Labour mobility and public-private earning and job-satisfaction in Australia

NILS working paper series

No 204

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Abstract

We use the Household, Income and Labour Dynamics in Australia (HILDA) household panel survey (2001-2011) to address whether the earnings and job satisfaction returns to job mobility are the same for public and private jobs. The complex relationship between individual job mobility and earnings and job satisfaction consequences between the public and private sectors, occupation and industry are examined, with the outcomes considered over the short term and medium term (up to 3 years). Fixed effect panel data analyses allow control of individual level fixed effects, and also some control for endogeneity/selection issues where there are unobserved constant individual specific characteristics. Economic career theory (Sicherman and Galor 1992, Neal 1995, Dolton and Kidd 1998, Neal 1999, Elliott and Lindley 2006) provides a framework for the analyses, building on human capital theory with imperfect information, that stresses the sequential and strategic processes of career formation. We find that job mobility has different rewards between the public and private sectors. Earnings in the public sector are higher than in the private sector (consistent with much literature) and we also find that moving into the public sector is better than out to the market sector. Within 2 years, the mobility penalty for changing sector is weakened and the stability premium in the public sector also weakens. We additionally find that individuals face differing rewards for employer mobility within the sectors. Employees in the public sector with a different employer have lower earnings than public employees remaining in the same job. In contrast, mobility within the private sector leads to some earnings and satisfaction gains. The findings for overall job satisfaction follow roughly the same pattern as for earnings. The medium term results suggest only short term effects from job mobility exist for job satisfaction. Across both sectors, mobility results in lower satisfaction with job security. The dynamics of the career mobility context appear quite fast as after two years, the rewards and penalties of mobility disappear.

JEL codes J31, J45, J62.

Acknowledgements:

1.   Introduction

This paper is an investigation into the individual consequences of labour market mobility in the public and private market sectors in Australia. The focus is on the pathways of individuals following mobility out of and within the public and market sectors, and the earnings and job satisfaction outcomes. The first eleven waves (2001 to 2011) of the Household, Income and Labour Dynamics in Australia (HILDA) household panel survey are used to conduct fixed effect panel data analyses which allow control of individual level fixed effects, and hence we can attempt some control for the issue of endogeneity i.e. omitted variable bias of a fixed nature where we still rely on the X's to control time varying selection effects. Our contribution is to investigate the little researched question of how industry, occupation *and* sector specific skills relate to the job mobility of an individual and subsequent earnings and job satisfaction.

Recently, government (public) employment has become of renewed interest. The 2013 Australian Federal election had a provocative debate on cutting the public workforce (see for example Towell 2013, Mannheim 2013). 'Austerity' policies in Europe and the UK also aim to cut the public workforce. However there is economic debate about whether these measures are appropriate. The macroeconomic literature (most recently Michaillait 2014), considers the role of the size of the public workforce in public policy, with a public employment multiplier as a type of government consumption multiplier. This theoretical development links the hiring (or firing) of public employees to unemployment and variations in the business cycle. It also builds partly on a literature which has recognized the importance of public sector employment as a separate behavioural component of government consumption. Seminally, Kahn 1931 and more recently Finn 1998, Cavallo 2005 and Pappa 2009 stress in various contexts the separate importance of public employment spending on salaries as opposed to other government purchasing consumption of private goods. Michaillat 2014 uses microeconomic search and

matching labor market theories to achieve a framework where the structure of the labour market division between public and market sectors develops the economic forces driving the model[1]. An assumption in the model is that public and private jobs are identical and yet if jobs differ across sectors in wages or separations (mobility) then job seekers will direct their search to a specific sector (Michaillat 2014: 213). We address this issue further and explore the complex relationship between individual job mobility and earnings consequences between the public and private sectors, occupation and industry.

We acknowledge the empirical literature relating to public-private earnings differentials, with Ehrenberg and Schwarz 1986 and Bender 1998 providing useful early reviews[2]. Earnings comparisons estimate the pay differential and more recent efforts attempt control of endogenous selection of workers (such as Smith 1976, Gunderson 1979, Shapiro and Stelcner 1989, Belman and Heywood 1989, Pedersen et al. 1990, Peng 1992, van Ophem 1993, Poterba and Rueben 1994, Mueller 1998, Dustman and Soest 1998, Capellari 2002, Sakellariou 2011, Danzer and Dolton 2012, Bewerunge and Rosen 2012). Typically, this kind of approach is based on cross-sectional data, assessing static differences in earnings (or more recently, total rewards) between the two sectors, in addressing the different sectoral pay/reward structures (more recently including pensions) and selection but leaving the features of earnings careers unexplored.

