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Job mobility and segmentation in Australian city labour markets¹

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1. Introduction

Gordon (2005: 2) hypothesises that in 15 years, cities have developed a unique potential for achieving successful economic outcomes, owing to their ‘density, diversity and openness to change’. Accordingly, by virtue of their scale, networks and advanced service functions cities provide greater potential for interaction and readier access to innovation; they also afford workers higher earnings and greater opportunity to appropriate productivity gains through job mobility.

However, the benefits of job mobility arguably accrue only to those individuals located in dynamic local labour markets and in growing occupations with ‘deep’ skill-sets. The flip-side of flexibility is more insecurity, associated with casualisation and intense job-competition for low-skilled positions. When labour markets are job rationed overall, more able workers successfully compete for low-skill jobs at the expense of the least skilled workers (see Bill and Mitchell, 2006).

There are significant differences exist between cities and their non-metropolitan counterparts in terms of the motivations for job search and the nature of job transition, holding other factors constant (Mitchell *et al.*, 2005). This paper attempts to extend these findings using four waves of Household Income and Labour Dynamics Australia (HILDA) data, to examine whether cities do promote greater levels of mobility and whether primary and secondary labour market participants display different patterns of search and occupational transition in urban areas.

For the purposes of this study we construct a cross-sectional pooled dataset of the working age population from the four waves of HILDA (first in 2001 and the last in 2004) comprising 25,214 observations. Full-time students, persons aged under the age of 15 years and persons aged over 65 years are excluded. The variables we use in this paper are summarised in the Appendix to this paper. Where necessary we further explain the choices made in the paper.

The paper is organised as follows, Section 2 presents analysis of the drivers of job-mobility attempting to isolate whether metropolitan labour markets inherently promote turnover, and explores the possible factors driving this outcome. Section 3 employs segmentation theory to test whether typical features of the metropolitan labour market intensify differences in labour market outcomes between the primary and the secondary segment, and Section 4 concludes.

2. Turbulence in Metropolitan Labour Markets

2.1 Brief literature review

Gordon (2005: 1) argues that modern cities owing to their growing ‘density, diversity and flexibility’ have a unique capacity for matching workers and employers, promoting job mobility. We might expect job mobility to be higher in metropolitan labour markets for a number of reasons (see summary in Buck *et al.*, 2002: 204). The scale of metropolitan labour markets increases the range of options available to workers and employers, making it attractive for them to use an external labour market as a means to achieve their goals. Agglomeration economies decrease the risks of labour market flexibility, since new jobs can be found more easily and when required. In addition to scale effects giving rise to greater mobility rates, Glaeser (1999) and Glaeser and Maré (2001) claim city labour markets – especially with advanced service functions – offer greater opportunities for ambitious workers to develop their skills and human capital. They argue that it is the greater opportunities for learning and the

ability to translate learning into a wage premium that attracts workers, rather than the higher initial wages. Dense urban areas increase the speed of interaction and interactions help individuals increase skill acquisition, which leads Buck *et al.* (2002: 204) to conclude that cities encourage higher mobility because workers can “appropriate more of the productivity gains associated with their growing human capital.” Meanwhile the risks of mobility are lower right across the labour market because of scale and density, encouraging quicker hiring and firing practices amongst employers. Similarly Fielding (1991) mounts what is termed the ‘escalator hypothesis’ such that in cities there is a higher rate and faster than normal progression from education into managerial posts, and a higher degree of churning between professional and managerial jobs. Thus cities promote occupational and social mobility, particularly for the young and qualified. According to Amin and Thrift (1992) higher mobility might also stem from readier access to new developments, international experience and opinions of powerful groups.

However Buck *et al.*, (2002:205) note that the capacity to access opportunities and to add to earnings via a process of job mobility is likely to be unevenly distributed. Those who are in higher status, non-routinised positions and those with greater learning skills are better able to garner the benefits of job change. The OECD (1997, 1999) note that while average job tenure has remained stable in recent years, job instability and insecurity are more pronounced among less educated workers than among the highly skilled. Thus the freedom afforded by ‘flexibility’ in urban labour markets may yield ‘variety and mobility’ in work but may also be associated with ‘insecurity’ (see Buck *et al.*, 2002: 198).

The earlier segmented labour market literature clearly noted that unlike the human capital theory vision of job change, workers in low-skill jobs tended to change jobs regularly and cycle between one low paid position and another with spells of unemployment often interspersed and no definable career progression occurring (Doeringer and Piore, 1971) Mitchell *et al.* (2005) find supporting evidence of this using HILDA data for the Australian economy.

White and Forth (1998) provide supporting evidence for this view in the UK labour market arguing that there is a strong tendency for the unemployed to cycle through more unstable or downgraded parts of the labour market. While older workers, on average, experience lower turnover, for those who do churn, unemployment spells may be longer. Their study of London confirms that middle-aged workers particularly exhibit high unemployment rates. More generally, higher turnover may mean that employers under-invest in non-firm specific skills, which they believe can be purchased in an accessible open market, hence there may be some shortfall in training

