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Labour Underutilisation and Gender: Unemployment Versus Hidden-Unemployment

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Abstract As labour markets have become more complex there has been increasing interest among researchers in understanding the ways that social and labour market processes and contexts impact on various labour market states. One important area has been in understanding the differences between unemployment and hidden unemployment. This paper considers the ways in which these two labour market states differ for a sample of male and female respondents to the Household Income and Labour Dynamics Australia (HILDA) survey. It presents data related to the reasons why respondents in these two labour force states consider they are jobless and analyses the characteristics of male and female respondents in the two labour market states to consider differences in outcomes. The findings suggest that there are differences in the two states of labour market outcomes and that these are further complicated when one considers processes for males and females.

Keywords Unemployment · Hidden-unemployment · Employability

Introduction

As labour markets have become more complex there has been increasing interest among researchers in understanding the ways that social and economic processes and contexts impact on various labour market states (Jones and Riddell 1999). It has long been recognised that problems associated with broad labour market outcomes are central to understanding questions of disadvantage, poverty and social

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exclusion. In this sense the analysis of labour market disadvantage is certainly not new. However, while researchers and policy makers are keenly interested in official unemployment rates and a simple division between work and non-work, it is generally agreed that the assumptions underpinning this division are no longer valid as the boundaries between work and non-work have become increasingly fluid (Beck 1992; Dooley and Catalano 2003). A stylised view of labour markets now includes reference to increasing casualization of jobs and a rise in part-time employment, a growth in so-called good jobs and bad jobs, an increase in the reference period for long-term unemployment and a more complex picture of occupation and employment mobility that may also include periods of marginal labour market attachment or labour underutilisation. In short this fluid picture is no longer just a divide between employment and unemployment but is now focused on increasingly multi-dimensional processes and outcomes.

This multi-dimensionality has increased interest in various types of labour underutilisation and marginal labour market attachment. While underutilisation can include people who are working and are underutilised according to hours available to work, the two extreme forms of underutilisation and therefore potentially the most serious from a social exclusion point of view remain those who are outside any form of paid employment—the unemployed and the hidden-unemployed. The unemployed are those people who are not employed but who have actively been seeking employment. Hidden unemployment on the other hand relates to those who might want to work but are not actively searching for employment and includes those people who might be classified as discouraged workers (Buss and Redburn 1988). The important linking issue is that in both cases underutilisation reflects an important loss of productive capacity in the labour market, the loss of national income and raises issues of social exclusion for the individual (Mitchell and Muysken 2008).

While broad social concerns surrounding both types of labour underutilisation have taken the attention of some researchers and policy makers, others have been interested in questions regrading how similar or dissimilar the two states are in terms of dynamics and socio-economic characteristics. The question often asked is ‘are unemployment and out of the labour force distinct labour force states’ (Flinn and Heckman 1983)? The distinction is important as differences will impact on policy development including how official unemployment rates should be measured, how issues of labour market underutilisation should be addressed and understanding how labour market disadvantage leads to wider forms of exclusion.

In understanding these issues much of the existing literature has considered longitudinal data and studied the dynamics of differential labour force states and in particular how moves into and out of states of underutilisation might differ. Studies in the US and Canada (Clark and Summers 1982; Flinn and Heckman 1983; Jones and Riddell 1999) have resulted in mixed findings with the early work by Clark and Summers (1982) finding that there was no difference in the two labour market states—unemployment and hidden unemployment were effectively the same—while the work of Flinn and Heckman (1983) found that the opposite was true. The Canadian study by Jones and Riddell (1999) corroborated the earlier work of Flinn and Heckman (1983). Limited work in Australia has also been carried out. Gray

et al. (2005) studying labour market transitions between 1994 and 1997 find that those who are marginally attached represent a distinctive labour market state, a finding also supported by the more recent work by Elliott and Dockery (2006). While most of these longitudinal studies do not focus specifically on gender, many do include gender as an independent variable in the analysis and are suggestive of gendered differences. For example the recent Australian work by Elliott and Dockery (2006) reported that transitions into employment from hidden unemployment were significantly higher for men that for women, while there was no significant gender difference for transitions to employment for a pooled sample of underutilised workers. In one of the only studies to specifically consider a gender dimension Gönül (1992), reports that unemployed and hidden unemployed are distinct labour market states for females but not for males.