Our paper focuses on job mobility and individual level outcomes in a career context, most closely building on research by Capellari 2002 where individual earnings careers in Italy were explored and found to differ between the public and market sectors. Following the approach

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[1] So that hiring public sector workers is more effective when unemployment is higher and hiring public workers always reduces unemployment (and the reverse when firing).

[2] Labour (job) mobility has a wide general literature with an early survey by Barber 1986, and there has long been interest in the distinctiveness of public sector labour market and it's functioning (Gregory and Borland 1986), neither of which we pursue further.

used by Pedersen et al. 1990 in a Danish context, this paper similarly analyses panel data and controls for non-random selection using fixed individual effects.

We explore the processes of mobility with a broad study of sectoral, industrial and occupational mobility, and career adaptation. All movement to jobs in other parts of the job market or to different jobs inside or outside their previous sector or industry are followed. Such moves may be interrupted by non-employment spells of several types or they may be smooth transitions. Sectoral changes may also involve change of industry and/or a change of occupation, including the important special case of downward mobility. We therefore ask what were the consequences of individual mobility of various types.

Theory provides a number of ideas for approaching the aims of this study. Most obviously one can turn to human capital theory and to the theory of implicit or relational contracts. As these are so familiar we do not discuss them further here. Additionally, we have obtained guidance from developments in economic career theory (Sicherman and Galor 1992, Neal 1995, Dolton and Kidd 1998, Neal 1999, Elliott and Lindley 2006) that stress the sequential and strategic processes of career formation. With human capital theory providing an underpinning framework, career theory suggests the importance of imperfect information about individuals' talents. As a result there is value in an exploratory process of mobility so that individuals can find niches where they can be productive and develop their careers positively. Much of the individual and economic gain (usually summarised by economists with earnings) is then achieved through promotions from a well-chosen or well-suited starting position. From this viewpoint, mobility can have positive consequences − in leading individuals to explore and find locations that suit them better for the long term − or negative consequences, in leaving favourable locations for others that suit them less well. Job satisfaction may be an intrinsic outcome sought in the job mobility process and which is now

considered more often in economic literature. The total effect of the consequences depends on the balance between these two possibilities.

The paper proceeds as follows: Section 2 describes the methods used – data, variable definition, and type of analysis. Section 3 reports the results relating to earnings and job satisfaction. Section 4 summarises the main findings and offers a brief discussion. Descriptive statistics are given in the Appendix.

2.   Data

The paper uses the first eleven waves (2001 to 2011) of the Household, Income and Labour Dynamics in Australia (HILDA) household panel survey. Modelled on household panel surveys undertaken in other countries (e.g. BHPS in the UK and GSOEP in Germany), the HILDA survey began in 2001 (wave 1) with a large national probability sample of Australian households and their members and surveys the same individual once every year[3]. The sample used here is restricted to an unbalanced panel of all working-age employees (16-64 years for males and 16-59 for females) who provide complete information on the variables of interest. The self-employed are excluded. The sample size we retain is approximately 6,000 observations (persons) per wave over eleven years.

We use information about employment between two consecutive waves to classify labour mobility considering mobility in the following four different forms: 1) change in sector, i.e. the mobility between public and market sectors; 2) change in employment, i.e. an individual's employer has changed since the last interview; 3) change in occupation, where occupational class is defined using 1-digit codes from ANZSCO 2006; 4) Change in industry, where industrial class is defined using 1-digit codes from ANZSIC 2006. We observe from our

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[3] See Watson and Wooden (2004) for a detailed description of the HILDA data.

sample that a small proportion (5.7 percent) of the employees has changed sector since the previous year, while 18.0 percent are found to have changed their employers. The proportions of those who changed occupation and industry are 24.6 percent and 23.4 percent, respectively. However, these four dimensions of labour mobility are inter-related and the correlations between them are presented in Table 1.

Table 1: Correlation matrix of different labour mobility dimensions

	Change in sector	Change in employer	Change in occupation	Change in industry
Change in sector	1.0000			
Change in employer	0.1758	1.0000		
Change in occupation	0.0716	0.2523	1.0000	
Change in industry	0.1366	0.3649	0.2431	1.0000

Table 2 shows mean nominal weekly earnings by labour mobility status (raw means not adjusted for X's). Consistent with findings in the literature, females have much lower earnings than males. Also, all types of mobility are on average substantially detrimental to the earnings of those who move. In addition, the earnings of stayers in the public sector are higher than for stayers in the private sector.

