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Abstract

It is widely assumed that contingent forms of employment, such as fixed-term contracts, labour-hire and casual employment, are associated with low quality jobs. This hypothesis is tested using data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey, a nationally representative household panel survey covering a country with a high incidence of non-standard employment. Ordered logit regression models of job satisfaction are estimated that hold constant all time-invariant individual differences as well as a range of observed time-varying characteristics. The results indicate that, among males, both casual employees and labour-hire workers (but not fixed-term contract workers) report noticeably lower levels of job satisfaction. Restricting the sample to persons aged 20-59 increases the estimated magnitudes of these effects. Negative effects for women are mainly restricted to labour-hire workers. We also show that the relationships between job satisfaction and contract type vary with educational attainment and the length of job tenure. Working hours arrangements also mediate the relationship.

JEL classification: J28, J41, J81

Keywords: Contingent employment, job satisfaction, non-standard employment, HILDA Survey, panel data

1. Introduction

Many western nations have witnessed marked growth in recent decades in the incidence of non-standard forms of employment; that is, employment arrangements that do not involve full-time permanent wage and salary jobs. Most often mentioned here is part-time employment, which in 2011 accounted for an estimated 16.5% of total employment in OECD nations, and as much as 37% in the case of The Netherlands (OECD 2012). Arguably just as significant is the rise in contingent employment, which, following Polivka and Nardone (1989: 11), can be defined as: "Any job in which an individual does not have an explicit or implicit contract for long-term employment or one in which the minimum hours can vary in a nonsystematic manner". This is most obviously reflected in various forms of temporary or fixed-term contract employment, which according to the OECD (2012) accounted for 12% of total OECD employment in 2011, though the variation across nations is extremely large (as are the definitions used).

The trend towards greater use of contingent forms of employment, including not only temporary and fixed-term contracts, but also labour-hire (or agency) work and casual employment, has been controversial. In particular, it is often claimed that these jobs are on average low quality jobs, as reflected in, for example, unpredictable working hours, high levels of job insecurity, low pay, and limited opportunities for career progression. From this perspective, workers only accept such jobs because their choices are constrained. Such claims, however, do not align well with evidence from empirical research where the outcome of interest is self-reported job satisfaction. While a finding of a negative relationship between contingent employment and job satisfaction is most common, the magnitude of this relationship is usually small and often restricted to specific sub-groups of contingent employees.

In this paper, panel data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey, a nationally representative household panel survey covering a country with a very high incidence of non-standard forms of employment, are used to tease out further the conditions under which different forms of employment are associated with relatively low levels of job satisfaction. A key feature of the analysis is the estimation of fixed effects ordered logit models of job satisfaction that hold constant all time-invariant characteristics (both observed and unobserved) of workers and, unlike previous methods that have been applied in this literature, have been shown to be immune to small sample bias. The approach

distinguishes between permanent employment, casual employment, fixed-term contracts and labour-hire workers.

The analysis is also unique in testing for interactions between employment contract type and a range of personal and job characteristics, including not just sex, but also marital / partnership status and whether, within couples, the respondent is the primary income earner, the presence of dependent children, educational attainment, length of job tenure, and both the regularity of work schedules and the number of hours worked per week. It also goes further than previous research by dealing with the selection issues that arise as a result of both exits from employment and panel attrition.

2. Previous Research

The growth in contingent forms of employment has been accompanied by growth in research into these relatively new forms of employment and how they differ from more traditional employment arrangements. One strand of this literature has focussed on testing the hypothesis that contingent workers will be less satisfied with their jobs than employees in more traditional jobs offering permanent or ongoing employment. In many explanations this is a function of at least three features common to most forms of contingent employment (De Cuyper et al. 2008). First, contingent employment, by definition, is characterized by a lack of any guarantee of permanency. This is most obvious with respect to temporary and fixed-term contract jobs, which are of limited duration and often have fixed termination dates, but it is also true of other forms of contingent employment, such as casual employment and self-employed contractors, with workers facing the constant possibility that their services can be terminated at any time. It thus seems inevitable that such jobs will promote relatively high levels of insecurity and anxiety among individuals filling those jobs. Second, contingent employment is often associated with inferior working conditions and entitlements. Relatively short job horizons will reduce the incentive for firms to invest in those workers, meaning reduced opportunities for skills development and career progression, and relatively low wages and lack of access to other entitlements such as paid leave (though this will vary across countries depending on employment regulations). Third, employers may treat contingent workers differently to their regular workforce, promoting a sense of marginalization among those workers. This might be especially likely where the employment arrangement is

mediated by a third-party (e.g., an employment agency) or where the worker is self-employed.

On the other hand, it has also been recognized that some workers might prefer the greater freedom and autonomy that might accompany contingent, but more flexible, employment arrangements (e.g., Guest 2004; Green and Heywood 2011). Further, while non-standard forms of employment are usually equated with low wages, Green and Heywood (2011) point to evidence suggesting that workers in some forms of non-standard employment (notably seasonal work) are paid more than otherwise comparable workers, thus potentially offsetting other negative aspects of such employment on job satisfaction. The relationship between pay and non-standard employment is potentially important in Australia where industry-wide agreements (or what is known as awards) have long required that persons employed on a casual basis be paid a wage premium to compensate them for the absence of entitlements to various benefits (such as paid leave, paid public holidays and severance pay). Such loadings have varied widely across awards but were generally assumed to average around 20% (see Watson 2005). In July 2009 new national labour laws came into effect requiring all casual employees covered by awards (and most employees in Australia are covered by an award) to receive a premium of at least 25%, but phased in gradually so that it will reach 25% by July 2014 (Creighton and Stewart 2010: 200).

A priori, therefore, the relationship between contingent forms of employment and job satisfaction is uncertain, and is reflected in the diverse findings reported. De Cupyer et al. (2008), for example, reviewed studies examining differences in reported job satisfaction between temporary employees and permanent employees, concluding that some find higher satisfaction levels among temporary employees, some report lower levels, while yet others are unable to find any significant relationship. Very differently, Wilkin (2013) used meta-analysis to summarize evidence from 72 different samples employed in studies where job satisfaction was the outcome of interest and contingent employment (of some form) a key explanatory variable. She found that, on average, contingent workers report lower levels of job satisfaction than permanent employees, but the weighted mean corrected difference (the difference in means divided by the reliability coefficient on the outcome variable) was quite small, especially once samples from one outlier study were excluded (d=-.06). The magnitude of these effects, however, was found to differ by employment type. The negative association with job satisfaction was much larger among temporary agency workers (d=-.37) than direct

hire workers employed on a contingent basis (d=-.07), while self-employed contractors were actually slightly more satisfied (d=.06) than permanent employees.

A problem with much of this literature is that the evidence used is often drawn from relatively small non-representative samples (e.g., employees from a single firm). In our view, more weight should be given to those studies using samples that can credibly claim to represent the broader population of workers. Early examples here include: (i) Clark (1996), who used data from the first wave of the British Household Panel Survey (BHPS) and could find no evidence of a statistically significant relationship between temporary or fixed-term contract work and job satisfaction (holding other things constant); (ii) Booth, Francesconi and Frank (2002), who used pooled data from the first seven waves of the BHPS and distinguished between different types of non-standard employment and reported significantly lower levels of job satisfaction among seasonal and casual employees, but not among fixed-term contract workers; (iii) the European Commission (2002), which used pooled data from the first four waves of the multi-country European Community Household Panel (ECHP) and found significantly lower levels of job satisfaction among workers on temporary contracts; (iv) Kalleberg and Reynolds (2003), who used cross-section data for 11 countries from the 1997 International Social Science Survey Program and found no evidence that workers on fixed-term or temporary contracts were significantly less satisfied than full-time employees on regular contracts; (v) Kaiser (2005), who also compared employees on temporary contracts with other employees using data from the ECHP, but estimated results separately for each European country, finding considerable diversity across nations, but with significant negative relationships dominating (present in ten out of 14 countries); and (vi) Wooden and Warren (2004), who used data from the first wave of the HILDA Survey and reported that among men (but not women) both casual employees and temporary agency workers, but not fixed-term contract workers, have significantly lower levels of job satisfaction.

A further problem, which is an issue for all research employing subjective measures of job satisfaction, is that job satisfaction may be a poor measure of job quality (Watson 2005). According to this argument, self-reports of job satisfaction will depend on the comparators being used by respondents. Perhaps most importantly, subjective reports of job satisfaction are likely to be a function of expectations (Clark 1997), which in turn might be expected to be conditioned by existing employment arrangements. Thus the absence of any large difference in self-reported job satisfaction between workers in standard and non-standard jobs may simply reflect lower expectations of their jobs among the latter. Such criticisms, however, are

less valid in the presence of panel data, where estimates are identified by persons whose employment status changes, and hence whose expectations will not have had time to adapt to the actual employment experience. Further, and more generally, with panel data we can eliminate the effects of all unobserved time invariant influences which, if correlated with employment status, will lead to incorrect inferences when using cross-sectional data.

What is needed, therefore, is not only evidence drawn from nationally representative samples, but evidence from samples that are repeatedly surveyed over time. Interestingly, all but one of the studies mentioned above used data from a panel, but did not (or were not able to) employ the panel nature of the data. The first study to estimate relationships between contingent employment and job satisfaction, while also making use of the panel nature of the data, was Bardasi and Francesconi (2004). Like Booth et al. (2002) they used data from the BHPS, but converted the job satisfaction measure into a binary variable. Again like Booth et al. (2002), they found that seasonal and casual employees, but not fixed-term contract workers, were more likely to be classified as relatively dissatisfied with their jobs. In contrast to Booth et al. (2002), however, the magnitude of this relationship was only found to be sizeable for men. Further, they also found that this negative relationship for men in seasonal or casual employment became much larger in magnitude in the presence of individual fixed effects.