Buck and Gordon (1998) employ three indicators of turnover (drawn from UK Labour Force Survey): (a) the probability of having started a job; (b) the probability of having left a job; and (c) the probability of having made a job-to-job move over a 12 month period. Inner London records the highest rates of job-to-job moves, and rates are generally higher in denser labour markets and those with lower unemployment rates (see Buck *et al.*, 2002: 206). This remains true once we control for socio-demographic and industrial characteristics and debunks that idea that the higher proportion of young unmarried residents are responsible for the higher rates of mobility. Buck *et al.* (2002: 207) break these measures down occupationally and find that all sectors and socio-economic groups display higher turnover rates in London. For those higher skilled occupations with generally lower turnover rates, the differential is most

marked. Mobility rates in cities were found to be highest amongst young workers and to disappear with age (40 years plus). This lends support to the argument that higher mobility rates are not just a function of scale but also reflect “the particular opportunities for well qualified young people to advance their careers through movement between firms” (Buck *et al.*, 2002: 207). In line with the OECD the authors find *no* upward trend in mobility rates between 1979 and 2000, despite temporarily high rates during the 1980s boom. After controlling for higher proportion of youth, qualified and ‘personally ambitious’ persons in the London labour market the London region escalator adds only 0.75 per cent per annum to the mobility of the average young, qualified worker, and personal ambition delivers no significant benefits, other things constant. Buck *et al.* (2002: 210) conclude career progression takes place through accumulating experience across a variety of employers, rather than through internal labour markets. The proposition that city employers may be reluctant to invest in staff development is also explored, and controlling for other factors staff in London are 20 per cent less likely to report training.

2.2 Job mobility in the Australian labour market

Higher job mobility rates in metropolitan labour markets is a key empirical finding in the international literature. Before analysing its effects on metropolitan labour market outcomes, we first show its presence in the Australian metropolitan labour market, which consists of the central business districts of Adelaide, Brisbane, Melbourne, Perth and Sydney. We apply the third indicator of job turnover from Buck and Gordon (1998: job-to-job mobility. The binary dependent variable suggests a panel logit specification. However, we have to take account of the fact that our dependent variables are correlated across waves. For example, a person’s job search activity in one period is correlated with his/her job search activity in another period. Recognising this interdependency, we use clustered logit estimated, which adjusts for observations which are dependent within a cluster but independent between clusters. We report odds ratios in Table 1, which are defined as the ratio of the odds of an event occurring in one group to the odds of it occurring in the control group.

The first column in Table 1 reports the standard regressors, which give the expected results. Job-to-job mobility declines with age and tenure. Job dissatisfaction in terms of hours worked or job security lead to higher job mobility. In terms of our main interest the results show that living in a metropolitan areas increases job mobility.

The literature review suggests two reasons for elevated levels of job mobility in metropolitan areas: one positive and one negative. On the positive side, ‘thick’ metropolitan labour markets provide ample job opportunities to employees, which should bolster employees’ confidence to find an equal or better job than their current job. But, then labour market flexibility might also increase job insecurity, especially for those at the bottom of the labour market. For this cohort, higher turnover rates imply more job insecurity, which enhances their expectations of losing their current job and subsequently spurs job search, and, if successful, job change. Both factors can thus increase job mobility. Column 2 of Table 1 reports the results of adding these factors to the regression in column 1. Both the positive and negative influences increase job turnover and more importantly, once they are introduced the metropolitan dummy becomes statistically insignificant. This suggests that we have captured the idiosyncrasies of metropolitan labour markets. For some the thick metropolitan labour market is an opportunity and for others it is a threat. Both factors spur job search and so the rest of the paper is devoted to studying these factors in more detail.

Table 1 Job-to-job movements, 2001-2004

| independent variables | dependent variables | Job to job movement (1) | Job to job movement (2) |
|--|--------------------------|----------------------------|----------------------------|
| Living outside a metropolitan area | | reference | reference |
| Living in a metropolitan area | | 1.11 (0.05)** | 1.06 (0.05) |
| Expectations in previous job: | | | |
| Likelihood to find another job (flexibility) | | | 1.01 (0.00)*** |
| Likelihood to lose the job (insecurity) | | | 1.01 (0.00)*** |
| Personal characteristics: | | | |
| Age cohort: | 16–30 years | reference | reference |
| | 31–40 years | 0.77 (0.04)*** | 0.76 (0.04)*** |
| | 41–50 years | 0.59 (0.03)*** | 0.58 (0.03)*** |
| | 51–65 years | 0.51 (0.04)*** | 0.53 (0.04)*** |
| Gender: | Female | reference | reference |
| | Male | 0.98 (0.05) | 0.99 (0.05) |
| Ethnicity: | Non-Aboriginal Austr. | reference | reference |
| | Indigenous | 1.33 (0.22)* | 1.36 (0.23)* |
| Education: | (Pre-)primary/sec school | reference | reference |
| | Certificate | 1.06 (0.06) | 1.02 (0.06) |
| | Advanced diploma | 1.10 (0.09) | 1.07 (0.08) |
| | Post Grad., Bachelor | 1.06 (0.06) | 0.98 (0.06) |
| Job characteristics (previous job): | | | |
| Hours worked: | Involuntary part-time | reference | reference |
| | Full time | 0.76 (0.08)** | 0.75 (0.08)*** |
| | Voluntary part-time | 0.63 (0.07)*** | 0.65 (0.07)*** |
| Contract type: | Fixed term contract | reference | reference |
| | Casual contract | 1.50 (0.12)*** | 1.52 (0.12)*** |
| | Permanent contract | 0.85 (0.06)** | 0.96 (0.06) |
| Tenure | | 0.94 (0.00)*** | 0.95 (0.00)*** |
| Industry level (previous job): | | | |
| Industry: | Agriculture | 1.54 (0.21)*** | 1.46 (0.2)*** |
| | Mining | 1.19 (0.20) | 1.22 (0.20) |
| | Manufacturing | 1.23 (0.10)*** | 1.19 (0.10)** |
| | Electricity, water, gas | 1.37 (0.33) | 1.41 (0.34) |
| | Construction | 1.51 (0.16)*** | 1.42 (0.15)*** |
| | Wholesale | 1.59 (0.17)** | 1.51 (0.17)** |
| | Retail / Restaurants | 1.46 (0.10)*** | 1.44 (0.10)*** |
| | Transport | 1.29 (0.16)** | 1.32 (0.16)** |
| | Finance, property buss. | 1.60 (0.10)*** | 1.53 (0.10)*** |
| | Government | reference | reference |
| | Cultural services | 1.24 (0.11)** | 1.26 (0.11)*** |
| R-squared | | 0.07 | 0.09 |
| Number of observations | | 15,232 | 15,015 |

* 10% significance, ** 5% significance, *** 1% significance, robust standard errors in parentheses.

