

Job mobility and segmentation in Australian city labour markets

Anthea Bill*, Bill Mitchell
and Riccardo Welters

Centre of Full Employment and Equity (CoFEE),
University of Newcastle,
Research Cottage,
University Drive,
Callaghan NSW 2308 Australia
E-mail: anthea.bill@newcastle.edu.au
E-mail: bill.mitchell@newcastle.edu.au
E-mail: riccardo.welters@newcastle.edu.au

*Corresponding author

Abstract: Cities are said to have afforded workers higher earnings and greater opportunity to appropriate productivity gains through job mobility. The flipside of flexibility is perhaps more insecurity, associated with casualisation and intense competition for low-skilled positions. This article examines whether cities do promote greater levels of mobility and whether workers in the primary and secondary segments display different patterns of job transition in urban vs. non-urban areas. We find evidence of higher job mobility in urban areas associated with both increased confidence that search will locate a new job and heightened fear of losing one's current job. Controlling for other factors, confidence (linked to upward job mobility), is higher in the primary segment of urban labour markets, but so is fear of losing one's job (linked to downward job mobility). Thus, the primary labour market of urban areas may be particularly susceptible to the adverse dynamics associated with increased mobility.

Keywords: job mobility; search behaviour; segmented labour market theory; urban labour markets.

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Biographical notes: Anthea Bill is a PhD candidate and a Research Fellow at the Centre of Full Employment and Equity (CoFEE), University of Newcastle, Australia. She is interested in the spatial dimensions of labour market inequality, local labour markets and models of spatial interaction involving social networks, migration and commuting.

William Mitchell is a Professor of Economics and the Director of the Centre of Full Employment and Equity, University of Newcastle, Australia. Mitchell has published extensively on macroeconomics, labour economics and regional economics. His research interests include models of job creation and destruction, chartalist approaches to macroeconomics, buffer stock employment models and their application to employment guarantees, regional models of unemployment and spatial econometrics.

Riccardo Welters obtained his masters degree from the Maastricht University, the Netherlands. In May 2005, he received his PhD from the Maastricht University titled 'Efficiency of Employment Subsidies and Firms' Recruitment Strategies'. His research interest is in long-term unemployment, firm recruitment behaviour towards disadvantaged on the labour market and spatial econometrics applied to regional labour markets.

1 Introduction

Gordon (2005, p.2) hypothesises that in 15 years, cities have developed a unique pot for achieving successful economic outcomes, owing to their 'density, diversity openness to change'. Accordingly, by virtue of their scale, networks and advanced service functions, cities provide greater potential for interaction and reader access innovation; they also afford workers higher earnings and greater opportunity 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 'skill-sets. The flip-side of flexibility is more insecurity, associated with casualisation intense job competition for low-skilled positions. When labour markets are job rat overall, more able workers successfully compete for low-skill jobs at the expense of least skilled workers (see Mitchell and Bill, 2006).

There are significant differences that exist between cities and their non-metropolitan counterparts, in terms of the motivations for job search and the nature of job transitions holding other factors constant (Mitchell, Muysken and Welters, 2005). This article attempts to extend these findings using five waves of the survey of Household Income and Labour Dynamics Australia (HILDA) data, to examine whether cities do provide greater levels of mobility and whether primary and SLM 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 five waves of HILDA (first in 2001 and the last in 2005) comprising 31,740 observations. Full-time students, persons aged below 15 and aged over 65 years are excluded. The variables we use in this article are summarised in the Appendix A to this article. Wherever necessary we further explain the choices made in the article.

The article is organised as follows: Section 2 presents analysis of the drivers of job mobility attempting to isolate whether metropolitan labour markets inherently promote job turnover, and explores the possible factors driving this outcome; Section 3 examines 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; Section 4 concludes.

2 Turbulence in metropolitan labour markets

2.1 Brief literature review

Gordon (2005, p.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, p.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, p.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, p.205) note that the capacity to access opportunities and to add 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, p. 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, Muysken and Welters (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 Labour Force Survey):

- 1 the probability of having started a job
- 2 the probability of having left a job
- 3 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 1 in denser labour markets and those with lower unemployment rates (see Buck 2002, p.206). This remains true once we control for socio-demographic and individual characteristics and debunks the idea that the higher proportion of young urban residents are responsible for the higher rates of mobility. Buck et al. (2002, p.207) these measures down occupationally and find that all sectors and socio-economic groups display higher turnover rates in London. For those higher-skilled occupations generally lower turnover rates, the differential is most marked. Mobility rates in were found to be highest amongst young workers and to disappear with age (40 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, p.207). In line with the OECD, the authors find no upward trend in mobility rates between 1970 and 2000, despite temporarily high rates during the 1980s boom. After controlling for the proportion of youth, qualified and ‘personally ambitious’ persons in the London labour market, the London region escalator adds only 0.75% per annum to the mobility of an average young, qualified worker and personal ambition delivers no significant benefit over other things constant. Buck et al. (2002, p.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% 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. This study 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 a clustered logit estimated, which adjusts for observations which are dependent within clusters 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 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

hours worked or job security leads to higher job mobility. In terms of our main interest, the results show that living in metropolitan areas increases job mobility.

