

JOB SATISFACTION AND GENDER: EVIDENCE FROM AUSTRALIA

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Abstract

This paper investigates six different aspects of job satisfaction by gender over a four year period in the Australian labour market using the HILDA panel dataset. We find females to be more satisfied with five of the six job satisfaction measures, and to be statistically just as satisfied with males for the sixth (flexibility). Running gender separated random effects ordered probit models, we report that gender differences with different aspects of job satisfaction can be partially explained by both personal and labour market characteristics. In particular, job satisfaction for females is far less influenced by past labour market participation compared to males. Differences in workplace characteristics are less pronounced though unionised females are less satisfied at work compared to non-unionised females; a finding far less pronounced for males.

Given that past studies have found younger and more educated females to have comparable rates of job satisfaction with their male peers, we re-ran random effects ordered probit models for both 'educated' and 'young groups. Unlike previous studies, we find that younger females are still more satisfied at work compared to males in four of the six measures investigated. However, higher educated females are a much-different subset of employed females as a whole. They are only more satisfied with higher educated males with respect to pay, and are actually less satisfied with hours worked and job flexibility.

Overall, the use of HILDA's panel dataset has produced results both consistent and inconsistent with previous findings in the literature. Females' higher level of job satisfaction is found, with no econometric (but statistical) evidence that it is being eroded over time. However, we find no evidence that younger females exhibit job satisfaction rates comparable to young males, while highly educated females have satisfaction rates that failed to match initial expectations and deserve further investigation.

1.0 Introduction

Job satisfaction has increasingly made in-roads in the labour economics literature in recent years mainly due to the introduction of subjective measures imported from the field of psychology (Clark, 1996, 1997; Sloane and Williams, 2000; Long, 2005). Job satisfaction allows economists to investigate individual well-being in the workplace, alongside traditional labour market research areas such as gender wage differentials and unemployment. According to Clark (1996: 189), "the

analysis of job satisfaction may give us a number of insights into certain aspects of the labour market”.

One specific area of investigation is the study of differing levels of reported job satisfaction by gender. Practically all studies (Clark, 1997; Sloane and Williams, 2000; Sousa-Poza and Sousa-Poza, 2003; Long, 2005) have shown that females possess higher levels of job satisfaction compared to males, a puzzling outcome when one considers the existence of gender wage differentials in favour of males¹, as well as occupational segregation by gender, with women occupying jobs with ‘lower’ prestige. There exist a number of theories as to why females possess higher levels of job satisfaction. These include the role of expectations, a possible difference in work ‘values’ and female selection into employment. These will be covered in Section 3.2 of this paper.

Research into differing levels of job satisfaction by gender in Australia has only been briefly covered, and this paper contributes to the literature by using a panel dataset that specifically questions participants on six aspects of job satisfaction². Previous study in Australia on this topic has been limited to using cross-sectional data and only one aspect of job satisfaction³ (Long, 2005) and the data available to us allows us to track changes in job satisfaction over time. Briefly, in our gender combined results, we find females to be more satisfied with five of the six aspects of job satisfaction compared to males. When separated by gender, we discover that these differing levels of satisfaction by gender can be partially attributed to differences in personal and labour

¹ A significant portion of the gender wage gap is usually left ‘unexplained’ and is partially attributed to discrimination against females (Blau and Kahn, 2006).

² These are overall job satisfaction, satisfaction with pay, satisfaction with job security, satisfaction with (type of) work, satisfaction with hours worked and satisfaction with the ability to balance work and non-work commitments (job flexibility).

³ Long (2005) investigates only overall job satisfaction.

market characteristics, with no evidence of time effects. We also find limited evidence of males closing the ‘satisfaction gap’ over time.

This paper is structured as follows. Section two reviews the existing literature on gender differences in job satisfaction. Section three presents the data, hypotheses and preliminary statistical results while section four introduces the methodology underlying our econometric evaluation of gender differences in job satisfaction. Section five introduces readers to the results of our study while section six summarises and concludes.

2.0 Literature Review: Gender Differences in Job Satisfaction

Clark’s (1997) seminal study of gender differences in levels of job satisfaction in Britain found females to have greater levels of satisfaction compared to males, despite being in jobs with lower earnings and promotion opportunities compared to males. He posits that this is due to females having lower expectations at work due to “the poorer position in the labour market that that women have held in the past” (1997: 342). Clark suggests that females’ higher levels of job satisfaction could be transitory as they improve their labour market performances over time⁴. Clark also investigated female self-selection into employment to see if only ‘happier’ females entered the workforce⁵ but found no evidence of sample selection bias. Neither did Clark find any significant gender differences with respect to personal and work characteristics. He does however find that gender differences in job satisfaction disappear for the young, the higher educated, professionals and those in male-dominated workplaces. This indicates that females in the aforementioned groups have expectation levels greater than females as a whole.

⁴ With greater labour market successes, females should increase their expectations at work, and thus be less satisfied at work than in previous times when they were not so involved in labour markets.

⁵ The argument made is that due to cultural and historical reasons, females face less pressure to remain in the workforce and hence, ‘unhappier’ females can exit the labour market, leaving only ‘happier’ females in the labour market, thus artificially inflating females’ job satisfaction levels compared to males.

Consistent with Clark, Sloane and Williams⁶ (2000) report higher levels of job satisfaction for females compared to males, despite earning lower pay. They also note that this could be due to females having lower expectations. Nevertheless, females in male dominated workplaces have similar satisfaction levels compared to males, perhaps reflecting higher expectations. Souza-Poza and Sousa-Poza (2003) undertook a specific look at Britain using 1991-2000 data and found evidence of falling levels of job satisfaction among females over time. They conclude that this points to the gender-job satisfaction gap being a transitory, rather than a permanent phenomenon in Britain. Similar to Clark's (1997) as well as Sloane and William's (2000) findings, Donohue and Heywood (2004) found no gender job satisfaction gap for young US workers, once again indicating that specific female labour market groups possess expectation levels similar to those of their male counterparts .

Souza-Poza and Sousa-Poza (2000) report their findings on an international investigation of gender differences in job satisfaction of 21 countries using 1997 data⁷. Only in Great Britain, New Zealand, USA and Spain were differing levels of job satisfaction by gender statistically significant, and in Spain, in favour of males. Souza-Poza and Sousa-Poza stated that their finding points to an 'Anglo-Saxon paradox' where females are more satisfied with work compared to males. However, a survey into gender job satisfaction differences across 14 member states of the European Union (Kaiser 2005) showed females to have higher levels of job satisfaction in 10 countries, suggesting that higher satisfaction levels among females might not be an 'Anglo-Saxon

⁶ Also using British data, though a different dataset.

⁷ These countries are Bulgaria, Cyprus, Czech Republic, Germany, Hungary, Denmark, France, Great Britain, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Russia, Slovenia, Spain, Sweden, Switzerland and the USA.

paradox' after all⁸. Equal employment opportunities, appropriate child day care and tax and social security system are the reason given by Kaiser (2005) for no gender job satisfaction difference in the above-mentioned three countries.

Long (2005) used cross-sectional 2001 Australian data to investigate gender differences in job satisfaction. Both her statistical and econometric (ordered probit) analysis suggests that females are more satisfied at work compared to males. However, as most the majority of studies cited above, this gender-job satisfaction gap disappears for younger females and also those with higher levels of education.

3.0 Data, Hypotheses and Preliminary Evidence

3.1 Data

Data is obtained from the first four waves (2001-2004) of the Household, Income and Labour Dynamics in Australia (HILDA) panel dataset. Designed to be consistent with the British Household Panel Survey (BHPS) and the German Socio-Economic Panel Study (GSOEP), it is a household-based panel study that collects information pertaining to economic, family labour market dynamics. For the purposes of this paper, we utilise the individual person dataset across the four waves. This provides an initial sample of 52146 individuals (52.51% female; 47.49% male)⁹. Of this sample 26414 or 50.65% are employed¹⁰. After checking for inconsistencies in the data, removing individuals with incomplete answers and restricting the sample to those of labour

⁸ Countries with females' higher job satisfaction are Austria, Belgium, France, Germany, Great Britain, Greece, Ireland, Italy, Luxemburg and Spain. In Portugal satisfaction was higher for males with no significant gender differences in Denmark, Finland and the Netherlands.