Evidence from subsequent research employing panel data methods is mixed, reflecting diversity in both data sources and estimation procedures. Nevertheless, our assessment is that, on balance, this relatively small group of studies find that non-standard contingent forms of employment either exert a small negative influence or no influence on overall job satisfaction. D'Addio, Eriksson and Frijters (2007), for example, used the Danish sub-sample from the ECHP and could find no evidence that temporary contract workers were less satisfied. Indeed, the estimated coefficients were positive (but statistically insignificant). Green and Heywood (2011), on the other hand, in yet another study that used data from the BHPS, found lower job satisfaction levels among casual and seasonal employees, but not fixed-term contract workers, as well as a negative effect among male agency workers. However, it was only the latter that was deemed to be of any magnitude. Broadly similar conclusions were reached by both de Graaf-Zijl (2012) and Chadi and Hetschko (2013). De Graaf-Zijl (2012) used data from eight waves of the Dutch Socio-Economic Panel, finding evidence of a significant negative relationship for temporary agency workers, but not other types of contingent working (on-call work and fixed-term contracts), with the estimated gap

in satisfaction between regular workers and temporary agency workers being 0.215 (on their 6-point scale). Chadi and Hetschko (2013) analyzed data from the German Socio-Economic Panel covering the period 2001 to 2010, and found even smaller effects. They found that temporary contract workers are significantly less satisfied than other workers, but only once job tenure was conditioned for. The size of the effect, however, was very small, with fixed effects estimation suggesting that temporary employment reduces life satisfaction by just a little over 0.1 on their 11-point scale.

All of the studies discussed above utilized data from European countries where the incidence of temporary and other forms of so-called flexible forms of employment is relatively low. Very different is Green, Kler and Leeves (2010), who used data for Australia (from the first five waves of the HILDA Survey) where estimates of the incidence of casual employment alone range from 18% of total employment to almost 21% (over the period 2001 to 2011), depending on definition and data source (Shomos, Turner and Will 2013: 80). Green et al. (2010) reported evidence that both casual employees and agency workers (but not fixed-term contract workers) tend to be less satisfied with their jobs, but such effects vary with both gender and hours of work. But again the estimated magnitudes of these relationships seem relatively modest.

Despite the emergence of what would seem to be a broad consensus that the differences in job satisfaction between workers in non-standard contingent forms of employment and workers in permanent jobs are modest, more research is still needed. First, there is need for further analyses of populations from countries outside of Western Europe. Second, as we shall demonstrate later, almost all of the research undertaken to date has used estimation techniques that will give rise to biased estimates. Third, relatively little consideration has been given to the conditions under which non-standard employment might matter for job satisfaction. It is routine to undertake estimations separately for men and women, but other potential interaction effects have mostly been ignored. One partial exception is Green et al. (2010) who, following Wooden and Warren (2004), interacted employment type with hours of work, finding evidence that the adverse effects of casual employment in Australia on job satisfaction are only pronounced among those working non-standard hours (that is, either part-time hours or relatively long hours each week). In the same vein, de Graaf-Zijl (2012) decomposed differences between workers on regular and contingent employment contracts by not only sex, but also by broad education group. She reported the rather puzzling result that

highly educated temporary agency workers were relatively more satisfied with jobs than lowly educated workers, while the reverse was true for on-call workers.

3. Hypotheses

The weight of evidence from previous research suggests two key hypotheses:

H1 Non-standard contingent forms of employment will be associated with lower levels of job satisfaction, but the magnitude of these effects are likely to be relatively small.

H2 The magnitude of these negative effects will differ with the type of contingent employment being examined.

We also hypothesize that:

H3 The effects of non-standard contingent employment will differ between men and women.

H4 The negative effects of non-standard contingent employment will be less pronounced among both relatively young workers and relatively old workers, as well as among persons combining employment with full-time study.

H3 follows from the expectation that men and women will attach different values to the amenity provided by different types of employment arrangements. Further, if non-standard employment arrangements provide greater flexibility to combine work and family, as suggested by de Graaf-Zijl (2012) and Green and Heywood (2011), then we might expect the negative effects of non-standard employment to be less pronounced among female workers.[1]

H4 is based on the assumption that the cost of job loss is relatively low for both the youngest and oldest members of the workforce. Young workers typically have fewer financial responsibilities than prime-age respondents and are far less likely to be working in a job (or even an occupation) which they see as a long-term career option. This will be especially so if still undertaking study. At the other end of the age spectrum, many of the oldest members of the workforce will have declining financial burdens (as children leave

[1] Whether contingent forms of employment actually provide workers with greater flexibility is contested. Cassirer (2003), for example, reported data from the US Current Population Survey indicating that most women, regardless of their family roles, do not desire to work in temporary, on-call or contract jobs. Somewhat differently, Bonet et al. (2013) reported evidence showing that temporary contracts in Spain are associated with greater difficulties balancing work and family among women workers.

home and the mortgage is paid off) and will be preparing for retirement. We thus expect both the youngest and oldest workers to be relatively less concerned by the greater insecurity inherent in contingent forms of employment.

We also test for interactions between employment type and four specific covariates (or groups of covariates). These are: (i) marital / partnership status, the presence of dependent children, and within couples, whether the individual is the primary or secondary income earner; (ii) educational attainment; (iii) job tenure; and (iv) both the regularity of work schedules and the number of hours worked per week.

We expect that how individual workers value different job characteristics will vary with their role in the household. Primary earners, especially with dependents, might be expected to attach greater primacy to job security, and thus more value to stable, ongoing employment. In contrast, secondary earners, and especially those with significant caring responsibilities, would be expected to exhibit opposite preferences. This gives rise to Hypothesis 5.

H5 The negative effects of non-standard contingent employment will be most pronounced for primary income earners, especially those with dependents, and least pronounced for secondary income earners with childcare responsibilities.

It has also been argued that the outcomes from contingent work arrangements might vary with skill level (de Graaf-Zijl 2012). The argument here is that more skilled and highly educated persons are more likely to have chosen their current employment arrangement, whereas workers at the other end of the skills spectrum are more likely to find themselves working in contingent forms of employment because of a lack of alternative options. This leads us to formulate Hypothesis 6.

H6 The negative effects of non-standard continent employment will be most pronounced for the least educated and skilled workers and least pronounced for the most educated and skilled workers.

Not previously considered is the possibility that the effects of employment contract type on job satisfaction might vary with the length of tenure with the employer. We find this surprising given: (i) it is widely assumed that the major driver of low job satisfaction among workers in non-standard jobs is job insecurity, and certainly there is ample evidence supporting the claim that temporary forms of employment are associated with lower levels of perceived job security (e.g., Sverke, Gallagher and Hellgren 2000; Parker et al. 2002; Clark and Postel-Vinay 2009; Green et al. 2010; Green and Heywood 2011); and (ii) job security

can be expected to be positively correlated with length of job tenure. We thus hypothesize that:

H7 Any negative association between non-standard employment and job satisfaction will diminish with length of tenure in that job.

Finally, other analyses of the same Australian data source used here have tested for interactions with weekly hours of work, obtaining quite different results. The cross-sectional analysis of Wooden and Warren (2004) found the negative effects of casual employment on job satisfaction to be largely restricted to those working full-time hours (35 hours or more per week). In contrast, the panel data analysis of Green et al. (2010) found that for men it was only those casual workers in part-time jobs who reported significantly lower job satisfaction, while among women job satisfaction was lowest among those casual employees working either part-time hours or long hours (more than 40 hours). This focus on the number of hours worked, however, is not well motivated. Indeed, as Green et al. (2010: 610) themselves note, it is the variability in hours, rather than their number, which should be more critical (also see Polivka and Nardone 1989: 11; Beard and Edwards 1995). That is, it is often argued that it is the variability, and more specifically the unpredictability, in working hours that is one of the key characteristics that makes contingent work undesirable (for supporting evidence, see Belman and Golden 2000; Bohle et al. 2004; Lewchuk, Clarke and de Wolff 2008). At the same time, it has also been recognised that many contingent employees, especially in Australia, have highly regular working arrangements (Watson et al. 2003: 67). This leads us to Hypothesis 8.

H8 Any negative association between non-standard employment and job satisfaction will be most pronounced for workers in jobs with irregular schedules.

4. Data

The HILDA Survey

Described in more detail in Watson and Wooden (2012), the HILDA Survey is a household panel survey with a focus on work, income and family. Of most relevance to this study is the extensive amount of information it collects about the main job held at the time of interview, including the nature of the employment contract. As a result, the HILDA Survey data have already been used to examine not just the relationship between employment type

and job satisfaction (Wooden and Warren, 2004; Green et al. 2010), but also the relationships between non-standard employment and mental health (Richardson, Lester and Zhang 2013), wages (Watson 2005), and future employment prospects (Buddelmeyer and Wooden 2011; Watson 2013). The data used in this analysis are drawn from Release 11 of the HILDA Survey in-confidence unit record file, which covers the first 11 years (or waves) of data collection, though for reasons that will be made clear later, our analysis is restricted to the first ten waves.[2]

The survey commenced in 2001 with a national probability sample of Australian households. Personal interviews were completed at 7,682 of the 11,693 households identified as in scope for wave 1, which provided an initial sample of 13,969 individual respondents. The members of these participating households form the basis of the panel pursued in the subsequent waves of interviews, which are conducted approximately one year apart (with the fieldwork concentrated into the period between September and December). Interviews are conducted with all adults (defined as persons aged 15 years or older on the 30th June preceding the interview date) who are members of the original sample, as well as any other adults who, in later waves, are residing with an original sample member. Annual re-interview rates (the proportion of respondents from one wave who are successfully interviewed the next) are high, rising from 87% in wave 2 to over 94% by wave 5. Over the next five years (waves 6 to 10) the annual re-interview rate was relatively stable and averaged 95.5%.