2.3 The global city hypothesis – escalation and bumping-down

Though metropolitan labour markets can be interpreted as providing an opportunity as well as a threat to employees, it doesn't follow necessarily that both forces will manifest as increased job mobility. Mitchell *et al.* (2005) contend that the different motivations for job mobility generate qualitatively different outcomes. They show that when job mobility is motivated by intrinsic motivation (that is, job change induced by labour market opportunities) the new job is qualitatively better (pay, hours worked and job security satisfaction) than the previous one. However, when job mobility is motivated by extrinsic search (that is, job change induced by labour market threats) no qualitative improvements occur as a result of the search and mobility.

This closely relates to the existing literature which proposes that metropolitan areas play an 'escalating' role. Gordon (2005: 6) argues that modern cities have a unique potential for success, particularly lying in the "range, flexibility, openness and depth" of their labour markets. Berry (2006: 5) notes that cities increasingly can be distinguished not merely by size and growth but by advanced business services. The rise of finance and specialised services concentrated in cities creates a 'critical-mass' of profitable enterprises (Sassen, 1995). Economies of scale are said to be generated by proximity of firms to key input services and the advantages offered by face-to-face communication. As Nygaard *et al.* (2005: 4) argue "greater service intensity and complexity through skill biased technical change has generated a skills premium, which induces wage and earnings inequality." Externalities flowing from co-location and reduction of transaction costs are said to significantly raise firm profitability.

That Australian cities offer a wage premium (and particularly skilled workers) is confirmed by crude analysis of HILDA. Table 2 shows average hourly wage by occupation for metropolitan and non-metropolitan regions.

Table 2 Mean hourly wages by occupation, metropolitan and non-metropolitan, 2001-2004 Australia

| Occupational level | Hourly gross wage (\$A) ^a | |
|-------------------------|--------------------------------------|-------------------|
| | Non-Metropolitan Area | Metropolitan Area |
| Manager | 11.45 | 27.76 |
| Professional | 21.40 | 22.99 |
| Associate Professional | 15.13 | 19.15 |
| Tradesperson | 12.84 | 14.01 |
| Advance Clerical | 17.40 | 18.23 |
| Clerical | 14.38 | 15.39 |
| Intermediate Production | 15.96 | 14.24 |
| Elementary Clerical | 12.34 | 12.87 |
| Labourer | 11.86 | 12.57 |

^a Includes all jobs. Source: HILDA, pooled cross-section, 2001-2004

In line with Sassen's (1991) 'global city' hypothesis, Berry (2006) argues that Australian cities have become both more integrated and more segmented. Nygaard *et al.* (2005) assess elements of the 'global cities' hypothesis for three Australian cities: Adelaide, Melbourne and Sydney. Results confirm that there is evidence of

agglomeration of 'new economy' type industries in Sydney, and to a lesser degree Melbourne, similarly new economy small businesses increased their profit share in Sydney and Melbourne. The authors employ a Grubel-Lloyd Index of intra-industry trade and find that Sydney and Melbourne are marginally more internationally connected than Adelaide.

Australian cities traditionally, unlike those in the UK and US, do not have economically depressed inner-areas, nor has there been a significant decentralisation of employment to the suburbs of Sydney and Melbourne (O'Connor and Healy, 2002). Like UK and US cities, Australian cities do however contain higher proportions of ethnic minorities and "unattached young people, in search of freedom or in flight from difficult family situations" (Buck *et al.*, 2002: 198), groups who may find difficulties with integration.

Sassen (1991) adds a new dimension to this mix. He argues that with the growth and concentration of new economy employment, not only are highly skilled, knowledge-intensive jobs generated but so are routinised, low-skilled support jobs, requiring little formal qualifications or training. Mitchell and Bill (2006) confirm these growth trends in the Australian economy. Berry (2006: 9) terms this a "synergistic dual urban labour market" which gives rise to labour market polarisation in income inequality as described in the Sassen's (1991) 'social polarisation thesis' (see also Friedmann and Wolff, 1982; and Baum, 1997). Nygaard *et al.* (2005) examine spatial income inequality using Australian Tax Office data at the post-code level and Milanovic-Gini coefficients for grouped data. They find that while in Adelaide the ratio of the ten richest to the ten poorest postcodes has remained relatively unchanged, it has increased in Sydney and Melbourne over the period 1995-96 to 2002-03. Examining census data for 1991, Baum (1997: 1900) provided early evidence of socio-economic segmentation in Sydney noting "at one end of the scale there exists a growing group of high-income, high-status individuals who are strongly attached to the global economy and have benefited from global integration. At the other end, there is both a growing group of workers who have only weak labour market attachment to the global economy (low-paid service workers) and a group who are outside the employed labour force, are dependent on welfare, and have benefited very little from global processes."