⁹ Includes multiple counting of individuals tracked through the different years (waves) and new individuals included to account for attrition. In wave 1 (2001) 13969 individual observations are available. In subsequent years the number of observations are 13041 (2002), 12728 (2003) and 12408 (2004).

¹⁰ This excludes those employed in family businesses and those who are self-employed.

force age (16-64) we end up with 38388 observations, with roughly the same gender ratio (52.21% female; 47.79% male). Of these numbers, 18980 are employed, with slightly more males (51.96%) than females (48.04%).

The HILDA dataset provides a rich source of information on labour market participation, outcome and performance. There is information on firm size, union membership, occupation and industry type, qualification levels attained, and of particular interest to this paper, workplace satisfaction measures. Appendix Table A1 provides a complete list of variables and definitions used in this study. Unfortunately, the role of expectations cannot be studied in this paper as the questions pertaining to expectations are only asked in wave 1 of the study, and dropped thereafter.

Six measures of workplace satisfaction are available in the HILDA dataset. The various measures are overall job satisfaction, satisfaction with pay, satisfaction with job security, satisfaction with hours of work, satisfaction with (type of) work and satisfaction with the flexibility to balance work and non-work commitments (job flexibility)¹¹. Respondents are asked to choose a number between 0 and 10 to indicate their levels of satisfaction with the six measures of workplace satisfaction. These questions are reproduced for every new wave.

3.1 Hypotheses

Following Clark (1997) we hypothesise that females in general will exhibit greater levels of workplace satisfaction compared to males. This is due to findings from previous studies, especially that of Long (2005), who used the first wave of the HILDA dataset. We argue that this is due to females having lower expectations due to previous cultural reasons constraining female

¹¹ The workplace satisfaction questions given to respondents in wave 1 (2001) is reproduced as Appendix A2.

participation in the workforce, and that the Australian occupational structure is gender segregated¹². We assume from previous findings that females in male dominated occupations will have higher expectations than females in female dominated occupations but given that most employed females are in female dominated occupations, this will lead to females in general possessing lower expectations and hence, higher levels of workplace satisfaction.

As well, we posit that the association with workplace satisfaction and both non-labour and labour market characteristics will differ by gender. Despite limited evidence in support of this hypothesis, we anticipate that our panel dataset will account for unobserved heterogeneity and better control for ‘white noise,’ which in turn will better predict the true associations between personal characteristics and workplace satisfaction.

Clark (1997) found no evidence of sample selection bias of females into the labour market, a finding strengthened by Long’s (2005) statistical analysis of Australian females. On the basis of these findings, we also anticipate that there will be no evidence of female self selecting into the labour market. Lastly, we expect a very limited association between female job satisfaction with time effects, unlike the finding from Sousa-Poza and Sousa-Poza (2003) as this panel dataset only stretches over four years.

3.2 Preliminary Results

[INSERT TABLE 1]

¹² Summary statistics in Table 1 (see Section 3.2) confirm the existence of gender based occupational segregation

The means and standard deviations of the explanatory variables by gender are presented in Table 1¹³. Despite being of similar age, we find that employed females have a different labour force participation history compared to males. They have less tenure with respect to both occupation and employer, and have less experience. As well, they have spent almost five times more years out of the labour force, suggesting that females might be more likely to have experienced interrupted labour force participation in the past. Part-time employment is predominantly female dominated and a fourth of females are casuals compared to a sixth of males. Females are also less likely to be in supervisory roles.

Apart from associate professional and labour work, we witness clear gender separation by occupation. Segregation by industry is also apparent. The occupation and industry segmentation can be partially explained by education levels attained; males are far more likely to hold certificate type qualifications that lead to trade, manufacturing and construction work. Thus, the statistical results presented here suggests that our study of job satisfaction should be gender sensitive

[INSERT TABLE 2]

Table 2 reports the average (mean) workplace satisfaction score by gender and wave (year). Looking at the average for all the years (2001-2004), we note that females have higher levels of workplace satisfaction with the exception of satisfaction with pay, and even then the difference is minute. The difference between genders is large for overall job satisfaction, satisfaction with job security, satisfaction with hours worked and satisfaction with job flexibility. However, we also note that males close the gap on the difference in satisfaction levels between the first and fourth waves, indicating perhaps that females in employment are raising their expectation levels over

¹³ A corresponding table by gender including those not employed is presented as Appendix Table A3.

time and are thus behaving more like males with respect to their expectations at work. Nevertheless we note that this is due more to the fact that males are increasing their levels of satisfaction rather than females facing a decreasing level of satisfaction over time.

[INSERT TABLE 3]

Looking at overall job satisfaction specifically (Table 3¹⁴), we can see that ‘happy’ females as a percentage of employed females remains stagnant, and actually slightly decreases between 2001 and 2004, while for males, the proportion of ‘happy’ males rises steadily over the years. Following and consistent with Long (2005), we report that there is very little gender difference with respect to those indicating lower (5 or less) overall job satisfaction. This is conditional evidence of an absence of female self-selection into employment¹⁵. Put together, statistical results in tables 1 - 3 indicate the need to account for genders when investigating the issue of workplace satisfaction.

4.0 Econometric Methodology

In accordance with Clarke and Oswald (1996), an individual’s utility (satisfaction) from working is nested in the total utility function. An overall utility function (or an overall life satisfaction) can be expressed as:

$$v = v(u, \mu), \tag{1}$$

¹⁴ We define those answering with a number 8 or higher as being ‘happy’ because for females 4 out of the 6 satisfaction measure have a mean score lying between 7 and 8. For males, this is the case for 5 out of the 6 satisfaction measures.

¹⁵ The ordered probit models utilised in the econometric investigation in Section 5 is unable to control for sample selection bias.

where v is overall utility, u is utility from work and μ is utility from other aspects of life (e.g., leisure time, family time). As a type of sub-utility function utility from work can be written as follows:

$$v = v(u(y, h, i, j), \mu), \quad (2)$$

where y is income, h is hours of work, i and j are individual and job specific characteristics respectively. From the above expression, the utility of working is then considered to be of the form:

$$u = u(y, h, i, j) \quad (3)$$

Similar to the argument that job satisfaction relating specifically to pay may depend not only on worker's own income but also on relative or comparative income, the notion of overall job satisfaction can be partly determined by relative arguments. This implies that the above model should capture the effect of a general relative utility and thus the complete model of utility from work can be expressed as:

$$u = u(y, h, i, j, E), \quad (4)$$

where E is a vector of comparison level that applies to all independent variables included in the model. It is a vector of variables that capture an individual's expectations. As stated by Clark (1997), E may come from observation of others, from one's own experience in the past or from one's feelings of what one should receive.

To analyse our six measures of workplace satisfaction we use random effects ordered probit models. The econometric model of job satisfaction has the general form:

$$y^* = x\beta + u \quad (5)$$

where y^* is a latent variable indicating the unobservable level of workplace satisfaction of the employees, x is a matrix containing individual socio-demographic characteristics, family and household characteristics, work related factors, information on working conditions, geographical locations and other control variables, β is a parameter vector and u is the error term. The individual workplace satisfaction cannot be observed instead a categorical but ordered random variable y is estimated as a function of the explanatory variables and a set of cut-off points z_i .

The conditional probability of a given observation can be expressed as:

$$\begin{aligned} \Pr(y = i / x) &= \Pr(z_{i-1} \leq x\beta + u < z_i) \\ &= \Pr(z_{i-1} \leq y^* + u < z_i) \end{aligned} \quad (6)$$

where i in our case is the average workplace satisfaction scores that range between 0 and 10.

By rearranging the above terms can be written as:

$$\begin{aligned} \Pr(y = i / x) &= \Pr(z_{i-1} - x\beta \leq u < z_i - x\beta) \\ &= \Pr(u < z_i - x\beta) - \Pr(u \leq z_{i-1} - x\beta) \\ &= \Phi(u < z_i - x\beta) - \Phi(u \leq z_{i-1} - x\beta) \end{aligned} \quad (7)$$

where $\Phi(\cdot)$ is the standard cumulative distribution function.

The probability of an employee choosing a workplace satisfaction level of i given the explanatory variables (x) is the difference between the cumulative normal distribution function valued at a cut-off points for i (z_i) minus the vector of explanatory variables multiplied by their respective coefficients, and cumulative normal distribution function valued at a preceding cut-off point (z_{i-1}) minus all the included explanatory variables multiplied by their respective coefficients.

