

Job Security Satisfaction in Australia: Do Migrant Characteristics and Gender Matter?

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Abstract

This paper utilises the HILDA Survey to examine the job security satisfaction of migrant workers. Using fixed effects models, stratified by migrant status and gender, we uncover native-migrant differences in the factors influencing workers' job security satisfaction. The adverse effects of non-permanent contracts on job security satisfaction are greater for male migrants than their native counterparts. However, the job security satisfaction of male migrant workers is boosted by union membership and wage increases. Among female migrant workers, education is positively correlated with job security satisfaction. We investigate the influences of assimilation and English-speaking background on migrants' job security satisfaction and find that the negative impacts of non-permanent contracts on job security satisfaction levels are augmented among female workers who are well-assimilated or who possess an English-speaking background. Variances in expectations between assimilated and non-assimilated workers and English-proficient versus non-English-proficient workers may explain these divergent outcomes within female migrant worker groups.

JEL classification: J150; J160; J280

1. Introduction

This paper empirically examines factors influencing the job security satisfaction of migrant workers in Australia. Our study is significant within the Australian context because migrants make up a significant proportion of the Australian population. Census data shows that, in 2006, one-quarter of Australians was born overseas. This is noticeably higher than some other English-speaking countries such as the United Kingdom and United States, where the proportion of population born overseas is

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below 15 per cent (US Census Bureau, 2010; Office for National Statistics, 2011). To our knowledge, no previous Australian study has analysed the job security satisfaction of migrants. Yet the sizable contribution of migrants to the Australian economy would suggest that the nexus between migrant status and job security satisfaction is an important issue to address. Indeed, in 2008, there were over 90,000 permanent additions under the Australian migration program with the skills stream accounting for around two-thirds of the additions (Birrell *et al.*, 2006). Of further significance is the fact that these arrivals are entering an increasingly precarious Australian labour market marked by insecure employment and casualisation (Perkins *et al.*, 2008).

We utilise a panel dataset and fixed effects regression approaches to model the factors influencing the job security satisfaction of migrants living in Australia. We distinguish *between* migrant and Australian-born workers, as well as male and female workers, by stratifying our analysis by migrant status and gender¹. Migration into a new country sparks a process of labour market adjustment that native workers do not undergo. The existing literature on migrants' outcomes in their destination countries has highlighted the degree of assimilation, whether one has an English-speaking background and ethnicity as key variables of importance. We investigate this by performing further regression analysis which uncovers the extent to which these factors impact on job security satisfaction *within* migrant groups.

Our paper is organised as follows. Section 2 provides a brief overview of the theoretical framework and the existing literature on migrant status and job-related satisfaction. Section 3 describes the data source and presents some descriptive statistics on the characteristics of migrant and native workers. It also documents the extent to which workers are satisfied with their job security by migrant status and gender. Section 4 analyses the factors influencing job security satisfaction, highlighting differences between migrant and native workers via fixed effects regressions. This is followed by further regression analysis in section 5, which employs the use of interaction terms to empirically estimate the effects of assimilation, English-speaking background and ethnicity on job *security* satisfaction within the group of migrant workers. Section 6 concludes.

2. Background

Job satisfaction studies are heavily based on the theory of subjective wellbeing to assess one's utility from work. While traditional microeconomic theory postulates that utility from work is a function of such factors as income, socio-demographic and human capital characteristics variables and job characteristics, studies on job satisfaction further hypothesise that an individual's expectations, personality or perceptions also influence his/her utility from work (Furnham, 1991; Clark and Oswald, 1996; Souza-Poza and Souza-Poza, 2000).

The labour market literature that exploits subjective wellbeing theory to assess utility from work is expanding (see for example, Clark, 1997; Dockery, 2005; Long, 2005; Dockery *et al.*, 2008). However, only a small number of studies have explicitly

¹ Previous studies have uncovered systematic differences in job-related satisfaction levels between males and females (Lacy and Sheehan, 1997, Long, 2005).

investigated the job-related satisfaction of migrants. In these studies, themes related to assimilation or acculturation, English proficiency, ethnicity and gender tend to stand out.

Au *et al.*'s (1998) qualitative study of 65 Chinese migrant restaurant workers living in New York City found that those who were more acculturated reported higher job satisfaction levels. Similarly, findings from Bloemen's (2011) regression analysis indicated that age at migration (or the number of years since migration) is an important determinant of job satisfaction among migrants in Netherlands. Mace *et al.*, (2005) undertook path analysis on a sample of 70 skilled migrant workers in New Zealand; the study proposed that migrants' acculturation style, in combination with their job-hunting behaviour, affect proximity to full employment, which in turn influences occupational satisfaction among migrants. Au *et al.*, (1998) also found that English proficiency has a direct positive influence on acculturation, which in turn affects job satisfaction. Furthermore, Helper and Kleiner (2002)'s survey study of auto part plant workers in the United States reported that Vietnamese workers who were not proficient in English expressed higher levels of job satisfaction than those who were proficient in English. The former group also reported that they were unlikely to find jobs that would offer similar pay and benefits elsewhere.