The principal mode of data collection is face-to-face personal interviews. Telephone interviews are conducted both as a last resort and to reach sample members that move to locations not covered by the network of face-to-face interviewers. The proportion of interviews conducted by telephone in wave 1 was negligible. By wave 8, however, this proportion had reached 10%, before falling back to 8.4% by wave 10.

Our initial working sample is the unbalanced panel of persons in paid employment at the time of interview, which comprises a total of 82,492 observations on 15,784 unique individuals. Note that this is different from most previous studies in this area that have used national household panel samples (Bardasi and Francesconi 2004; Green et al. 2010; Green and Heywood 2011), which restricted their samples to the population of employees. We can see no reason for making such a restriction here; self-employment can be treated as analogous

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[2] The data were extracted using PanelWhiz, an add-on package for Stata (http://www.PanelWhiz.eu). See Haisken-DeNew and Hahn (2010) for details.

to any other type of employment. Moreover, by including the self-employed we avoid the potential selectivity bias that arises when workers change employment status.

Measuring Job Satisfaction

The principal outcome variable used in this analysis is a single-item measure of overall job satisfaction (with the main job) scored on an 11-point (0-10) bipolar scale, with descriptors attached only to the extreme values on the scale. The survey question reads: "All things considered, how satisfied are you with your job." The wording of the question is very similar to a question included in each wave of the BHPS, but with the notable difference that the BHPS question employed a 7-point scale.

Classifying Employment Type

All survey respondents who were employed at any time during the seven days prior to interview are asked whether, in their main job, they worked for an employer for wages or salary (employees), in their own business (the self-employed) or without pay in a family business (and hence excluded from the sample used in this analysis). Employees are then asked to choose one among four categories that best describes their current contract of employment in their main job. The options are: (i) employed on a permanent or ongoing basis; (ii) employed on a fixed-term contract; (iii) employed on a casual basis; or (iv) employed under some other arrangement (for example, persons remunerated on a commission basis). The survey further identifies persons employed through a labour-hire firm or temporary employment agency. We thus created a fifth category of employee – labour-hire worker – which is mutually exclusive of the other categories. A casual employee who is employed through a labour-hire firm is therefore classified as a labour-hire worker and not as a casual employee.

Note that while we are able to separately identify the self-employed, we are not able to identify within this group (at least not for the entire period covered by the data) those self-employed workers who other researchers (e.g., Connelly and Gallagher 2004; Wilkin 2012) have classified as contingent workers – the contractors who sell their services to clients on a fixed-term basis.

The distribution of the pooled sample by employment type is provided in Table 1. As should be apparent, there is a very high rate of contingent work arrangements in the HILDA Survey data. Among employed men, just under 80% are employees (in their main job), and of

these almost 30% are employed in some form of non-standard contingent work arrangement. Among women the proportion is even higher. Just over 88% are employees, with 39% of this group employed in non-standard jobs. By comparison, studies employing data for other countries usually have samples where the incidence of non-standard employment is far smaller. In the BHPS data used by Green and Heywood (2011), for example, just 3.6% of their male employee sample and 5.4% of their female sample were employed on what they described as flexible contracts. Similarly, in the Dutch sample used by de Graaf-Zijl (2012), and despite the presentation of other evidence suggesting a relatively high incidence of non-standard employment in The Netherlands, just 9% were on temporary or fixed-term contracts.

Further, the relatively large proportions of employees who are reported in the HILDA Survey as being in non-standard employment is consistent with other Australian (cross-sectional) data sources. Shomos, Turner and Will (2013, p. 79), for example, report that the population weighted estimate of the prevalence of non-permanent employees in 2008 (wave 8) was 40% according to the HILDA Survey. This compares with estimates ranging from 38.2% to 39.8% from cross-sectional household surveys conducted in the same year by the Australian Bureau of Statistics.

Finally, note that the number of sample members who are classified to the 'other employee' category is tiny, and so we do not report results for this category in the remainder of this paper.

5. Method

Central to the analyses reported in this paper is the estimation of a regression model of the form:

$$JS_{it}^{*} = \alpha_i + E_{it}'\beta + X_{it}'\gamma + \delta_t + \varepsilon_{it} \qquad i = 1, \ldots, N;\ t = 1, \ldots T$$

where JS_{it}^{*} is a latent variable describing job satisfaction of individual i at time t, E_{it} is a set of dummy variables identifying the type of employment held by individual i at time t, X_{it} is a set of other observable individual- and time-specific variables, α_i is an individual-specific effect that captures unobservable time-invariant characteristics, δ_t captures time (or survey wave) effects, and ε_{it} is a random error term.

JS_{it}^{*}, however, is not observed. Instead, we observe the variable, JS_{it}, the values for which are only ordinal (and not cardinal). This variable is tied to the latent variable as follows:

$$JS_{it} = k \text{ if } \tau_k < JS_{it}^* < \tau_{k+1} \qquad k = 1, \ldots, K$$

where the thresholds τ are assumed to be strictly increasing.

The estimation of such non-linear fixed effects models is complicated by the well-known incidental parameters problem, which "renders conventional gradient-based maximization of … [the] log likelihood infeasible" (Greene 2004: 102). For many researchers examining satisfaction data this problem provides justification for ignoring the ordered nature of the variable and treating it is as if it is cardinal, thus permitting estimation by least squares. This, for example, is the approach taken by Chadi and Hetschko (2013). It is also the method that has been most commonly used by other researchers who have analyzed the job satisfaction data available in the HILDA Survey (e.g., Wooden, Warren and Drago 2009; Johnston and Lee 2013). Slightly differently, Green et al. (2010) also used least squares estimation, but on a rescaled outcome variable that better reflects the frequency distribution of the responses to that outcome. But the fact remains that the outcome variable is not cardinal and linear models are inappropriate.

Greene (2004) goes on to show that maximization of the log-likelihood of non-linear models, such as ordered probit, can be achieved using less conventional means ('brute force'), and it is this approach that is employed by Green and Heywood (2011) in their analysis of BHPS data. Greene (2004), however, also demonstrates that estimates from such models are biased, and while such bias declines with T (the length of the panel), with small T, and Green and Heywood (2011) worked with a maximum of six waves of data, the bias is substantial.[3]

The usual response to this problem is to dichotomize the ordered outcome variable at some cut-off point and then use Chamberlain's (1980) estimator for the conditional fixed effects binary logit. Bardasi and Francesconi (2004), for example, classify workers as having low satisfaction with their jobs if they report a score below the scale mid-point, and all other workers as having high job satisfaction. Following Ferrer-i-Carbonell and Frijters (2004), others have used a person-specific cut-off point, most frequently the within-person mean (e.g., D'Addio et al. 2007; de Graaf-Zijl 2012). All such estimators, however, inevitably

[3] Greene (2004) reports results from Monte Carlo simulations of unconditional maximum likelihood estimation of an ordered probit model with three ordered responses, which produce estimates of bias that range from 30% to 42% with T=5 and 5% to 7% when T=20.

mean a loss of information since they do not use all the possible *k*'s available for each individual. Moreover, as demonstrated by Baetschmann, Staub and Winkelman (2011), the estimated coefficients from such models are biased in finite samples and the bias does not disappear as sample size increases.

For this analysis, therefore, we use the BUC ('Blow-Up and Cluster') estimator proposed by Baetschmann et al. (2011) that uses all variation in the ordered outcome variable (i.e., JS_{it}) and which they have shown produces estimates that are unbiased, even in small samples. This also involves use of the conditional maximum likelihood binary logit estimator, but in this case for every possible threshold at each point in time for each individual in the data. In practice this involves 'blowing up' the data so that every person-year observation in the sample is replaced by K-1 copies of itself, one for each threshold or cut-off point (which in our case effectively means increasing the sample size tenfold). The resulting binary logits are then estimated, with the standard errors adjusted to take account of the interdependence (or within-person clustering) of the person-year observation copies. Despite its recency, this estimator has already been used in published studies of job satisfaction (Donegani, McKay and Moro 2012) as well as of other ordinal subjective outcomes, such as self-assessed health, life satisfaction, fear of job loss and indices of political freedom (e.g., Bell, Otterbach and Sousa-Poza 2012; Geishecker, Reidl and Frijters 2012; Neumayer 2013).

The composition of X_{it} is based closely on the specification used in the previous analysis of these data by Green et al. (2010). We thus include controls for: age (with persons grouped into 12 discrete categories), marital / partnership status, educational attainment (6 categories), the presence of a long-term health condition or disability (3 categories), hours usually worked per week (3 categories), length of tenure with the current employer (7 categories), occupation (8 categories), supervisory responsibilities, membership of a trade union or employee association, firm size (3 categories), public sector employment, industry (19 categories), and survey wave (10 categories). For multiple job holders, job characteristics are measured with respect to the main job.

Very different to Green et al. (2010), we capture any location effects through the inclusion of a measure of remoteness (4 categories) based on the Accessibility / Remoteness Index for Australia (ARIA) used by the Australian Bureau of Statistics (see ABS 2001).

