

## **Public-private labour mobility, earnings and job-satisfaction in Australia**

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### **Abstract**

This contribution considers how public-private sector specific skills, above industry and occupation, relate to the job mobility of an individual and their subsequent earnings and job satisfaction. The pathways of individuals' labour mobility out of and within the public and market sectors are examined. The research concentrates on understanding the individual earnings and job satisfaction outcomes of labour market mobility. We use twelve waves (2001 to 2012) of the Household, Income and Labour Dynamics in Australia (HILDA) household panel survey to conduct individual level fixed effect panel data analyses which estimate the earnings and job-satisfaction effects of public-private sectoral mobility.

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## I Introduction

Recently, government (public) employment has become of renewed interest, in the context of reducing public expenditure. The 2013 Australian Federal election had a provocative political 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.

There is also economic debate about whether these measures are appropriate. The macroeconomic literature, most recently Michailait (2014), has considered 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. Michailat (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<sup>i</sup>. 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 (Michailat (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<sup>ii</sup>. Earnings comparisons in this literature 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, and then addressing the different sectoral pay/reward structures, more recently including pensions and selection but leaving the features of earnings careers unexplored (Danzer and Dolton (2012), Bewerunge and Rosen (2012)).

This paper focuses on dynamic job mobility and individual level outcomes in a career context. This builds and adds to some earlier research by Capellari (2002) explored individual earnings careers in Italy and found them to differ between the public and market sectors. The approach was also used by Pedersen et al. (1990) in a Danish context.

The processes of mobility are explored 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 these various types, and measure the consequences on earnings and job satisfaction.

The paper proceeds with the next section providing the theoretical backdrop, then the data and methods used, with descriptive statistics for the data, variable definitions, and explanation of the type of analysis. The regression results relating to earnings and job satisfaction are then reported for the short and medium term. Finally, the main findings are drawn and a brief discussion is offered.

## **II Background**

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 by 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 is usually summarised by economists with earnings but job satisfaction may be an intrinsic outcome sought in the job mobility process and this is now considered more often in economic literature, for example Clarke et al. (2009), which 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. The total effect of the consequences depends on the balance between these two possibilities.

### **III Data and methods**

The analysis uses the first twelve waves (2001 to 2012) of the Household, Income and Labour Dynamics in Australia (HILDA) household panel survey. Designed similarly to household panel surveys undertaken in other countries (for example the 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 attempts to survey the same individuals once every year. See Watson and Wooden (2004) for a detailed description of the HILDA.

The sample used for this analysis 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 dependent variables of interest – job satisfaction, earnings. Hence for the models of earnings outcomes, we limit

to those who both classify themselves as employees and report positive current paid hours and for the job satisfaction models we limit to those who both classify themselves as employees and report job satisfaction. The self-employed are excluded. The sample size retained is approximately 6,000 observations (persons) per wave over twelve years. The variables used in modelling are described in Table 1.

The analysis of panel data can adopt either a 'balanced panel' or an 'unbalanced panel' approach (see Wansbeek and Kapteyn (1989), where balanced means confining the analysis to those sample members who are observed at every time point. We analyze the unbalanced panel, since restriction to the balanced panel would lose too much data. The unbalanced panel includes those who left the survey after a few years, and those who entered the survey at some time after it began. Panel analysis makes it impossible to apply sample weights that vary across years, as is inevitably the case with the unbalanced panel.

#### **Insert here Table 1: Definition of HILDA Variables**

Information about employment between two consecutive waves is used 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 define terms for the medium-term impact analysis of mobility on earnings using different lags of these mobility variables: lags at t-1, t-2 and t-3 are used.

Table 2 gives descriptive information about the sample. We observe from our sample that a small proportion (5.6 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 24.5 percent and 23.3 percent, respectively. However, these four dimensions of labour mobility are inter-related and the correlations between them are presented in Table 3.

**Insert here Table 2: Descriptive statistics**

**Insert here Table 3: Correlation matrix of different labour mobility dimensions**

Table 4 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 mean 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.