Given the diversity among migrants in terms of their country of origin, many job satisfaction studies have chosen to focus on migrant groups from specific ethnic backgrounds. For example, Krau's (1983) study focused on migrants from Eastern Europe, Au *et al.*'s (1998) study was based on Chinese migrants, and Helper and Kleiner (2002) were primarily interested in Vietnamese and Portuguese migrant workers. The importance of ethnic networks in aiding migrants to secure jobs which they are satisfied with was also explored in Mahuteau and Junankar's (2008) Australian study.

The existing literature is also cognizant of gender differences in job satisfaction among migrants. Au *et al.* (1998) noted that male migrant workers reported higher job satisfaction than their female counterparts. More recently, an Australian study by Kostenko (2008) employed regression modelling to investigate the job-life relationship of migrants living in Australia. A key finding from the study was that well-educated female migrants' subjective wellbeing is hindered as a result of a struggle to balance work and family commitments.

Overall, the literature review has not uncovered any study that has specifically investigated the job *security* satisfaction of migrant workers in Australia. Hence, our paper makes a novel contribution by filling this gap in the existing literature.

3. Data and Descriptive Statistics

This paper utilises data from the 2005-2009 Household, Income and Labour Dynamics in Australia (HILDA) Survey.² The dataset is nationally representative, and the survey contains comprehensive information on socio-demographic and labour market variables that affect job security satisfaction.

Table 1 offers a comparison of the mean socio-demographic, human capital and job characteristics of migrant versus native workers by gender based on person-period data pooled across the five waves of the HILDA Survey. These form the

² These were the most recent five waves of the HILDA Survey at the time of writing of this paper.

key explanatory variables that are subsequently used in the regression models. The person-period observations are drawn from approximately 8,500 native workers and 1,300 migrant workers. Each worker is observed multiple times due to the pooling of the data, resulting in a healthy person-period sample of approximately 28,000 native worker observations and 4,400 migrant worker observations. The gender distribution is roughly equal within both the native and migrant samples (see the last row of table 1).

There are some obvious gender differences in the characteristics displayed in table 1, especially in relation to human capital and job characteristics. Male workers, regardless of whether they are migrants or native, have spent longer periods in paid work than female workers. Managerial positions are twice as likely to be observed among males as females. Blue-collar jobs such as technicians and trades workers, machinery operators and drivers, and labourers dominate the occupational profile of male workers. In contrast, female workers are predominantly white-collar workers such as professionals, clerical and administrative workers, and sales workers. It is noteworthy that the probability of securing permanent contracts is higher among men; in contrast, the rate of casualisation is higher among females. The average weekly work hours of male workers pooled is approximately 40 hours as compared to about 30 hours for female workers, reflecting the higher rate of part-time employment amongst the latter.

Controlling for gender, we observe that migrant workers are more likely to be legally married but also more likely have undergone household dissolution than native workers. Many migration moves are potentially linked to changes in household composition including marriage, divorce and children leaving home. The typical migrant worker is older than native workers, and more likely to reside in major cities. The human capital characteristics of migrant workers reflect the emphasis Australian immigration policy has placed on high levels of human capital that can contribute to boosting skills shortage in the economy, with university degrees and longer periods in paid work appearing to be more common among migrant workers than their native counterparts. Therefore, it is unsurprising to find that higher-skilled occupations are more widespread among migrant workers.

The HILDA Survey contains a range of job-related satisfaction variables based on individuals' responses to questions asking them to rate their satisfaction pertaining to various aspects of their work, including total pay, job security, the work itself, hours of work, the flexibility to balance work and non-work commitments and overall job satisfaction. On each aspect, individuals are asked to rate their satisfaction on a scale of zero to 10, with zero indicating totally dissatisfied rising to 10 if they are totally satisfied³.

³ According to the HILDA Survey questionnaire, survey respondents are shown a showcard listing various aspects of job satisfaction. They are then asked 'to pick a number between zero 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'. The following job aspects are listed on the showcard:

- Your total pay?
- Your job security?
- The work itself (what you do)?
- The hours you work?
- The flexibility available to balance work and non-work commitments?
- All things considered, how satisfied are you with your job?

Table 1 - Characteristics of Migrant and Native Workers by Gender, 2005-2009, column per cent unless otherwise stated