Following other analyses of the HILDA Survey data, we also include controls that identify: (i) the presence of other adults during the interview, to control for any social

desirability bias that might arise in such situations (Shields, Wheatley-Price and Wooden 2009; Wooden et al. 2009; Wooden and Li 2013); and (ii) whether the interview was administered in person or by telephone (Wooden and Li 2013).

Also unlike previous research, we include variables intended to control for any biases that might arise because of selectivity in the sample. Like all panel surveys, our estimates could be affected by endogenous sample attrition. We thus follow the analysis of subjective well-being measures by Wooden and Li (2013) and include a variable identifying whether the sample member is a non-respondent at the next survey wave. Further, we extend this approach to control for more general forms of sample selection bias and also include variables identifying whether the sample member was observed as not employed but looking for work (i.e., unemployed) at the next survey wave and not employed and not looking for work at the next survey wave. The addition of these variables enables the bias that might arise if the non-appearance of a case in the sample is correlated with the dependent variable, whether due to panel attrition or a change in employment status, to be identified and controlled for. Note that since the construction of these three variables requires observations made at t+1 we effectively lose one wave of data from our sample (and hence the analysis is based on 10 waves of data rather than the 11 available in Release 11).

Finally, and in yet another departure from Green et al. (2010), our basic specification excludes any measure of wages. This is justified both by the likely endogeneity of wages and by the possibility that some of the effect of non-standard employment on job satisfaction may operate through its impact on wages. We do, however, re-estimate our model after including the log of the real hourly wage in the main job to explore sensitivity to its inclusion.

A list of all explanatory variables and their definitions, together with summary statistics are provided in an Appendix.

6. Results

We begin our presentation of results by reporting, in Table 2, population-weighted cross-sectional estimates of mean job satisfaction for each year of the HILDA Survey by employment type and sex. The weighting adjusts estimates to take into account survey design effects (and notably the clustered nature of the original sample), as well as non-random survey response and attrition (see Watson 2012). While estimates fluctuate from year to year, Table 2 suggests that, among male workers, both labour-hire workers and casual employees

tend to be less satisfied with their jobs than permanent employees. The mean difference between permanent and casual employees, however, seems relatively small. Also there is little obvious difference between employees on fixed-term contracts and permanent contracts. Among female employees systematic differences between different groups of employees are even less obvious. Indeed, the only notable difference concerns the self-employed, who have higher mean job satisfaction than females workers in all other groups in every year.

But will these patterns be replicated in panel data regression models that control for both observed time-varying characteristics and unobserved fixed effects? We thus turn now to the results of the ordered logit regressions, beginning in Table 3 with our basic specification, both with and without fixed effects. Focussing first on the simple pooled data estimates, reported in columns (1) and (2), we can see that among males both casual and labour-hire workers are significantly less satisfied with their jobs than permanent employees (the reference group). In contrast, fixed-term contract workers are, other things constant, no more or less satisfied with their job. Among women, however, it is only labour-hire workers who are any less satisfied with their jobs. Inclusion of fixed effects appears to make surprisingly little difference (see columns (3) and (4)). Although the magnitude of the casual employment coefficient for men becomes slightly larger in absolute terms, and the coefficient on the labour-hire variable slightly smaller, the key finding – that among men both casual and labour-hire employment, but not fixed-term contracts, are associated with significantly lower levels of job satisfaction – remains unaffected.

In short, we have clear evidence in support of hypotheses H1, H2 and H3. Non-standard contingent forms of employment, when statistically significant, do indeed have negative effects (H1); the magnitude of these effects vary with the type of contingent employment (H2), with job satisfaction among fixed-term contract workers being no different from permanent workers; and for the most part, the negative effects are only of any consequence for male employees (H3).

Less clear is whether the magnitudes of the statistically significant effects that we do observe are small or not, as suggested by H1. To assess this we derived the average predicted probabilities of reporting different job satisfaction scores from the fixed effects models by employment type and sex. These are reported in Table 4. The top panel in that table reports probabilities for male workers from the specification using the full sample (column (3) in Table 3). Thus the likelihood of a male worker in a permanent job reporting a satisfaction score in the bottom half of the scale (that is, less than 5) is 5.4%, exactly the same as among

fixed-term contract workers, but less than among casual employees (6.8%) and among labour-hire workers (7.1%). At the other end of the scale, the likelihood of a permanent or a fixed-term contract worker reporting a very high job satisfaction score of 9 or 10 is 30.3% and 30.1%, respectively. By contrast, the comparable probabilities for casual and labour-hire workers are only 25.3% and 24.6% respectively. In summary, men employed on a casual basis or through a labour-hire firm are more likely to be highly dissatisfied with their jobs than otherwise comparable men employed on a permanent basis, and are less likely (around five percentage points less likely) to be highly satisfied with their jobs. These differences are not huge, but neither can they be dismissed as trivial.

Among female workers the average predicted probability of a permanent employee reporting a score of 9 or 10 is 34.6%, which compares with 34.5% among casual employees, 33.1% among fixed-term contract workers, and 30.7% among labour-hire workers. The differences here are clearly smaller in magnitude than is the case among men.

We next consider H4, repeating the fixed effects estimation after removing from the sample all persons under 20 years of age or aged 60 years or older and any remaining full-time students. The results are reported in columns (5) and (6) of Table 3, and reveal that, consistent with H4, the negative effects of casual employment are noticeably larger in the restricted sample, though are still only significantly different from zero for men. The estimated effects of labour-hire employment are less affected, though we now see that the modest negative estimate is very similar for both men and women. And as with the other specifications, we continue to find no evidence of any detrimental effects of fixed-term contracts. Again, the magnitude of these effects can be more clearly seen from the average predicted probabilities reported in Table 4. The negative coefficient on male casual employment in column (5) translates into a marginal effect of the probability of a permanent employee reporting a score of 9 or 10 relative to a casual employee of 6.9 percentage points. Relative to labour-hire workers the marginal effect is smaller; just 4.5 percentage points.

We also report, in columns (7) and (8) of Table 3, results after including the log of real hourly wages as an additional control. Surprisingly, the inclusion of this variable made relatively little difference. The negative coefficients on the contingent employment variables all become larger in absolute terms, but in all cases the changes are statistically insignificant (though the negative coefficient on female casual employment becomes weakly significant). The implication is that the negative effects of non-standard employment on job satisfaction

neither operate primarily through lower wages nor are substantially ameliorated by wage premia.

We now turn to our tests of Hypotheses 5 through 8. We begin by reporting results from a specification that includes a set of explanatory variables that identifies all possible combinations of partnership status (partnered vs single), the presence of any dependent children under the age of 15, among couples whether the person is the primary or secondary earner (based on who reports the highest usual weekly gross labor earnings), and employment type (five categories). The BUC parameter estimates for this set of 30 dummy variables are presented, again separately for males and females, in Table 5. As should be immediately apparent, with one exception, there are no coefficients in the female specification that are significant at the 5% level or better. The only group of female workers whose job satisfaction levels vary markedly from most others is labor-hire workers who are secondary earners without dependents. This group attracts a relatively large negative coefficient, which is inconsistent with expectations – we hypothesized that the negative effects of contingent forms of employment would be greatest among primary earners. We can thus confidently reject H5 for women. Among men there is some partial evidence in support of H5 but only among those in casual employment. Specifically, we find very large negative associations with job satisfaction among those male casual employees with dependent children, in line with the hypothesis that caring responsibilities, especially for primary earners, will increase the desirability of more secure permanent employment. That said, the largest negative coefficient attaches to partnered men with children in casual employment who are secondary earners. We suspect, however, that most of the males in this group (and it is a relatively small group) are not secondary earners by choice, and indeed for many the fact that they are the secondary earner in the household at the time of interview may be a function of their inability to secure a more stable job offering greater hours and hence greater labor earnings.

In Table 6 we present evidence intended to test H6. Specifically, we present results which include interactions between educational attainment and employment type. For ease of exposition we collapsed our education categories into three broad groups – low education (not completing high school; that is, Year 12), medium education levels (completing final year of high school or a trade / vocational qualification[4]), and high education levels

[4] Consistent with the Australian Standard Classification of Education, persons that did not complete high school and only completed a low-level vocational qualification (Certificate level I or II) are classified to the low education category.

(completing a university qualification; that is, a diploma or degree course). The results for men provide some support for H6, but only among labour-hire workers. As hypothesized, all of the negative associations between labour-hire employment and job satisfaction are concentrated on workers with relatively low levels of education. No evidence of any interaction effect with education could be found for casual and fixed-term contract workers. Among women, on the other hand, the only significant interactions are for casual employment, with the direction of association opposite to that hypothesized; the most educated casual workers are found to be the least satisfied. Further the magnitude of the effect is not small. The average predicted probability of a university-educated female employee in a permanent job reporting either 9 or 10 on the job satisfaction scale is 37.7%. For an otherwise similar university-educated casual employee the probability is just 31.9%. This is the first (and only) piece of evidence that casual employment is an undesirable state for at least some groups of women; in this case, those with university qualifications. However, the explanation for this result does not appear, as H6 suggests, to lie in preferences. Indeed, it seems more likely that when highly educated women find themselves in casual employment this is mainly because their employment choices are constrained.

We next turn to H7 and the expectation that the negative association between job satisfaction and non-standard employment will diminish with the length of job tenure. In this case we capture the effects of job tenure through the inclusion of a single continuous variable – the number of years employed with the current employer – but specified in log form. More common is to specify job tenure in quadratic form. However, previous research which has used such specifications in combination with individual fixed effects (e.g., Theodossiou and Zangelidis 2009; Chadi and Hetschko 2013) have found the estimated turning point in this association to occur at very long tenures – in excess of 20 years. We thus argue that in the absence of any theory for why job satisfaction would rise only in the tail of the distribution (other than because of selection effects that have not been controlled for), a log-linear specification will provide a better fit to the data. The key results are presented in Table 7 and indicate that, in general, H7 is supported; among both casual and labour-hire workers (and both men and women) the negative job satisfaction effects of non-standard employment decline as tenure increases. Again there is no association among fixed-term contract workers, providing yet further evidence that in the Australian workforce there is no substantive difference between fixed-term contract employment and more permanent forms of employment in terms of its consequences for worker well-being.