**Insert here Table 4: Weekly wages by mobility status and gender**

In the HILDA surveys, 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<sup>iii</sup>): see Table 1 earlier. For each measure of job satisfaction, the mean is reported by mobility status in Table 5 (these are raw means, unadjusted for X's). The results suggest that, on average the respondents in each group indicate they are reasonably satisfied. The differences in mean job satisfaction between stayers and movers appear relatively small (often within one scale point) both in relation to overall job satisfaction as well as individual facets of job satisfaction.

Employees in the public sector appear overall more satisfied with their pay than those in the market sector, regardless of mobility status (7.70 or 7.86, against 7.55 or 7.62).

**Insert here Table 5: Job satisfaction by mobility status**

The first stage of analysis investigates the short-term effects of labour mobility on wages. The earnings function estimated is:

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

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 year and now’, ‘market sector last year and public sector this year’, and ‘in the public sector last wave and market sector this year’. Hence a stable public sector employment is the reference comparison group for the analysis (with ‘in the public sector last wave and now’ as 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*. Hence again, a form of stable public sector job is the reference comparison group (being in the public sector this wave with the same employer is the reference category). In both model I and model II specifications, *change in occupation* and *change in industry* are also included.

In both model I and model II,  $X$  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, firm size, union (these variables are listed and explained in detail in Table 1).  $\varepsilon$  is the conventional error term. The estimation utilises the panel nature of the data with a fixed effects model (the within estimator), which controls for time invariant unobserved individual heterogeneity. This can be characterized as pooled regression on de-meaned data (Wooldridge (2002)), and is often referred to as ‘within’ regression, i.e. the variation considered is that which occurs within each individual’s data over time.

Model 1 can be rewritten as the form below:

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

where  $\alpha_i$  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 with the same set of  $X$  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 earnings and job satisfaction 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 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  $X$  control variables (coefficients not reported) covering a range of individual and workplace characteristics that are listed in Table 1.

As already outlined, in the FE models a person ‘fixed-effect’ (FE) methodology can eliminate selection bias that arises from unobserved constant individual attributes such as ability or personality. Intuitively, the removal of fixed effects is likely to be very important in reducing selection bias in a model of earnings or job satisfaction effects. However there is also the possibility of unobserved time-varying bias, and some such bias is likely to remain. Accordingly we do not argue that all sources of bias have been removed. A further issue with panel data analysis is the possibility of inflated t-statistics resulting from repeated observations on the same individuals. To address this, the panel models are estimated with a robust variance estimator that takes account of the over-time

correlations as well as of heteroskedasticity that would result from a varying number of observations per person.

## IV Regression results

### 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 2012 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 6.

#### **Insert here Table 6: The effects of mobility on earnings**

Results from Model I show that relative to those who stayed public (the reference category), earnings are estimated to be 10.9 per cent lower for the market sector stayers, and this estimate is statistically significant at the 1 percent level. In other words, earnings gains are higher over a year in the public sector than the market sector. However, the earnings of new public sector employees (who have moved from the private sector) are not yet as high as for stable employees in the public sector, who receive an earnings advantage of 3.8 percent. In addition, public-to-market mobility reduces earnings by 6.4 percent by comparison with the reference category of staying public. 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 yearly earnings gains in the public sector are higher than in the private sector and moving into the public sector is better than out of the public sector.

Table 6 also reports Model II, the effect on earnings of change of employer. Employees in the public sector with a different job have no measurable earnings difference to the reference category of public sector employees in the same job. Thus, mobility tends to involve some loss of earnings for public sector employees only when they move into the private sector (Model 1:-6.5 percent) and not if they move employers within the public sector. The market sector has a different earnings profile for mobility however. In contrast, employer mobility leads to some earnings gains for market sector employees. Employees in the market sector with the same employer have 9.2 percent lower earnings than those in the public sector who stay with the same employer (reference category). Yet market sector employees with different employers have earnings only 3.9 per cent lower than public sector stayers. These two categories of employees (public sector employees with the same employer and public sector employees with different employers) receive relatively higher earnings than the remaining categories.

***b) Medium-term impacts of mobility on earnings***

Table 7 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. As two years of data are required to define the mobility variables, these lags are equivalent to historical periods of  $t-1=1$  years after the mobility status;  $t-2=2$  years after the mobility status;  $t-3=3$  years after the mobility status. The dependent variable and control variables remain the same as previously.