There is a close link between processes of mobility, job competition and economic disadvantage for the less skilled workers particularly in times of overall job rationing as exists in the Australian economy in 2006. While cities may offer chances for prosperity relative to less-dense employment growth areas, they also generate perverse dynamics including so-called 'bumping down' effects whereby as the supply of skilled workers expands more highly educated workers compete with less skilled (educated) workers for similar jobs and according to Thurow (1998: 33) the high skill workers 'bump down the job distribution' driving the less-skilled workers either further down the occupational ladder or into unemployment (see Fields, 1975). Skott and Auerbach (2005) conclude that the rising proportion of high-skill workers without high-skill employment who bump down into lower-skill jobs can explain a substantial increase in US wage inequality. Green and Owen (1998) link the 'bumping down' mechanisms to an explanation of the spatial distribution of non-employment. They note that low-skill workers are less spatially mobile (through migration or commuting) and require an adequate stock of spatially proximate jobs to avoid unemployment. In times of overall job rationing, high growth areas experience substantial net in-migration and net in-commuting from more skilled workers in

search of the overall scarce employment. As a consequence the less-skilled workers do not fully enjoy the high growth in jobs that they would normally access if there was full employment overall. The problem is not that the low skilled do not possess relevant skills but rather that the higher-skilled workers bump down and present superior competition for the finite pool of jobs. Mitchell and Bill (2006) have found evidence of these dynamics in the Australian labour market.

These processes represent the dark side of the global city. Table 3 shows educational attainment shares in the two lowest occupational categories available in HILDA both in and outside the metropolitan area. The data shows that there is a higher incidence of highly educated employees in low occupational jobs in the metropolitan area relative to the non-metropolitan areas. The data is thus consistent with the major dynamics expected of bumping down.

Table 3 Bumping down in the two lowest occupational categories in the secondary labour market segment, metropolitan and non-metropolitan, Australia

| Occupational and educational level | | Share in employment | |
|------------------------------------|-------------------|---------------------|--------------|
| | | Non-Metropolitan | Metropolitan |
| Labourer: | Primary education | 73.4 | 70.0 |
| | Certificate | 19.7 | 18.8 |
| | Diploma | 3.2 | 3.8 |
| | Bachelor | 3.7 | 6.5 |
| Elementary Worker: | Primary education | 76.9 | 73.0 |
| | Certificate | 15.1 | 12.0 |
| | Diploma | 4.1 | 5.4 |
| | Bachelor | 3.9 | 9.7 |

Source: HILDA, pooled cross-section, 2001-2004

Taken together, the analysis in this section motivates an examination of career dynamics by spatial division and occupational demarcation.

3. Labour market segmentation and career trajectory

3.1 Labour market segmentation

The analysis in Table 1 suggest that two motivations for job mobility – the confidence in finding a (better) job and the fear of losing one’s current job – provide indicators of upward and downward escalators, respectively. This is consistent with Mitchell *et al.* (2005). We now seek to explain the role these motivators play in career development.

Mitchell *et al.* (2005) analyse job-search in the context of dual labour market (DLM) theory, using HILDA data 2001-2003. DLM theory proposes that the labour market is segmented on the basis of processes for allocation and reward. The crudest demarcation defines a Primary Labour Market (PLM) and the Secondary Labour Market (SLM) with rigidities restricting mobility between the two segments. The authors hypothesise that on-the-job search behaviour is likely to be different according to which ‘segment’ the worker is employed within. The traditional notion of a PLM worker suggests they are employed in tight internal labour market structures which facilitate career advancement and search activity is used to enhance his/her

career aspirations. Conversely the SLM worker may be motivated to search for new employment because their jobs are typically precarious. Intrinsic search is associated with occupational and educational levels associated with the primary sector, while extrinsic search tends to be associated with individuals in the secondary sector.

We thus hypothesise that higher rates of turnover in metropolitan labour markets will have different impacts for primary and secondary workers. Primary workers with higher levels of education and skill should be able to use job mobility to appropriate productivity gains associated with their human capital. Job mobility by secondary workers is driven by extrinsic factors (fear) and generates negligible improvements in pay, security and overall job satisfaction. This is at odds with human capital theory that proposes that job search is a process that underpins career development. We also suggest that changes in the way cities are organised and associated structural shifts in employment, as per the ‘social polarisation’ thesis, may be deepening the divisions between the career trajectories of primary and secondary workers.

Underlying this labour market construction, however, is a tension – how should we demarcate the primary and secondary segments and allocate workers accordingly. This is a long-standing and unresolved issue that has meant the theory of dual labour markets has had limited empirical application. But if we want to propose that career trajectories in different labour market segments are aggravated by features of metropolitan labour markets, we have to simultaneously provide demarcation criteria. To make our analysis operational, we follow Flatau and Lewis (1993) and demarcate the labour market into three segments. With the middle segment not being assigned exclusively to either the primary or the secondary segment, we are left with two ‘extreme’ categories which we assert represent the characteristics attributable to primary and the secondary markets. To identify these segments we employ the partition cluster technique, which is preferred to hierarchical clustering if the number of clusters is known (see Hair *et al.*, 2006). We use educational attainment, occupational level and firm size (number of employees) to cluster the labour market which is consistent with the descriptive analysis of Doeringer and Piore (1971).

3.2 The role of job seeking confidence

The flexibility and richness of the metropolitan labour market should boost a primary worker’s confidence in being able to find an equal or better job. To test this hypothesis we run an ordinary least squares regression with the percentage chance of finding another (potentially better than the current) job within a year as the dependent variable and interaction terms between the metropolitan dummy variable and a dummy variable indicating the worker’s presence in the primary labour market segment. Table 4 reports the results. The first two columns (the second column adds job characteristics) support the upward escalator theory. We find significantly more confidence in the primary segment of the metropolitan labour market compared to the primary segment of the non-metropolitan area. Not surprisingly we also find that confidence is higher in the primary segment of the non-metropolitan labour market compared to the secondary segment outside the city. Further, Fielding (1991)’s observation that young workers particularly benefit from upward escalators is confirmed by our analysis. In the final column of Table 4, we include the extent to which employees use their skills/abilities in their job. Glaeser and Maré (2001) argue that metropolitan labour markets offer greater opportunities for ambitious workers to develop their skills and human capital. Our results show that the extent to which skills are used in the job fosters confidence and improved career trajectory.

