effect to initial registration with Centrelink. However, being in Intensive Assistance was not found to have a significant impact on the utilisation of the individual methods selected. Currently undertaking a mutual obligation activity was also tested and was insignificant in all models. This is not necessarily a negative result, since one potential drawback of mutual obligation activities is that participation reduces the individual's capacity for search activities.¹² As in previous research, it is clear that Centrelink is a job search strategy utilised mainly by those who are disadvantaged in the labour market.

Evidence of an association between duration and reduced job search efforts offers one possible source of negative duration dependence. Each of the other three individual job search methods display declining utilisation with duration of unemployment. For the Poisson regression of the number of methods used a lower count is identified for the long term unemployed (unemployed one year or more). In addition to this duration effect, there is possible evidence that job search intensity may act as a channel in generating poverty traps. Utilisation of all four of the individual methods is higher for persons from areas of socio-economic advantage and the number of methods used increases with their area's decile of education and occupation. Our summary factor of the occurrence of financial emergencies indicates that financial stress promotes Centrelink registration, but not other job search methods. In the model for whether or not the individual had answered an advertisement, the response from a direct question asking the household's level of prosperity proved the better instrument, the result showing persons from less prosperous households were more likely to respond to an advertised vacancy. This variable is negatively related to the number of different search methods used.

¹² 16 per cent of the unemployed reported they were currently undertaking mutual obligation activities.

Table 14 Factors Affecting Use of Job Search Methods of Unemployed Persons — Logit Model Results

<i>Independent Variable</i>	<i>Applied in Person to an Employer</i>	<i>Answered an Advertisement</i>	<i>Been Registered with Centrelink</i>	<i>Contacted Friends or Relatives</i>
Intercept	2.3006 ***	-1.559 **	-1.935 ***	-1.4429 *
Male	0.4851 **	0.205	0.863 ***	0.5121 **
Aged 15-19	-0.0230	-0.026	-0.417	-0.3660
Aged 20-24	-0.6031	-0.603 *	0.317	-0.8120 *
Aged 25-34	-0.5928 *	0.138	0.309	-0.3709
Aged 35-44	—	—	—	—
Aged 45-54	-0.2555	0.156	0.101	0.2191
Aged 55 plus	0.3300	-0.952 **	0.276	-0.1683
Married	0.0970	0.454 **	0.044	-0.1301
Qualifications:				
- did not finish school	—	—	—	—
- low qualifications		0.662 ***	0.528 **	0.1758
- medium qualifications		0.471 *	0.157	0.5599 *
- high qualifications		0.564 *	0.567	0.2851
Reg. with Centrelink	0.5846 **	0.582 ***	—	—
Unemp duration (1-5)*	-0.0785	-0.205 **	0.258 ***	-0.2206 **
Indices for collection district (deciles) ^b				
- socio-econ disadvtge	0.0801 *	0.093 **	0.215 **	0.2133 ***
- educ. & occupation			-0.221 ***	
- economic resources			-0.124 *	-0.1150 *
Main difficult finding work				
- none	-0.3638	-0.400	0.162	-0.7539 *
- personal circumstances	—	—	—	—
- human capital	-0.4219	0.565 **	1.240 ***	-0.3317
- external labour market	0.1667	0.321	1.042 ***	-0.3887
Vitality index (0-100)	-0.0224 ***			0.0202 **
Mental hlth index (0-100)				-0.0251 ***
Constructed Factors				
- has close soc support	0.1797 *			
- enjoys support	0.2191 *			
- Financial emergencies			0.169 ***	
Has a lot of friends				0.1247 *
Financial prosperity (1-6) ^c		-0.198 *		
Retrenched or dismissed			0.591 **	
Observations	505	530	504	519
Deg. of freedom	16	17	19	19
Model Fit Criteria (c ²)				
-2 Log Likelihood	37.3 ***	71.9 ***	125.9 ***	36.8 ***
Score Statistic	35.6 ***	67.9 ***	113.2 ***	35.1 **
Wald Test Statistic	33.3 ***	60.7 ***	91.6 ***	32.3 **

Notes: ***, ** and * denote significance at the 1%, 5%, 10% levels respectively. a. The variable for unemployment duration ranges from 1 to 5: < 4 weeks; 4 but < 13 weeks; 13 weeks but < 1 year, 1 year but < 2 years, two years or more. b. The indices relate to the collection district of the household and are coded such that relatively advantaged areas have higher scores. c. The variable for financial prosperity is measured on a 6 point scale recoded as: 1. very poor, 2. poor, 3. just getting along, 4. reasonably comfortable, 5. very comfortable, 6. prosperous.