We find from Model I that one further year after the defining year for the mobility variable, the earnings advantage of those who stay in the public sector over the market sector stayers is reduced from 10.9 percent to 8.5 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 6.4 percent to 4.8 percent. 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 3.9 percent in the defining year to 4.8 percent one year later and becomes not significant three years later. However, the statistical support for a gain from change of job in the public sector is weak as no coefficients are statistically different from zero. In contrast, the gain from change of job in the market sector (relative to staying in the market sector) is 5.3 percent  $(-9.2+3.9)$  but falls to 0.6 per cent one year after and 1 per cent at 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 market movers and stayers<sup>iv</sup>. Hence, there is some reassuring evidence that movers can subsequently equalise their position in the medium-term. However this also suggests that there is no significant gain in the medium term that offsets the interim pay losses.

**Insert here Table 7: The medium-term effects of mobility on earnings**

## **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 8 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 from a scale of 1-10.

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 1.34 satisfaction units. Model II shows that employees with the same job in the public sector feel more satisfied than those in the private sector by 1.71 satisfaction units.

Job change in the public sector has a significant impact in raising satisfaction compared to staying in the same job (model II), and moving from private to public (model I) results in higher job satisfaction. Relative to those who stayed public (the reference category), overall job satisfaction is estimated to be 1.71 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 relative to stable employees in the public sector individuals become more satisfied by 1.21 units. Model II also shows that moving to a different employer in the market sector has equivalent job satisfaction to staying in the public sector (not statistically significant coefficient), or 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.

#### **Insert here Table 8: The effects of mobility on overall job satisfaction**

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 9. The results suggest a similar picture to that for overall job satisfaction, between mobility and satisfaction with the pay, the work, the hours worked and flexibility but not between mobility and job security satisfaction. Stable employees in the public sector have a higher job satisfaction across almost all facets. For employees in the market sector, moving into the public sector (model I) raises satisfaction with the work and the hours (other aspects of job satisfaction are also positively related to this move but not statistically significant). Changing a job within the market sector (model II) reduces job satisfaction across pay, job security and job flexibility. For employees in the public sector, moving

into the private sector (model I) lowers satisfaction with pay, and changing employer within the sector (model II) raises job satisfaction across all facets except job security. However, compared to stable employees in the private sector, but with the exception of job security, they are more satisfied. In model II, mobility between employers generally lowers satisfaction with job security. Change of occupation improves satisfaction with the work and hours, while change of industry improves satisfaction with pay, the work, hours and flexibility, but not satisfaction with job security.

**Insert here Table 9: The effects of mobility on facets of job satisfaction**

#### **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 follow-on periods up to three years via the FE model. Estimation is only run for overall job satisfaction and the results with different lags are shown in Table 10. We find that one year after the defining year, in Model I change of industry and a move from market to public sector and in Model II a change of industry and a move to a different job in the market sector are still significant. At 2 years later, the influence of industry and occupation change disappears; In model I there is a sizable positive payoff to job satisfaction from moving public to market which was not present earlier, while the positive job satisfaction from moving market to public sector continues; in model II, the positive satisfaction of a move to a different job in the market sector continues, and that from a different job in the public sector returns. There are no statistically significant results after 3 years. It seems that any short-term benefit to satisfaction of mobility 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 which still had some significant impacts 3 years later.

**Insert here Table 10: The medium-term effects of mobility on overall job satisfaction**

## V Discussion

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. Within two years, the mobility penalty for changing sector is still present (and hence the stability premium in the public sector) but after 3 years it weakens for moves to the market and stability in the market sector.

In considering employer mobility, model II uncovers the short term wage premium for market sector employees with a different employer. Employees in the public sector with a different employer do not have significantly lower earnings than public sector employees remaining in the same job. However mobility generally tends to involve some gain of earnings for private sector employees, with lower earnings resulting from stability within the job and within the private sector. Hence mobility 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.