<i>Characteristics</i>	<i>Male Workers</i>		<i>Female Workers</i>	
	<i>Native</i>	<i>Migrant</i>	<i>Native</i>	<i>Migrant</i>
<i>Socio-demographic characteristics</i>				
Legally married	43.7	64.4	41.3	60.4
De facto	17.5	11.5	17.1	11.4
Divorced or separated	5.7	7.5	10.2	13.1
Widowed	0.3	0.4	1.4	2.1
Single never married	32.9	16.2	30.0	13.0
Have children aged <15 years	14.1	12.8	10.9	9.0
Have a disability or long-term health condition	12.2	13.0	13.2	10.7
Mean age (years)	36.0	44.0	36.3	43.8
Major city	61.3	82.7	62.1	79.3
<i>Highest qualification</i>				
Postgraduate degree	3.6	10.5	3.1	6.5
Graduate degree	4.7	7.4	7.4	10.9
Bachelor degree	12.5	20.8	17.0	23.2
Diploma	7.8	9.8	9.5	9.5
Certificate	28.6	24.0	18.0	14.2
Year 12 or below	42.7	27.5	45.0	35.7
<i>Labour market history since left full-time education</i>				
Percentage of time in paid work	81.0	84.5	71.9	75.2
Percentage of time unemployed	3.5	2.9	2.7	2.2
<i>Occupation</i>				
Manager	11.8	16.6	7.0	7.5
Professional	18.7	26.5	26.6	31.8
Technicians and trades worker	22.6	18.2	4.1	3.6
Community and personal service worker	7.2	5.8	15.9	14.0
Clerical and administrative worker	7.9	10.2	23.3	24.9
Sales worker	7.6	5.3	15.1	8.3
Machinery operator and driver	11.3	8.7	1.1	1.5
Labourer	13.0	8.8	6.9	8.4
<i>Contract type</i>				
Permanent contract	71.2	75.8	61.8	69.4
Fixed-term contract	9.2	9.9	9.4	9.4
Casual contract	19.5	14.2	28.8	21.2
<i>Other job characteristics</i>				
Belong to a union	26.4	25.0	25.4	27.4
Hourly wage (\$)	25.8	29.6	22.5	25.8
Usual weekly working hours (hours)	40.9	41.2	31.0	32.1
Number of person-period observations	13,885	2,124	14,121	2,232

Source: Author's calculations using the HILDA survey waves 5-9.

Table 2 compares the job satisfaction of migrant and native workers by gender. Clearly, little difference exists between the two groups across most aspects of their job satisfaction. On average, male native workers report higher overall job satisfaction than male migrant workers. On the other hand, the average female native worker has a lower job satisfaction level in relation to her ability to balance work and non-work commitments than the average female migrant worker. These differences are mildly significant at the 10 per cent level.

The only distinction between migrant and native workers that is statistically significant at the one per cent level is in relation to job security satisfaction. Both male and female native workers have an average job security satisfaction level of around 8.1 (out of 10). In comparison, their migrant counterparts' average satisfaction with job security is approximately 7.9. These findings naturally prompt the question of why there exists a statistically significant difference in job security satisfaction between migrant and native workers. This research question is addressed in the following section.

Table 2 - Comparison of Mean Job Satisfaction Levels of Native and Migrant Workers, 2005-2009, by gender

<i>Aspect of Job Satisfaction</i>	<i>Male Workers</i>		<i>Female Workers</i>	
	<i>Native</i>	<i>Migrant</i>	<i>Native</i>	<i>Migrant</i>
Total pay	7.01	7.02	7.03	7.03
Job security	8.07	7.87 ***	8.15	7.94 ***
Work itself	7.55	7.56	7.58	7.58
Hours of work	7.19	7.11	7.31	7.35
Work-life balance	7.35	7.31	7.49	7.57 *
Overall	7.59	7.52 *	7.70	7.70
Number of person-period observations	13,885	2,124	14,121	2,232

Source: Author's calculations using the HILDA survey waves 5-9.

Notes: *** Significantly different from native workers at 1% level; ** Significantly different from native workers at 5% level; * Significantly different from native workers at 10% level.

4. Migrant Characteristics, Gender and Job Security Satisfaction

Regression Approach

To estimate the key determinants of job security satisfaction, we perform regression analysis using the following model specification:

$$JS_{it} = f(S_{it}, H_{it}, J_{it}, Y_{it}, \alpha_i, \varepsilon_{it}) \quad (1)$$

where i indexes individuals, t indexes time, JS represents level of job security satisfaction on a scale of zero to 10, and S , H and J represent socio-demographic, human capital and job characteristics respectively. Y represents the year of survey, α_i refers to person-specific fixed effects such as personality traits and ε_{it} represents a random error term.

The vector of socio-demographic characteristics includes marital status, disability status, presence of children, age and area of residence. In addition to the age variable, an age squared variable has been included in the regression model. Its purpose is to account for potential non-linearities in the relationship between age and job security satisfaction. Human capital variables include education and work history since leaving full-time education, specifically time spent in paid work and time spent in unemployment as a percentage of time since leaving full-time education up to time t . Job characteristics comprise occupation, contract type, union membership, hourly wage and hours worked. The variable definitions are detailed in appendix table A1.

We stratify the sample by migrant status and gender in order to account for potential differences in returns to explanatory variables of interest across the four groups. Unobserved heterogeneity, such as personality traits, can be correlated with the propensity to report job security satisfaction (or any other subjective wellbeing measure) and with explanatory variables. Unobservable characteristics can produce biased estimates within a cross-sectional framework. Hence, the panel nature of the survey is exploited via the application of fixed effects regression techniques, which minimises this potential bias to the extent that unobservables such as personality type are fixed over time.