Table 2: Weekly wages by mobility status and gender

Mobility variables	Males	Females	Total
In market sector last wave and now	1153.3	688.8	944.7
In public sector last wave and now	1279.3	973.3	1105.9
From market to public	1090.4	739.6	873.6
From public to market	1041.0	722.2	846.4
No change in employer	1143.2	742.4	947.2
Change in employer	974.6	645.1	815.9
No change in occupation	1157.5	746.9	950.8
Change in occupation	1052.3	715.1	904.3
No change in industry	1148.3	756.0	951.0
Change in industry	1057.0	674.3	889.2

Mean nominal weekly earnings within group.

In the HILDA data, job satisfaction is measured as a 0 to 10 (lowest to highest) scale, including overall job satisfaction along with five facets of job satisfaction (total pay, job security, work itself, hours of work and flexibility[4]). The mean for each measure of job satisfaction is reported in Table 3 by mobility status (also raw means, unadjusted for X's). The results suggest that, on average respondents in each group indicate they are reasonably satisfied. The differences in job satisfaction between stayers and movers are relatively small both in relation to overall job satisfaction as well as individual facets of job satisfaction, with the exception that stayers are more satisfied with job security than movers. Also, employees in the public sector are more satisfied with their pay than those in the market sector.

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[4] Flexibility has some ambiguity in interpretation in this question context, for example it can be demanded by the employer of the employee or vice versa.

Table 3: Job satisfaction by mobility status

Mobility variables	Overall	Pay	Security	Work	Hours	Flexibility
In market sector last wave and now	7.55	6.92	8.05	7.49	7.17	7.40
In public sector last wave and now	7.71	7.33	8.31	7.64	7.31	7.29
From public to market	7.63	6.88	7.84	7.67	7.21	7.33
From market to public	7.83	7.23	7.79	7.73	7.57	7.52
No change in employer	7.61	7.02	8.15	7.55	7.22	7.39
Change in employer	7.54	6.89	7.69	7.50	7.18	7.34
No change in occupation	7.59	7.01	8.11	7.54	7.21	7.34
Change in occupation	7.61	6.98	7.97	7.54	7.19	7.45
No change in industry	7.59	7.01	8.15	7.55	7.19	7.32
Change in industry	7.60	6.97	7.86	7.51	7.28	7.52

Note: The mean for each measure of job satisfaction is reported by mobility status.

3.   Methodology

In the first stage of our analysis, we investigate the short-term effects of labour mobility on wages. We estimate the following earnings function:

$$\ln Y_{it} = \alpha_0 + \alpha M_{it} + \beta X_{it} + \varepsilon_{it} \tag{1}$$

where $\ln Y_{it}$ is the log of weekly earnings and M_{it} contains labour mobility dummy variables as discussed earlier for individual i at time t. The specification of the mobility variables takes two forms. Model I focuses more on the mobility between sectors. In this Model, M_{it} includes being in the *market sector last wave and now*, being in the *public sector last wave and now* and being in the *public sector last wave and market sector this wave* (being in the *market sector last wave and public sector this wave* is the reference category). Model II considers the change of employer in different sectors, M_{it} includes being in the *market sector this wave with the same employer*, being in the *public sector this wave with different employer* and being *in the market sector this wave with different employer* (being in the *public sector*

this wave with the same employer is the reference category). In both specifications, *change in occupation* and *change in industry* are also included.

X is a matrix of other relevant personal and workplace characteristics that are used as control variables in the estimation, including age, education level, disability status, marital status, number of children, residential location, hours of work, type of contract, unemployment history, employment and occupational tenure, and firm size[5]. ε is the conventional error term. Our estimation utilises the panel nature of the data and uses a fixed effects model (the within estimator), which controls for time invariant unobserved individual heterogeneity and allows us to come closer to making inferences about causal effects. Equation 1 can be rewritten as the form below:

$$\ln Y_{it} = \alpha_0 + \alpha M_{it} + \beta X_{it} + a_i + u_{it} \tag{2}$$

where a_i is not assumed to have a distribution but is instead treated as the individual fixed (and estimable) effect, and u_{it} is an idiosyncratic error.