5.0 Econometric Results

[INSERT TABLE 4]

Table 4 presents results of ordered probit estimations on the six workplace satisfaction measures with a gender dummy. We find that the ordered probit results confirm the initial findings in Section 3; namely that females are more satisfied at work than males. As with the results in Table 2, females are more satisfied than males with five of the six measures. Unlike Table 2 however, we now report that females are also more satisfied than males with pay, but are now no more satisfied with job flexibility as compared to males.

Briefly noting other results, we find some evidence of changing levels of satisfaction over time. Those married or living in *de facto* relationships appear to be more satisfied than those not cohabitating while those with long-term health problems are less satisfied with all types of workplace satisfaction measures compared to healthier employees. NESB immigrants also appear to be less satisfied at work. Evidence of possible relationships between tenure and labour force

participation history with workplace satisfaction is mixed. Overtime and casual work significantly affects satisfaction as do most workplace characteristics.

[INSERT TABLE 5a]

Table 5a reports workplace satisfaction among female employees. As in Table 4, we find mixed evidence of the role of time on satisfaction. Female employees seem to be less satisfied with overall job satisfaction, satisfaction with (type of) work, satisfaction with hours worked and to a certain extent, satisfaction with job flexibility in 2004 compared to 2001. They are however, happier with satisfaction with pay and job security compared to 2001. Marital status increases satisfaction in 3 out of the 6 measures investigated, and poor health decreases satisfaction across the board with the exception of satisfaction with job security. Female NESB immigrants are also largely dissatisfied at work.

As expected, tenure with employer is positively associated with satisfaction with job security, though tenure in occupation is insignificant. Working experience is surprisingly largely insignificant, though unemployment spells reduces satisfaction in 4 out of the 6 measures investigated. With the exception of satisfaction with (type of) work, higher wages are positively correlated with higher satisfaction levels. Casuals are more satisfied with pay, but less satisfied with job security. Union membership is associated with lower levels of satisfaction (bar satisfaction with job security).

[INSERT TABLE 5b]

Table 5b investigates the factors underlying workplace satisfaction among male employees. We report higher levels of satisfaction with job security over time with pay and job security, with

little time effects evident across the other satisfaction measures. Those in poor health are generally more dissatisfied as are ESB immigrants. Employed male Indigenous Australians, on the other hand are more satisfied than non-Indigenous Australian born residents with respect to overall job satisfaction, satisfaction with (type of) work and job flexibility.

Tenure with occupation and experience both exhibit a U-shaped pattern indicating first, falling levels of satisfaction but eventually greater levels of satisfaction with both tenure and occupation¹⁶. Bar satisfaction with pay, casuals are less satisfied than those on permanent contracts while higher wages are associated with higher levels of satisfaction in 4 of the 6 measures.

5.1 Comparing Results by Gender

This sub-section will investigate both similarities and differences in the six aspects of workplace satisfaction by gender. These similarities and differences have been summarised in Table 6.

[INSERT TABLE 6]

5.1.1 Overall Job Satisfaction

Looking first at time effects, we find that compared to 2001 and 2003, females in 2004 are less satisfied with overall job satisfaction suggesting a possible role for increased workplace expectations. No such trend is found for males. Non-labour market personal characteristics have similar associations with satisfaction irrespective of gender though ESB and NESB immigrants

¹⁶ This could be related to age. The continuous age variable was dropped because it was highly correlated with years worked (0.81).

have different outcomes by gender. However, four of the five labour market personal characteristics form different associations with satisfaction by gender. We note that only years unemployed is insignificantly associated with overall job satisfaction for males, while all other labour market characteristics are negatively associated with overall job satisfaction¹⁷. For females however, only tenure with current employer and years unemployed have a negative association with satisfaction¹⁸. Type of work and hours of work are largely similar with the exception of casual work and we also find that union membership and supervisory roles are negatively associated with overall job satisfaction only for females.

5.1.2 Satisfaction with Pay

Unlike overall job satisfaction we do find that both genders are increasingly becoming more satisfied with their pay over time. As well, in comparison with overall job satisfaction, non-labour market personal characteristics do exhibit gender differences. For females, only indigenous Australians form no significant association with pay satisfaction while for males, only ESB immigrants form a significant (and negative) association with pay satisfaction. Labour market personal characteristics play no significant part in determining satisfaction for females while years worked and years out of the labour force reduce males' initial satisfaction with pay (U-shaped patterns). Not surprisingly, overtime and casual work and higher hourly wages are positively associated with higher levels of pay satisfaction¹⁹. Part-time work is negatively associated with pay satisfaction for females only while workplace characteristics are not associated with pay satisfaction for males but do so for females.

¹⁷ All but tenure with current employer exhibit U-shaped patterns indicating falling, then rising levels of satisfaction.

¹⁸ Both U-shaped.

¹⁹ Casual work in Australia attracts a 'premium' to offset the lack of non-pecuniary benefits such as annual and sick leave.

5.1.3 Satisfaction with Job Security

We witness evidence of time effects with rising levels of job security over time for both genders. Non-labour market personal characteristics exhibit gender differences with only NESB immigrants of both genders forming negative associations with satisfaction with job security. Labour market personal characteristics are however, similar between the genders²⁰. As expected, casual work is negatively associated with job security satisfaction. Working in excess of 40 hours a week increases satisfaction with job security only for males while higher hourly wages only increase satisfaction for females. Workplace characteristics play a stronger role for males in forming associations with job security though for both genders, working in small firms and having supervisory roles improve satisfaction with job security.

5.1.4 Satisfaction with (Type of) Work

Satisfaction with (type of) work has little significant time-effect with only those in 2001 being more satisfied. Two of the five non-labour market personal characteristics differ with cohabitating and indigenous Australia males being more satisfied while their female counterparts form no significant association with work satisfaction. As with satisfaction with pay, female labour market personal characteristics are not significantly associated with satisfaction. For males, tenure in current occupation and years out of the labour force reduces the levels of satisfaction (at a decreasing rate). As with labour market personal characteristics, type of work and hours of work also do not affect females' satisfaction with (type of) work, though overtime and casual work affects males' satisfaction with (type of) work. With the exception of working for small firms, workplace characteristics exhibit gender differences.

²⁰ For males however, there is no U-shaped pattern evident suggesting past experience looking for work has a stronger negative impact compared to females where longer spells of unemployment eventually lead to greater levels of satisfaction with job security.

5.1.5 Satisfaction with Hours Worked

Little evidence of time effects influencing satisfaction with hours worked can be seen, with only females in 2001 being more satisfied compared to females in 2004. Consistent with satisfaction with pay, job security and (type of) work, we find gender differences in non-labour market personal characteristics. Only cohabitating females are more satisfied with their working hours while both immigrant groups form different associations with satisfaction by gender. The relationship between satisfaction with hours worked and labour market personal characteristics also show some gender divergence. In particular we note that tenure in current occupation and years worked reduces only males' satisfaction with hours worked (at a decreasing rate). On the other hand, a U-shaped pattern is evident only for females when associating years unemployed with satisfaction with hours worked. Type of work and hours of work results show similarity by gender with the exception of part-time work where we report that males are less satisfied while females are more satisfied with hours worked. This tends to suggest that males in part-time employment are seeking full-time work while females in similar positions are happy to remain in such positions²¹.

5.1.6 Satisfaction with Job Flexibility

As with satisfaction with (type of) work and hours, there is little evidence of time effects on satisfaction with job flexibility. Once again, both non-labour market and labour market personal characteristics exhibit gender differences. The relationship between satisfaction with job

²¹ Summary statistics in table 1 shows that only 9% of males are in part-time work while 43% of females are in a similar position. This also suggests that part-time work is viewed 'negatively' by males while for females (especially those juggling work and family commitments) reduced working hours can be seen in a positive light.

flexibility and type of work and hours of work are largely similar for both genders. Unsurprisingly, we find that those in part-time employment are more satisfied with job flexibility with the opposite being true for those working greater than the normal work week. Casual work is however only positively associated with job flexibility for females. Workplace characteristics also remain largely gender neutral when associated with satisfaction with job flexibility with the exception of supervisory roles, where females form a negative association.