The dependent variable, job security satisfaction, is an ordered categorical variable ranging from zero to 10. In our paper, we utilise a fixed effects ordinary least squares (OLS) regression by treating the variable as a cardinal variable. The coefficients in an OLS model offer a more straightforward interpretation than an ordered probit specification, and several existing studies have offered assurances that a linear model generates quantitatively similar results to an ordinal model (see, for example, Frey and Stutzer, 2002; Dockery *et al.*, 2008). An alternative approach would be to arbitrarily divide the job security satisfaction variable into a binary variable denoting whether a person is satisfied or dissatisfied. However, the proportion of individuals observed to move between the satisfied and dissatisfied states during the five waves would be small, limiting the usefulness of the fixed effects approach, whereas treating the dependent variable as a cardinal variable would allow for greater variation in the dependent variable across time within the same individual.

Male Workers

The regression results are reported in table 3. Some interesting native-migrant differences exist in the factors influencing male workers' job security satisfaction.

Firstly, the longer a male migrant worker has been unemployed since leaving full-time education, the more satisfied he is with the security proffered by his present job. This is not observed among male native workers. This potentially reflects differences in expectations between the two groups; male migrant workers may possess lower expectations of their jobs than male native workers who have spent an equivalent amount of time in unemployment, given that the former are aware that they have to undergo a process of assimilation after arriving in their destination country.

Among male workers, those who work in white collar occupations express higher job security satisfaction than those who work in blue collar occupations.⁴ Turning to other job characteristics, we observe that for male migrant workers, union membership increases their job security satisfaction level by 0.3 points relative to not belonging to a union. In comparison, male native workers do not derive job security satisfaction from union membership. Indeed the coefficients of the occupational variables indicate that the effect of working in occupations that are highly unionised (e.g. technicians and trades workers, machinery operators and drivers and labourers) is to lower job security satisfaction for male native workers.

⁴ For male migrants, this is evidenced by the positive and significant coefficients on some white collar occupation variables, such as community and personal service workers and clerical and administrative workers. For male native workers, we observe that the coefficients on some blue collar occupation variables, such as technicians and trades worker and labourer, are negative and significant.

Male migrant workers draw a greater sense of job security from increases in their hourly wage, while their native counterparts do not. For both groups, being on non-permanent contracts lowers job security satisfaction relative to being on permanent contracts after other factors are controlled for. However, the size of the coefficients suggests that the negative impacts of non-permanent contracts on job security satisfaction are greater for migrant workers than native workers. For example, being on a casual contract lowers the job security satisfaction of native workers by 0.8 points relative to being on a permanent contract. For migrant workers, this negative impact is larger (one point).

Female Workers

Among females, we are able to draw out once again some noteworthy differences between migrant and native workers. A female native worker derives greater job security satisfaction as she ages. This reflects a common finding in existing studies that happiness increases with age from about 30 years onwards (see for example, Frey and Stutzer, 2003), and indeed around two-thirds of our female native worker sample are aged 30 years and over. However, surprisingly, this positive age effect is not found among female migrant workers. Rather, for female migrant workers, education appears to matter. Possessing postgraduate qualifications results in higher job security satisfaction relative to other post-school qualifications among female migrant workers, a finding that is not observed among their native counterparts.

Among females, time in unemployment in the past is positively correlated with present job security satisfaction; again, this is possibly a reflection of the fact that those who have spent extended periods in unemployment are more likely to value their job security than those who have experienced only short bouts of unemployment. Though this effect is present for both migrants and natives, its magnitude is much greater for the former, and as with male workers, we postulate that female migrant workers may possess lower expectations of their jobs than female native workers who have spent an equivalent amount of time in unemployment. Indeed, a longer time in paid work in the past is actually linked to a lower sense of current job security among female native workers. It may be that female natives who have a healthy labour market history have not incorporated the prospect of working in jobs that offer less security than they expect in an increasingly precarious labour market.

Again, fixed-term and casual contracts lower job security satisfaction, though the magnitude of this effect is similar for both migrant and native female workers.

Table 3 - Job Security Satisfaction of Workers, Fixed Effects OLS Regression, by Gender and Migrant Status^a