Finally, we test for interactions between employment type and measures of work schedule regularity and the number of working hours. We first test for the impact of irregular work schedules, which we proxy here with a binary variable constructed from responses to a question about the nature of the current work schedule and to another question about the days of the week on which employed respondents usually work. A worker is classified as having an irregular work schedule if they either describe their work schedule as "irregular" or "on call" or report that their usual working days vary from week to week or from month to month.[5] The results on the main parameters of interest are reported in Table 8 and reveal that the direct effect of work schedule regularity on job satisfaction is small, and only significant for men. More importantly, there is little evidence of any indirect impact via an interaction with employment type. The one exception to this is male labor-hire workers; for this group regular work schedules are associated with much higher job satisfaction than irregular work schedules, consistent with the predictions of H8.

We then extend this analysis to also include interactions with the number of hours usually worked each week, again classified into three broad groups: less than 35 hours; 35 to 45 hours; and more than 45 hours per week. The results on the parameters of interest, reported in Table 9, provide stronger evidence that regularity of work schedules might matter. Consistent with the results reported in Table 8, among male labor-hire workers, in all work hours categories, irregular work schedules are associated with noticeably lower levels of job satisfaction. In addition, male casual employees working irregular schedules also report noticeably lower levels of job satisfaction than comparable employees working regular schedules, but not when reported usual weekly hours of work exceed 45. These results are broadly consistent with H8, but suggest that associations also depend on the length of the work week. For female employees, on the other hand, there are few significant differences, and those that do exist are mostly inconsistent with expectations. Specifically it is found that irregular work schedules are associated with lower levels of job satisfaction among the relatively small group of women that work long hours each week (>45), but only if they work on a permanent basis or on a fixed-term contract. Casual employees on irregular schedules that work long hours are no more likely to be dissatisfied with their jobs than workers on

[5] We also tested the robustness of these results to alternative definitions of irregular working; specifically we restricted irregular workers to only include those who described their working arrangements as irregular or reported being on-call. There was little qualitative difference in the estimates.

regular schedules, while females in labor-hire jobs who work irregular schedules report much higher job satisfaction levels. These findings for women are inconsistent with H8.

7. Conclusions and Discussion

This paper makes a number of important contributions, many of them unique, to the literature on the effects of non-standard employment on job satisfaction, and more specifically to the handful of recent studies in this literature that employ panel methods on nationally representative data.

First, it is one of only two studies within this literature to exploit data for a country outside of Western Europe. We demonstrate here that one of the key findings from the European strand of this literature – that casual/seasonal work is associated with lower levels of job satisfaction among men – also holds in the rather different labour market context of Australia, despite the considerably higher prevalence of such employment in Australia than in Western European countries. Also consistent with the European strand of this literature, there appears to be no job satisfaction penalty associated with fixed-term employment. Further, we show that women in contingent employment tend to be no less satisfied with their jobs than women in ongoing employment. Various explanations for this apparent contrast have been put forward in the literature, including gender differences in expectations from employment (Clark 1997) and gender differences in the way different job characteristics are valued (Casey and Alach 2004; Bender, Donohue and Heywood 2005). The fact that these gender differences persist in fixed effects models, which to some extent should control for differences in expectations, suggests at first glance that the latter explanation may be driving our results.

Second, a common shortcoming of the handful of studies in this strand of the literature using non-linear methods is the lack of guidance on interpreting the magnitudes of the reported estimates, should we wish to look beyond the sign and statistical significance of estimated effects. For example, it is not clear whether Green and Heywood's (2011, Table 3: 722) key fixed effects ordered probit coefficient for agency work among males of -0.342 is large, and therefore something policy makers might be concerned about, or small. Here we use our estimates to generate predicted probabilties for reporting different levels of job satisfaction for workers employed under different forms of contract. We show that men in casual employment are between five and seven percentage points less likely to report high

levels of job satisfaction, and between one and three percentage points more likely to report very low levels of job satisfaction. Although these are not huge effects, it seems equally inappropriate to label them as small. This is an important point of difference with much of the existing literature. This is also the first study to use the superior BUC estimator.

Third, this is the first study in this literature to examine whether the negative job satisfaction effects of different types of non-standard employment depend on a range of worker and job characteristics that are difficult to dismiss a priori, including partnered status, the presence of dependent children, primary earner status, education level, job tenure and regularity of hours worked. In many cases our hypotheses in these respects are supported. In some cases, however, they are intriguingly rejected. For example, the lack of a significant interaction for women between contingent employment and secondary earner status and/or childcare responsibilites seems at least partly at odds with the intuition behind the view that on average women may place greater value on employment arrangements that balance work and non-work activity. Further, the negative effect of casual employment on job satisfaction for university-educated women suggests that employment choices may be disproprtionately constrained for this group of women.

In Australia the issue of non-standard employment and the question of whether greater or lesser regulation is required remains high on the agenda. Notably, the Australian Council of Trade Unions regards the proliferation of non-standard forms of employment as an attack on worker rights and, as recommended in its report of the Independent Inquiry into Insecure Work in Australia (2012), is lobbying for changes to industrial laws that will provide increased protections for casual employees and eliminate so-called sham contracting. Such issues are also high on the agenda elsewhere. Witness, for example, the recent 'revelations' regarding the extent to which zero hours contracts – essentially casual contracts by another name – are being used by employers in the UK.[6] Our hope is that any additional policy interventions that emerge from these agendas are evidence based. Contingent employment contracts can significantly reduce job satisfaction. Not all forms of contingent employment contracts are viewed by workers as inferior to ongoing/permanent jobs, however, and where there are adverse job satisfaction effects on average, they tend to obscure significant heterogeneity across different groups of workers in different employment contexts.

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[6] See, for example, the front page of *The Guardian*, 31 July 2013.

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Table 1. Distribution of Sample by Employment Type (in Main Job)

Employment type	*Males*		*Females*	
	N	*%*	*N*	*%*
Employee				
Permanent or ongoing	24,210	55.8	21,131	54.1
Casual	5,932	13.7	9,198	23.5
Fixed-term contract	2,965	6.8	3,111	8.0
Labour-hire	1,136	2.6	922	2.4
Other	124	0.3	108	0.3
Self-employed	9,004	20.8	4,613	11.8
Total	43,371	100.0	39,083	100.0

Note: The figures reported are unweighted person-wave observations drawn from the first ten waves (2001 to 2010) of the HILDA Survey.

Table 2. Mean Job Satisfaction by Employment Type (in Main Job)

Employment type	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Males										
Employee										
Permanent or ongoing	7.47	7.54	7.52	7.54	7.60	7.49	7.57	7.60	7.61	7.60
Casual	7.29	7.41	7.54	7.25	7.36	7.42	7.48	7.64	7.44	7.40
Fixed-term contract	7.81	7.71	7.64	7.53	7.60	7.62	7.56	7.56	7.51	7.64
Labour-hire	6.59	7.07	7.13	6.84	7.31	7.46	7.12	7.41	7.21	7.42
Self-employed	7.74	7.74	7.69	7.68	7.54	7.55	7.70	7.64	7.71	7.55
Females										
Employee										
Permanent or ongoing	7.73	7.64	7.71	7.66	7.69	7.67	7.70	7.65	7.64	7.60
Casual	7.70	7.79	7.71	7.70	7.60	7.63	7.76	7.75	7.55	7.69
Fixed-term contract	7.86	7.58	7.74	7.55	7.75	7.75	7.37	7.70	7.56	7.54
Labour-hire	7.54	7.71	7.62	7.58	7.51	7.20	7.51	7.75	6.99	7.26
Self-employed	7.96	7.94	8.07	7.97	8.03	7.89	8.08	8.13	7.78	7.92

Note: All figures are weighted population estimates.

Table 3. Job Satisfaction and Non-standard Employment: Ordered Logit Estimates

	Without fixed effects (full sample)		*Fixed effects (full sample)*		*Fixed effects (restricted sample)*		*Fixed effects (restricted sample) controlling for wages*	
	Males (1)	*Females (2)*	*Males (3)*	*Females (4)*	*Males (5)*	*Females (6)*	*Males (7)*	*Females (8)*
Casual	-.204***	-.041	-.264***	-.001	-.395***	-.050	-0.411***	-0.053
	(.051)	(.041)	(.059)	(.052)	(.073)	(.062)	(0.076)	(0.063)
Fixed-term contract	.038	-.059	-.010	-.072	-.005	-.097	-0.019	-0.105*
	(.043)	(.043)	(.058)	(.055)	(.063)	(.060)	(0.064)	(0.060)
Labour-hire	-.347***	-.179**	-.305***	-.189*	-.252**	-.235**	-0.281**	-0.250**
	(.081)	(.090)	(.095)	(.105)	(.110)	(.113)	(0.114)	(0.113)
Self-employed	-.175***	.045	.072	.165*	.163**	.153	0.231**	0.135
	(.052)	(.063)	(.074)	(.089)	(.080)	(.097)	(0.097)	(0.119)
Log likelihood	-75951.2	-67067.6	-45760.9	-41410.4	-37473.5	-33836.1	-31629.0	-30430.4
Wald chi-squared	885.4	1034.7	540.7	507.0	416.7	407.2	421.7	447.3
Degrees of freedom	79	79	79	79	75	75	76	76
Pseudo R^2	0.015	0.018	0.021	0.022	0.021	0.021	0.025	0.024
N (observations)	41,930	36,609	124,248	111,980	101,753	91,490	86,247	82,644
N (individuals)	7,965	7,464	5,779	5,443	4,924	4,565	4,542	4,359

Notes:

The full sample comprises all employees observed during the first 10 waves (2001-2010) of the HILDA Survey. The restricted sample excludes all persons aged less than 20 years or 60 years or older, as well as any remaining full-time students.