Table 1 Job-to-job movements, 2001–2005

Independent variables	Job-to-job movement (1)	Job-to-job movement (2)
Dependent variables		
Living outside a metropolitan area	reference	reference
Living in a metropolitan area	1.11 (0.04)***	1.06 (0.04)
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)***	0.59 (0.03)***
51–65 years	0.51 (0.03)***	0.52 (0.04)***
Gender:		
Female	reference	reference
Male	0.97 (0.04)	0.97 (0.04)
Ethnicity:		
Non-Aboriginal Austr.	reference	reference
Indigenous	1.41 (0.21)**	1.43 (0.22)**
Education:		
(Pre-)primary/sec school	reference	reference
Certificate	1.10 (0.05)*	1.06 (0.05)
Advanced diploma	1.08 (0.08)	1.05 (0.07)
Post Grad., Bachelor	1.04 (0.05)	0.96 (0.05)
Job characteristics (previous job)	–	–
Hours worked:		
Involuntary part-time	reference	reference
Full time	0.78 (0.08)**	0.76 (0.08)***
Voluntary part-time	0.65 (0.06)***	0.65 (0.06)***
Contract type:		
Fixed term contract	reference	reference
Casual contract	1.39 (0.10)***	1.41 (0.10)***
Permanent contract	0.81 (0.05)***	0.91 (0.06)
Tenure	0.94 (0.00)***	0.95 (0.00)***
Industry level (previous job)	–	–
Industry:		
Agriculture	1.48 (0.18)***	1.40 (0.17)***
Mining	1.41 (0.20)**	1.42 (0.20)**
Manufacturing	1.27 (0.09)***	1.23 (0.09)***

Table 1 Job-to-job movements, 2001–2005 (Continued)

Independent variables	Job-to-job movement (1)	Job-to-job movement (2)
Electricity, water, gas	1.50 (0.31)*	1.54 (0.33)**
Construction	1.51 (0.14)***	1.41 (0.13)***
Wholesale	1.59 (0.16)***	1.52 (0.15)***
Retail / Restaurants	1.50 (0.09)***	1.48 (0.09)***
Transport	1.35 (0.14)***	1.36 (0.14)***
Finance, property buss.	1.60 (0.09)***	1.52 (0.09)***
Government	reference	reference
Cultural services	1.26 (0.10)***	1.27 (0.10)***
R-squared	0.07	0.09
Number of observations	20,062	20,062

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

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 'bolster employees' confidence to find an equal or better job than their current job 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, 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 at others it is a threat. Both factors spur job search and so the rest of the article is devoted to studying these factors in more detail.

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 does not follow necessarily that both forces will manifest as increased job mobility. Mitchell, Muysken and Welters (2005) contend that 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, working conditions 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 threat) qualitative improvements occur as a result of the search and mobility.

This closely relates to the existing literature which proposes that metropolitan labour markets play an 'escalating' role. Gordon (2005, p.6) argues that modern cities have a

potential for success, particularly lying in the 'range, flexibility, openness and depth' of their labour markets. Berry (2006, p.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, Wood and Stoakes (2005, p.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 gross wages by occupation for metropolitan and non-metropolitan regions.

In line with Sassen (1991) 'global city' hypothesis, Berry (2006) argues that Australian cities have become both more integrated and more segmented. Nygaard, Wood and Stoakes (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.

Table 2 Mean hourly wages by occupation, metropolitan and non-metropolitan, 2001–2005 Australia

Occupational level	Hourly gross wage (\$A) ^a	
	Non-metropolitan area	Metropolitan area
Manager	11.70	28.41
Professional	21.49	23.24
Associate professional	15.29	19.64
Tradesperson	13.00	14.28
Advance clerical	17.21	18.10
Clerical	13.78	15.50
Intermediate production	15.98	14.39
Elementary clerical	12.45	13.00
Labourer	11.90	12.71

^a Includes all jobs.