Explanatory Variables	Parameter Estimates			
	Male Workers		Female Workers	
	Native	Migrant	Native	Migrant
<i>Socio-demographic characteristics (legally married omitted)</i>				
De facto	0.038 (0.41)	-0.225 (-0.72)	-0.120 (-1.21)	-0.041 (-0.12)
Divorced or separated	-0.043 (-0.32)	-0.559 (-1.67) *	-0.104 (-0.79)	-0.058 (-0.14)
Widowed	1.646 (1.57)	-0.023 (-0.06)	-0.111 (-0.09)	
Single never married	0.067 (0.56)	0.189 (0.47)	-0.003 (-0.02)	0.357 (0.92)
Have children aged <15 years	0.001 (0.01)	-0.065 (-0.35)	-0.141 (-1.65) *	-0.234 (-1.11)
Have a disability or long-term health condition	-0.048 (-0.89)	0.042 (0.31)	-0.081 (-1.38)	-0.072 (-0.48)
Age	0.001 (0.03)	0.113 (0.78)	0.138 (2.45) **	-0.022 (-0.15)
Age squared	0.000 (0.28)	-0.001 (-0.47)	-0.001 (-1.43)	0.002 (1.35)
Major city	-0.178 (-1.88) *	0.350 (1.00)	0.008 (0.08)	-0.096 (-0.25)
<i>Highest qualification (postgraduate degree omitted)</i>				
Graduate degree	-0.680 (-1.92) *	-0.618 (-0.77)	0.196 (0.58)	-1.146 (-2.03) **
Bachelor degree	-0.402 (-1.27)	0.707 (0.86)	0.148 (0.49)	-1.274 (-2.16) **
Diploma	-0.561 (-1.35)	0.762 (0.68)	-0.238 (-0.61)	0.000 (0.00)
Certificate	-0.405 (-1.09)	1.154 (1.13)	-0.044 (-0.13)	-1.494 (-1.97) **
Year 12 or below	-0.159 (-0.44)	1.243 (1.28)	0.182 (0.53)	-0.933 (-1.26)
<i>Labour market history since left full-time education</i>				
Percentage of time in paid work	-0.001 (-0.55)	0.002 (0.35)	-0.003 (-2.07) **	-0.002 (-0.39)
Percentage of time unemployed	-0.004 (-0.69)	0.109 (4.07) ***	0.010 (1.67) *	0.065 (1.80) *
<i>Occupation (manager omitted)</i>				
Professional	-0.103 (-1.27)	0.005 (0.03)	0.010 (0.10)	-0.077 (-0.38)
Technicians and trades worker	-0.216 (-2.44) **	0.321 (1.44)	0.128 (0.88)	-0.195 (-0.55)
Community and personal service worker	0.211 (1.83) *	0.547 (1.69) *	0.165 (1.58)	0.121 (0.49)
Clerical and administrative worker	-0.100 (-1.11)	0.487 (2.35) **	0.003 (0.03)	-0.317 (-1.48)
Sales worker	-0.151 (-1.53)	0.283 (1.10)	0.320 (3.09) ***	-0.191 (-0.75)
Machinery operator and driver	-0.190 (-1.82) *	0.161 (0.58)	-0.393 (-1.86) *	-0.852 (-1.62)
Labourer	-0.171 (-1.78) *	0.113 (0.44)	0.013 (0.10)	-0.519 (-1.49)
<i>Contract type (permanent omitted)</i>				
Fixed-term contract	-0.385 (-6.34) ***	-0.487 (-3.02) ***	-0.868 (-13.73) ***	-0.853 (-5.25) ***
Casual contract	-0.769 (-12.25) ***	-1.001 (-5.53) ***	-0.811 (-13.77) ***	-0.829 (-5.28) ***
<i>Other job characteristics</i>				
Belong to a union	-0.025 (-0.42)	0.347 (2.03) **	0.002 (0.03)	-0.025 (-0.17)
Hourly wage	-0.002 (-1.22)	0.004 (2.01) **	-0.001 (-0.78)	0.001 (0.13)
Usual weekly working hours	0.004 (1.68) *	0.007 (1.20)	0.001 (0.29)	-0.003 (-0.47)
<i>Year of survey (waves 5 and 6 omitted)</i>				
Wave 7	0.105 (1.49)	0.102 (0.58)	0.027 (0.37)	-0.133 (-0.77)
Wave 8	-0.004 (-0.04)	-0.098 (-0.37)	-0.130 (-1.13)	-0.448 (-1.69) *
Wave 9	-0.149 (-1.01)	-0.098 (-0.27)	-0.283 (-1.80) *	-0.691 (-1.91) *
Constant	8.524 (5.38) ***	2.054 (0.42)	4.553 (2.69) ***	7.506 (1.54)
Observations	13,885	2,124	14,121	2,232
Groups	4,219	629	4,371	666
F-stat	8.41 ***	2.88 ***	12.54 ***	2.71 ***
R-square	0.052	0.083	0.075	0.112

Source: Author's calculations using the HILDA survey waves 5-9.

Notes: Fixed effects OLS specification. Absolute t-values in parentheses. *** Significant at the 1% level. ** Significant at the 5% level. * Significant at the 10% level. See appendix table A1 for variable definitions.

5. Do the Extent of Assimilation, English-speaking Background and Ethnicity Influence Job Security Satisfaction amongst Migrants?

Migrant workers are a heterogeneous group given their diverse backgrounds. Hence, their job security satisfaction levels can vary depending on critical factors such as the degree of assimilation, whether they have an English-speaking background and their ethnicity. The potential influences of these factors on job-related satisfaction have been highlighted in studies reviewed in the background section. Here, we seek to specifically examine their impacts on job security satisfaction amongst migrants. To do so, we focus on differences within migrant groups in this section.