We then use similar model specifications to estimate the short-term effect of labour mobility on overall job satisfaction and the separate facets of job satisfaction. This ignores the ordered nature of the variable, treating it as if it is cardinal, and allows the use of least squares methods, but is still the most common approach for analysis of satisfaction (see for example Wooden et al. 2009 and Johnstone and Lee 2013). Some job satisfaction analyses (such as Green et al. 2010) include a measure of wages as an additional explanatory variable, however we separate the models fully and we justify this by the likely endogeneity, as some of the effect of job satisfaction can operate via wages. We do however, re-estimate the model with

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[5] The variables are listed and explained in detail in Appendix.

the component variables of job satisfaction in order to more fully explore this. In addition, we develop a medium-term impact analysis of mobility on earnings and overall job satisfaction by using the various lags of mobility variables at *t-1*, *t-2* and *t-3* while retaining the same dependent and control variables as in models I and II. Estimations with different lags are run separately. We acknowledge that this medium-term model may ignore some important underlying dynamics, but we leave this for future research. There are a set of control variables (not reported) covering a range of individual and workplace characteristics that are listed in the Appendix.

4. Regression results

4.1 Earnings and mobility

a) Short-term impacts of mobility on earnings

The short-term impacts of labour mobility are estimated using data from 2003 to 2011 because the information on sector is only available since 2003. Moreover, since deriving sector mobility requires the information on sector for two consecutive waves, estimation in Model I only uses the data from 2004 to 2011. The results are presented in Table 4 below.

Table 4: The effects of mobility on earnings

Mobility variables	Model I		Model II	
	Coef.	*S.E.*	*Coef.*	*S.E.*
Reference category Model I: *from market to public*				
In market sector last wave and now	-0.078***	(0.01)	-	-
In public sector last wave and now	0.023**	(0.01)	-	-
From public to market	-0.040***	(0.01)	-	-
Reference category Model II: *Public Sector this wave, same job*				
Market sector this wave, same job	-	-	-0.078***	(0.01)
Public sector this wave, different job	-	-	-0.032***	(0.01)
Market sector this wave, different job	-	-	0.011	(0.01)
Change of occupation	0.001	(0.00)	-0.005	(0.00)
Change of industry	-0.001	(0.00)	-0.009*	(0.00)
No. of observations	41,597		41,180	

Note: Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Results from Model I show that relative to those who moved from market to public (the reference category), earnings are estimated to be 7.8 per cent lower for the market sector stayers, and this estimate is statistically significant at the 1 percent level. In other words, moving out of the private sector leads to a substantial earnings benefit. However, the earnings of these new public sector employees are not yet as high as for stable employees in the public sector, who receive an earnings advantage of 2.3 percent. In addition, public-to-market mobility reduces earnings by 4.0 percent by comparison with the reference category of market-public movers but they still have higher earnings than private sector stayers by 3.8 percent (0.078-0.040). Neither change of occupation nor change of industry plays a significant additional role in affecting earnings.

In summary, the public sector stayers have the best earnings outcome while the market sector stayers have the worst. The two types of movers lie in between and market-to-public movers are relatively better off than movers towards the other direction. The main implication of these findings is that earnings in the public sector are higher than in the private sector and moving into the public sector is better than towards the other direction.

Table 4 also reports (Model II) the effect on earnings of change of employer. Employees in the public sector with a different job have earnings 3.2 percent lower than the reference category of public sector employees in the same job, and this difference is statistically significant at the 1 percent level. Thus, mobility tends to involve some loss of earnings for public sector employees, even though the losses are more substantial when they move into the private sector (-0.023-0.040= -6.3 percent). In contrast, mobility leads to some earnings gains for market sector employees. Employees in the market sector with a new job have 7.8 percent higher earnings than those in the public sector who stay in the same job (reference category). Little difference was found between public sector employees in the same job and market sector employees in a different job. These two categories of employees receive relatively higher earnings than the other remaining categories.

b) Medium-term impacts of mobility on earnings

Table 5 presents the results from the medium-term impact analysis of mobility on earnings. Different lags of mobility variables at *t-1*, *t-2* and *t-3* are used. The dependent variable and control variables remain the same as previously. We find from Model I that one year after the defining year, the earnings advantage of those who moved from market to public sector over the market sector stayers is reduced from 7.8 percent to 3.0 percent and such an advantage becomes not significant three years after the defining year. Similarly, one year after the defining year, those who stayed in the public sector weaken their earnings advantage over

those who moved to private sector, from 6.3 percent (0.023+0.040) to 2.6 percent (0.037-0.010). This advantage also becomes not significant three years after the defining year.