Source: HILDA, pooled cross-section, 2001–2005.

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, p.198), groups who may find difficulties with integration.

Sassen (1991) adds a new dimension to this mix. She argues that with the growth and concentration of new economy employment, not only are highly skilled, knowledge-

intensive jobs generated, but also are routinised, low-skilled support jobs, requiring formal qualifications or training. Mitchell and Bill (2006) confirm these growth trends in the Australian economy. Berry (2006, p.9) terms this a 'synergistic dual urban 1 market' which gives rise to labour market polarisation in income inequality as described in the Sassen (1991) 'social polarisation thesis' (see also Friedmann and Wolff, 198; Baum, 1997). Nygaard, Wood and Stoakes (2005) examine spatial income inequality using Australian Tax Office data at the post-code level and Milanovic-Gini coefficient for grouped data. They find that while in Adelaide the ratio of the ten richest to the poorest postcodes has remained relatively unchanged, it has increased in Sydney Melbourne over the period 1995–1996 to 2002–2003. Examining census data for Baum (1997, p.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 exists in the Australian economy in 2006. While cities may offer chances for growth 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, p.33), the high-skill workers 'bump 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 the rising proportion of high-skill workers without high-skill employment who are 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 spatially mobile (through migration or commuting) and require an adequate stock of spatially proximate jobs to avoid unemployment. In times of overall job rationing growth areas experience substantial net in-migration and net in-commuting from skilled workers in search of the overall scarce employment. As a consequence, less-skilled workers do not fully enjoy the high growth in jobs that they would not access if there was full employment overall. The problem is not that the low skill workers do not possess relevant skills, but rather that the higher-skilled workers bump down into present superior competition for the finite pool of jobs. Mitchell and Bill (2006) 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 by region 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 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	72.2	70.2
Certificate	20.7	19.3
Diploma	3.5	4.0
Bachelor	3.7	6.5
Elementary worker: Primary education	75.7	72.2
Certificate	16.3	12.8
Diploma	4.0	5.6
Bachelor	4.0	9.5

Source: HILDA, pooled cross-section, 2001–2005.

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 suggests 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, Muysken and Welters (2005). We now seek to explain the role these motivators play in career development.

Mitchell, Muysken and Welters (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 cities are organised and associated structural shifts in employment, as per the 'polarisation' thesis, may be deepening the divisions between the career trajectory 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 DLM has had limited empirical application. But if we want to propose that career trajectories in different market segments are aggravated by features of metropolitan labour markets, we must 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 characteristics attributable to primary and the secondary markets. To identify 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 education attainment, occupational level and firm size (number of employees) to cluster the 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 a (potentially better than the current) job within a year as the dependent variable. We include interaction terms between the metropolitan dummy variable and a dummy variable indicating the worker's presence in the PLM segment.

Table 4 reports the results. The first two columns (the second column and third column) support the upward escalator theory. We find significantly higher 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 confidence is higher in the primary segment of the non-metropolitan labour market compared to the secondary segment outside the city. Further, Fielding (1991) observation that young workers particularly benefit from upward escalators is confirmed by our analysis.

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 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 in HILDA. In that sense, we should exercise some caution. To control for respondents who potentially misinterpret the question and include voluntary quits, we include the variable '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 SLM 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 the significance of the interaction dummy 'Metropolitan area X primary segment', but we do not find confirmation of our a priori expectations.

Table 4 Driving forces behind confidence, job-to-job movers, 2001-2005

Independent variables	Dependent variables	Confidence (1)	Confidence (2)
Metropolitan area X primary segment		4.92 (1.52)***	4.66 (1.44)***
Metropolitan area X secondary segment		-0.72 (1.60)	-1.34 (1.52)
Non-Metrop. area X primary segment		reference	reference
Non-Metrop. area X secondary segment		-4.92 (1.65)***	-4.70 (1.58)***
<i>Personal characteristics</i>			
Age cohort:			
16-30 years		reference	reference
31-40 years		-4.22 (1.13)***	-1.08 (1.08)
41-50 years		-9.08 (1.23)***	-2.59 (1.22)**
51-65 years		-17.65 (1.60)***	-7.84 (1.61)***
Gender:			
Female		reference	reference
Male		-3.96 (0.96)***	-3.06 (0.93)***
Ethnicity:			
Non-Aboriginal Austr.		reference	reference
Indigenous		-7.87 (3.47)**	-5.41 (3.29)*
<i>Job characteristics / satisfaction:</i>			
Satisfaction about hours worked		-	0.34 (0.19)*
Satisfaction about pay		-	-1.74 (0.19)***
Satisfaction about job security		-	1.76 (0.18)***
Hours worked:			
Involuntary part time		-	reference
Full time		-	4.03 (2.12)*
Voluntary part time		-	3.58 (2.16)*
Probability to leave the job voluntary		-	0.16 (0.01)***
Tenure		-	-0.96 (0.09)***