The amount of time spent in a destination country has been used in previous studies attempting to find a suitable proxy for degree of assimilation (see for example, Bloemen, 2011). Here, we employ a similar but stricter definition of assimilation. A migrant is defined as having a high degree of assimilation if s/he has spent more than half of his/her lifetime in Australia, in addition to also having completed his/her schooling in Australia. Over 40 per cent of the migrant worker observations in our sample are defined as having a high degree of assimilation (see table 4). Just over half (under half) of male (female) migrant workers have an English-speaking background, i.e. they speak English as their first language.

Migrants' countries of birth are grouped into broad geographic areas using the Standard Australian Classification of Countries (SACC) published by the Australian Bureau of Statistics (1998). Table 4 shows that the majority of migrants are drawn from three key regions – North-west Europe, Southern and Eastern Europe, and South-east Asia. These statistics suggest that the ability to speak the destination country's language, i.e. English, factor into decisions to migrate to Australia, as evidenced by the dominance of North-west European individuals among migrants, most of whom are likely to have an English-speaking background. Furthermore, relatively high proportions arrive from nearby countries such as South-east Asia.

Table 4 - Characteristics of Migrant Workers, by Gender, per cent by column

<i>Migrant Characteristic</i>	<i>Male Workers</i>	<i>Female Workers</i>
High degree of assimilation	42.7	42.9
English-speaking background	55.0	46.1
<i>Country of birth</i>		
Other Oceania and Antarctica	4.0	3.8
North-west Europe	41.7	39.2
Southern and Eastern Europe	9.6	11.4
North Africa and the Middle East	4.7	2.6
South-east Asia	11.7	16.6
North-east Asia	5.0	7.1
Southern and Central Asia	8.4	6.2
Americas	6.7	6.5
Sub-Saharan Africa	8.1	6.7

Source: Author's calculations using the HILDA survey waves 5-9.

Table 5 reports the mean job security satisfaction levels of migrant workers by degree of assimilation, whether they possess an English-speaking background and the three main regions from which migrants originate. The table shows that a high degree of assimilation is correlated with higher job security satisfaction among both male and female migrant workers. Furthermore, on average, female migrant workers with an English-speaking background report a higher level of job security satisfaction than those with a non-English-speaking background, though this difference is not noticeable among male migrant workers. This may be due to the fact that females are typically more likely than males to be employed in white collar occupations in which English proficiency is important⁵. The differences by ethnicity are generally statistically insignificant.

Table 5 - Mean Job Security Satisfaction of Migrant Workers, by Migrant Characteristics and Gender, 2005-09

<i>Migrant Characteristic</i>	<i>Male Migrant Workers</i>	<i>Female Migrant Workers</i>
<i>Degree of assimilation</i>		
Low	7.75	7.77
High	8.04***	8.14***
<i>English-speaking background</i>		
No	7.88	7.79
Yes	7.87	8.11***
<i>North-west Europe</i>		
No	7.84	7.87
Yes	7.92	8.04*
<i>Southern and Eastern Europe</i>		
No	7.85	7.97
Yes	8.05	7.73
<i>South-east Asia</i>		
No	7.89	7.93
Yes	7.73	8.01

Source: Author's calculations using the HILDA survey waves 5-9. *** Significantly different from other category at 1% level; ** Significantly different from other category at 5% level; * Significantly different from other category at 10% level.

Given the differences highlighted in table 5, we next conduct separate regression analyses to uncover the extent to which high assimilation and English-speaking background influence the job security satisfaction of migrant workers⁶. English-speaking background is a time-invariant variable and our indicator of high assimilation is only time-varying to the extent that migrants' proportion of lifetime spent in Australia exceeds 50 per cent during the data timeframe. Time-invariant variables cannot be included in fixed effects regressions. Hence, the effects of these variables of interest are captured by interacting them with other time-varying variables as represented by the socio-demographic, human capital and job characteristics variables captured in equation 1. Specifically, we estimate the following regressions using the migrant person-period observations:

⁵ Refer to table 1, which shows that female workers are more likely to be employed as professionals, clerical and administrative workers and sales workers than males.

⁶ The differences in job security satisfaction are insignificant by key regions of birth. Hence, we do not pursue further exploration of the effects of ethnicity via regression analysis.

$$JS_{it} = f(S_{it}, H_{it}, J_{it}, HAS_{it} * S_{it}, HAS_{it} * H_{it}, HAS_{it} * J_{it}, Y_{it}, \alpha_i, \varepsilon_{it}) \quad (2)$$

$$JS_{it} = f(S_{it}, H_{it}, J_{it}, ESB_i * S_{it}, ESB_i * H_{it}, ESB_i * J_{it}, Y_{it}, \alpha_i, \varepsilon_{it}) \quad (3)$$

where *HAS* is a binary indicator that equals 1 if a migrant worker has a high degree of assimilation and 0 otherwise, and *ESB* equals 1 if a migrant worker has an English-speaking background and 0 otherwise. Other terms are as defined in equation 1. As before, equation (2) is estimated separately for males and females. However, we estimate equation (3) for females, as the differences in job security satisfaction by English-speaking background was found to be insignificant among male migrant workers in table 5. While the full range of explanatory variables is included in these regressions, only the variables that are significant when interacted are reported in table 6.