Robust standard errors are reported in parentheses.

The reference category is persons in permanent or ongoing employment.

All equations include controls for: age, partnership status, the presence of long-term health conditions, level of education attainment, location, usual weekly hours of work, job tenure, supervisory responsibilities, union membership, occupation, industry, employer size, whether interviewed by telephone, whether other adults were present during the interview, whether the sample member was observed at the next wave, and year. We also include, but do not report, a control for the 'other employee' category.

The specifications in columns (7) and (8) include the log of real hourly wages as an additional control.

* Statistically significant at the .10 level; ** at the .05 level; *** at the .01 level.

Table 4: Average Predicted Probabilities of Job Satisfaction Scores by Employment Type and Sex

	P(JS=0-4)	*P(JS=5)*	*P(JS=6)*	*P(JS=7)*	*P(JS=8)*	*P(JS=9)*	*P(JS=10)*
Men – Full sample							
Permanent	.054	.057	.079	.201	.306	.195	.108
Casual	.068	.071	.093	.220	.295	.167	.086
Fixed-term contract	.054	.058	.079	.202	.306	.194	.107
Labour-hire	.071	.073	.095	.222	.293	.163	.083
Men – Restricted sample							
Permanent	.058	.061	.084	.212	.308	.185	.091
Casual	.084	.083	.106	.237	.284	.143	.064
Fixed-term contract	.059	.062	.084	.213	.308	.185	.091
Labour-hire	.075	.075	.098	.230	.294	.158	.073
Women – Full sample							
Permanent	.051	.060	.075	.181	.287	.212	.134
Casual	.054	.064	.080	.185	.286	.203	.127
Fixed-term contract	.058	.067	.082	.188	.285	.198	.122
Labour-hire	.064	.074	.090	.197	.281	.184	.108
Women – Restricted sample							
Permanent	.050	.060	.078	.183	.286	.209	.132
Casual	.055	.063	.081	.186	.286	.204	.127
Fixed-term contract	.057	.066	.083	.190	.285	.199	.121
Labour-hire	.064	.073	.091	.199	.281	.184	.107

Note: All probabilities are calculated from ordered logit models with fixed effects (specifications (3) through (6) in Table 3).

Table 5. Job Satisfaction and Non-standard Employment by Partnership / Earner Status and the Presence of Dependent Children: Fixed Effects Ordered Logit Estimates (Restricted Sample)

	Males		*Females*	
	Coeff.	*S.E.*	*Coeff.*	*S.E.*
Permanent, single, no kids	(ref)		(ref)	
Permanent, single, with kids	0.188	0.175	0.096	0.110
Permanent, partnered, primary earner, no kids	-0.025	0.077	0.023	0.088
Permanent, partnered, primary earner, with kids	-0.011	0.084	-0.084	0.112
Permanent, partnered, secondary earner, no kids	-0.168	0.106	-0.017	0.083
Permanent, partnered, secondary earner, with kids	-0.011	0.127	-0.033	0.097
Casual, single, no kids	-0.392***	0.108	-0.225*	0.117
Casual, single, with kids	-0.533**	0.269	0.187	0.146
Casual, partnered, primary earner, no kids	-0.246	0.158	0.018	0.159
Casual, partnered, primary earner, with kids	-0.528***	0.143	-0.009	0.166
Casual, partnered, secondary earner, no kids	-0.212	0.199	-0.222*	0.134
Casual, partnered, secondary earner, with kids	-0.854***	0.284	0.046	0.124
Fixed-term contract, single, no kids	0.094	0.119	-0.144	0.114
Fixed-term contract, single, with kids	0.644	0.455	-0.120	0.216
Fixed-term contract, partnered, prim. earner, no kids	-0.006	0.125	0.081	0.138
Fixed-term contract, partnered, prim. earner, with kids	-0.112	0.129	-0.332*	0.202
Fixed-term contract, partnered, second. earner, no kids	-0.176	0.198	-0.007	0.126
Fixed-term contract, partnered, second. earner, w kids	-0.399	0.297	-0.212	0.139
Labour-hire, single, no kids	-0.523***	0.195	-0.371*	0.219
Labour-hire, single, with kids	-0.395	0.422	0.261	0.338
Labour-hire, partnered, primary earner, no kids	-0.021	0.222	-0.144	0.324
Labour-hire, partnered, primary earner, with kids	-0.206	0.228	-0.055	0.397
Labour-hire, partnered, secondary earner, no kids	-0.118	0.321	-0.132	0.289
Labour-hire, partnered, secondary earner, with kids	-0.540	0.454	-0.470**	0.208
Self-employed, single, no kids	0.092	0.130	-0.048	0.216
Self-employed, single, with kids	0.487*	0.265	-0.235	0.276
Self-employed, partnered, primary earner, no kids	0.156	0.135	0.093	0.178
Self-employed, partnered, primary earner, with kids	0.166	0.115	0.282*	0.161
Self-employed, partnered, secondary earner, no kids	0.078	0.137	0.268	0.169
Self-employed, partnered, secondary earner, with kids	0.097	0.139	0.223	0.152
Log likelihood	-37429.0		-33787.2	
Wald chi-squared	455.2		447.4	
Degrees of freedom	99		99	
Pseudo R^2	0.022		0.022	
N (observations)	101,750		91,490	
N (individuals)	4,924		4,565	

Notes: The sample is drawn from the first 10 waves (2001-2010) of the HILDA Survey and comprises employed persons aged between 20 and 59 years of age. Any remaining full-time students are also excluded. As summarised in the text, all equations include controls for a range of other personal and job characteristics.

* Statistically significant at the .10 level; ** at the .05 level; *** at the .01 level.

Table 6. Job Satisfaction and Non-standard Employment by Education Attainment: Fixed Effects Ordered Logit Estimates (Restricted Sample)

	Males		*Females*	
	Coeff.	*S.E.*	*Coeff.*	*S.E.*
Casual	-0.292**	0.137	0.197*	0.105
Fixed-term contract	0.198	0.156	-0.103	0.158
Labour-hire	-0.518**	0.246	-0.329	0.223
Self-employed	0.183	0.165	0.006	0.183
Medium education	-0.131	0.217	-0.213	0.159
High education	-0.182	0.266	-0.025	0.218
Medium education x Casual	-0.179	0.164	-0.305**	0.140
Medium education x Fixed-term contract	-0.272	0.181	0.092	0.186
Medium education x Labour-hire	0.208	0.289	0.061	0.290
Medium education x Self-employed	-0.274	0.194	-0.196	0.230
High education x Casual	-0.150	0.199	-0.466***	0.143
High education x Fixed-term contract	-0.207	0.184	-0.068	0.178
High education x Labour-hire	0.641**	0.320	0.168	0.286
High education x Self-employed	0.309	0.208	0.462**	0.224
Log likelihood	-37436.5		-33781.8	
Wald chi-squared	439.1		426.3	
Degrees of freedom	80		80	
Pseudo R^2	0.022		0.022	
N (observations)	101,753		91,490	
N (individuals)	4,924		4,565	

Notes: See Table 5. The reference group for these specifications is persons with low levels of education (left school without completing Year 12) who are permanently employed.

Table 7. Job Satisfaction and Non-standard Employment by Job Tenure: Fixed Effects Ordered Logit Estimates (Restricted Sample)

	Males		*Females*	
	Coeff.	*S.E.*	*Coeff.*	*S.E.*
Casual	-0.385***	0.074	-0.105*	0.063
Fixed-term contract	-0.045	0.072	-0.107*	0.065
Labour-hire	-0.231**	0.112	-0.235**	0.116
Self-employed	0.155*	0.085	0.113	0.101
Ln tenure	-0.206***	0.020	-0.222***	0.021
Ln tenure x Casual	0.157***	0.039	0.128***	0.033
Ln tenure x Fixed-term contract	0.056	0.039	0.010	0.037
Ln tenure x Labour-hire	0.168**	0.066	0.172**	0.070
Ln tenure x Self-employed	0.010	0.037	0.056	0.047
Log likelihood	-37461.6		-33820.3	
Wald chi-squared	423.5		414.4	
Degrees of freedom	74		74	
Pseudo R^2	0.021		0.021	
N (observations)	101,753		91,490	
N (individuals)	4,924		4,565	

Notes: See Table 5. The reference group for these specifications is persons who are permanently employed.

Table 8. Job Satisfaction and Non-standard Employment by Regularity of Work Schedules: Fixed Effects Ordered Logit Estimates (Restricted Sample)

	Males		*Females*	
	Coeff.	*S.E.*	*Coeff.*	*S.E.*
Casual	-0.332***	0.081	-0.059	0.067
Fixed-term contract	-0.012	0.070	-0.071	0.065
Labor-hire	-0.128	0.109	-0.248**	0.121
Self-employed	0.124	0.083	0.103	0.105
Irregular work schedule	-0.134**	0.066	-0.039	0.069
Irregular x Casual	-0.198	0.135	0.040	0.108
Irregular x Fixed-term contract	0.054	0.143	-0.174	0.152
Irregular x Labor-hire	-0.592**	0.243	0.071	0.269
Irregular x Self-employed	0.195*	0.103	0.155	0.116
Log likelihood	-37429.3		-33815.9	
Wald chi-squared	441.6		410.8	
Degrees of freedom	80		80	
Pseudo R^2	0.022		0.021	
N (observations)	101,739		91,453	
N (individuals)	4,922		4,563	

Notes: See Table 5. For these specifications the reference category is persons in permanent or ongoing employment working a regular schedule.