Table 4 Driving forces behind confidence, job-to-job movers, 2001-2005 (Continued)

Independent variables	Dependent variables	Confidence (1)	Confidence (2)
Industry level (previous job)		-	-
Industry:			
Agriculture		9.74 (3.18)***	7.88 (3.02)**
Mining		-0.06 (3.71)	-1.55 (3.52)
Manufacturing		-1.75 (1.71)	-2.34 (1.64)
Electricity, water, gas		-4.24 (4.75)***	-10.07 (4.50)
Construction		4.07 (2.27)*	3.35 (2.16)
Wholesale		1.24 (2.37)	-0.72 (2.26)
Retail/restaurants		4.81 (1.45)***	1.47 (1.39)
Transport		2.69 (2.67)	1.67 (2.53)
Finance, property buses		1.76 (1.43)	0.74 (1.37)
Government		reference	reference
Cultural services		-1.13 (2.01)	-2.78 (1.90)
Adjusted R-squared		0.05	0.15
N		4,394	4,392

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

Table 5 Driving forces behind fear of job loss, job-to-job movers, 2001-2005

Independent variables	Dependent variables	Fear (1)	Fear (2)	Fear (3)
Metropolitan area X primary segment		2.34 (1.35)*	1.31 (1.09)	1.19 (1.1)
Metropolitan area X secondary segment		1.98 (1.41)	0.01 (1.14)	-0.15 (1.1)
Non-Metrop. area X primary segment		reference	reference	reference
Non-Metrop. area X secondary segment		2.13 (1.46)	0.50 (1.19)	0.50 (1.1)
<i>Personal characteristics</i>				
Age cohort:				
16-30 years		reference	reference	reference
31-40 years		0.81 (1.00)	-0.32 (0.82)	-0.39 (1.0)
41-50 years		5.07 (1.10)***	1.12 (0.91)	1.07 (0.9)
51-65 years		7.29 (1.43)***	3.01 (1.20)**	3.09 (1.2)
Gender:				
Female		reference	reference	reference
Male		2.01 (0.85)**	0.99 (0.68)	1.18 (0.6)
Ethnicity:				
Non-Aboriginal Austr.		reference	reference	reference
Indigenous		4.70 (3.06)	1.11 (2.46)	0.82 (2.4)
<i>Job characteristics / satisfaction</i>				
Satisfaction about hours worked		-	0.65 (0.14)***	0.72 (0.14)
Satisfaction about pay		-	0.67 (0.15)***	0.73 (0.15)

Table 5 Driving forces behind fear of job loss, job-to-job movers, 2001–2005 (continued)

Dependent variables	Fear (1)	Fear (2)	Fear (3)
<i>Independent variables</i>			
Satisfaction about job security	–	–6.29 (0.14)***	–6.23 (0.14)***
Contract type:			
Fixed term contract	–	reference	reference
Casual contract	–	–5.70 (1.20)***	–5.80 (1.21)***
Permanent contract	–	–7.35 (1.10)***	–7.30 (1.10)***
Tenure	–	–0.07 (0.07)	–0.05 (0.07)
<i>Stress related factors</i>			
Mental Distress	–	–	–0.08 (0.02)***
Financial Pos.:			
Prosperous	–	–	reference
Very comfortable	–	–	–3.12 (2.77)
Reasonably comfortable	–	–	–2.72 (2.68)
Getting along	–	–	–3.17 (2.73)
Poor	–	–	2.80 (3.32)
Very poor	–	–	–4.47 (4.63)
Probability to leave job voluntary	0.07 (0.01)***	0.03 (0.01)***	0.03 (0.01)***
Confidence to find a job	–0.06 (0.01)***	0.01 (0.01)	0.01 (0.01)
<i>Industry level (previous job)</i>			
Industry:			
Agriculture	13.64 (2.80)***	9.70 (2.25)***	9.74 (2.25)***
Mining	1.88 (3.27)	1.82 (2.63)	1.91 (2.62)
Manufacturing	5.06 (1.50)***	4.19 (1.22)***	4.19 (1.21)***
Electricity, water, gas	4.94 (4.24)	2.45 (3.41)	1.93 (3.40)
Construction	7.10 (2.00)***	6.06 (1.61)***	6.11 (1.61)***
Wholesale	7.64 (2.08)***	6.21 (1.68)***	6.28 (1.68)***
Retail/restaurants	–1.02 (1.28)	1.27 (1.04)	1.21 (1.04)
Transport	0.24 (2.35)	1.44 (1.89)	1.48 (1.88)
Finance, property buses.	4.91 (1.26)***	2.61 (1.03)**	2.54 (1.02)**
Government	reference	reference	reference
Cultural services	3.00 (1.77)	3.51 (1.42)	3.46 (1.42)
Adjusted R-squared	0.04	0.38	0.38
N	4,507	4,505	4,505