Results from Model II also show that the gain from change of job in the market sector reduces from 8.9 percent (0.011+0.078) in the defining year to 4.4 percent (0.004+0.040) one year later and becomes not significant three years later. However, the statistical support for a gain from change of job in the market sector is weak as no coefficients are statistically different from zero. In contrast, the loss from change of job in the public sector remains about 3 to 4 percent during the first two years after the defining year, becoming not significant in the third year.

The overall picture from the medium-term impact analysis of mobility on earnings is that there is a short-term earnings loss due to labour mobility for employees in the public sector (for a move into the market sector (Model I) or a change of employer within the public sector (Model II). For employees in the market sector, there is a short term gain to changing employer within the sector (Model II). While there is a short term wage penalty for moving into the market sector (Model I), there is a weakening of this penalty after a few years and then there is little difference between the outcomes for the initial movers and initial stayers[6]. Hence, there is some evidence that movers can subsequently reverse their position in the medium-term (movers within the public sector become worse off, and movers within the market sector become better off).

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[6] Within 3 year years, the models detect no statistically significant earnings differences.

Table 5: The medium-term effects of mobility on earnings

Mobility variables	at *t*	at *t-1*	at *t-2*	at *t-3*
Reference category: *from market to public*		Model I		
In market sector last wave and now	-0.078***	-0.030**	-0.038***	0.014
	(0.01)	(0.01)	(0.01)	(0.01)
In public sector last wave and now	0.023**	0.037***	0.003	0.021
	(0.01)	(0.01)	(0.01)	(0.01)
From public to market	-0.040***	0.010	-0.038**	0.017
	(0.01)	(0.01)	(0.02)	(0.02)
Change of occupation	0.001	0.005	-0.000	-0.009*
	(0.00)	(0.00)	(0.00)	(0.01)
Change of industry	-0.001	0.006	0.002	0.003
	(0.00)	(0.00)	(0.01)	(0.01)
No. of observations	**41,597**	**31,090**	**23,191**	**17,102**
Reference category: *Public Sector this wave same job*		Model II		
Market sector this wave, same job	-0.078***	-0.040***	-0.035***	-0.003
	(0.01)	(0.01)	(0.01)	(0.01)
Public sector this wave, different job	-0.032***	-0.029***	-0.044***	0.002
	(0.01)	(0.01)	(0.01)	(0.01)
Market sector this wave, different job	0.011	0.004	0.010	0.011
	(0.01)	(0.01)	(0.01)	(0.01)
Change of occupation	-0.005	0.000	0.001	-0.009*
	(0.00)	(0.00)	(0.00)	(0.00)
Change of industry	-0.009*	0.002	0.001	-0.004
	(0.00)	(0.00)	(0.01)	(0.01)
No. of observations	**41,180**	**34,611**	**26,387**	**19,967**

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

4.2 Job satisfaction and mobility

a) Short-term impacts on job satisfaction

In this section, we maintain the two different models used in the earnings analysis, but we model job satisfaction as the dependent variable rather than log earnings. As previously, the first model focuses more on the mobility between sectors and the second considers change of

employer in different sectors. Table 6 presents the short-term picture in terms of overall job satisfaction outcomes. Interpretation of the coefficients for the model of the satisfaction scale are slightly different to that of the earnings, as they are not percent but proportion of a unit of satisfaction. We find in Model I that stable employees in the public sector have a substantially higher level of job satisfaction than their counterparts in the private sector. Stayers in the public sector have a more positive attitude than stayers in the private sector by 1.36 satisfaction units (2.63-1.27) and employees with the same job in the public sector feel more satisfied than those in the private sector by 1.62 satisfaction units.

Job change in the public sector does not have a significant impact on satisfaction and moving from public to private has a negative impact on overall job satisfaction. Relative to those who moved from market to public (the reference category), overall job satisfaction is estimated to be 2.63 units lower for the market sector stayers, and this estimate is statistically significant at the 1 percent level. Moving out of the private sector leads to an improvement in job satisfaction and stable employees in the public sector become less satisfied by 1.27 units. On the contrary, public-to-market mobility slightly reduces the level of job satisfaction by 0.2 (1.47-1.27) units by comparison with the public sector stayers. Mobility towards this direction is relatively worse than moving into the public sector, by 1.47 units. In addition, Model II shows that moving to a different employer in the market sector increases the level of job satisfaction by 3.56 units (1.94+1.62) while changing employer in the public sector does not have a significant impact on job satisfaction. Moving to a different occupation or industry improves the level of job satisfaction and this result is significant in both models.