Besides understanding the dynamics of labour market outcomes it is also instructive to consider, as we do in this paper, the various associations between different labour market states and a range of social and economic characteristics. The literature that has considered this aspect has tended to make use of cross sectional data and has focused on a range of theoretical approaches that seek to situate labour market outcomes as a function of for example, skills, training and human capital (Becker 1975), labour market segmentation (Peck 1989), the impact of perceived employment opportunities (Humphrey 1940; Long 1958) decision about job search and employment (Kingdon and Knight 2006; Ehrenberg and Smith 2003) or other trade offs between work and non-work (Becker 1976, 1991; van Ham et al. 2001). Largely these types of studies have tended to focus on providing detailed summaries of unemployment, discouragement and other marginal attachment for various socio-demographic groups. International literature has included the work by Little (2006), Fieldhouse and Hollywood (1999), and Green (1997) into hidden unemployment and economic activity in the UK, Sa'di and Lewin-Epstein (2001) in Israel, Hilst and Schuup (2000) in Germany and Partridge (2001) in North America. Little (2006) for example shows that the likelihood of belonging to a particular non-employed state is influenced by the level of education, ethnic background, marital status and child-care responsibilities and gender. In Australia the work by researchers including Stricker and Sheehan (1981), Wooden (1996), and Gray et al. (2002) find that the degree of labour force discouragement is generally higher for females than for males, especially women with children under 15 years of age, and for unmarried people than for married. Also, people born in Australia are more easily discouraged than their foreign-born counterparts, as are secondary and tertiary students compared to non-students. By region, it is found that there is a greater incidence of discouraged workers in high unemployment regions.

The general thrust of both the longitudinal literature and that which considers cross sectional data is that it is generally important to consider the ways in which different labour market states differ and it is within this context that the current paper is set. Specifically it considers the differences between unemployment and hidden unemployment via an analysis of marginal labour market attachment. It does so generally but also with reference to the potential differences that will exist between men and women. In what follows the paper first provides a context for understanding unemployment and hidden unemployment in Australia before turning

to analyse the likelihood of unemployment and hidden unemployment for a sample of working aged respondents. The paper concludes by providing a discussion of the main findings.

The Context of Unemployment and Hidden Unemployment in Australia

The unemployed and those who are hidden unemployed are part of a large and significant cohort of the working age population that are underutilised. In Australia, while the recent economic cycle had seen official unemployment rates decline, there is significant evidence to suggest that taking a broader measure of labour underutilisation illustrates the true extent of labour disadvantage (Watson 2000; Denniss 2003). Australian Bureau of Statistics estimates illustrate the converging trends that characterise unemployment and underutilisation rates, suggesting that while headline unemployment rates have shown improvement, underlying labour market disadvantage as represented by broader labour underutilisation has remained much more constant. Similar concerns have been raised in the research by Mitchell and Carlson (2001, p. 63) who argue that 'while the aggregate unemployment rate in Australia has returned to levels that existed in the late 1980s…the level of underemployment and the impact of marginal attachment have risen over that time'. Figures available from the Australian Council of Social Services (ACOSS 2005) illustrate the potential magnitude of this issue. In 2002, while the standard unemployment rate stood at 6.3%, a level that was historically low, the rate of marginal attachment (unemployment plus hidden unemployment) stood at 12.9%. Interestingly while the rate of unemployment for males is only slightly above that for females, once the rate for hidden unemployment is added an interesting and noteworthy gender dimension emerges with females significantly more likely to be classified as being among the hidden-unemployed when compared to men (Table 1).

To further consider the context of the two states of labour underutilisation it is insightful to consider the reasons given by working aged people for being unemployed or hidden unemployed. To do this we consider a sub-sample of the Household, Income and Labour Dynamics in Australia (HILDA) survey, a broad social survey, conducted annually which contains information on employment, individual socio-economic characteristics and household/family characteristics.