Table 9. Job Satisfaction and Non-standard Employment by Weekly Hours of Work and the Regularity of Work Schedules: Fixed Effects Ordered Logit Estimates (Restricted Sample)

		Males		*Females*	
		Coeff.	*S.E.*	*Coeff.*	*S.E.*
Regular					
Permanent	35-45 hrs/wk	(Ref)		(Ref)	
Casual	35-45 hrs/wk	-0.348***	0.110	-0.208	0.130
Fixed-term contract	35-45 hrs/wk	-0.002	0.091	-0.095	0.083
Labour-hire	35-45 hrs/wk	-0.192	0.126	-0.186	0.160
Self-employed	35-45 hrs/wk	0.203**	0.098	-0.016	0.148
Permanent	Less than 35 hrs/wk	0.002	0.121	0.016	0.063
Casual	Less than 35 hrs/wk	-0.335***	0.116	0.010	0.078
Fixed-term contract	Less than 35 hrs/wk	-0.246	0.234	-0.009	0.111
Labour-hire	Less than 35 hrs/wk	-0.556*	0.301	-0.322	0.197
Self-employed	Less than 35 hrs/wk	0.114	0.151	0.212*	0.128
Permanent	More than 45 hrs/wk	-0.038	0.055	-0.141*	0.075
Casual	More than 45 hrs/wk	-0.444***	0.171	-0.016	0.344
Fixed-term contract	More than 45 hrs/wk	-0.023	0.117	-0.238	0.158
Labour-hire	More than 45 hrs/wk	0.266	0.232	-0.191	0.621
Self-employed	More than 45 hrs/wk	0.038	0.100	-0.141	0.159
Irregular					
Permanent	35-45 hrs/wk	-0.199**	0.089	-0.033	0.096
Casual	35-45 hrs/wk	-0.883***	0.201	0.287	0.245
Fixed-term contract	35-45 hrs/wk	-0.122	0.190	-0.252	0.200
Labour-hire	35-45 hrs/wk	-1.155***	0.379	0.191	0.528
Self-employed	35-45 hrs/wk	0.323**	0.146	0.190	0.168
Permanent	Less than 35 hrs/wk	-0.023	0.243	0.043	0.104
Casual	Less than 35 hrs/wk	-0.697***	0.148	-0.047	0.095
Fixed-term contract	Less than 35 hrs/wk	-0.035	0.293	-0.186	0.197
Labour-hire	Less than 35 hrs/wk	-0.802**	0.393	-0.443	0.278
Self-employed	Less than 35 hrs/wk	0.011	0.163	0.314**	0.132
Permanent	More than 45 hrs/wk	-0.155*	0.089	-0.501***	0.171
Casual	More than 45 hrs/wk	-0.373	0.275	-0.216	0.527
Fixed-term contract	More than 45 hrs/wk	-0.144	0.180	-0.731**	0.339
Labour-hire	More than 45 hrs/wk	-0.581	0.397	1.893***	0.710
Self-employed	More than 45 hrs/wk	0.158	0.124	-0.160	0.201
Log likelihood		-37399.3		-33780.8	
Wald chi-squared		479.8		434.5	
Degrees of freedom		98		98	
Pseudo R^2		0.023		0.022	
N (observations)		101,739		91,453	
N (individuals)		4,922		4,563	

Notes: See Table 5. For these specifications the reference category is persons in permanent or ongoing employment working between 35 and 45 hours per week on a regular schedule.

Appendix: Variable Definitions and Summary Statistics

Table A1. Variable Definitions

Variable	*Definition*
Overall job satisfaction	Ordinal variable which takes values between 0 (totally dissatisfied) and 10 (totally satisfied).
Employment contract type	
Permanent	Dummy variable indicating respondent reports being employed on a permanent or ongoing basis.
Casual	Dummy variable indicating respondent reports being employed on a casual basis.
Fixed-term	Dummy variable indicating respondent reports being employed on a fixed-term contract.
Labour-hire	Dummy variable indicating respondent is employed through a labour-hire firm or temporary employment agency. This category takes precedence over all other contract types.
Self-employed	Dummy variable indicating respondent is employed in their own business.
Real hourly wages	Usual weekly earnings divided by usual weekly hours worked, in the main job, expressed in constant 2001 dollars.
Hours worked	Weekly hours usually worked (including both paid and unpaid overtime) in the main job. Used to construct three dummy variables: (i) less than 35 hours a week; (ii) 35 to 45 hours a week; and (iii) more than 45 hours a week
Irregular work	Dummy variable indicating that respondent describes their work schedule as "irregular" or "on call", or that that the usual days of work vary from week to week or month to month.
Supervisor	Dummy variable indicating respondent normally supervises the work of other employees.
Union member	Dummy variable indicating respondent belongs to a trade union or employee association.
Job tenure	Years worked for current employer (or in current business). Used to construct seven dummy variables: (i) less than 1 year; (ii) 1 to up to 2 years; (iii) 2 to 4 years; (iv) 5 to 9 years; (v) 10 to 14 years; (vi) 15 to 19 years; (vii) 20 or more years
Occupation	Distinguishes the 8 major occupations groups identified in the Australian and New Zealand Standard Classification of Occupations (ANZSCO) 2006.
Public sector worker	Dummy variable indicating respondent employed in a government business or organisation.
Industry	Distinguishes the 19 industry divisions identified in the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006.
Firm size	Approximate number of persons employed by employer throughout Australia. Used to construct three dummy variables: (i) fewer than 20 workers; (ii) 20 to 100 workers; and (iii) more than 100 workers.
Age	Age at 30 June preceding date of interview. Used to construct a series of 5-year age dummies (15-19, 20-24, …, 70 and over).

Variable	*Definition*
Long-term health condition and work	Identifies the presence of a long-term health condition or disability (where long-term is defined as lasting or expecting to last for 6 months or more), and the extent to which that condition limits the type or amount of work that can be done. Dummy variables are constructed that identify three states: (i) no long-term condition; (ii) presence of a long-term condition that is not work limiting; and (iii) presence of a work limiting long-term health condition.
Education	Highest level of education attainment. Used to construct six dummy variables which identify whether respondent completed: (i) up to Year 11 at high school and/or a Certificate level I or II qualification; (ii) Year 12 at high school; (iii) a Certificate level III or IV qualification; (iv) a Diploma or Advanced Diploma; (v) a Bachelors or honours degree; and (vi) a Graduate Diploma, Graduate Certificate, or Postgraduate qualification.
Family status	Series of dummy variables that interact partnership status with the presence of dependent children and primary / secondary earner status.
Children	Dummy variable indicating whether there are any children aged less than 15 years living in the household.
Partnered	Dummy variable indicating respondent is married or living in a de facto relationship.
Primary earner	Dummy variable indicating respondent is the primary earner in the household, based on gross weekly wages and salaries at the time of interview
Location / Remoteness	Measure of the remoteness of a respondent's address based on the Accessibility / Remoteness Index for Australia (ABS 2001). Used to construct four dummy variables: (i) major city; (ii) inner-regional; (iii) outer-regional; and (iv) remote or very remote.
Next year's labour force status	Four dummy variables that identify either the labour force status of the respondent in the following survey wave – employed, unemployed or not in the labour force – or whether the respondent was not interviewed at the next wave.
Interviewed by phone	Dummy variable indicating respondent was interviewed by telephone (rather than face-to-face).
Others present during interview	Dummy variable indicating that other adults were present during the interview.
Year	Year dummies for 2001 to 2010 (which correspond to waves 1 to 10 of the HILDA Survey).