Table 4 Driving forces behind confidence, job-to-job movers, 2001-2004

| Dependent variables | | Confidence | Confidence | Confidence |
|--|--|------------------|------------------|-----------------|
| Independent variables | | (1) | (2) | (3) |
| Metropolitan area X primary segment | | 5.80 (2.17)*** | 5.32 (2.05)*** | 5.35 (2.05)*** |
| Metropolitan area X secondary segment | | -1.15 (2.21) | -2.15 (2.11) | -1.76 (2.12) |
| Non-Metrop. area X primary segment | | reference | reference | reference |
| Non-Metrop. area X secondary segment | | -5.95 (2.26)*** | -5.92 (2.17) *** | -5.67 (2.17)*** |
| Metropolitan area X middle segment | | 2.47 (2.32) | 1.97 (2.20) | 1.93 (2.20) |
| Non-Metrop. area X middle segment | | -4.61 (2.56)* | -4.95 (2.44)** | -5.09 (2.44)** |
| Personal characteristics: | | | | |
| Age cohort: | 16–30 years | reference | reference | reference |
| | 31–40 years | -4.39 (1.32)*** | -1.38 (1.26) | -1.53 (1.27) |
| | 41–50 years | -10.62 (1.45)*** | -3.80 (1.45)*** | -3.92 (1.45)*** |
| | 51–65 years | -18.43 (1.87)*** | -8.97 (1.88)*** | -9.10 (1.89)*** |
| Gender: | Female | reference | reference | reference |
| | Male | -3.64 (1.12)*** | -2.53 (1.09)** | -2.48 (1.09)** |
| Ethnicity: | Non-Aboriginal Austr. | reference | reference | reference |
| | Indigenous | -1.97 (4.17) | -1.00 (3.95) | -0.90 (3.95) |
| Job characteristics / satisfaction: | | | | |
| | Satisfaction about hours worked | | 0.35 (0.22) | 0.35 (0.22) |
| | Satisfaction about pay | | -1.71 (0.22)*** | -1.74 (0.18)*** |
| | Satisfaction about job security | | 1.53 (0.21)*** | 1.51 (0.21)*** |
| Hours worked: | Involuntary part time | | reference | reference |
| | Full time | | 2.98 (2.41) | 2.61 (2.42) |
| | Voluntary part time | | 3.71 (2.47) | 3.65 (2.47) |
| | Probability to leave the job voluntary | | 0.17 (0.01)*** | 0.17 (0.01)*** |
| | Tenure | | -0.88 (0.10)* | -0.88 (0.10)* |
| | Use of skills / abilities in job | | | 0.53 (0.31)* |
| Industry level (previous job): | | | | |
| Industry: | Agriculture | 8.86 (3.72)** | 7.15 (3.55)** | 7.36 (3.55)** |
| | Mining | -4.95 (4.69) | -4.83 (4.46) | -4.67 (4.46) |
| | Manufacturing | -2.54 (2.05) | -2.47 (1.97) | -2.21 (1.97) |
| | Electricity, water, gas | -12.28 (5.96)** | -8.28 (5.66) | -8.13 (5.66) |
| | Construction | 3.79 (2.72) | 3.90 (2.60) | 4.06 (2.60) |
| | Wholesale | 1.17 (2.78) | -0.71 (2.65) | -0.46 (2.65) |
| | Retail / Restaurants | 3.92 (1.75)** | 0.46 (1.68) | 0.66 (1.68) |
| | Transport | 1.78 (3.16) | 0.88 (3.01) | 1.22 (3.02) |
| | Finance, property buss. | -0.27 (1.68) | -0.50 (1.61) | -0.30 (1.62) |
| | Government | reference | reference | reference |
| | Cultural services | -3.06 (2.37) | -4.38 (2.25)* | -4.34 (2.25)* |
| Adjusted R-squared | | 0.06 | 0.16 | 0.16 |
| N | | 3,250 | 3,250 | 3,250 |

* 10% significance, ** 5% significance, *** 1% significance, robust standard errors in parentheses. Constant not reported.

3.3 Fear of losing current job

We hypothesise that the flexibility found in metropolitan labour markets also generates job insecurity in the secondary segment. To explore this notion, we run a similar regression to that in Section 3.2 with the dependent variable becoming ‘the percentage chance the respondent loses his/her job in the next 12 months’, which is provided as a response in HILDA. In that sense, we should exercise some caution. To control for respondents who potentially misinterpret the question and include voluntary quits in the expected percentage chance that they will lose their job, we include the variables ‘probability of leave the job voluntary’ and ‘confidence in finding a new (potentially better) job’ in the specification.

A priori, we expect employees will be less apprehensive of losing their job in the primary segment of the metropolitan labour market than in the primary segment of the non-metropolitan area. We also expect secondary labour market workers to have more apprehension than primary workers. Table 5 reports the regression results, for job-to-job movers. The first striking result is that our *a priori* expectations are not confirmed. In the first column, we control for personal characteristics and sector. We find that fear plays a significantly more important role in the primary segment of the metropolitan labour market than in the same segment outside the main cities and there is no evidence suggesting there is more fear in the secondary segment. In the second column we add job characteristics and job satisfaction to the analysis. Bear in mind that this refers to the job that the job-changer has just left. Job satisfaction in terms of ‘hours worked’ and ‘pay’ leads to more fear, because there is more to lose for these employees if job loss occurs. This might also explain why age plays a smaller role in the second regression than in the first - older workers typically have better jobs. Including these variables in the analyses absorbs part of the significance of the interaction dummy ‘Metropolitan area X primary segment’, but it remains significantly different from zero.