Table 1 Unemployment and hidden unemployment, Australia 2002

	Unemployed people	Hidden unemployed people	Unemployed + hidden unemployed people	Standard unemployment rate (%)	Unemployment + hidden unemployment (%)
Males	354,000	239,000	593,000	6.4	10.5
Females	273,000	477,000	750,000	6.2	15.8
Total	627,000	717,000	1 344 000	6.3	12.9

Source: ACOSS 2005

This current paper considers the first wave of the HILDA survey (2001) with subsequent papers considering longitudinal outcomes. The wave one survey file contains a total of around 19,000 respondents. A reduced data set is used in this paper which includes individuals of working age defined as either employed, unemployed or hidden unemployed and who is living in the major metropolitan regions. This reduced data set includes 5372 individuals. This data allows us to consider the differences between the two states of labour underutilisation and to begin to understand the characteristics of these outcomes.

We consider the reasons given by unemployed people as to why they feel they can't find work (Table 2) and the reasons why those considered to be hidden-unemployed are not actively searching for work (Table 3). For the sub-sample used in this paper the most common reasons given for not being able to obtain work relate to the individual characteristics of the applicant (employers thought respondent was too old or too young, did not have the required education, training or skills or did not have enough work experience) and factors that might be associated with the characteristics of local demand (too many applicants for the available jobs, no jobs in your line of work, just no jobs at all). Responses for males and females were similar although a higher proportion of females thought that they did not have the required education, training or skills, while slightly more males considered that employers thought the respondent was too young or too old or that the respondent did not have enough work experience.

The single most important reason given by hidden unemployed for not currently looking for work relates to the need to care for children. Over one quarter of the sample considered in this paper stated that the reason they were not actively

Table 2 Reasons for not being able to find work, unemployed persons

	Male	Female	Total
Own ill health or disability	9.4	3.4	7.0
Employers thought respondent too young or too old	13.3	11.9	12.1
Hours were unsuitable	1.7	6.8	3.7
Transport problems/too far to travel	8.3	8.5	8.4
Did not have the required education, training or skills	8.8	14.4	11.0
Did not have enough work experience	14.9	10.2	13.0
Language difficulties	3.9	3.4	3.7
No jobs in your line of work	8.8	7.6	8.4
Too many applicants for the available jobs	10.5	11.9	11.0
Just no jobs at all	6.6	5.9	6.4
Discrimination against migrant/ethnic groups	0.6	0.0	0.3
Difficulties in finding childcare	0.0	1.7	0.7
Other family responsibilities	0.0	0.8	0.3
Overqualified	0.0	0.8	0.3
Other difficulties	3.3	2.5	3.0

Source: Household, Income and Labour Dynamics in Australia (HILDA) survey 2001

Table 3 Reasons for not looking for work, hidden unemployed persons

	Male	Female	Total
Have a job to go to	1.9	2.6	2.4
Own illness, injury or disability	13.3	7.8	9.1
Pregnancy/Maternity leave	0.0	2.3	1.8
Studying/returning to studies	8.0	3.4	10.4
Does not need to work	4.8	6.3	6.0
To give others a chance	1.0	0.0	0.2
Welfare payment/pension may be affected	1.0	0.6	0.7
Moved house/Holidays	3.8	3.2	3.3
Prefers to look after children	1.0	33.6	26.0
Other childcare reason	1.0	7.5	6.0
Ill health of other than self/other family reason	8.6	5.7	6.4
Too young/too old	3.8	3.2	3.3
Lacks necessary training or qualifications	1.9	2.0	2.0
Lacks necessary experience	0.0	0.3	0.2
Difficulties with language/ethnic background	0.0	1.4	1.1
No jobs available	5.7	1.1	2.2
On a job related training program	1.0	0.0	0.2
Not interested/no time	1.9	0.6	0.9
Taking a break/rest from working	4.8	1.1	2.0
Do voluntary/unpaid work	1.0	0.0	0.2
Other reasons (Specify)	4.8	3.2	3.5

Source: Household, Income and Labour Dynamics in Australia (HILDA) survey 2001

searching for jobs was that they preferred to care for children. Other important reasons were that respondents were returning to study or that they had an illness or disability or had to care for someone else with a disability or illness. For males the single most important reason was having a disability or illness, followed by returning to study or having to care for someone else with an illness. For females the single largest reason given for not actively searching for work is the pressures of childcare.