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

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 and as a consequence lead to more fear. 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 therefore, add the variables 'financial position' and 'mental distress' to the analysis second variable indicates a threat to climbing the internal job ladder in the p 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 and it reduces the coefficient of the interaction term 'Metropolitan area X primary segment' further, but there is no sign reversion. Further analysis is needed.

4 Conclusions

We use HILDA data to test three key findings arising from the international employment 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
- 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 unable to go further to determine what behavioural processes are driving this result. Higher confidence that search will locate a new job and heightened fear of losing 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, Muysken and Welters (2005) to test the two remaining key hypotheses drawn from the extant literature. Mitchell, Muysken and Welters (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 gets 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). Lack of confirmation of key finding (3) raises the next research question. Have primary segment metropolitan regions undergone dynamic change as the government has increased deregulation of the labour market such that they no longer provide secure employment which dynamic (intergenerational) training allows job-specific skills to be passed on?

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References

- Amin, A. and Thrift, N. (1992) 'Neo-Marshallian Nodes in global networks', *Int. J. Urban and Regional Research*, Vol. 16, pp.571-587.
- Baum, S. (1997) 'Sydney, Australia: a global city? Testing the social polarisation thesis', *Urban Studies*, Vol. 34, pp.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. (1998) 'Turbulence and sedimentation in the labour markets of late twentieth century London', *City at the Millennium Conference*, 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*. New York, NY: Routledge, Taylor and Francis Group.
- 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*, Vol. 26, pp.1-15.
- Fields, G.S. (1975) 'Higher education and income distribution in a less developed country', *Oxford Economic Papers*, Vol. 27, pp.245-59.
- Flatau, P. and Lewis, P. (1993) 'Segmented labour markets in Australia', *Applied Economics*, Vol. 25, pp.285-294.
- Friedmann, J. and Wolff, C. (1982) 'World city formation', *Int. J. Urban and Regional Research*, Vol. 6, pp.306-344.
- Glaeser, E.L. (1999) 'Learning in cities', *Journal of Urban Economics*, Vol. 46, pp.254-277.
- Glaeser, E.L. and Maré, D.C. (2001) 'Cities and skills', *Journal of Labor Economics*, Vol. 19, pp.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 ed.), Upper Saddle River, NJ: Pearson Prentice Hall.
- Mitchell, W.F. and Bill, A., (2006) 'Who benefits from growth? Disadvantaged workers in growing labour markets', *Australian Journal of Labour Economics*, Vol. 9, pp.239-255.
- 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*. Callaghan: University of Newcastle.
- 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.
- OECD (1997) *Employment Outlook*, Paris, July 1997.
- OECD (1999) *Employment Outlook*, Paris, June 1999.
- O'Connor, K. and Healy, E. (2002) 'The links between labour and housing markets in Melbourne', *Final Report*. Melbourne, Australia: Australian Housing and Urban Research Institute.
- Sassen, S. (1991) *The Global City: New York, London, Tokyo*. Princeton, NJ: Princeton University Press.
- Sassen, S. (1995) 'Urban impacts of economic globalism', in J. Brothie, M. Batty, E. BI P. Hall and P. Newtown (Eds), *Cities in Competition: Productive and Sustainable Cit. the 21st Century* (pp.36-57). Australia: Longman.
- Skott, P. and Auerbach, P. (2005) 'Wage inequality and skill asymmetries,' in M. Setterfield *Interactions in Analytical Political Economy: Theory, Policy and Applications*. Armonk M.E. Sharpe.
- Thurow, L. (1998) 'Wage dispersion: "who done it?"', *Journal of Post Keynesian Econ* Vol. 21, pp.25-37.
- White, M. and Forth, J. (1998) *Pathways Through Unemployment: the Effects of a Flexible L Market*. New York, NY: Joseph Rowntree Foundation.