The findings for overall job satisfaction and mobility in the short term follow a slightly different pattern to that for earnings – despite an earnings fall, satisfaction was higher in moving from market to public for example but when staying in the market sector, both job satisfaction and earnings were lower. In model II, for those who move to different employers within the public sector despite no significant wage change relative to stayers, there is a significant improvement in job satisfaction. For job satisfaction, in the short term there is improvement from moving occupation or industry which is in contrast to earnings for which the pattern was less apparent. The components of job satisfaction broken down into satisfaction with pay, security, work, hours and flexibility generally support the overall job satisfaction results for job mobility but reveal some interesting aspects. Any type of mobility lowers satisfaction with job security. Change of occupation or industry improves job satisfaction components (except job security). The medium term results for overall job satisfaction

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 by the third year.

We find that job mobility has different rewards between the public and private sectors. Earnings and job satisfaction from job stability in the public sector are higher than in the private sector and moving into the public sector is better than out to the market sector (model D). 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 no different earnings (although they have satisfaction gains) than public sector employees in the same job, but in contrast, mobility within the private sector leads to some earnings and satisfaction gains.

These findings suggest 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 for stability counterbalanced by the need to be mobile in the private sector for earnings improvements relative to stable public sector earnings (those stable in the private sector have the largest earnings penalty) but never achieving equivalence with stable public sector earnings. Hence, mobility can have negative consequences if the sector of this new job does not suit an individual: although a short term pay penalty in a private sector job can be improved from employer changes as job movers within the market sector (the penalty becomes lesser) yet there are not subsequent gains over time which offset the earlier penalty. The dynamics of the career mobility context appear to differ for earnings and satisfaction, with satisfaction gains/losses disappearing after two years, but some of the earnings rewards and penalties of mobility remaining.

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**Table 1 Definition of HILDA analysis 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.

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

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

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

Education: 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.

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

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

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

Firm size: 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 2: Descriptive statistics**

Explanatory variable	Mean	Standard deviation
In market sector last wave and now	0.698	0.459
From market to public	0.031	0.174
From public to market	0.025	0.157
Market sector this wave, same job	0.578	0.494
Market sector this wave, different job	0.154	0.361
Public sector this wave, different job	0.026	0.158
Change of occupation	0.245	0.430
Change of industry	0.233	0.423
Age between 25 and 39	0.351	0.477
Age between 40 and 54	0.345	0.475
Age above 54	0.085	0.279
Completed school	0.200	0.400
Certificate III/IV	0.213	0.409
Advanced diploma or diploma	0.089	0.285
University degrees	0.266	0.442
Casual employment	0.250	0.433
Disability	0.145	0.352
Married	0.630	0.483
Urban	0.883	0.322
Hours per week usually worked in main job	35.82	14.31
Prefer to work more hours	0.259	0.438
Prefer to work fewer hours	0.158	0.365
Tenure in the current occupation	8.004	9.049
Tenure with current employer	5.845	7.265
Firm has less than 5 employees	0.086	0.281
Firm has 5 to 9 employees	0.124	0.329
Firm has 10 to 19 employees	0.144	0.352
Firm has 20 to 49 employees	0.180	0.385
Have children aged between 5 and 14	0.233	0.423
Have children aged under 5	0.116	0.321
Percent time spent unemployed in last financial year	2.687	11.879
Union member	0.275	0.446
Unemployed at t-2	0.023	0.151
Not in the labour force at t-2	0.054	0.227

*Note:* The sample consists of all working age employees from HILDA 2001-2012, and includes 80,036 person-wave observations.

**Table 3: 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	0.1748	1.0000		
Change in occupation	0.0698	0.2507	1.0000	
Change in industry	0.1388	0.3644	0.2432	1.0000

**Table 4: Weekly wages by mobility status and gender**

Mobility variables	Males	Females	Total
In public sector last wave and now	1305.9	994.5	1129.2
In market sector last wave and now	1182.7	704.5	967.9
From market to public	1058.1	729.5	859.1
From public to market	1127.8	761.0	901.3
No change in employer	1171.0	759.6	969.8
Change in employer	1004.6	661.4	839.7
No change in occupation	1187.7	763.6	974.0
Change in occupation	1074.3	734.2	925.4
No change in industry	1176.3	773.5	973.6
Change in industry	1083.1	690.6	911.0

Mean nominal weekly earnings within group.