5.1.7 Sectional Summary

The analysis of gender differences with respect to the various measures of workplace satisfaction clearly indicate that at times, both females and males form different associations with satisfaction. However, a number of similarities do exist. For example, with the exception of overall job satisfaction, time effects are largely gender neutral, with a slightly stronger correlation for females. Part-time, overtime and higher wages also form associations with the various measures of workplace satisfaction in a gender neutral manner, as does working for small firms.

The relationship between personal characteristics and satisfaction are gender-specific however, especially with labor market characteristics²². Results suggest that labour market personal characteristics for a stronger association with satisfaction for males. Given that males have more experience in the labour market (see Table 1) this is not a surprising result. Gender differences between casual work and satisfaction is also apparent in some of the results, indicating that casual work is viewed differently according to one's gender. Unionised females are however less satisfied than their non-unionised counterparts; a finding less apparent between unionised and non-unionised males. As well, females in supervisory roles are less satisfied than those they supervise. This is not apparent for males.

²² With the exception of satisfaction with job security.

6.0 Conclusion and Summary

Using a panel dataset that allows us to control for unobserved heterogeneity and track individuals over time, we have investigated gender differences in job satisfaction in Australia over a four year period. Consistent with our expectations, females enjoy higher levels of workplace satisfaction compared to males with the exception of satisfaction with job flexibility. We suspect this is due to their lower expectations, but the dataset is unable to study this matter further. As well, we found no preliminary evidence of females self-selecting into employment, suggesting that gender differences with respect to workplace satisfaction is largely due to differing characteristics between males and females rather than within female groups themselves. Time effects were largely gender neutral, negating our hypotheses that female workplace satisfaction will show limited evidence of falling over time as their expectation levels rise.

We can however report the existence of gender differences in labour market personal characteristics, suggesting that past labour market activities lead to differing associations with workplace satisfaction based on gender. There is also evidence of gender differences with respect to some workplace characteristics such as union membership and difference in type of work, especially casual work.

Overall, this paper has shown that gender differences in workplace satisfaction in Australia is evident and requires further investigation. In particular, the role of expectations needs to be incorporated into further analysis on this issue given the prominent role it plays in forming hypotheses regarding gender differences with respect to workplace satisfaction. As well, an econometric evaluation of female self-selection is required (as opposed to our statistical observation) in order to strengthen results. At the moment however, this will require abandoning

the ordered probit model for a probit model that can handle for sample selection bias, and thus trade off any potential loss of information for further information on self-selection bias²³.

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²³ In preliminary results undertaken so far, we found that when we define 'satisfied' by those answering between 6 and 10 (and giving a value of 1) and 'dissatisfied' as those answering less than six (and giving a value of 0) and running probit models, results are very different from those reported in Section 5. However, when the satisfaction cut-off is restricted to those answering between 8 to 10, results produce are much more similar with that found in Section 5.

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Table 1 Descriptive Statistics By Gender – Employed Only

| Variables | Female | | Male | |
|---|--------|-----------|-------|-----------|
| | Mean | Std. Dev. | Mean | Std. Dev. |
| Personal Characteristics | | | | |
| Age (between 16 – 64) | 38.78 | 11.11 | 38.26 | 11.37 |
| Married / <i>de facto</i> | 0.67 | 0.47 | 0.70 | 0.46 |
| Long Term Health Problems | 0.13 | 0.34 | 0.14 | 0.35 |
| Non-Indigenous ABRs | 0.77 | 0.42 | 0.77 | 0.42 |
| ATSI | 0.02 | 0.12 | 0.01 | 0.12 |
| ESB Immigrants | 0.10 | 0.31 | 0.11 | 0.31 |
| NESB Immigrants | 0.11 | 0.31 | 0.11 | 0.31 |
| Tenure – Current Occupation | 8.31 | 8.69 | 9.55 | 9.55 |
| Tenure – Current Employer | 5.95 | 6.75 | 7.08 | 8.23 |
| Years Worked | 17.38 | 10.21 | 20.05 | 11.88 |
| Years Unemployed | 0.37 | 1.18 | 0.55 | 1.38 |
| Years out of the Labour Force | 4.24 | 5.59 | 0.90 | 2.02 |
| Type of Work and Hours of Work | | | | |
| Full-time (35 hours or more a week) | 0.57 | 0.50 | 0.91 | 0.28 |
| Part-Time | 0.43 | 0.50 | 0.09 | 0.28 |
| Overtime (40 hours or more a week) | 0.20 | 0.40 | 0.51 | 0.50 |
| Casual | 0.24 | 0.43 | 0.15 | 0.36 |
| Hourly Wage | 18.14 | 7.53 | 20.95 | 10.18 |
| Workplace Characteristics | | | | |
| Small Firm (employs less than 20 people) | 0.37 | 0.48 | 0.35 | 0.48 |
| Medium Sized Firm (employs between 20-99) | 0.33 | 0.47 | 0.31 | 0.46 |
| Large Firm (employs 100 or more) | 0.32 | 0.47 | 0.34 | 0.47 |
| Union Member | 0.31 | 0.47 | 0.34 | 0.47 |
| Has Supervisory Responsibilities | 0.45 | 0.50 | 0.56 | 0.50 |
| Occupation (2 Digit ASCO Codes) | | | | |
| Managerial | 0.04 | 0.20 | 0.09 | 0.29 |
| Professional | 0.29 | 0.45 | 0.20 | 0.40 |
| Associate Professional | 0.13 | 0.33 | 0.13 | 0.34 |
| Trade Work | 0.02 | 0.15 | 0.18 | 0.39 |
| Advanced Services | 0.06 | 0.24 | 0.01 | 0.09 |
| Intermediate Services | 0.27 | 0.44 | 0.10 | 0.30 |
| Intermediate Production | 0.02 | 0.14 | 0.14 | 0.35 |
| Elementary Work | 0.10 | 0.30 | 0.05 | 0.22 |
| Labour Work | 0.07 | 0.25 | 0.09 | 0.29 |
| Industry (2 Digit ANZSIC Codes) | | | | |
| Agriculture | 0.01 | 0.10 | 0.03 | 0.18 |
| Mining | 0.00 | 0.06 | 0.03 | 0.17 |
| Manufacturing | 0.07 | 0.25 | 0.19 | 0.39 |
| Power | 0.00 | 0.05 | 0.02 | 0.13 |
| Construction | 0.01 | 0.09 | 0.04 | 0.21 |
| Wholesale Trade | 0.03 | 0.17 | 0.05 | 0.22 |
| Retail Trade | 0.12 | 0.32 | 0.09 | 0.29 |
| Retail Services | 0.05 | 0.22 | 0.03 | 0.18 |
| Transport | 0.02 | 0.14 | 0.06 | 0.23 |
| Communication Services | 0.02 | 0.13 | 0.03 | 0.18 |
| Finance & Insurance | 0.05 | 0.21 | 0.03 | 0.18 |
| Business Services | 0.11 | 0.31 | 0.10 | 0.29 |
| Government | 0.06 | 0.23 | 0.07 | 0.26 |
| Education | 0.17 | 0.37 | 0.06 | 0.24 |

| | | | | |
|-------------------------------------|------|------|------|------|
| Health Services | 0.22 | 0.42 | 0.04 | 0.20 |
| Cultural Services | 0.02 | 0.15 | 0.03 | 0.16 |
| Personal Services | 0.04 | 0.19 | 0.04 | 0.19 |
| Geographical Location | | | | |
| New South Wales | 0.30 | 0.46 | 0.29 | 0.46 |
| Victoria | 0.25 | 0.43 | 0.24 | 0.43 |
| Queensland | 0.21 | 0.41 | 0.22 | 0.41 |
| South Australia | 0.09 | 0.28 | 0.09 | 0.29 |
| Western Australia | 0.09 | 0.29 | 0.10 | 0.30 |
| Tasmania | 0.03 | 0.17 | 0.03 | 0.16 |
| Northern Territory | 0.01 | 0.09 | 0.01 | 0.09 |
| ACT | 0.02 | 0.14 | 0.02 | 0.15 |
| Education | | | | |
| Masters & Ph. D | 0.03 | 0.18 | 0.04 | 0.20 |
| Post-graduate Diploma & Certificate | 0.08 | 0.27 | 0.05 | 0.22 |
| Degree | 0.18 | 0.39 | 0.15 | 0.36 |
| Diploma | 0.10 | 0.30 | 0.09 | 0.28 |
| Certificate | 0.14 | 0.35 | 0.29 | 0.46 |
| Year 12 | 0.16 | 0.37 | 0.14 | 0.35 |
| Year 11 or less | 0.29 | 0.45 | 0.24 | 0.43 |
| | | | | |
| Observations | 9118 | | 9862 | |