Unemployment and Hidden Unemployment-Individual Characteristics, Personal Circumstances and Local Labour Markets

In this section we consider the characteristics that are associated with different labour market states for the males and females considered in our sample. Following an increasing trend in the international literature (Sunley et al. 2006; Baum et al. 2008) we consider any given labour market state to be an outcome of a range of factors that include both the individual characteristics of a respondent and a set of broader local labour market characteristics.

Model and Data

In order to understand the correlates of unemployment and hidden unemployment in a way that accounts for the characteristics of the individual and the characteristics of the local labour market it is necessary to model our dependent variable in a way that allows for data to be measured at different levels of measurement and that is hierarchical. That is, because our data relates to individuals who are located in a particular local labour market we have to model the outcomes of interest so as to produce robust statistical outcomes. In order to consider the issues raised in this paper we run a series of multivariate logit models which specifically account for the clustering of observations at the level of the local labour market region. This provides us with a modelling technique that produces robust outcomes in the face of the two level structure of our data. Prior to fitting the final set of models several alternative approaches were considered including the fitting of multilevel models that specifically take into account the hierarchical nature of the data (Goldstein 2003). While this type of approach has become increasingly popular, it was not used in the final analysis as initial modelling suggested that with reference to the data set and sample we use no additional benefit is gained by fitting a multilevel model versus a standard multi-variate model accounting for clustering.

Our dependent variable is labour force state measured as employed, unemployed and hidden unemployed. Our independent variables are obtained from responses in the HILDA survey together with aggregate level local labour market indicators taken from the Australian Bureau of Statistics Census of Population and Housing. Details of the independent variables are contained in Table 4. Importantly, each individual respondent in the HILDA survey has details of their residential location so that relevant spatially based census data can combined with each respondent's individual level characteristics. The final data set consists of the 5372 individual observations clusters or grouped into 36 distinct local labour market areas.

Results

We first present a model for the entire population with gender as an independent variable (Table 5). The table contains the regression coefficient, robust standard errors and the relative risk ratio for each category of labour market status relative to the reference category 'employed'. In all cases values on the relative risk ratio above one indicate that higher values of the explanatory variable increase the predicted probability of being in the particular category of underutilisation, compared to being employed. Coefficients less than one indicate the opposite. The constant is interpreted in the usual way.[1]

[1] In multinomial logit model, one of the response categories is taken as the reference case and then we use this case to compute the log-odds for all other response categories relative to it. Thus the constant term is the multinomial logit estimate for unemployed relative to the reference category (adequately employed) when the explanatory variables are evaluated at zero. Typically we would mean-centre the explanatory variables so the constant applicable to unemployed gives the logit of being unemployed versus adequately employed (reference category) when the explanatory variables take their average values.

Table 4 Independent variables used in the analysis

	Description	Source
Personal characteristics		
AGE2544	Respondents aged 25–44 (1 = yes, 0 = no).	Household, Income and Labour dynamics Australia (HILDA) survey
AGE4564	Respondents aged 45–64 (1 = yes, 0 = no).	Household, Income and Labour dynamics Australia (HILDA) survey
DEGREE	Respondents holding a university degree (1 = yes, 0 = no).	Household, Income and Labour dynamics Australia (HILDA) survey
POST_SCHOOL	Respondents holding a post-school qualification but not a degree (1 = yes, 0 = no).	Household, Income and Labour dynamics Australia (HILDA) survey
ATSI	Respondents with indigenous Australian background (1 = yes, 0 = no).	Household, Income and Labour dynamics Australia (HILDA) survey
ENG_PROF	Respondents with poor self-reported English proficiency (1 = yes, 0 = no).	Household, Income and Labour dynamics Australia (HILDA) survey
DISABLE	Respondents with a self-reported disability (1 = yes, 0 = no).	Household, Income and Labour dynamics Australia (HILDA) survey
PARENTING	Respondents with parenting responsibilities	Household, Income and Labour dynamics Australia (HILDA) survey
Personal circumstances		
PAR_UN	If respondent's parents were outside of paid work force (1 = yes, 0 = no).	Household, Income and Labour dynamics Australia (HILDA) survey
SOC_NET[a]	Proxy variable for social networks	Household, Income and Labour dynamics Australia (HILDA) survey
MOVED	If respondent had moved in the past 12 months (1 = yes, 0 = no).	Household, Income and Labour dynamics Australia (HILDA) survey
PUB_TRANS[b]	Self reported access to public transport (1 = poor, 0 = otherwise)	Household, Income and Labour dynamics Australia (HILDA) survey
JOB_OPS[c]	Self reported job availability perception (1 if perceived job opportunities are poor, 0 if otherwise)	Household, Income and Labour dynamics Australia (HILDA) survey
Local labour market context		
LOC_EMP	The percentage of local jobs taken by locals	Australian Bureau of Statistics 2001 Census
LMR_PT	The percentage of jobs in the local labour market that are part-time	Australian Bureau of Statistics 2001 Census