**Table 5: Job satisfaction by mobility status**

Mobility variables	Overall	Pay	Security	Work	Hours	Flexibility
In public sector last wave and now	7.70	7.35	8.26	7.64	7.32	7.30
In market sector last wave and now	7.55	6.94	8.03	7.49	7.18	7.41
From market to public	7.86	7.24	7.80	7.75	7.58	7.57
From public to market	7.62	6.91	7.82	7.66	7.22	7.31
No change in employer	7.61	7.03	8.13	7.55	7.23	7.40
Change in employer	7.55	6.91	7.68	7.50	7.18	7.35
No change in occupation	7.59	7.03	8.10	7.54	7.22	7.35
Change in occupation	7.60	6.99	7.96	7.54	7.21	7.46
No change in industry	7.59	7.02	8.13	7.55	7.19	7.32
Change in industry	7.60	6.99	7.84	7.51	7.30	7.53

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

**Table 6: The effects of mobility on earnings**

Mobility variables	Model I		Model II	
	Coef.	S.E.	Coef.	S.E.
<u>Reference category Model I:</u>				
<u>In public sector last wave and now</u>				
In market sector last wave and now	-0.109***	(0.01)	-	-
From market to public	-0.038***	(0.01)	-	-
From public to market	-0.064***	(0.01)	-	-
<u>Reference category Model II:</u>				
<u>Public sector this wave, same job</u>				
Market sector this wave, same job	-	-	-0.092***	(0.01)
Market sector this wave, different job	-	-	-0.039***	(0.01)
Public sector this wave, different job	-	-	-0.004	(0.01)
Change of occupation	-0.002	(0.00)	-0.010**	(0.00)
Change of industry	0.005	(0.00)	-0.004	(0.00)
<b>No. of observations</b>	47,485		51,980	

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

**Table 7: The medium-term effects of mobility on earnings**

Mobility variables	at t	at t-1	at t-2	at t-3
<u>Reference category:</u>				
<u>in public sector last wave and now</u>	Model I			
In market sector last wave and now	-0.109*** (0.01)	-0.085*** (0.01)	-0.059*** (0.01)	-0.022 (0.02)
From market to public	-0.038*** (0.01)	-0.055*** (0.01)	-0.027** (0.01)	-0.030** (0.01)
From public to market	-0.064*** (0.01)	-0.048*** (0.01)	-0.062*** (0.01)	-0.019 (0.02)
Change of occupation	-0.002 (0.00)	0.002 (0.00)	-0.004 (0.01)	-0.010** (0.00)
Change of industry	0.005 (0.00)	0.008* (0.00)	0.003 (0.01)	0.005 (0.01)
<b>No. of observations</b>	47,485	36,057	27,439	20,819
<u>Reference category:</u>				
<u>Public Sector this wave same job</u>	Model II			
Market sector this wave, same job	-0.092*** (0.01)	-0.054*** (0.01)	-0.049*** (0.01)	-0.018 (0.01)
Market sector this wave, different job	-0.039*** (0.01)	-0.048*** (0.01)	-0.059*** (0.01)	-0.020 (0.01)
Public sector this wave, different job	-0.004 (0.01)	-0.002 (0.01)	-0.006 (0.01)	-0.002 (0.01)
Change of occupation	-0.010** (0.00)	-0.003 (0.00)	-0.003 (0.00)	-0.012** (0.00)
Change of industry	-0.004 (0.00)	0.007 (0.00)	0.004 (0.01)	-0.001 (0.01)
<b>No. of observations</b>	51,980	39,607	30,664	23,706

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

**Table 8: The effects of mobility on overall job satisfaction**

Mobility variables	Model I		Model II	
	Coef.	S.E.	Coef.	S.E.
<u>Reference category Model I:</u>				
<u>In public sector last wave and now</u>				
In market sector last wave and now	-0.134***	(0.05)	-	-
From market to public	0.121***	(0.05)	-	-
From public to market	-0.030	(0.06)	-	-
<u>Reference category Model II:</u>				
<u>Public Sector this wave, same job</u>				
Market sector this wave, same job	-	-	-0.171***	(0.04)
Market sector this wave, different job	-	-	0.003	(0.04)
Public sector this wave, different job	-	-	0.174***	(0.05)
Change of occupation	0.079***	(0.02)	0.051***	(0.02)
Change of industry	0.120***	(0.02)	0.084***	(0.02)
<b>No. of observations</b>	48,716		53,288	