Table A2. Summary Statistics

	Males					*Females*				
Employment type	*P*	*C*	*F*	*LH*	*SE*	*P*	*C*	*F*	*LH*	*SE*
Overall job satisfaction										
Mean	7.6	7.5	7.7	7.2	7.7	7.7	7.7	7.6	7.4	8.0
Standard deviation	1.7	1.9	1.7	2.1	1.7	1.7	1.9	1.7	2.0	1.8
Log real hourly wages ($)										
Mean	3.0	2.6	3.0	2.9	2.8	2.9	2.6	2.9	2.8	2.9
Standard deviation	0.5	0.6	0.6	0.6	0.8	0.4	0.6	0.5	0.6	1.0
Hours worked										
35 to 45 hrs	62.2	23.7	55.8	60.8	30.1	53.9	9.4	50.4	42.5	24.0
Less than 35 hrs	5.8	68.4	11.7	21.3	19.6	35.0	89.4	36.3	52.7	56.1
More than 45 hours	32.0	7.9	32.5	17.9	50.4	11.2	1.2	13.3	4.8	19.9
Irregular work	15.7	28.9	16.3	18.3	31.6	13.7	30.6	14.6	25.2	42.3
Supervisor	58.1	27.7	54.2	32.1	46.9	49.8	27.4	42.9	23.5	29.9
Union member	32.9	11.9	26.6	20.8	12.3	33.8	12.3	29.5	15.1	9.5
Job tenure										
Less than a year	15.7	45.9	27.3	52.5	9.3	15.8	39.7	30.1	52.1	11.3
1 up to 2 yrs	8.7	14.3	10.8	12.2	5.5	9.1	14.8	11.9	13.5	6.8
2 to 4 yrs	26.9	26.1	30.6	22.9	18.2	27.8	27.1	28.0	20.6	22.1
5 to 9 yrs	20.1	8.3	15.9	8.9	20.3	21.2	10.4	16.3	7.7	23.2
10 to 14 yrs	10.6	2.7	5.9	1.9	14.5	11.2	4.0	6.1	3.5	13.9
15 to 19 yrs	6.8	1.1	3.4	0.2	9.1	6.8	1.8	3.6	1.4	7.9
20 or more yrs	11.2	1.7	6.1	1.5	23.1	8.2	2.2	4.0	1.3	14.9
Occupation										
Managers	14.8	2.2	16.0	4.7	31.9	9.1	1.9	8.8	2.7	28.1
Professionals	21.8	8.3	29.0	13.6	19.5	31.4	12.1	42.2	20.7	22.6
Technicians & trades workers	22.5	13.8	23.7	28.2	26.6	3.9	4.4	3.5	3.5	5.8
Community & personal service workrs	5.8	12.1	5.7	3.8	2.1	12.0	23.1	14.1	17.6	9.6
Clerical & administrative workers	9.2	5.1	7.2	8.9	2.1	28.5	13.4	21.0	31.5	21.7
Sales workers	5.7	14.5	5.5	3.4	3.2	8.8	29.6	7.1	6.6	4.6
Machinery operators & drivers	11.6	11.3	6.9	16.9	6.0	1.1	1.3	0.3	2.5	1.5
Labourers	8.8	32.7	6.1	20.5	8.6	5.3	14.2	3.1	15.0	6.1
Public sector worker	23.1	9.0	31.8	11.9	0.5	34.2	14.2	47.7	17.5	0.8
Industry										
Agriculture, forestry & fishing	2.3	6.2	2.6	3.1	14.4	0.5	2.0	0.4	0.6	13.0
Mining	3.3	0.9	4.1	4.3	0.6	0.5	0.2	0.2	1.8	0.1
Manufacturing	16.9	8.2	10.7	21.2	7.7	5.5	4.7	3.1	9.4	5.8
Electricity, gas, water etc.	1.9	1.0	1.6	2.9	0.3	0.5	0.1	0.5	1.8	0.0
Construction	9.6	10.0	10.4	11.8	24.6	1.5	0.7	1.0	1.9	5.9
Wholesale trade	5.1	2.6	3.0	4.1	3.1	2.6	1.7	1.4	3.8	2.4
Retail trade	7.4	17.7	7.5	3.9	5.6	9.4	23.7	7.6	5.5	9.2
Accommodation & food services	3.2	18.6	2.8	3.4	3.0	3.8	21.8	2.5	5.7	5.6
Transport, postal & warehousing	6.9	6.0	4.5	7.1	5.9	2.3	1.7	1.1	3.2	3.4
Information media & telecomm.	2.7	1.4	3.6	6.2	2.1	2.6	1.8	2.5	4.4	1.6
Financial & insurance services	3.9	0.3	2.4	3.7	2.6	5.9	0.9	3.4	6.1	2.1
Rental, hiring & real estate services	1.1	1.0	1.1	0.7	1.9	1.7	1.3	1.3	0.9	1.7
Professional, scientific & tech. servs	7.0	3.2	6.7	5.6	12.2	7.1	4.2	7.0	5.6	14.1

	Males					*Females*				
Employment type	*P*	*C*	*F*	*LH*	*SE*	*P*	*C*	*F*	*LH*	*SE*
Administrative & support services	1.5	3.4	1.5	6.2	4.3	2.8	2.6	2.3	11.6	6.2
Public administration & safety	10.9	2.5	11.9	6.0	0.6	7.9	1.4	8.7	6.9	0.2
Education and training	5.9	5.9	13.0	2.7	1.7	16.6	10.4	29.6	6.4	4.3
Health care & social assistance	4.6	4.3	6.8	3.0	2.5	25.2	14.6	22.3	22.6	11.0
Arts & recreation services	1.6	4.2	2.7	1.1	1.7	0.9	3.0	2.2	0.9	3.3
Other services	4.3	2.6	3.2	3.2	5.1	2.8	3.1	2.9	1.1	10.0
Firm size (number of employees)										
Less than 20	19.4	39.6	19.4	13.8	93.6	17.2	35.7	14.0	13.8	94.9
20 to 100	16.5	18.1	15.8	15.7	4.6	14.3	18.1	14.8	16.1	3.4
More than 100	64.1	42.3	64.8	70.5	1.8	68.5	46.2	71.2	70.1	1.8
Age (years)										
15 to 19	4.2	31.7	8.3	15.0	0.3	3.9	26.9	4.6	9.5	0.7
20 to 24	10.0	20.3	15.5	17.3	2.5	10.6	15.3	12.3	14.9	2.2
25 to 29	12.1	8.8	12.5	12.9	5.4	11.7	7.0	14.4	12.4	4.6
30 to 34	13.0	6.0	11.7	12.9	8.4	11.5	7.7	10.4	11.5	10.6
35 to 39	13.8	5.7	11.4	9.9	11.7	12.3	9.0	11.6	11.0	14.8
40 to 44	13.8	5.4	10.5	8.1	15.3	13.5	9.9	13.6	12.3	16.2
45 to 49	12.8	4.8	10.3	7.2	15.8	13.8	8.9	14.3	10.7	14.7
50 to 54	10.1	3.8	8.9	8.1	13.1	11.8	6.4	10.3	8.5	12.4
55 to 59	6.5	4.5	5.8	4.7	12.2	7.4	4.5	5.6	4.8	11.4
60 to 64	3.0	4.6	3.2	2.7	8.3	3.0	2.8	2.1	2.8	6.9
65 to 69	0.6	2.7	1.3	1.0	3.7	0.5	1.1	0.6	1.1	3.4
70 and over	0.2	1.7	0.6	0.2	3.2	0.2	0.5	0.3	0.7	2.3
Long-term health condition and work										
No LT health condition	85.8	82.8	86.2	84.6	78.7	85.9	84.2	84.0	83.5	81.9
Non work-limiting LT health condit.	8.3	6.7	7.7	7.5	8.7	6.7	6.5	7.4	6.3	5.9
Work-limiting LT health condition	6.0	10.5	6.1	7.9	12.7	7.5	9.3	8.6	10.2	12.2
Education										
Up to Year 11 and/or Cert I / II	21.2	43.5	18.6	28.7	24.4	23.2	42.3	15.9	25.1	31.3
Year 12	15.1	25.0	16.7	22.6	11.1	17.0	24.4	15.3	24.2	12.7
Cert III or IV	29.2	16.7	23.2	26.2	33.3	15.2	13.1	14.9	17.7	15.2
Advanced diploma or diploma	9.1	4.6	8.6	5.5	10.1	11.0	6.6	9.6	8.2	13.0
Bachelors or honours degree	15.0	6.9	17.3	12.8	12.5	20.6	9.4	23.6	17.8	16.3
Grad. diploma, grad. cert., post-grad.	10.5	3.3	15.6	4.2	8.7	13.0	4.2	20.8	7.0	11.4
Family status										
Single, no kids	26.1	46.7	31.0	39.1	16.4	25.9	34.5	28.6	35.8	13.5
Single, with kids	3.4	17.3	4.1	7.2	1.5	7.7	18.5	7.9	11.8	3.3
Partnered, primary earner, no kids	28.3	15.7	29.0	23.9	27.1	18.4	9.1	17.9	11.6	27.3
Partnered, primary earner, with kids	32.5	10.6	26.9	20.3	26.5	8.1	5.3	8.7	7.0	19.0
Partnered, secondary earner, no kids	6.6	6.9	6.4	6.3	16.8	21.6	14.7	20.1	16.6	17.7
Partnered, secondary earner, with kids	3.1	2.7	2.7	3.2	11.6	18.3	17.9	16.9	17.2	19.3
Location / Remoteness										
Major city	66.8	58.0	62.5	70.3	56.1	68.0	59.1	63.8	78.0	53.0
Inner regional	22.3	26.4	22.3	19.3	24.7	21.2	26.4	24.5	13.0	27.7
Outer regional	9.1	13.2	12.2	8.6	15.4	8.9	12.3	10.1	7.3	15.5
Remote or very remote	1.9	2.4	2.9	1.9	3.8	1.9	2.2	1.6	1.7	3.8
Next year's labour force status										
Employed	88.4	73.9	85.3	78.6	86.3	86.1	76.2	84.7	76.6	83.1

	Males					*Females*				
Employment type	*P*	*C*	*F*	*LH*	*SE*	*P*	*C*	*F*	*LH*	*SE*
Unemployed	1.2	4.6	1.5	4.2	0.8	1.0	3.1	1.7	4.2	0.9
NILF	2.0	9.2	3.3	4.5	4.2	4.8	11.3	5.1	8.1	8.9
Not observed	8.4	12.3	10.0	12.7	8.8	8.1	9.5	8.6	11.1	7.2
Interviewed by telephone	7.3	8.4	7.3	10.0	7.3	6.9	6.8	5.7	7.2	6.8
Others present during interview	37.2	36.0	36.1	37.5	39.3	30.5	32.9	29.5	28.9	32.0

Note: Unweighted means. All figures are percentages except for the variables 'overall job satisfaction', which is measured on an 11-point scale from 0 to 10, and log (real) wages. P, C, F, LH, and SE denote Permanent, Casual, Fixed-term, Labour-hire, and Self-employment, respectively.