Table 4 continued

	Description	Source
EMP_RATE	The percentage of the population employed	Australian Bureau of Statistics 2001 Census

[a] The social network index was constructed by considering the main components from a Principal Components Analysis of questions coded on a five point likert scale. The questions included in the index are: People don't come to visit me as often as I would like; I often need help from other people but can't get it; I don't have anyone I can confide in; I have no one to lean on in times of trouble; I often feel very lonely. Although this does not allow us to consider the strength of these social ties, the frequency of contact or the extent to which social networks are used to access information on employment the index is suggestive of potential impacts of social networks

[b] The public transport variable was constructed using the responses to a question regarding accessibility (distance) to public transport. The original variable was coded on a 5 point likert scale and this was recoded into 1 = less than adequate, much less than adequate, 0 all other responses

[c] The perceived job opportunities variable was constructed using the responses to a question regarding satisfaction with employment opportunities. The original variable was coded on a 10 point likert scale and this was recoded into 1 = totally dissatisfied to neither satisfied or dissatisfied, 0 all other responses

The independent variables can be divided into those associated with individual characteristics and those related to the local labour market context. The first thing to note about the results in Table 5 is the significant signs on the independent variable 'GENDER' indicating that while females are less likely than males to be unemployed, they are more likely to be counted as hidden unemployed.

Several of the independent variables had consistent impacts across both unemployment and hidden unemployment. Education level (DEGREE, POST-SECOND) had predictable inverse associations with unemployment and hidden-unemployment. The level of social networks or social contact (SOC_NET) also had an inverse association with both labour market states, indicating that as the social network indicator increased the likelihood of being unemployed or hidden unemployed declined.[2] Levels of English proficiency (ENG_PROF), parent's employment background (PAR_UN), residential mobility (MOVED), perception of job opportunities (JOB_OPS)[3] and the local employment rate (EMP_RATE) all had positive associations with unemployment and hidden unemployment.

For the remaining independent variables, factors often associated with labour market disadvantage are seen to be more important and act in a more consistent way for understanding unemployment than for the likelihood of hidden-unemployment. The variables accounting for age (AGE2544, AGE4564) and indigenous status (ATSI) all have a significant association with unemployment but not with hidden-unemployment. Both of the variables for age were associated with a reduced likelihood of unemployment or hidden unemployment (relative to those aged less

[2] We recognise that the social network variable is potentially problematic as we don't know if respondents have low social contacts before they became unemployed or hidden unemployed, or because they are unemployed or hidden unemployed.

[3] Job opportunities reflect the perceived level of job opportunities given by respondents. While the respondents may have had these perceptions prior to becoming out of work, it is equally likely to be the case that low perceptions may be a result of the jobless state.