Table 2: Average Workplace Satisfaction Scores By Gender (2001-2004)

| Aspects of Workplace Satisfaction | | | | | | |
|--|----------------|------------|-----------------|-------------|--------------|--------------|
| | Overall | Pay | Job Sec. | Work | Hours | Flex. |
| 2001 | | | | | | |
| Female | 7.77 | 6.76 | 7.95 | 7.67 | 7.36 | 7.48 |
| Male | 7.44 | 6.82 | 7.64 | 7.56 | 7.06 | 7.13 |
| Difference | 0.33 | -0.06 | 0.31 | 0.11 | 0.30 | 0.35 |
| 2002 | | | | | | |
| Female | 7.65 | 6.76 | 8.04 | 7.61 | 7.29 | 7.35 |
| Male | 7.48 | 6.82 | 7.85 | 7.56 | 7.01 | 7.12 |
| Difference | 0.17 | -0.06 | 0.19 | 0.05 | 0.28 | 0.23 |
| 2003 | | | | | | |
| Female | 7.72 | 6.86 | 8.14 | 7.59 | 7.32 | 7.48 |
| Male | 7.51 | 6.98 | 7.91 | 7.54 | 7.09 | 7.22 |
| Difference | 0.21 | -0.12 | 0.23 | 0.05 | 0.23 | 0.26 |
| 2004 | | | | | | |
| Female | 7.68 | 6.98 | 8.13 | 7.59 | 7.32 | 7.48 |
| Male | 7.53 | 6.98 | 8.00 | 7.59 | 7.12 | 7.21 |
| Difference | 0.15 | 0 | 0.13 | 0 | 0.20 | 0.27 |
| 2001-2004 | | | | | | |
| Female | 7.71 | 6.84 | 8.05 | 7.62 | 7.32 | 7.45 |
| Male | 7.49 | 6.89 | 7.85 | 7.56 | 7.07 | 7.17 |
| Difference | 0.22 | -0.05 | 0.20 | 0.06 | 0.25 | 0.28 |

Table 3 Percentage Response Breakdown By Wave and Gender For Overall Job Satisfaction

| Score | 2001 | | 2002 | | 2003 | | 2004 | |
|-------------|--------|-------|--------|-------|--------|-------|--------|-------|
| | Female | Male | Female | Male | Female | Male | Female | Male |
| 0 | 0.49 | 0.58 | 0.27 | 0.48 | 0.49 | 0.29 | 0.28 | 0.17 |
| 1 | 0.49 | 0.92 | 0.62 | 0.89 | 0.27 | 0.57 | 0.51 | 0.39 |
| 2 | 1.10 | 1.38 | 1.11 | 1.01 | 0.98 | 1.34 | 0.93 | 1.03 |
| 3 | 1.83 | 1.96 | 1.83 | 1.62 | 1.68 | 1.67 | 1.30 | 1.85 |
| 4 | 2.36 | 2.38 | 2.32 | 2.30 | 1.60 | 2.28 | 1.90 | 2.45 |
| 5 | 6.50 | 6.76 | 6.90 | 6.55 | 6.38 | 6.23 | 6.82 | 6.14 |
| 6 | 7.15 | 9.52 | 7.84 | 8.44 | 7.14 | 8.68 | 7.32 | 7.47 |
| 7 | 15.24 | 20.19 | 16.75 | 21.29 | 17.15 | 19.32 | 17.99 | 21.43 |
| 8 | 25.28 | 26.53 | 26.95 | 27.84 | 28.55 | 31.17 | 29.58 | 31.10 |
| 9 | 20.53 | 17.08 | 20.62 | 19.43 | 22.16 | 18.66 | 20.68 | 18.81 |
| 10 | 19.02 | 12.71 | 14.79 | 10.14 | 13.61 | 9.78 | 12.70 | 9.15 |
| ≥ 8 | 64.83 | 56.32 | 62.36 | 57.41 | 64.32 | 59.61 | 62.96 | 59.06 |
| ≤ 5 | 12.77 | 13.98 | 13.05 | 12.85 | 11.40 | 10.38 | 11.74 | 12.03 |
| Observation | 2460 | 2605 | 2245 | 2475 | 2256 | 2454 | 2157 | 2328 |

Table 4: Ordered Probit Regression Results For Various Measures of Workplace Satisfaction With Gender Dummy

| | Overall | Pay | Job Sec. | Work | Hours | Flex. |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Interview Years | | | | | | |
| 2001 | 0.09*** (0.02) | -0.07*** (0.02) | -0.14*** (0.02) | 0.11*** (0.02) | 0.06** (0.02) | 0.05** (0.02) |
| 2002 | 0.02 (0.02) | -0.11*** (0.02) | -0.09*** (0.02) | 0.03 (0.02) | -0.00 (0.02) | -0.03 (0.02) |
| 2003 | 0.04* (0.02) | -0.03 (0.02) | -0.05** (0.02) | 0.01 (0.02) | 0.01 (0.02) | 0.02 (0.02) |
| Personal Characteristics | | | | | | |
| Female | 0.20*** (0.04) | 0.25*** (0.04) | 0.20*** (0.04) | 0.09*** (0.04) | 0.07** (0.03) | -0.03 (0.04) |
| Married / <i>de facto</i> | 0.06** (0.03) | 0.06** (0.03) | 0.06** (0.03) | 0.10*** (0.03) | 0.06** (0.03) | 0.03 (0.03) |
| Long Term Health Problems | -0.14*** (0.03) | -0.09*** (0.03) | -0.09*** (0.03) | -0.13*** (0.03) | -0.11*** (0.03) | -0.08*** (0.03) |
| ATSI | 0.40*** (0.11) | -0.04 (0.11) | -0.06 (0.11) | 0.33*** (0.11) | 0.01 (0.10) | 0.06 (0.11) |
| ESB Immigrants | -0.08* (0.05) | -0.18*** (0.05) | -0.11** (0.05) | -0.05 (0.05) | -0.06 (0.04) | -0.02 (0.05) |
| NESB Immigrants | -0.11** (0.05) | -0.16*** (0.05) | -0.21*** (0.05) | 0.03 (0.05) | -0.14*** (0.04) | -0.18*** (0.05) |
| Tenure – Current Occupation | -0.02*** (0.00) | -0.00 (0.00) | -0.00 (0.00) | -0.02*** (0.00) | -0.01*** (0.00) | -0.01** (0.00) |
| Tenure – Current Occupation Squared*100 | 0.05*** (0.01) | 0.00 (0.01) | -0.00 (0.01) | 0.04*** (0.01) | 0.03*** (0.01) | 0.02* (0.01) |
| Tenure – Current Employer | -0.01** (0.01) | 0.00 (0.01) | 0.03*** (0.01) | -0.00 (0.01) | -0.00 (0.00) | 0.01** (0.01) |
| Tenure – Current Employer Squared*100 | 0.03* (0.02) | 0.00 (0.02) | -0.07*** (0.02) | 0.00 (0.02) | 0.01 (0.02) | -0.04** (0.02) |
| Years Worked | -0.01 (0.00) | -0.02*** (0.00) | -0.03*** (0.00) | 0.00 (0.48) | -0.01** (0.00) | -0.00 (0.00) |
| Years Worked Squared*100 | 0.04*** (0.01) | 0.07*** (0.01) | 0.05*** (0.01) | 0.03** (0.01) | 0.04*** (0.01) | 0.02** (0.01) |
| Years Unemployed | -0.03** (0.02) | -0.05*** (0.02) | -0.09*** (0.02) | 0.00 (0.02) | -0.08*** (0.02) | -0.06*** (0.02) |
| Years Unemployed Squared*100 | 0.17 (0.15) | 0.11 (0.14) | 0.32** (0.15) | -0.14 (0.14) | 0.43*** (0.14) | 0.32** (0.14) |
| Years out of the Labour Force | -0.00 (0.01) | -0.00 (0.01) | -0.00 (0.01) | -0.00 (0.01) | 0.01 (0.01) | 0.00 (0.01) |
| Years out of the Labour Force Squared*100 | 0.1*** (0.04) | 0.10*** (0.04) | -0.01 (0.04) | 0.07** (0.04) | 0.02 (0.03) | 0.02 (0.04) |
| Type of Work and Hours of Work | | | | | | |
| Part-Time | 0.02 (0.03) | -0.08** (0.03) | 0.05 (0.03) | -0.02 (0.03) | 0.03 (0.03) | 0.41*** (0.03) |
| Overtime (40 hours or more a week) | -0.01 (0.03) | 0.18*** (0.03) | 0.11*** (0.03) | 0.10*** (0.03) | -0.56*** (0.03) | -0.28*** (0.03) |
| Casual | -0.07** (0.03) | 0.23*** (0.03) | -0.55*** (0.03) | -0.05 (0.03) | -0.15*** (0.03) | 0.05 (0.03) |
| Log of Hourly Wage | 0.28*** (0.04) | 1.02*** (0.04) | 0.04 (0.04) | 0.02 (0.04) | 0.27*** (0.03) | 0.11 (0.03) |
| Workplace Characteristics | | | | | | |
| Small Firm (employs less than 20 people) | 0.14*** (0.03) | 0.06** (0.03) | 0.14*** (0.03) | 0.17*** (0.03) | 0.17*** (0.03) | 0.12*** (0.03) |
| Medium Sized Firm (employs between 20-99) | 0.02 (0.03) | -0.05* (0.03) | 0.04 (0.03) | 0.03 (0.03) | 0.05* (0.03) | -0.00 (0.03) |
| Union Member | -0.11*** (0.03) | -0.05* (0.03) | -0.10*** (0.03) | -0.07** (0.03) | -0.07*** (0.03) | -0.23*** (0.03) |
| Has Supervisory Responsibilities | -0.02 (0.02) | -0.06*** (0.02) | 0.20*** (0.02) | 0.04* (0.02) | -0.11*** (0.02) | -0.06*** (0.02) |
| Observations | 18980 | 18980 | 18980 | 18980 | 18980 | 18980 |
| Log-Likelihood | -33743.25 | -37053.41 | -33630.29 | -34710.18 | -37217.81 | -37523.13 |