Table 15 Poisson Regression Model of the Number of Different Job Search Methods Used (excluding Registration with Centrelink)

<i>Independent Variable</i>	<i>Coefficient</i>	<i>P > z </i>
Intercept	0.360 **	0.038
Male	0.082	0.145
Aged 15-19	-0.081	0.380
Aged 20-24	-0.168 *	0.075
Aged 25-34	-0.014	0.866
Aged 35-44	—	
Aged 45-54	-0.002	0.985
Aged 55 plus	-0.242 **	0.028
Married	0.016	0.786
Qualifications:		
- Did not finish school	—	
- Low qualifications	0.150 **	0.022
- Medium qualifications	0.045	0.527
- High qualifications	0.072	0.442
Reg. with Centrelink	0.344 ***	0.000
In Intensive Assistance	0.136 **	0.033
Unemployment duration:		
- short-term (0-13 weeks)	—	
- medium term (13 - 51 weeks)	0.020	0.744
- long term (52 weeks or more)	-0.129 *	0.069
Indices for collection district (deciles) ^a		
- Education and occupation	0.032 ***	0.001
Main difficult finding work		
- none	-0.288 **	0.011
- personal circumstances	—	
- human capital	0.074	0.316
- external labour market	0.064	0.395
Financial prosperity (1-6) ^b	-0.062 **	0.038
Observations	551	
Log likelihood	-929.717	
LR chi2(19)	122.91	0.000
Pseudo R-squared	0.062	

Notes: ***, ** and * denote significance at the 1%, 5%, 10% levels respectively. a. The indices relate to the collection district of the household and are coded such that relatively advantaged areas have higher scores. b. The variable for financial prosperity is measure on a 6 point scale recoded as: 1. very poor, 2. poor, 3. just getting along, 4. reasonably comfortable, 5. very comfortable, 6. prosperous.

There is evidence that poorer mental health contributes to lower likelihood of contacting friends or relatives in search of work. The results regarding the SF-36 vitality index are mixed. Those unemployed persons scoring higher on the vitality index are less likely to approach an employer directly but more likely to approach friends or relatives. The constructed factors relating to social support do not have much influence. Those with access to strong social support and those who enjoy utilising their social support are more likely to approach an employer in person. These factors were insignificant in all other models.

Variables on the jobseekers' level of optimism had to be excluded because of potential endogeneity — those who had recently applied to an employer in person or answered an advertisement could be expected to be more optimistic about securing a job in the future, unless they had already been notified that such steps had been rejected. Another important category of variables that has not been incorporated here relates to the receipt and amount of social security benefits. It is expected that job search efforts would decline, *ceteris paribus*, if a person receives benefits and as the amount of benefits received increases. However, a number of measurement and econometric issues makes the identification of these effects problematic and this is also left as a matter for future research.¹³

Reservation Wages

In the personal interview persons looking for work were asked what the lowest hourly wage that they were willing to work for would be, before any tax is taken out. The final set of results look at the factors impacting upon this reservation wage. The responses had a mean of \$12.50. The standard approach to estimating a wage equation is followed by estimating the log of the reservation wage in a least squares regression. It is known that wages earned are strongly influenced by human capital variables, such as level of education, experience and experienced squared, plus occupation and industry specific premiums, and estimated wage equations typically explain around twenty-five per cent of variation in wages. In estimating reservation wages, it can be assumed that both observable and unobservable human capital and other individual characteristics which impact upon wages are embodied in the wage earned in the unemployed person's previous job. Indeed, when this variable is included, these standard variables become insignificant. Wages earned in the person's last job alone explain 29 per cent of the variation in the nominated reservation wage.

The reduced form model reported in table 16 is arrived at after testing and excluding a range of other variables. Of particular note among the insignificant variables are those reflecting the household's financial circumstances. Neither the ability to meet expenses, the occurrence of financial emergencies or the rating of relative prosperity impacted significantly upon reservation wages. Others include the main difficulty in finding work — people do not appear to reduce their wage if they perceive the barriers are related to their own human capital or to labour market conditions; participation in intensive assistance or mutual obligation activities; or any of the indices relating to the socio-economic status of the collection district.

It seems the unemployed largely determine their reservation wage on the basis of the wage received in their last job discounted by around 0.14 of a percentage point for each week of unemployment, or by about 7.5 per cent

¹³ Difficulties arise because of the large number of parameters that need be taken into account when calculating benefit withdrawal rates; endogeneity due to active job search being a condition of continued benefit receipt; and linear dependency between the level of benefit received and other variables that may affect job search (e.g. number of dependents and value of assets).

after one year of unemployment. The square of duration was not found to be significant. Registration with Centrelink also reduces the reservation wage by around 7 per cent. No role for vitality, mental health or job search intensity is identified.