Table 6: The effects of mobility on overall job satisfaction

Mobility variables	Model I		Model II	
	Coef.	*S.E.*	*Coef.*	*S.E.*
Reference category Model I: *from market to public*				
In market sector last wave and now	-0.263***	(0.05)		
In public sector last wave and now	-0.127***	(0.05)		
From public to market	-0.147***	(0.06)		
Reference category Model II: *public sector this*				
Market sector this wave, same job			-0.162***	(0.04)
Public sector this wave, different job			0.033	(0.05)
Market sector and different job			0.194***	(0.05)
Change of occupation	0.074***	(0.02)	0.045**	(0.02)
Change of industry	0.119***	(0.02)	0.082***	(0.02)
No. of observations	**42,643**		**47,147**	

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Given the significant influence of labour mobility on overall job satisfaction, we further examine how this impact varies across different facets of job satisfaction. Estimation results are shown in Table 7. The results suggest a similar picture as the one for overall job satisfaction, regarding between mobility and satisfaction with pay, work, hours worked and flexibility but not job security satisfaction. Stable employees in the public sector have a higher level of job satisfaction almost across all facets. For employees in the market sector, both moving into the public sector (Model I) and changing a job within the sector (Model II) improves job satisfaction across all facets except job security[7]. These employees become even more satisfied than stable employees in the public sector. On the contrary, for employees in the public sector, both moving into the private sector (Model I) and changing employer within the sector (Model II) deteriorates job satisfaction across all facets. However, they are still

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[7] Although, this is not statistically significant for market sector this wave, same job.

more satisfied than stable employees in the private sector with the exception of job security. In Model II, mobility generally lowers satisfaction with job security. Change of occupation or industry improves job satisfaction, except for satisfaction with job security.

Table 7: The effects of mobility on facets of job satisfaction

Mobility variables	Pay	Security	Work	Hours	Flexibility
Reference category:					
from market to public			Model I		
In market sector last wave and now	-0.409***	0.140**	-0.254***	-0.480***	-0.191***
	(0.07)	(0.07)	(0.06)	(0.06)	(0.07)
In public sector last wave and now	-0.102*	0.202***	-0.115**	-0.209***	-0.074
	(0.06)	(0.07)	(0.06)	(0.06)	(0.07)
From public to market	-0.299***	0.076	-0.052	-0.358***	-0.186**
	(0.07)	(0.08)	(0.06)	(0.07)	(0.08)
Change of occupation	0.046*	-0.020	0.088***	0.071***	0.029
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Change of industry	0.083***	-0.100***	0.125***	0.139***	0.043
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)
No. of observations	**42,632**	**42,628**	**42,645**	**42,645**	**42,631**
Reference category:					
Public Sector same job			Model II		
Market sector this wave, same job	-0.319***	0.035	-0.132***	-0.269***	-0.103*
	(0.05)	(0.06)	(0.05)	(0.05)	(0.06)
Public sector this wave, different job	-0.128**	-0.124**	0.046	-0.116*	-0.120*
	(0.06)	(0.06)	(0.05)	(0.06)	(0.07)
Market sector this wave, different job	0.215***	-0.299***	0.160***	0.326***	0.133**
	(0.06)	(0.07)	(0.06)	(0.06)	(0.07)
Change of occupation	0.009	-0.002	0.068***	0.036	0.014
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Change of industry	0.029	-0.044*	0.095***	0.107***	0.048*
	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)
No. of observations	**47,137**	**47,133**	**47,149**	**47,149**	**47,132**

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

b) Medium-term impacts on overall job satisfaction

We estimate the medium-term impacts on job satisfaction in the same way as earnings, looking at outcomes over various follow-on periods up to three years via the FE model. Our

estimation is only run for overall job satisfaction and the results with different lags are shown in Table 8. We find that one year after the defining year, only one estimate in Model I (change of industry) and two estimates in Model II (a move to a different job in the public sector and a change of industry) are still significant at the 5 percent level or better. There are no significant results for a period longer than one year. It seems that any short-term psychic benefit of mobility soon fades out leaving individuals with no better, though also no worse, levels of satisfaction than those who were stayers. Also, the impact on job satisfaction fades out more quickly than the impact on earnings.