To probe these seemingly surprising results further, we include two variables that might explain why job loss in the primary segment in the metropolitan area might have detrimental consequences for primary segment employees. If the upward escalators indeed exist in the primary segment in the city, employees might bring the future fruits to the fore. That is, they take on substantial debt burdens which can only be serviced in the future if career advancements occur. We therefore add the variables ‘financial position’ and ‘mental distress’ to the analysis. The second variable indicates a threat to climbing the internal job ladder in the primary segment. The third column shows the results of adding these variables to the regression. The financial position does not affect one’s fear of losing their current job. Mental distress does affect fear positively, though it does not explain the pressure felt in the primary segment in the city to change jobs. Further analysis is needed.

Table 5 Driving forces behind fear of job loss, job-to-job movers, 2001-2004

| Dependent variables | | Fear | | |
|--|-----------------|-----------------|-----------------|--|
| Independent variables | (1) | (2) | Fear (3) | |
| Metropolitan area X primary segment | 5.04 (1.97)*** | 2.85 (1.59)* | 2.78 (1.58)* | |
| Metropolitan area X secondary segment | 3.66 (1.99) | 1.10 (1.63) | 1.00 (1.63) | |
| Non-Metrop. area X primary segment | reference | reference | reference | |
| Non-Metrop. area X secondary segment | 4.29 (2.04)** | 2.09 (1.67) | 2.27 (1.68) | |
| Personal characteristics: | | | | |
| Age cohort: | | reference | reference | |
| 16–30 years | reference | reference | reference | |
| 31–40 years | 0.66 (1.20) | -0.50 (0.98) | -0.52 (0.98) | |
| 41–50 years | 4.83 (1.33)*** | 0.73 (1.11) | 0.81 (1.11) | |
| 51–65 years | 6.70 (1.71)*** | 2.40 (1.44)* | 2.64 (1.44) | |
| Gender: | | reference | reference | |
| Female | reference | reference | reference | |
| Male | 2.23 (1.01)** | 0.94 (0.82) | 1.19 (0.82) | |
| Ethnicity: | | reference | reference | |
| Non-Aboriginal Austr. | reference | reference | reference | |
| Indigenous | 4.81 (3.76) | 2.49 (3.04) | 2.20 (3.03) | |
| Job characteristics / satisfaction: | | | | |
| Satisfaction about hours worked | | 0.79 (0.17)*** | 0.86 (0.17)*** | |
| Satisfaction about pay | | 0.78 (0.17)*** | 0.83 (0.18)*** | |
| Satisfaction about job security | | -6.40 (0.16)*** | -7.41 (0.16)*** | |
| Contract type: | | reference | reference | |
| Fixed term contract | | reference | reference | |
| Casual contract | | -5.94 (1.45)*** | -6.08 (1.46)*** | |
| Permanent contract | | -7.33 (1.34)*** | -7.32 (1.34)*** | |
| Tenure | | -0.06 (0.08) | -0.05 (0.08) | |
| Stress related factors: | | | | |
| Mental Distress | | | 0.10 (0.02)*** | |
| Financial Pos.: | | | reference | |
| Prosperous | | | reference | |
| Very comfortable | | | -3.00 (3.37) | |
| Reasonably comfortable | | | -3.16 (3.26) | |
| Getting along | | | -3.60 (3.31) | |
| Poor | | | 1.13 (3.99) | |
| Very poor | | | -7.41 (5.86) | |
| Probability to leave job voluntary | 0.06 (0.01)*** | 0.03 (0.01)*** | 0.03 (0.01)** | |
| Confidence to find a job | -0.04 (0.02)** | 0.02 (0.01) | 0.02 (0.01) | |
| Industry level (previous job): | | | | |
| Industry: | | | | |
| Agriculture | 14.12 (3.33)*** | 9.20 (2.70)*** | 9.21 (2.70)*** | |
| Mining | 5.76 (4.31) | 4.02 (3.48) | 4.03 (3.48) | |
| Manufacturing | 5.73 (1.84)*** | 4.02 (1.50)*** | 3.94 (1.50)*** | |
| Electricity, water, gas | 9.71 (5.43) * | 5.84 (4.39) | 5.39 (4.38) | |
| Construction | 8.80 (2.45)*** | 5.73 (1.99)*** | 5.71 (1.99)*** | |
| Wholesale | 9.14 (2.49)*** | 6.53 (2.03)*** | 6.48 (2.02)*** | |
| Retail / Restaurants | -1.18 (1.58) | 0.83 (1.29) | 0.69 (1.29) | |
| Transport | 0.05 (2.83) | 0.69 (2.29) | 0.70 (2.29) | |
| Finance, property buss. | 5.57 (1.51)*** | 2.45 (1.24)** | 2.30 (1.23)* | |
| Government | reference | reference | reference | |
| Cultural services | 2.72 (2.14) | 2.67 (1.73) | 2.63 (1.73) | |
| Adjusted R-squared | 0.04 | 0.37 | 0.38 | |
| N | 3,332 | 3,332 | 3,332 | |

* 10% significance, ** 5% significance, *** 1% significance. Constant not reported. Middle segment not reported.

4. Conclusion

We use HILDA data to test three key findings arising from the international empirical literature on the functioning of metropolitan labour markets: 1) job mobility is higher in metropolitan areas; 2) increased flexibility in the metropolitan area spurs career advancement in the primary segment of the labour market; and 3) increased insecurity in the metropolitan area obstructs career advancement in the secondary segment of labour market.