***, ** and * denote 1, 5 and 10% levels of significance. Standard errors are in parentheses. Omitted categories are interview year 2004, male, non-cohabitating, no long-term health problems, non-indigenous Australian Born Resident, working full-time, employed at a large firm, non-union member and has no supervisory responsibilities. Other variables not shown for brevity include variables controlling for occupation, industry and level of highest qualification attained.

Table 5a: Ordered Probit Regression Results For Various Measures of Workplace Satisfaction: Female Employees

| | Overall | Pay | Job Sec. | Work | Hours | Flex. |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Interview Years | | | | | | |
| 2001 | 0.15*** (0.03) | -0.08** (0.03) | -0.11*** (0.04) | 0.13*** (0.03) | 0.09** (0.03) | 0.06* (0.03) |
| 2002 | 0.01 (0.03) | -0.13*** (0.03) | -0.10*** (0.04) | 0.02 (0.03) | 0.01 (0.03) | -0.05 (0.03) |
| 2003 | 0.07** (0.03) | -0.06* (0.03) | -0.04 (0.04) | 0.02 (0.03) | 0.02 (0.03) | 0.01 (0.03) |
| Personal Characteristics | | | | | | |
| Married / <i>de facto</i> | 0.06 (0.04) | 0.13*** (0.04) | 0.07* (0.04) | 0.05 (0.04) | 0.08** (0.04) | 0.04 (0.04) |
| Long Term Health Problems | -0.18*** (0.04) | -0.10** (0.04) | -0.08 (0.05) | -0.14*** (0.05) | -0.12*** (0.04) | -0.11** (0.05) |
| ATSI | 0.29* (0.16) | -0.03 (0.16) | -0.17 (0.16) | 0.12 (0.15) | 0.08 (0.14) | -0.15 (0.15) |
| ESB Immigrants | -0.04 (0.07) | -0.22*** (0.07) | -0.10 (0.07) | -0.02 (0.07) | -0.01 (0.06) | -0.02 (0.07) |
| NESB Immigrants | -0.14** (0.06) | -0.21*** (0.07) | -0.29*** (0.07) | -0.01 (0.07) | -0.17*** (0.06) | -0.24*** (0.06) |
| Tenure – Current Occupation | -0.01 (0.01) | -0.00 (0.01) | 0.01 (0.01) | -0.01 (0.01) | -0.01 (0.01) | -0.00 (0.01) |
| Tenure – Current Occupation Squared*100 | 0.02 (0.02) | 0.01 (0.02) | -0.01 (0.02) | 0.01 (0.02) | 0.02 (0.02) | 0.01 (0.02) |
| Tenure – Current Employer | -0.02* (0.01) | 0.00 (0.01) | 0.04*** (0.01) | -0.01 (0.01) | 0.00 (0.01) | 0.02** (0.01) |
| Tenure – Current Employer Squared*100 | 0.06** (0.03) | 0.03 (0.03) | -0.08** (0.03) | 0.04 (0.03) | 0.02 (0.03) | -0.05* (0.03) |
| Years Worked | 0.00 (0.01) | -0.01 (0.01) | -0.02*** (0.01) | 0.01 (0.01) | -0.00 (0.01) | 0.01 (0.01) |
| Years Worked Squared*100 | 0.02 (0.02) | 0.04** (0.02) | 0.03 (0.02) | 0.01 (0.02) | 0.01 (0.02) | -0.01 (0.02) |
| Years Unemployed | -0.08** (0.03) | -0.05 (0.03) | -0.13*** (0.03) | -0.03 (0.03) | -0.15*** (0.03) | -0.07** (0.03) |
| Years Unemployed Squared*100 | 0.85*** (0.30) | 0.23 (0.28) | 0.57** (0.28) | 0.34 (0.28) | 1.15*** (0.28) | 0.65** (0.28) |
| Years out of the Labour Force | 0.00 (0.01) | -0.00 (0.01) | -0.00 (0.01) | 0.00 (0.01) | 0.01 (0.01) | 0.00 (0.01) |
| Years out of the Labour Force Squared*100 | 0.06 (0.04) | 0.09** (0.04) | -0.01 (0.04) | 0.04 (0.04) | 0.01 (0.04) | 0.02 (0.04) |
| Type of Work and Hours of Work | | | | | | |
| Part-Time | 0.01 (0.04) | -0.14*** (0.04) | -0.00 (0.04) | -0.04 (0.04) | 0.19*** (0.04) | 0.45*** (0.04) |
| Overtime (40 hours or more a week) | -0.03 (0.04) | 0.08* (0.04) | 0.05 (0.04) | 0.07 (0.04) | -0.53*** (0.04) | -0.24*** (0.04) |
| Casual | 0.03 (0.04) | 0.32*** (0.04) | -0.43*** (0.05) | -0.02 (0.04) | -0.15*** (0.04) | 0.13*** (0.04) |
| Log of Hourly Wage | 0.34*** (0.05) | 0.94*** (0.05) | 0.16*** (0.05) | -0.01 (0.05) | 0.22*** (0.05) | 0.11** (0.05) |
| Workplace Characteristics | | | | | | |
| Small Firm (employs less than 20 people) | 0.16*** (0.04) | 0.12*** (0.04) | 0.14*** (0.04) | 0.23*** (0.04) | 0.20*** (0.04) | 0.09** (0.04) |
| Medium Sized Firm (employs between 20-99) | 0.04 (0.04) | -0.07* (0.04) | 0.03 (0.04) | 0.07* (0.04) | 0.08** (0.04) | 0.02 (0.04) |
| Union Member | -0.16*** (0.04) | -0.07* (0.04) | -0.06 (0.04) | -0.12*** (0.04) | -0.13*** (0.04) | -0.25*** (0.04) |
| Has Supervisory Responsibilities | -0.06* (0.03) | -0.09*** (0.03) | 0.18*** (0.03) | -0.01 (0.03) | -0.09*** (0.03) | -0.08** (0.03) |
| Observations | 9118 | 9118 | 9118 | 9118 | 9118 | 9118 |
| Log-Likelihood | -16176.77 | -18151.46 | -15881.02 | -16810.31 | -17862.51 | -17668.68 |

***, ** and * denote 1, 5 and 10% levels of significance. Standard errors are in parentheses. Omitted categories are non-cohabitating, no long-term health problems, non-indigenous Australian Born Resident, working full-time, employed at a large firm, non-union member and has no supervisory responsibilities. Other variables not shown for brevity include variables controlling for occupation, industry and level of highest qualification attained.