Table 6a shows that high assimilation has a positive impact on job security satisfaction for male migrant workers possessing a diploma and those who work in certain white-collar occupations as compared to those who have experienced lower degrees of assimilation. Tables 6b and 6c unveil a more interesting theme among female workers in relative to the effects of non-permanent contracts. As shown in table 6b, being on fixed-term contracts reduces job security satisfaction relative to being on permanent contracts. Interestingly, this effect is magnified if a female migrant worker is highly assimilated into the Australian labour market. Similarly, table 6c shows that, after controlling for other factors, the negative effects of non-permanent contracts on job security satisfaction among female migrant workers is amplified if one possesses an English-speaking background relative to those who do not have an English-speaking background.

Table 6 - Job Security Satisfaction of Migrant Workers, Fixed Effects OLS Regression with Interaction Terms^a

(a) Male migrant workers – does degree of assimilation (HAS) matter?	
<i>Explanatory Variables</i>	<i>Parameter Estimates</i>
Diploma	-2.560 (-1.17)
Diploma x HAS	5.226 (1.87) *
Professional	-0.258 (-1.11)
Professional x HAS	0.708 (1.93) **
Clerical and administrative worker	0.064 (0.22)
Clerical and administrative worker x HAS	0.885 (2.04) **
Sales worker	0.033 (0.09)
Sales worker x HAS	1.079 (1.95) **
Fixed-term contract	-0.460 (-2.15) **
Fixed-term contract x HAS	-0.045 (-0.13)
Observations	2,051
Groups	608
F-stat	2.15***
R-square	0.121

Table 6 - Job Security Satisfaction of Migrant Workers, Fixed Effects OLS Regression with Interaction Terms^a (continued)

(b) Female migrant workers – does degree of assimilation (HAS) matter?	
<i>Explanatory Variables</i>	<i>Parameter Estimates</i>
Fixed-term contract	-0.490 (-2.04)**
Fixed-term contract x HAS	-0.619 (-1.84)*
Observations	2,152
Groups	641
F-stat	1.75***
R-square	0.137
(c) Female migrant workers – does possessing an English-speaking background (ESB) matter?	
<i>Explanatory Variables</i>	<i>Parameter Estimates</i>
Sales worker	-0.550 (-1.20)
Sales worker x ESB	0.900 (1.71)*
Machinery operator and driver	-0.659 (-0.95)
Machinery operator and driver x ESB	4.720 (2.44)**
Fixed-term contract	-0.490 (-2.04)**
Fixed-term contract x ESB	-0.845 (-2.59)***
Casual contract	-0.925 (-4.03)***
Casual contract x ESB	-0.791 (-2.45)**
Observations	2,232
Groups	666
F-stat	2.18***
R-square	0.136

Source: Author's calculations using the HILDA survey waves 5-9.

Notes: a. Fixed effects OLS specification. Absolute t-values in parentheses. *** Significant at the 1% level. ** Significant at the 5% level. * Significant at the 10% level. All personal characteristics are interacted with the HAS variable in tables 6a and 6b, and with the ESB variable in table 6c. However, only statistically significant interaction terms are reported.

6. Conclusion

This paper examines the impacts of migrant status on job security satisfaction among workers in Australia. We utilise pooled data from the 2005-2009 HILDA Survey to model and compare factors influencing the job security satisfaction of native and migrant workers to highlight differences *between* the two groups. We further investigate the influences of assimilation, English-speaking background and ethnicity on the job security satisfaction of migrants by focusing on differences *within* migrant groups with different backgrounds and degrees of assimilation. Our analysis is stratified by gender to account for potential systematic differences in job security satisfaction levels between males and females. To our knowledge, no previous study has investigated the job security satisfaction of migrant workers in Australia. Hence, our paper makes a novel contribution by filling this gap in the existing literature.

Unobserved heterogeneity, such as personality traits, can be correlated with the propensity to report job security satisfaction (or any other subjective wellbeing measure) and with explanatory variables in regressions. Hence, the panel nature of the

survey is exploited via the application of fixed effects regression techniques, which minimises this potential bias to the extent that unobservables such as personality type are fixed over time.

Our fixed effect OLS regression analysis uncovers some native-migrant differences in the factors influencing the job security satisfaction of workers. The negative impacts of non-permanent contracts on job security satisfaction are found to be greater for male migrants than their native counterparts after controlling for other factors. However, the job security satisfaction of male migrant workers are boosted by union membership and increases in hourly wage, but these do not impact on the job security satisfaction of male native workers after other factors are controlled for. Among female workers, age is positively correlated with the job security satisfaction of natives; but for female migrant workers, it is education that appears to matter.

Interestingly, the longer a migrant worker has been unemployed since leaving full-time education, the more satisfied s/he is with the security offered by his/her present job relative to native workers. This potentially reflects differences in expectations between the two groups. Migrant workers may possess lower expectations of their jobs than native workers who have spent an equivalent amount of time in unemployment, given that the former are aware that they have to undergo a process of assimilation after arriving in their destination country.