We find clear evidence that job mobility is higher in metropolitan areas. However, we are able to go further to determine what behavioural processes are driving this result. Both an increased confidence that search will locate a new job and heightened fear of losing one's current job in metropolitan areas appears to explain why job mobility is higher in metropolitan areas. We use this result and earlier findings by Mitchell *et al.* (2005) to test the two remaining key hypotheses drawn from the extant literature. Mitchell *et al.* (2005) show that when higher confidence of finding a new job (fear to lose the current job) is a motivation for job search a person gains a better (equal or worse) outcome in terms of the qualities of the new job compared to the old one. We use these insights to test key findings (2) and (3). If the second key finding is true, confidence should be higher in the primary segment of the metropolitan labour market, indicating the existence of upwards escalators. If the third key finding is true, fear should be higher in the secondary segment of the metropolitan labour market, indicating the existence of bumping down. We confirm key finding (2), but not (3). On the contrary, we find that there is more fear of job loss in the primary segment of the metropolitan labour market than in both the same segment outside the metropolitan area and the secondary segment in the metropolitan area. The lack of confirmation of key finding (3) raises the next research question. Have primary labour markets in metropolitan regions undergone dynamic change as the Government has increasingly deregulated the labour market such that they no longer provide secure employment within which dynamic (intergenerational) training allows job-specific skills to be passed on?

References

- Amin, A. and Thrift, N. (1992) 'Neo-Marshallian Nodes in Global Networks', *International Journal of Urban and Regional Research*, 16, 571-587.
- Baum, S. (1997) 'Sydney, Australia: A Global City? Testing the Social Polarisation Thesis', *Urban Studies*, 34, 1881-1901.
- Berry, M. (2006) 'Housing Affordability and the Economy: a review of labour market impacts and policy issues', National Research Venture 3: Housing Affordability and Lower-Income Australians (Background Report), *Australian Housing and Urban Research Institute*, Melbourne
- Buck, N. and Gordon, I. (2005) 'Cities in the New Conventional Wisdom', in: Buck, N., Gordon, I., Harding, A. and Turok, I. (eds.), '*Changing Cities*', Palgrave Macmillan, London.
- Buck, N., Gordon, I., Hall, P., Harloe, M. and Kleinman, M., (2002) 'Climbing Up, Bumping Down and Flitting Around: London's Dynamic Labour Market', *Working Capital – Life and Labour in Contemporary London*, Routledge, Taylor & Francis Group, New York.

- Buck, N. and Gordon, I. (1998) *'Turbulence and Sedimentation in the Labour Markets of Late Twentieth Century London'*, City at the Millennium Conference, London.
- Doeringer, P. and Piore, M. (1971) *Internal Labour Markets and Manpower Analysis*, Lexington Mass., D.C. Heath.
- Fielding, A. (1991) 'Migration and Social Mobility: South East England as an Escalator Region', *Regional Studies*, 26, 1-15.
- Fields, G.S. (1975) 'Higher education and Income Distribution in a less developed country', *Oxford Economic Papers*, 27(2), 245-59.
- Flatau, P. and Lewis, P. (1993) 'Segmented Labour Markets in Australia', *Applied Economics*, 25, 285-294.
- Friedmann, J. and Wolff, C. (1982) 'World City Formation', *International Journal of Urban and Regional Research*, 6, 306-344.
- Glaeser, E. (1999) 'Learning in Cities', *Journal of Urban Economics*, 46, 254-277.
- Glaeser, E. and Maré, D. (2001) 'Cities and Skills', *Journal of Labor Economics*, 19, 316-342.
- Gordon, I. (2005) 'Session 2: Labour Market Integration Policies to Enhance Social Cohesion', *OECD International Conference – Sustainable Cities: Linking Competitiveness with Social Cohesion*, 13-14 October 2005, Montreal.
- Green, A.E. and Owen, D.W. (1998) *Where are the jobless?: Changing employment and non-employment in cities and regions*, Bristol, Policy Press.
- Hair, J., Black, B., Babin, B., Anderson, R. and Tatham, R. (2006) *'Multivariate Data Analysis'*, 6th Edition, Pearson Prentice Hall, Upper Saddle River, N.J.
- Mitchell, W. and Bill, A., (2006) 'Who Benefits from Growth? Disadvantaged Workers in Growing Labour Markets', forthcoming in the *Australian Journal of Labour Economics*.
- Mitchell, W.F., Muysken, J. and Welters, R. (2005) 'Search Behaviour and Casualties of the (Dual) Labour Market', Centre of Full Employment and Equity, *Working Paper 05-15*, University of Newcastle, Callaghan.
- Nygaard, C., Wood, G. and Stoakes, A. (2005) *'A Tale of Three Cities: Labor and Housing Market Development in a Post-Industrial Era'*, Paper presented to State of Australian Cities Conference, Brisbane.
- O'Connor, K. and Healy, E. (2002) 'The Links Between Labour and Housing Markets in Melbourne', Final Report, *Australian Housing and Urban Research Institute*, Melbourne.
- OECD, (1997) 'Employment Outlook', Paris, July 1997
- OECD, (1999) 'Employment Outlook', Paris, June 1999.
- Sassen, S. (1995) 'Urban Impacts of Economic Globalism', in Brothie, J., Batty, M., Blakely, E., Hall, P. and Newtown, P. (Eds.), *Cities in Competition: Productive and Sustainable Cities for the 21st Century*, Longman, Australia, 36-57.
- Sassen, S. (1991) *'The Global City: New York, London, Tokyo'*, Princeton University Press, Princeton NJ.

Skott, P., and P. Auerbach (2005) 'Wage inequality and skill asymmetries,' in *Interactions in Analytical Political Economy: Theory, Policy and Applications*, ed. M. Setterfield (Armonk, NY: M.E. Sharpe)

Thurow, L. (1998) 'Wage dispersion: "who done it?"' *Journal of Post Keynesian Economics*, 21, 25–37

White, M. and Forth, J. (1998) '*Pathways Through Unemployment: the effects of a flexible labour market*', Joseph Rowntree Foundation, York.