Table 16 Reservation Wage Equation: Dependent Variable Log of Hourly Reservation Wage

<i>Variable</i>	<i>Estimated Coefficient</i>	<i>Pr > t </i>
Intercept	1.8889 ***	0.000
Log of hourly wage in last job	0.1393 ***	0.000
Male	0.0785 **	0.012
Age at last birthday (in years)	0.0110 ***	0.000
Married	-0.0941 ***	0.004
Duration of unemployment (weeks)	-0.0013 ***	0.000
Is registered with Centrelink	-0.0644 **	0.033
Constructed factors:		
- enjoys social support	-0.0217	0.127
Observations	343	
Degrees of freedom	7	
R-squared	0.4224	
Adjusted R-sq.	0.4104	
F statistic	35.1	
p(>f)	<.0001	

Notes: ***, ** and * denote significance at the 1%, 5%, 10% levels respectively.

4. Conclusions and Discussion

This paper explores a range of aspects of the experiences of unemployed Australians using the first wave of data from HILDA. In particular it seeks to illustrate the potential of the HILDA data to expand on the neo-classical economist's view of unemployment by incorporating variables prominent in other theoretical approaches to unemployment, such as subjective measures of wellbeing, mental health and social support. Associations between these variables and standard parameters of the neo-classical job-search model are also investigated to identify potential avenues of research in explaining unemployment experiences, including the question of why an individual's chance of finding work appears to decline with duration of unemployment.

There is ample evidence that the unemployed experience a significantly worse standard of life than those in employment and, on most scores, than those not in the labour force. The unemployed are less satisfied with many aspects of their life, including their affinity with their local community and the neighbourhood in which they live, and particularly with their financial situations. Their responses to standard constructs of mental health display clearly that they experience lower levels of mental or emotional wellbeing, and have (or perceive themselves to have) a lower level of social support available to them in order to cope with these circumstances. A common concern is that the unemployed who become most despairing or disaffected simply give up looking for work, and thus drop out of the formal definition

of unemployment. However, no evidence is found here of a pool of discouraged and depressed workers. The sample defined as discouraged workers display generally better outcomes than the unemployed on the range of measures of mental health, social support and financial stress.

Of course, the finding that those who become unemployed experience a lower quality of life comes as no surprise. The more surprising, albeit preliminary, result is the lack of evidence of a clear deterioration in quality of life with duration of unemployment. There are many individual characteristics and initial conditions that have not been controlled for here, and more definitive relationships may be discernible with the benefit of longitudinal data. It is possible, however, that time in unemployment or even the event of becoming unemployed is not that important a determinant of wellbeing or of the standard of living for those persons most at threat of unemployment. As a generalisation, it can be expected that those who are most at risk of entering unemployment tend to have lower levels of education, come from lower socio-economic neighbourhoods and move in and out of 'inferior' jobs that offer low pay and poor working conditions, job satisfaction or advancement opportunities. That is to say, for many of those who become unemployed their circumstances may not be so much worse than those they faced in employment. The result regarding prior earnings — that those coming from lower paid jobs are not as unhappy in unemployment — is consistent with this interpretation, but also with other interpretations available in the psychological literature.

Some evidence of mediating effects on the wellbeing of the unemployed is found as expected from the literature, including the level of social support and availability of financial resources. These are 'mediating' in the sense that persons with higher levels of social support and financial resources are less depressed, but not in the sense that they limit the impacts of duration of unemployment, since scant evidence of a duration effect is found at all. Several factors are not found to have the influence on mental wellbeing that may have been expected from the psychological literature and from other studies. These include the main difficulty in finding work or the reason a person lost their last job (attribution) and the jobseeker's level of optimism about finding suitable work.

In the cross-sectional data, job search intensity and the job offer arrival rate fall with duration of unemployment, while jobseekers with longer durations of unemployment set lower reservation wages. Thus declining job search intensity and job offer arrival rates constitute potential sources of negative duration dependence to be explored as further waves of HILDA data become available. Neighbourhood effects do appear to be of some importance — it seems those in more advantaged areas make more effort to find work. Along with the duration effect, this presents a possible channel in generating poverty traps. The summary factor of the occurrence of financial emergencies indicates that financial stress promotes Centrelink registration, but not other job search methods.

The analysis undertaken here demonstrates the considerable potential of the HILDA panel data for the evaluation of policy initiatives to assist the unemployed, and highlights several areas worthy of future investigation.

Being in Intensive Assistance is estimated to have a depressive effect on the unemployed. However, both Centrelink registration and Intensive Assistance appear to increase job search intensity. Participation in mutual obligation activities stands out only for the complete absence of any identified effects. Proponents of the approach would argue that mutual obligation activities have a positive impact on the mental wellbeing of the unemployed. Opponents would say it has a demeaning effect and reduces the time available to devote to finding a real job. The analysis finds no evidence of any such effects. Quite apart from the limitation of having access to only the first wave of data, there are potentially important variables that have not yet been incorporated into the analysis, such as household type, activities of partners, home ownership status and assets. The derivation and incorporation of variables capturing replacement rates and effective marginal tax rates is a further priority. The distribution of unemployment within households also needs to be considered, rather than treating the sample as random individuals.

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