Table 5b: Ordered Probit Regression Results For Various Measures of Workplace Satisfaction: Male Employees

| | Overall | Pay | Job Sec. | Work | Hours | Flex. |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Interview Years | | | | | | |
| 2001 | 0.03 (0.03) | -0.06* (0.03) | -0.17*** (0.03) | 0.09*** (0.03) | 0.03 (0.03) | 0.03 (0.03) |
| 2002 | 0.04 (0.03) | -0.08*** (0.03) | -0.09*** (0.03) | 0.04 (0.03) | -0.01 (0.03) | -0.01 (0.03) |
| 2003 | 0.01 (0.03) | 0.00 (0.03) | -0.06* (0.03) | 0.00 (0.03) | -0.00 (0.03) | 0.02 (0.03) |
| Personal Characteristics | | | | | | |
| Married / <i>de facto</i> | 0.04 (0.04) | -0.05 (0.04) | 0.05 (0.04) | 0.16*** (0.04) | -0.01 (0.04) | -0.02 (0.04) |
| Long Term Health Problems | -0.08* (0.04) | -0.06 (0.04) | -0.10** (0.04) | -0.12*** (0.05) | -0.08* (0.04) | -0.05 (0.04) |
| ATSI | 0.55*** (0.17) | -0.02 (0.15) | 0.04 (0.16) | 0.59*** (0.16) | -0.00 (0.15) | 0.31* (0.16) |
| ESB Immigrants | -0.12* (0.07) | -0.15** (0.06) | -0.15** (0.07) | -0.06 (0.07) | -0.10* (0.06) | -0.02 (0.07) |
| NESB Immigrants | -0.06 (0.07) | -0.10 (0.06) | -0.12* (0.07) | 0.09 (0.07) | -0.09 (0.06) | -0.12* (0.07) |
| Tenure – Current Occupation | -0.03*** (0.01) | -0.00 (0.01) | 0.00 (0.01) | -0.03*** (0.01) | -0.02*** (0.01) | -0.02*** (0.01) |
| Tenure – Current Occupation Squared*100 | 0.08*** (0.02) | 0.00 (0.02) | 0.00 (0.02) | 0.07*** (0.02) | 0.05*** (0.02) | 0.04** (0.02) |
| Tenure – Current Employer | -0.02** (0.01) | 0.00 (0.01) | 0.03*** (0.01) | -0.00 (0.01) | -0.01 (0.01) | 0.01 (0.01) |
| Tenure – Current Employer Squared*100 | 0.03 (0.02) | -0.00 (0.02) | -0.06*** (0.02) | -0.01 (0.02) | 0.01 (0.02) | -0.03 (0.02) |
| Years Worked | -0.01** (0.01) | -0.04*** (0.01) | -0.04*** (0.01) | -0.01 (0.01) | -0.03*** (0.01) | -0.01* (0.01) |
| Years Worked Squared*100 | 0.07*** (0.01) | 0.10*** (0.01) | 0.08*** (0.01) | 0.05*** (0.01) | 0.08*** (0.01) | 0.05*** (0.01) |
| Years Unemployed | -0.00 (0.02) | -0.03 (0.02) | -0.06*** (0.02) | 0.02 (0.02) | -0.03 (0.02) | -0.06*** (0.02) |
| Years Unemployed Squared*100 | -0.14 (0.17) | -0.03 (0.17) | 0.17 (0.17) | -0.34* (0.20) | 0.07 (0.16) | 0.17 (0.17) |
| Years out of the Labour Force | -0.07*** (0.02) | -0.04** (0.02) | -0.00 (0.02) | -0.05*** (0.02) | -0.02 (0.02) | -0.01 (0.02) |
| Years out of the Labour Force Squared*100 | 0.52*** (0.17) | 0.22* (0.13) | -0.03 (0.13) | 0.34** (0.16) | 0.24* (0.14) | 0.18 (0.15) |
| Type of Work and Hours of Work | | | | | | |
| Part-Time | -0.08 (0.06) | -0.06 (0.06) | 0.07 (0.06) | -0.03 (0.06) | -0.48*** (0.06) | 0.25*** (0.06) |
| Overtime (40 hours or more a week) | 0.00 (0.03) | 0.25*** (0.03) | 0.16*** (0.03) | 0.12*** (0.03) | -0.61*** (0.03) | -0.30*** (0.03) |
| Casual | -0.21*** (0.05) | 0.10** (0.05) | -0.70*** (0.05) | -0.10** (0.05) | -0.13*** (0.05) | -0.05 (0.05) |
| Log of Hourly Wage | 0.23*** (0.05) | 1.11** (0.05) | -0.04 (0.05) | 0.04 (0.05) | 0.32*** (0.05) | 0.13*** (0.05) |
| Workplace Characteristics | | | | | | |
| Small Firm (employs less than 20 people) | 0.12*** (0.04) | 0.01 (0.04) | 0.13*** (0.04) | 0.11** (0.04) | 0.14*** (0.04) | 0.14*** (0.04) |
| Medium Sized Firm (employs between 20-99) | 0.00 (0.04) | -0.02 (0.04) | 0.06* (0.04) | -0.02 (0.04) | 0.01 (0.04) | -0.02 (0.04) |
| Union Member | -0.06 (0.04) | -0.03 (0.04) | -0.13*** (0.04) | -0.03 (0.04) | -0.01 (0.04) | -0.21*** (0.04) |
| Has Supervisory Responsibilities | 0.02 (0.03) | -0.03 (0.03) | 0.22*** (0.03) | 0.08** (0.03) | -0.13*** (0.03) | -0.03 (0.03) |
| Observations | 9862 | 9862 | 9862 | 9862 | 9862 | 9862 |
| Log-Likelihood | -17454.33 | -18751.83 | -17675.19 | -17803.20 | -19187.39 | -19781.84 |

***, ** and * denote 1, 5 and 10% levels of significance. Standard errors are in parentheses. Omitted categories are non-cohabitating, no long-term health problems, non-indigenous Australian Born Resident, working full-time, employed at a large firm, non-union member and has no supervisory responsibilities. Other variables not shown for brevity include variables controlling for occupation, industry and level of highest qualification attained.

Table 6: Summary of Tables 5a and 5b

| | Overall | | Pay | | Job Sec. | | Work | | Hours | | Flex. | |
|---------------------------------------|---------|------|--------|------|----------|------|--------|------|--------|------|--------|------|
| | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male |
| Interview Years | | | | | | | | | | | | |
| 2001 | P | O | N | N | N | N | P | P | P | O | P | O |
| 2002 | O | O | N | N | N | N | O | O | O | O | O | O |
| 2003 | P | O | N | O | O | N | O | O | O | O | O | O |
| Personal Characteristics | | | | | | | | | | | | |
| Married / <i>de facto</i> | O | O | P | O | P | O | O | P | P | O | O | O |
| Long Term Health Problems | N | N | N | O | O | N | N | N | N | N | N | O |
| ATSI | P | P | O | O | O | O | O | P | O | O | O | P |
| ESB Immigrants | O | N | N | N | O | N | O | O | O | N | O | O |
| NESB Immigrants | N | O | N | O | N | N | O | O | N | O | N | N |
| Tenure – Current Occupation | O | N | O | O | O | O | O | N | O | N | O | N |
| Tenure – Current Employer | N | N | O | O | P | P | O | O | O | O | P | O |
| Years Worked | O | N | O | N | N | N | O | O | O | N | O | N |
| Years Unemployed | N | O | O | O | N | N | O | O | P | O | N | N |
| Years out of the Labour Force | O | N | O | N | O | O | O | N | O | O | O | O |
| Type of Work and Hours of Work | | | | | | | | | | | | |
| Part Time | O | O | N | O | O | O | O | O | P | N | P | P |
| Overtime | O | O | P | P | O | P | O | P | N | N | N | N |
| Casual | O | N | P | P | N | N | O | N | N | N | P | O |
| Log of Hourly Wage | P | P | P | P | P | O | O | O | P | P | P | P |
| Workplace Characteristics | | | | | | | | | | | | |
| Small Firm | P | P | P | O | P | P | P | P | P | P | P | P |
| Medium Sized Firm | O | O | N | O | O | P | P | O | P | O | O | O |
| Union Member | N | O | N | O | O | N | N | O | N | O | N | N |
| Has Supervisory Responsibilities | N | O | N | O | P | P | O | P | N | N | N | O |

‘P’ denotes that the variable in Table 5 or 6 was positive and significant.