Table 8: The medium-term effects of mobility on overall job satisfaction

Mobility variables	at *t*	at *t-1*	at *t-2*	at *t-3*
Reference category: from market to public	Model I			
In market sector last wave and now	-0.263***	-0.052	-0.054	-0.017
	(0.05)	(0.05)	(0.06)	(0.07)
In public sector last wave and now	-0.127***	-0.050	-0.105*	-0.004
	(0.05)	(0.05)	(0.06)	(0.07)
From public to market	-0.147***	-0.021	0.071	0.003
	(0.06)	(0.06)	(0.07)	(0.08)
Change of occupation	0.074***	0.023	-0.004	0.004
	(0.02)	(0.02)	(0.03)	(0.03)
Change of industry	0.119***	0.106***	-0.004	-0.003
	(0.02)	(0.02)	(0.03)	(0.03)
No. of observations	**42,643**	**31,856**	**23,779**	**17,527**
Reference category: Public Sector this wave, same job	Model II			
Market sector this wave, same job	-0.162***	-0.032	0.012	-0.014
	(0.04)	(0.04)	(0.05)	(0.05)
Public sector this wave, different job	0.033	0.104**	0.066	0.062
	(0.05)	(0.05)	(0.05)	(0.06)
Market sector and different job	0.194***	0.053	0.070	0.045
	(0.05)	(0.05)	(0.06)	(0.07)
Change of occupation	0.045**	0.009	-0.011	-0.023
	(0.02)	(0.02)	(0.03)	(0.03)
Change of industry	0.082***	0.052**	0.001	-0.030
	(0.02)	(0.02)	(0.03)	(0.03)
No. of observations	**47,147**	**35,439**	**27,022**	**20,478**

Note: Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

5. Discussion/conclusions

In the short run, the earnings of the mobile are affected by the sector. Stable public sector jobs have the best earnings outcome while the market sector stayers have the worst. The two types of movers lie in between, with market-to-public movers relatively better off than public-to-market movers. The main implication of these findings is that average earnings in the public sector are higher than in the private sector (consistent with much literature) and moving into the public sector is better than the reverse. Within two years, the mobility penalty for changing sector is weakened and the stability premium in the public sector also weakens.

In considering employer mobility, Model II uncovers the short term wage premium for public sector employees staying with the same employer and for market sector employees with a different employer. Employees in the public sector with a different employer have lower earnings than public sector employees remaining in the same job. Hence mobility generally tends to involve some loss of earnings for public sector employees, even though the losses are more substantial when they move into the private sector. In contrast, mobility sometimes leads to some earnings gains for market sector employees. Employees in the market sector who move to a new employer have higher earnings than those who stay with the same employer[8].

The findings for overall job satisfaction and job mobility follow roughly the same pattern as for earnings. The exception is that in Model II, for those who move to different employers within the public sector despite a small wage penalty, there is a small, positive but not statistically significant improvement in job satisfaction (which means that interpretation is unclear). For job satisfaction, there is improvement from moving occupation or industry

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[8] Although, some caution is needed in interpretation as the coefficients are not statistically significant from zero for 'market sector and different job'.

which is in contrast to earnings for which any pattern was less apparent. The components of job satisfaction broken down into pay, security, work, hours and flexibility generally support the overall job satisfaction results for job mobility. Any type of mobility lowers satisfaction with job security. The medium term results suggest, however, that only short-term effects from job mobility exist for job satisfaction, with any rewards (or penalties) fading more quickly than earnings gains. Again, change of occupation or industry improves job satisfaction components (except job security).

We find that job mobility has different rewards between the public and private sectors. Earnings and job satisfaction in the public sector are higher than in the private sector (consistent with much literature) and moving into the public sector is better than out to the market sector (Model I). However, while this gives incentive to move to the public sector, the individuals then face differing rewards for employer mobility within the sectors. Employees in the public sector with a different employer have lower earnings than public sector employees in the same job, and in contrast, mobility within the private sector leads to some earnings and satisfaction gains.

This paper suggests that the rewards of earnings and job satisfaction between the public and private sectors can be motivating job search and mobility within a dynamic career context of imperfect information. There does appear to be a balance which individuals need to address in exploring for productive public or private career niches, with the positive attractions of higher public earnings potentially counteracted by the poorer gains from job changes within the sector. Hence, mobility can have negative consequences if this new job does not suit an individual, as subsequent job mobility within the public sector is detrimental. A short term pay penalty in a private sector job can be remedied with the pay gains from employer changes as job movers within the market sector become better off. The dynamics of the career

mobility context appear quite fast as after two years, the rewards and penalties of mobility disappear.