Table 5 Multinomial regression results, unemployed and hidden unemployed versus employed, total sample

	Unemployment			Hidden unemployment		
	β	Robust se	Exp β	β	Robust se	Exp β
GENDER	−0.31**	0.10	0.73	1.28**	0.12	3.60
DEGREE	−0.65**	0.25	0.52	−0.68**	0.16	0.51
POST_SCHOOL	−0.41**	0.15	0.66	−0.43**	0.15	0.65
AGE2544	−0.81**	0.17	0.45	−0.29	0.21	0.75
AGE4564	−1.03**	0.17	0.36	−0.30***	0.17	0.74
ATSI	1.09**	0.41	2.99	0.40	0.54	1.49
ENG_PROF	1.46**	0.28	4.31	0.90**	0.35	2.45
DISABLE	0.22	0.18	1.25	0.61**	0.12	1.84
PARENT	−0.19	0.16	0.83	0.76**	0.13	2.14
PAR_UN	0.73*	0.30	2.07	0.87**	0.25	2.39
SOC_NET	−0.26**	0.07	0.77	−0.17**	0.05	0.84
MOVED	0.52**	0.10	1.68	0.39**	0.13	1.47
PUB_TRANS	−0.17	0.21	0.84	0.16	0.21	1.17
JOB_OPS	1.88**	0.11	6.52	1.43**	0.13	4.20
LMR_PT	−0.04	0.03	0.96	0.00	0.03	1.00
EMP_RATE	−0.05***	0.03	0.95	−0.05***	0.03	0.95
LOC_EMP	0.00	0.00	1.00	0.00	0.00	1.00
CONSTANT	3.65	3.04		1.18	3.32	

Log pseudo likelihood = −2258.78

* significant at 0.01 level

** significant at 0.05 level

*** significant at 0.10 level

than 25), while having an indigenous Australian background increased the likelihood of unemployment.

In contrast the main differentiating factors in terms of hidden-unemployment were related to the impact of a particular set of personal circumstances. This is most obvious in terms of the impact of child care requirements. The presence of children (PARENT) was significantly associated with an increased likelihood of hidden-unemployment. The other significant independent variable associated with hidden-unemployment was the variable DISABLE. Those respondents stating that they had a long term disability were significantly more likely to be hidden unemployed.

Clearly the outcomes reported in Table 5 establish the complexity of the unemployment and hidden unemployment state as well as the potential for gender to be an issue. In order to explore the gender issue further we now consider the results of the regressions controlling for males and females. The results are presented in Tables 6 and 7.

A key difference noted in the tables related to the impact of child care decisions. For males (Table 6) the presence of children actually increased the likelihood that a

Table 6 Multinomial regression results, unemployed and hidden-unemployed versus employed, males

	Unemployment			Hidden unemployment		
	β	Robust se	Exp β	β	Robust se	Exp β
DEGREE	−0.65**	0.26	0.52	−0.08	0.29	0.92
POST_SCHOOL	−0.32*	0.17	0.72	−0.16	0.23	0.86
AGE2544	−0.93**	0.24	0.39	−1.29**	0.32	0.27
AGE4564	−1.20**	0.22	0.30	−0.86**	0.30	0.42
ATSI	1.66**	0.48	5.28	1.48*	0.63	4.39
ENG_PROF	1.74**	0.33	5.71	1.18*	0.60	3.24
DISABLE	0.61**	0.20	1.84	1.12**	0.25	3.07
PARENT	−0.57**	0.20	0.56	−0.62*	0.29	0.54
PAR_UN	0.86*	0.38	2.37	1.42**	0.41	4.13
SOC_NET	−0.20*	0.11	0.82	−0.29**	0.12	0.75
MOVED	0.29*	0.15	1.33	0.05	0.26	1.05
PUB_TRANS	−0.12	0.32	0.89	−0.02	0.36	0.98
JOB_OPS	1.98**	0.16	7.25	1.44**	0.26	4.23
LMR_PT	0.00	0.03	1.00	0.00	0.05	1.00
EMP_RATE	−0.07*	0.03	0.93	−0.02	0.05	0.98
LOC_EMP	0.00	0.01	1.00	−0.01	0.01	0.99
CONSTANT	4.45	3.65		−0.69	5.51	

Log pseudo likelihood = −919.73

* significant at 0.01 level

** significant at 0.05 level

*** significant at 0.10 level

respondent would be employed rather than unemployed or hidden unemployed. For females (Table 7) the presence of children had no significant association with unemployment but did increase the likelihood that the respondent would be hidden unemployed.