‘N’ denotes that the variable in Table 5 or 6 was negative and significant.

‘O’ denotes that the variable in Table 5 or 6 was insignificant.

Appendix Table A1 Variable List and Definitions

| Variables | Definitions |
|--|--|
| Personal Characteristics | |
| Non-Cohabiting | Individuals not married or living in <i>de facto</i> relationships (omitted case) |
| Married / <i>de facto</i> | Individual is either married or living in a <i>de facto</i> relationship |
| No Long Term Health Problems | Individual has no long term health problems (omitted case) |
| Long Term Health Problems | Individual has long-term health problems |
| Non-Indigenous ABRs | Australian Born Resident not of Aboriginal or Torres Straits Islander background (omitted case) |
| ATSI | Australian Born Resident of Aboriginal or Torres Straits Islander background |
| ESB Immigrants | Immigrant from the UK and Ireland, USA, Canada, New Zealand, South Africa and Zimbabwe |
| NESB Immigrants | Immigrant from countries not covered by 'ESB Immigrant' |
| Tenure – Current Occupation | Tenure (in years) in current occupation (continuous variable) |
| Tenure – Current Employer | Tenure (in years) with current employer (continuous variable) |
| Years Worked | Years worked since finishing full-time education for the first time (continuous variable) |
| Years Unemployed | Years spent looking for work since finishing full-time education for the first time (continuous variable) |
| Years out of the Labour Force | Years out of the labour force since finishing full-time education for the first time (continuous variable) |
| Type of Work and Hours of Work | |
| Full-time | Individual works an average of 35 hours or more (omitted case) |
| Part-Time | Individual works an average of less than 35 hours a week |
| Overtime | Individual works an average of at least 40 hours a week |
| Casual | Individual has no annual and sick leave entitlements |
| Log of Hourly Wage | The log of hourly wage (continuous variable) |
| Workplace Characteristics | |
| Small Firm | Individual works for an employer that employs less than 20 people |
| Medium Sized Firm | Individual works for an employer that employs between 20 and 99 people |
| Large Firm | Individual works for an employer that employs 100 or more people (omitted case) |
| Union Member | Individual belongs to a union |
| Non-Union Member | Individual does not belong to a union (omitted case) |
| Has Supervisory Responsibilities | Individual's work includes supervising other employees |
| Has No Supervisory Responsibilities | Individual's work does not include supervising other employees (omitted case) |
| Occupation (2 Digit ASCO Codes) | |
| Managerial | Individual is in a managerial level occupation |
| Professional | Individual is in a professional level occupation (omitted case) |
| Associate Professional | Individual is in an associate professional level occupation |

| | |
|--|---|
| Trade Work | Individual is in a trade level occupation |
| Advanced Services | Individual is in an advanced services level occupation |
| Intermediate Services | Individual is in an intermediate services level occupation |
| Intermediate Production | Individual is in an intermediate production level occupation |
| Elementary Work | Individual is in an elementary level occupation |
| Labour Work | Individual is in a labour level occupation |
| Industry (2 Digit ANZSIC Codes) | |
| Agriculture | Individual works in the agricultural, forestry and fishing industry |
| Mining | Individual works in the mining industry |
| Manufacturing | Individual works in the manufacturing industry |
| Power | Individual works in the electricity, gas and water supply industry |
| Construction | Individual works in the construction industry |
| Wholesale Trade | Individual works in the wholesale trade industry |
| Retail Trade | Individual works in the retail trade industry |
| Retail Services | Individual works in the accommodation, cafes and restaurants industry |
| Transport | Individual works in the transport and storage industry |
| Communication Services | Individual works in the communication services industry |
| Finance & Insurance | Individual works in the finance and insurance industry |
| Business Services | Individual works in the property and business services industry |
| Government | Individual works in the government administration and defence industry (omitted case) |
| Education | Individual works in the education industry |
| Health Services | Individual works in the health and community services industry |
| Cultural Services | Individual works in the cultural and recreational services industry |
| Personal Services | Individual works in the personal and other services industry |
| Geographical Location | |
| New South Wales | Individual resides in New South Wales (omitted case) |
| Victoria | Individual resides in Victoria |
| Queensland | Individual resides in Queensland |
| South Australia | Individual resides in South Australia |
| Western Australia | Individual resides in Western Australia |
| Tasmania | Individual resides in Tasmania |
| Northern Territory | Individual resides in the Northern Territory |
| ACT | Individual resides in the Australian Capital Territory |
| Education | |
| Masters & Ph. D | Individual highest qualification level attained – Masters or Doctorate |

| | |
|-------------------------------------|---|
| Post-graduate Diploma & Certificate | Individual highest qualification level attained – Post-Graduate Diploma or Certificate |
| Degree | Individual highest qualification level attained – Degree |
| Diploma | Individual highest qualification level attained – Diploma |
| Certificate | Individual highest qualification level attained – Certificate |
| Year 12 | Individual highest qualification level attained – Completed Year 12 in high school (omitted case) |
| Year 11 or less | Individual highest qualification level attained – Completed Year 11 or less |

Unless otherwise stated, these are dummy, and not continuous variables

Appendix Table A2: Workplace Satisfaction Question in Wave 1 of the HILDA Person Questionnaire

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

Appendix Table A3 Descriptive Statistics By Gender

| Variables | Female | | Male | |
|-------------------------------------|--------|-----------|-------|-----------|
| | Mean | Std. Dev. | Mean | Std. Dev. |
| Personal Characteristics | | | | |
| Age (between 16 – 64) | 40.36 | 12.33 | 40.47 | 12.59 |
| Married / <i>de facto</i> | 0.69 | 0.46 | 0.68 | 0.47 |
| Long Term Health Problems | 0.20 | 0.40 | 0.23 | 0.42 |
| Non-Indigenous ABRs | 0.74 | 0.44 | 0.75 | 0.44 |
| ATSI | 0.02 | 0.15 | 0.02 | 0.13 |
| ESB Immigrants | 0.10 | 0.30 | 0.11 | 0.31 |
| NESB Immigrants | 0.14 | 0.34 | 0.13 | 0.33 |
| Years Worked | 15.92 | 10.94 | 21.49 | 12.85 |
| Years Unemployed | 0.51 | 1.64 | 0.77 | 2.02 |
| Years out of the Labour Force | 7.40 | 9.22 | 1.61 | 3.48 |
| Geographical Location | | | | |
| New South Wales | 0.30 | 0.46 | 0.30 | 0.46 |
| Victoria | 0.25 | 0.43 | 0.24 | 0.43 |
| Queensland | 0.21 | 0.40 | 0.21 | 0.41 |
| South Australia | 0.09 | 0.29 | 0.01 | 0.29 |
| Western Australia | 0.10 | 0.30 | 0.10 | 0.30 |
| Tasmania | 0.03 | 0.17 | 0.03 | 0.17 |
| Northern Territory | 0.01 | 0.08 | 0.01 | 0.08 |
| ACT | 0.02 | 0.13 | 0.02 | 0.14 |
| Education | | | | |
| Masters & Ph. D | 0.02 | 0.16 | 0.04 | 0.19 |
| Post-graduate Diploma & Certificate | 0.06 | 0.24 | 0.04 | 0.20 |
| Degree | 0.14 | 0.35 | 0.13 | 0.33 |
| Diploma | 0.09 | 0.29 | 0.09 | 0.28 |
| Certificate | 0.14 | 0.35 | 0.29 | 0.46 |
| Year 12 | 0.17 | 0.37 | 0.14 | 0.35 |
| Year 11 or less | 0.37 | 0.48 | 0.27 | 0.44 |
| | | | | |
| Observations | 20041 | | 18347 | |