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

**Table 9: The effects of mobility on facets of job satisfaction**

Mobility variables	Pay	Security	Work	Hours	Flexibility
<u>Reference category:</u>					
<u>In public sector last wave and now</u>					
	Model I				
In market sector last wave and now	-0.336*** (0.06)	0.062 (0.07)	-0.124** (0.06)	-0.189*** (0.06)	-0.128* (0.07)
From market to public	0.065 (0.06)	-0.093 (0.06)	0.121** (0.05)	0.183*** (0.05)	0.085 (0.06)
From public to market	-0.235*** (0.07)	-0.031 (0.07)	0.051 (0.06)	-0.081 (0.06)	-0.144* (0.08)
Change of occupation	0.022 (0.02)	-0.024 (0.02)	0.100*** (0.02)	0.080*** (0.02)	0.024 (0.02)
Change of industry	0.085*** (0.02)	-0.078*** (0.02)	0.121*** (0.02)	0.146*** (0.02)	0.035 (0.03)
<b>No. of observations</b>	48,699	48,696	48,719	48,718	48,699
<u>Reference category:</u>					
<u>Public Sector same job</u>					
	Model II				
Market sector this wave, same job	-0.317*** (0.05)	0.067 (0.05)	-0.146*** (0.05)	-0.207*** (0.05)	-0.121** (0.05)
Market sector this wave, different job	-0.116** (0.05)	-0.116** (0.06)	0.019 (0.05)	-0.083 (0.05)	-0.151** (0.06)
Public sector this wave, different job	0.211*** (0.06)	-0.268*** (0.07)	0.121** (0.05)	0.252*** (0.05)	0.105* (0.06)
Change of occupation	-0.009 (0.02)	-0.010 (0.02)	0.077*** (0.02)	0.049** (0.02)	0.018 (0.02)
Change of industry	0.040* (0.02)	-0.034 (0.02)	0.091*** (0.02)	0.117*** (0.02)	0.044* (0.03)
<b>No. of observations</b>	53,271	53,269	53,291	53,290	53,268

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

**Table 10: The medium-term effects of mobility on overall job satisfaction**

Mobility variables	at t	at t-1	at t-2	at t-3
<u>Reference category:</u>				
<u>in public sector last wave and now</u>			Model I	
In market sector last wave and now	-0.134*** (0.05)	0.003 (0.05)	0.040 (0.06)	0.013 (0.07)
From market to public	0.121*** (0.05)	0.083* (0.05)	0.110** (0.05)	0.054 (0.06)
From public to market	-0.030 (0.06)	0.065 (0.06)	0.207*** (0.06)	0.023 (0.07)
Change of occupation	0.079*** (0.02)	0.018 (0.02)	-0.001 (0.02)	0.012 (0.02)
Change of industry	0.120*** (0.02)	0.087*** (0.02)	-0.005 (0.02)	0.002 (0.03)
No. of observations	48,716	36,975	28,148	21,320
<u>Reference category:</u>				
<u>Public Sector this wave same job</u>			Model II	
Market sector this wave, same job	-0.171*** (0.04)	-0.024 (0.04)	0.024 (0.04)	-0.011 (0.05)
Market sector this wave, different job	0.003 (0.04)	0.096** (0.05)	0.086* (0.05)	0.069 (0.05)
Public sector this wave, different job	0.174*** (0.05)	0.069 (0.05)	0.104** (0.05)	0.050 (0.06)
Change of occupation	0.051*** (0.02)	0.009 (0.02)	-0.008 (0.02)	-0.011 (0.02)
Change of industry	0.084*** (0.02)	0.043** (0.02)	0.005 (0.02)	-0.022 (0.03)
No. of observations	53,288	40,591	31,422	24,318

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

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<sup>i</sup> 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).

<sup>ii</sup> Labour (job) mobility itself has a wide general literature with an early survey by Barber 1986, and separately there has long been interest in the distinctiveness of public sector labour market and its functioning (Gregory and Borland 1986), neither of which we pursue further.

<sup>iii</sup> 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.

<sup>iv</sup> Within 3 year years, model I detects no statistically significant earnings differences for movers public to market nor for those staying market sector last wave and now.