Over and above this an analysis of the regression output suggests that the impact of several individual factors differed between males and females. In terms of unemployment the impact of ethnic or racial background was larger for males than for females, as was the impact of the variable accounting for long term disabilities. The impact of parental non-employment was larger for males than females, while moving increased the likelihood of unemployment more for females. The impact of local labour market characteristics differed between the two groups. For males it was the strength of the local labour market which was most important (EMP_RATE), while for females the types of jobs available (part-time versus full-time) were most important, with an increase in part-time jobs reducing the likelihood of unemployment. Females also reported a weak significant association with the strength of the local labour market variable.

For hidden-unemployment the individual characteristics of age, ethnicity and race and long term disability were more important for males, while education was

Table 7 Multinomial regression results, unemployed and hidden-unemployed versus employed, females

	β	Robust se	Exp β	β	Robust se	Exp β
DEGREE	−0.49	0.30	0.61	−0.76**	0.17	0.47
POST_SCHOOL	−0.40	0.31	0.67	−0.37*	0.17	0.69
AGE2544	−0.68*	0.28	0.51	0.15	0.25	1.16
AGE4564	−0.76**	0.29	0.47	0.10	0.23	1.11
ATSI	0.38	0.58	1.47	−0.14	0.48	0.87
ENG_PROF	1.06**	0.39	2.89	0.73***	0.38	2.07
DISABLE	−0.49	0.33	0.62	0.32*	0.14	1.37
PARENT	0.21	0.22	1.24	1.19**	0.16	3.28
PAR_UN	0.73***	0.44	2.07	0.64***	0.38	1.89
SOC_NET	−0.35**	0.09	0.70	−0.14*	0.06	0.90
MOVED	0.86**	0.21	2.36	0.59**	0.14	1.80
PUB_TRANS	−0.16	0.33	0.85	0.27	0.25	1.31
JOB_OPS	1.82**	0.22	6.20	1.50**	0.18	4.47
LMR_PT	−0.09*	0.04	0.91	0.00	0.03	1.00
EMP_RATE	−0.03	0.04	0.97	−0.06*	0.03	0.94
LOC_EMP	0.01***	0.01	1.01	0.01	0.00	1.01
CONSTANT	1.55	4.18		2.83	3.04	

Log pseudo likelihood = −1272.15

* significant at 0.01 level

** significant at 0.05 level

*** significant at 0.10 level

more important for females. Again parental non-employment was important for males and residential mobility was important for females. In terms of the impact of local labour market characteristics, the likelihood of hidden-unemployment was associated with the strength of the local labour market, suggesting that a weak market may discourage female workers from searching for work.

Summarising the findings from the regression analysis it would appear that in terms of a range of broad socio-economic characteristics that the two states of labour underutilisation are different, and that for males and females there are further differences in the potential reasons for these outcomes. For many of the sample the likelihood of unemployment appears to be about constraints in the labour market imposed due to rationing by age or ethnic background rather than choice, over and above other factors such as education or local labour market strength. The background material discussed earlier in the paper supports this contention. Here it was illustrated that the main reasons why unemployed person could not find work had to do with a lack of education or experience for the types of jobs available, being not able to compete for the available jobs or perceiving that there were no jobs available. This also appeared to be more prevalent for males than females.

Hidden unemployment also had associations with constraints in the labour market which can be explained in terms of discussions regarding discouraged workers—that is those who are unable to find a job may eventually drop out of

actively searching for a job and become part of the hidden unemployed (see Kingdon and Knight 2006). However, for some the hidden unemployment state was also associated with choice. While the pressures of child care maybe seen as a constraint—the costs of market provided childcare may constrain choices (Blau and Robins 1988)—it is also likely to be the case that many parents, especially women, will actively choose to care for children rather than seek work, putting them in the hidden unemployed category. This was hinted at in the reasons respondents gave for not seeking employment (prefer to care for children) and is an area that requires further investigation (Walzer 1997).