Appendix:

The HILDA study now in its fourth wave is a general social and economic survey, focusing on family and household formation, income and work. The confidentialised version of HILDA has restricted spatial information but we are able to identify metropolitan and non-metropolitan regions. The HILDA Survey began tracking 19,914 persons in 2001, and is a representative sample of the Australian population. It has a longitudinal design, with most questions repeated each year for four years, the most recent wave concluding in 2004.

Table A Descriptive statistics (% shares, unless mentioned otherwise), HILDA 2001-2004

| | | 2001 | 2002 | 2003 | 2004 |
|-------------------|----------------------------------|------|------|------|------|
| Age cohort: | 16-30 years | 0.31 | 0.31 | 0.31 | 0.32 |
| | 31-40 years | 0.27 | 0.26 | 0.25 | 0.24 |
| | 41-50 years | 0.25 | 0.26 | 0.26 | 0.26 |
| | 51-65 years | 0.16 | 0.16 | 0.18 | 0.18 |
| Gender: | Male | 0.51 | 0.51 | 0.50 | 0.51 |
| Ethnicity: | Indigenous | 0.01 | 0.01 | 0.02 | 0.02 |
| Residence: | Living in major statistical area | 0.61 | 0.60 | 0.59 | 0.59 |
| Hours worked: | Full time | 0.70 | 0.70 | 0.69 | 0.69 |
| | Voluntary part-time | 0.26 | 0.27 | 0.27 | 0.28 |
| | Involuntary part-time | 0.04 | 0.04 | 0.04 | 0.03 |
| Type of contract: | Fixed term contract | 0.09 | 0.10 | 0.09 | 0.09 |
| | Casual contract | 0.24 | 0.24 | 0.23 | 0.22 |
| | Permanent contract | 0.67 | 0.66 | 0.68 | 0.70 |
| Education: | (Pre-)primary/secondary school | 0.46 | 0.44 | 0.44 | 0.43 |
| | Certificate | 0.20 | 0.21 | 0.21 | 0.21 |
| | Advanced diploma and diploma | 0.09 | 0.09 | 0.09 | 0.09 |
| | (Post) Graduate, bachelor degree | 0.25 | 0.26 | 0.26 | 0.27 |
| Industry: | Agriculture | 0.03 | 0.02 | 0.02 | 0.02 |
| | Mining | 0.02 | 0.02 | 0.02 | 0.02 |
| | Manufacturing | 0.11 | 0.13 | 0.11 | 0.11 |
| | Electricity, water, gas | 0.01 | 0.01 | 0.01 | 0.01 |
| | Construction | 0.05 | 0.04 | 0.05 | 0.05 |
| | Wholesale | 0.04 | 0.04 | 0.04 | 0.04 |
| | Retail / Restaurants | 0.19 | 0.19 | 0.19 | 0.19 |
| | Transport | 0.04 | 0.04 | 0.04 | 0.04 |
| | Finance, property buss. | 0.17 | 0.15 | 0.15 | 0.15 |
| | Government | 0.29 | 0.30 | 0.30 | 0.31 |
| | Cultural services | 0.06 | 0.06 | 0.07 | 0.06 |

Table A (continued)

| | 2001 | 2002 | 2003 | 2004 |
|--|-------|-------|-------|-------|
| Use of skills / abilities in job: scale 1-7 (mean) | 5.40 | 5.26 | 5.27 | 5.24 |
| Mental Distress: scale 0-100 (mean) | 74.54 | 75.21 | 75.30 | 74.98 |
| Financial Pos.: Prosperous | 0.02 | 0.02 | 0.02 | 0.01 |
| Very comfortable | 0.13 | 0.13 | 0.16 | 0.14 |
| Reasonably comfortable | 0.55 | 0.54 | 0.54 | 0.55 |
| Getting along | 0.28 | 0.29 | 0.26 | 0.27 |
| Poor | 0.02 | 0.02 | 0.02 | 0.02 |
| Very poor | 0.00 | 0.00 | 0.00 | 0.00 |
| LM segment: Primary segment | 0.31 | 0.31 | 0.32 | 0.33 |
| Secondary segment | 0.44 | 0.43 | 0.43 | 0.42 |
| Undetermined | 0.25 | 0.26 | 0.25 | 0.26 |
| Tenure in years (mean) | 6.03 | 5.88 | 5.90 | 5.89 |
| Pay satisfaction: scale 0-10 (mean) | 6.77 | 6.80 | 6.90 | 6.94 |
| Hours worked satisfaction: scale 0-10 (mean) | 7.19 | 7.15 | 7.17 | 7.22 |
| Job security satisfaction: scale 0-10 (mean) | 7.76 | 7.94 | 7.99 | 8.03 |
| Confidence to find another job: scale 0-100 (mean) | 63.35 | 64.00 | 63.14 | 64.34 |
| Fear to lose the current job: scale 0-100 (mean) | 14.11 | 10.22 | 10.17 | 9.51 |
| Prob. to leave the job voluntarily: scale 0-100 (mean) | 22.57 | 23.16 | 22.35 | 23.48 |
| Respondents (numbers) | 6,519 | 6,226 | 6,305 | 6,164 |

¹ This paper uses confidentialised unit record file from the Household, Income and Labour Dynamics in Australia (HILDA) survey. The HILDA Project was initiated and is funded by the Commonwealth Department of Family and Community Services (FaCS) and is managed by the Melbourne Institute of Applied Economic and Social Research (MIAESR). The findings and views reported in this paper, however, are those of the authors and should not be attributed to either FaCS or the MIAESR.

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