Turning our focus to differences within migrant groups, we find that on average, a high degree of assimilation is associated with higher job security satisfaction. Additionally, female migrant workers that possess an English-speaking background have a higher average level of job security satisfaction than those who come from a non-English-speaking background. This effect is absent among male workers, possibly due to the fact that females are typically more likely than males to be employed in white collar occupations in which proficiency in English is essential. However, regression analysis findings indicate that after other factors are controlled for, the negative impacts of non-permanent contract types on the job security satisfaction levels are augmented among female migrant workers who are well-assimilated or who possess an English-speaking background. Once again, variances in expectations between assimilated and non-assimilated workers and English-proficient versus non-English-proficient workers may explain these divergent outcomes within female migrant worker groups.

The findings of this study have potentially important implications for post-immigration policies that seek to improve job security satisfaction among migrant workers. The opposing impacts of non-permanent contracts and union membership on the job security satisfaction of male migrant workers suggest that for males, feelings of job insecurity caused by casual job contracts can be counteracted by programs that provide a sense of solidarity among employees. Among female migrant workers, opportunities to pursue and achieve further education, in particular postgraduate qualifications, can improve their sense of job security. Feelings of job insecurity are amplified among well-assimilated and/or English-proficient female migrant workers working in non-permanent jobs, indicating that assimilation policies and programs that seek to improve the English proficiency of female migrant workers should be complemented by measures that induce a greater sense of job security, such as career progression structures or pathways towards long-term or permanent positions within the workplace.

Appendix

A1 Variable Definitions

Table A1 - Definitions of Variables Used in the Regression Analysis

<i>Variables</i>	<i>Measurement</i>	<i>Definition</i>
<i>Socio-demographic characteristics</i>		
Legally married (omitted)	Binary	1 if legally married, 0 otherwise
De facto	Binary	1 if living with a partner in a de facto relationship, 0 otherwise
Divorced or separated	Binary	1 if divorced or separated, 0 otherwise
Widowed	Binary	1 if widowed, 0 otherwise
Single never married	Binary	1 if single and never married, 0 otherwise
Have children aged <15 years	Binary	1 if have resident children aged under 15 years, 0 otherwise
Have a disability or long-term health condition	Binary	1 if have a disability or health condition which has lasted or is likely to last for at least six months, restrict everyday activity and cannot be corrected by medication or medical aids, 0 otherwise
Age	Continuous	Age in years
Age squared	Continuous	Age x age
Major city	Binary	1 if living in a major city, 0 otherwise. Major cities are collection districts with an Accessibility/Remoteness Index of Australia (ARIA) index of 0 to 0.2. For further details, refer to Australian Bureau of Statistics (2001).
Highest qualification (omitted)	Binary	1 if highest qualification is a masters or doctorate degree, 0 otherwise
Graduate degree	Binary	1 if highest qualification is a graduate certificate of graduate diploma, 0 otherwise
Bachelor degree	Binary	1 if highest qualification is a bachelor or honours degree, 0 otherwise
Diploma	Binary	1 if highest qualification is an advanced diploma or diploma, 0 otherwise
Certificate	Binary	1 if highest qualification is a certificate, 0 otherwise
Year 12 or below	Binary	1 if do not possess a post-school qualification, 0 otherwise
<i>Labour market history since left full-time education</i>		
Percentage of time in paid work	Continuous	Percentage of time in paid work since leaving full-time education till time t
Percentage of time unemployed	Continuous	Percentage of time in unemployment since leaving full-time education till time t
<i>Occupation (1-digit Australian and New Zealand Standard Classification of Occupations in Australian Bureau of Statistics, 2006)</i>		
Manager (omitted)	Binary	1 if a manager, 0 otherwise
Professional	Binary	1 if a professional, 0 otherwise
Technicians and trades worker	Binary	1 if a technician and trade worker, 0 otherwise
Community and personal service worker	Binary	1 if a community and personal service worker, 0 otherwise
Clerical and administrative worker	Binary	1 if a clerical and administrative worker, 0 otherwise
Sales worker	Binary	1 if a sales worker, 0 otherwise
Machinery operator and driver	Binary	1 if a machinery operator and driver, 0 otherwise

Table A1 - Definitions of Variables Used in the Regression Analysis
(continued)

<i>Variables</i>	<i>Measurement</i>	<i>Definition</i>
Labourer	Binary	1 if a labourer, 0 otherwise
Job contract type		
Permanent contract (omitted)	Binary	1 if on a permanent job contract, 0 otherwise
Fixed-term contract	Binary	1 if on a non-permanent fixed term job contract, 0 otherwise
Casual contract	Binary	1 if on a casual job contract, 0 otherwise
Other job characteristics		
Belong to a union	Binary	1 if belonging to a union, 0 otherwise
Hourly wage	Continuous	Weekly wage in usual job / hours usually worked per week
Usual weekly working hours	Continuous	Hours usually worked per week

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