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Appendix

Definition of HILDA Variables:

Age: Continuous variable, expressed in years.

Age Square: Continuous variable, expressed in years.

Education:

Only completed school: Dummy variable, takes the value 1 if an individual only completed school, zero otherwise.

Certificate III/IV: Dummy variable, takes the value 1 if an individual has a certificate III/IV, zero otherwise.

Advanced diploma or diploma: Dummy variable, takes the value 1 if an individual has an advanced diploma or diploma, zero otherwise.

University degree: Dummy variable, takes the value 1 if an individual has a university degree or diploma, zero otherwise.

Did not complete school is the reference category.

Casual employment: Dummy variable, takes the value 1 if an individual is in casual employment, zero otherwise.

Disability: Dummy variable, takes the value 1 if an individual has a disability, zero otherwise.

Married: Dummy variable, takes the value 1 if an individual is married (or de facto), zero otherwise.

Urban: Dummy variable, takes the value 1 if an individual domiciled within a major city, zero otherwise.

Hours per week usually worked in main job: Continuous variable, expressed in hours.

Tenure in the current occupation: Continuous variable, expressed in years.

Tenure in the current employer: Continuous variable, expressed in years.

Firm size:

Less than 5 employees: Dummy variable, takes the value 1 if working in a firm with less than 5 employees, zero otherwise.

5 to 9 employees: Dummy variable, takes the value 1 if working in a firm with 5-9 employees, zero otherwise.

10 to 19 employees: Dummy variable, takes the value 1 if working in a firm with 10-19 employees, zero otherwise.

20 to 49 employees: Dummy variable, takes the value 1 if working in a firm with 20-49 employees, zero otherwise.

More than 49 employees is the reference category.

Children aged between 5 and 14: Dummy variable, takes the value 1 if an individual has children between the ages of 5 and 14, zero otherwise.

Children aged under 5: Dummy variable, takes the value 1 if an individual has children aged under 5, zero otherwise.

Percent time spent unemployed in last financial year: Continuous variable, value of which lies between 0 and 100.

Job satisfaction questions in HILDA:

E36 I now have some questions about how satisfied or dissatisfied you are

with different aspects of your job.

If not currently employed: These questions refer to the most recent job

you were working in the last 7 days.

I am going to read out a list of different aspects of your job and, using

the scale on SHOWCARD 36, I want you to pick a number between 0

and 10 to indicate how satisfied or dissatisfied you are with the following

aspects of your job. The more satisfied you are, the higher the

number you should pick. The less satisfied you are, the lower the

number.

a. Your total pay;

b. Your job security;

c. The work itself (what you do);

d. The hours you work;

e. The flexibility available to balance work and non-work commitments;

and

f. All things considered, how satisfied are you with your job?

Table A1: Descriptive statistics

Explanatory variable	Mean	Standard deviation
In market sector last wave and now	0.697	0.459
In public sector last wave and now	0.245	0.430
From public to market	0.026	0.159
Market sector this wave, same job	0.577	0.494
Public sector this wave, different job	0.154	0.361
Market sector, different job	0.026	0.160
Change of occupation	0.246	0.431
Change of industry	0.234	0.423
Age	36.659	12.372
Age Square	1496.9	933.8
Completed school	0.199	0.399
Certificate III/IV	0.211	0.408
Advanced diploma or diploma	0.089	0.285
University degrees	0.266	0.442
Casual employment	0.252	0.434
Disability	0.146	0.353
Married	0.629	0.483
Urban	0.883	0.322
Hours per week usually worked in main job	35.805	14.324
Tenure in the current occupation	7.992	9.040
Tenure with current employer	5.818	7.253
Firm has less than 5 employees	0.088	0.284
Firm has 5 to 9 employees	0.125	0.330
Firm has 10 to 19 employees	0.147	0.354
Firm has 20 to 49 employees	0.183	0.386
Have children aged between 5 and 14	0.235	0.424
Have children aged under 5	0.117	0.321
Percent time spent unemployed in last financial year	2.606	11.732

Note: The sample consists of all working age employees from HILDA 2001-2011, and includes 75,086 person-wave observations.