Other interesting differences were also noted between males and females. The impact of recent residential mobility had interesting outcomes. For both males and females recent residential mobility was associated with the likelihood of unemployment whereas, only female's hidden unemployment status was impacted by recent residential mobility. While further research is needed this may suggest as has been noted elsewhere (Boyle et al. 2001) that the impact of family migration on women's employment outcomes is to initially increase joblessness (the trailing spouse syndrome).

Finally, the impact of local labour market characteristics reflected differing outcomes for males and females. While the strength of the local labour market as measured by the level of employment was important for both underutilisation states for the entire sample it only impacted on unemployment for males while impacting on hidden unemployment for females, suggesting a different set of factors at work in each case. Moreover, as the presence of part-time jobs increased females unemployment likelihood declined reflecting the higher presence of female sin part time and casualised employment more generally.

Conclusion

This paper has sought to develop an analysis of the circumstances associated with marginal labour force attachment between men and women and the extent to which there might be differences between unemployment and hidden-unemployment. Specifically the paper utilises available data from the Household, Income and Labour Dynamics in Australia (HILDA) survey together with Australian Bureau of Statistics census data and undertakes multivariate analysis of the likelihood of unemployment and hidden-unemployment for a sample of metropolitan residents.

In considering the analysis undertaken in this paper it is important to recognise that the outcomes and patterns identified have several limitations. It is important to note that the paper does not seek to identify causal relationships. Rather the analysis has simply identified associations that exist between a range of independent variables net of other factors in the model and the dependent variable of interest, namely unemployment and hidden-unemployment. Further analysis using longitudinal data will provide some insight into these issues and will be the subject of later analysis. Moreover, while the independent variables covered a wide range of possible factors that might be hypothesised to impact on marginal labour market attachment, in some cases the indicators only provided broad proxies.

These caveats aside, the research presented here provides some insights into the issues surrounding labour underutilisation, unemployment and hidden unemployment. Recent research using longitudinal HILDA survey data has argued that there are some differences between the two states of labour underutilisation when a broad sample is considered. Although Elliott and Dockery (2006) used a different approach they showed that there were some differences between respondents who were unemployed and those who were hidden unemployed including answers to questions about life satisfaction and measures relating to the level of financial stress.

Here we have continued in the spirit of these research findings by arguing that considering sub-samples differentiated by gender adds to our understanding of the potential differences in these two labour market states. From the analysis of both the reasons given for unemployment and hidden unemployment and the results of the detailed regression analysis it appears that not only are unemployment and hidden unemployment to be considered as separate states of labour market outcome in a general sense, but the potential drivers of both labour market states appear to be in some cases different. These differences were magnified when the sub-sample was divided by gender. While there were variables that operated equally across the two types of labour underutilisation for both males and females, it appears that the variables most strongly associated with unemployment tended to be associated with constraints, while for hidden-unemployment a mixture of constraints and choice might be appropriate. Moreover, males appeared to be more impacted by constraints on their outcomes while women also had a choice characteristic in their outcomes. The most apparent example of the impact of choice on the hidden unemployment state is the role of child care on women's decisions to seek employment (and therefore to be considered as hidden unemployed).

The findings have important implications for policy and for researchers interested in improving the evidence base of policy development. Firstly, as we have argued there is good reason to treat the two states of labour market underutilisation as separate entities. This would suggest a set of separate but closely related suite of policy prescriptions to address marginalisation. Neo-liberal skills based policies will be one facet, but these are unlikely to be able to adequately address all marginalisation. For females with families giving them more skills can not be the entire answer. Addressing the possible imbalance between reservation wages and the cost and availability of child care is crucial, as may be increasingly flexible work arrangement such as job sharing which allow increased participation in the paid labour market while still achieving family aspirations. Also important is the findings that some indicators of local labour market characteristics (labour market demand) are associated with marginal labour market attachment. A focus on addressing issues such as skills or work-family balance may be premature if issues of local labour demand are not considered. The issue here is that by simply focusing on the labour supply side of the equation policy simply reshuffles the queue for existing jobs or means that potential workers are still operating under perceptions that result in them being discouraged from searching. It is policy issues such as these that will become increasingly important if, as was argued in the introduction to this paper, the boundaries between work and non-work have become increasingly fluid and have resulted in a much more multi-faceted labour market structure.

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