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The Effect of Non-Permanent Contractual Employment on Financial Hardship*

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Abstract

This study uses longitudinal data from the Household, Income and Labour Dynamics in Australia (HILDA) survey to examine the difference in the experience of financial hardship between permanent and two forms of non-permanent employment:-fixed-term and casual employment, separately for men and women. It estimates multivariate ordered logit fixed-effects models that account for time-invariant unobserved heterogeneity, common macroeconomic shocks and a rich set of individual level characteristics, and finds that for both men and women, compared to permanent employment, casual employment is associated with increased financial hardship. Fixed-term employment is not associated with increased financial hardship for either men or women. For men, the strong positive association between casual employment and financial hardship is largely explained by fewer hours of work and a higher vulnerability to employment shocks (job loss and job change). For women, particularly those with caring responsibilities, working fewer hours and experiencing employment shocks (job loss and job change) explain some of the association between casual employment and financial hardship, but even after allowing for these factors casual employment per se continues to have a strong positive association with the experience of financial hardship.

JEL classification: J3, J4

Keywords: Non-permanent employment, financial hardship, HILDA Survey, blow-up and cluster fixed-effects ordered-logit model

Employment and economic well-being are very closely related. Employment is the key means of generating income to both pay for current expenses and save for the future. Hence, volatile earnings and jobs can lead to severe financial stress. The past two decades have registered substantial changes in the overall structure of employment in many western countries (ILO, 2008b, 2015). There has been a rise of various alternative forms of employment arrangements that differ from the standard permanent full-time employment in terms of continuity and hours worked in varying degrees. This growth in the share of 'alternative or non-standard' employment is often used as evidence that employment is now less secure and more precarious.

This study examines the relationship between non-standard employment arrangements that are non-ongoing or non-permanent in that they lack legal guarantee of a long-lasting employment relationship, and may produce financial hardship. Financial hardship includes experiencing problems such as the inability to pay rent/mortgage on time, the inability to pay utility bills on time, pawning, missing meals, asking friends/family for financial help and/or asking welfare organisations for financial help. The study considers two types of non-permanent employment arrangements - fixed-term employment and casual employment - and defines permanent employment as standard employment.

The growth in non-permanent employment in the many OECD countries has raised concerns that these jobs are characterized by sizeable gaps in wage and non-wage benefits compared to permanent employment, producing adverse financial effects for non-permanent workers (Fuller & Vosko, 2008; Houseman & Osawa, 2003; OECD, 2014, 2015). Despite these claims, however, there is a surprising lack of convincing empirical evidence on the relationship between non-permanent employment and experience of financial hardship. Indeed, the only quantitative study to examine financial hardship issues is the cross-sectional analysis of Buchler, Haynes, & Baxter (2009) that examined the differences in financial difficulty between casual and permanent employees. However, the study could not account for unobservable

confounders that might be correlated with both employment and financial situation such as ability, motivation to work and attitudes towards risk.

The objective of this paper is to fill this gap in the literature and shed light on whether and how non-permanent employment is associated with financial hardship. I use panel data from the Household, Income and Labour Dynamics in Australia (HILDA) survey, national data from a country with a high incidence of non-permanent employment (around 20% of the work force). The two main forms of non-permanent employment in Australia are casual and fixed-term employment. Casual employees do not have standard rights and benefits like protection against dismissal, paid annual leave, paid sick leave, and guaranteed hours of work (Campbell, 1996; Watson, Buchanan, Campbell, & Briggs, 2003). However, the Australian labour regulations require casual employees to receive a premium (casual loading) to compensate them for the lack of these entitlement benefits (Will, 2013). Nonetheless, the evidence suggests that casual employees still suffer from wage penalties compared with permanent employees (Watson, 2005; Wooden & Warren, 2003). While it might be problematic to compare different forms of non-permanent employment in various countries, casual employment in Australia does share some or many characteristics of non-permanent or temporary employment in other OECD countries (Campbell, 2004). Workers on fixed-term contracts in Australia are not eligible for termination and redundancy pay at the completion of the contract, and they do not receive any special compensation, but they otherwise tend to be entitled to similar benefits, do similar jobs and receive similar wages as permanent employees (Burgess & Campbell, 1998; Will, 2013; Wooden & Warren, 2003).

These differences between casual and fixed-term employment allows an analysis of how these two non-permanent yet very distinctive forms of employment are associated with financial hardship and thus understand the job characteristics that are important if financial hardship is to be avoided.

This paper makes important contributions to the literature of the consequences of non-standard employment. First, it is one of the very few studies to directly examine the financial hardship consequences of non-permanent employment and the first one to examine the relationship using longitudinal data and methods. Given the rising prevalence of both non-permanent employment and financial stress in many OECD countries (Casey & Liang, 2014; OECD, 2015), it is crucial that we understand the financial consequences of non-permanent employment. Second, it adds to the literature by documenting the gender differences in the financial consequences of non-permanent employment and also examining how these consequences differ by family composition for men and women. Third, the study's empirical analysis explores the extent to which financial hardship is driven by factors or experiences such as job loss, job change, lower income and less work hours, which are often linked to non-permanent employment. Disentangling these pathways is important to improve economic outcomes for workers in non-permanent jobs.

The results indicate that for both men and women, compared to permanent employment, casual employment is associated with increased financial hardship. Fixed-term employment is not associated with increased financial hardship for either men or women. For men, the strong positive association between casual employment and financial hardship is largely explained by fewer hours of work and a higher vulnerability to employment shocks (job loss and job change). For women, particularly those with caring responsibilities, working fewer hours and experiencing employment shocks (job loss and job change) explain some of the association between casual employment and financial hardship; however, casual employment per se continues to have a strong positive association with financial hardship.

Previous studies on the consequences of non-permanent employment

There has been a considerable amount of research on the consequences of non-permanent employment and non-regular employment on various labour market outcomes for workers

(job satisfaction, health and safety, etc.). The literature that is most relevant for this study includes studies that have examined the economic consequences for those in non-permanent employment that can have direct implications for a person's financial situation.

Many empirical studies have examined wage differences between non-permanent and permanent employment (Booth, Francesconi, & Frank, 2002; Forde & Slater, 2005; Fuller & Vosko, 2008; Kahn, 2013; Kalleberg, 2000; OECD, 2002, 2014, 2015). Evidence from these studies often suggests a significant difference in wages between non-permanent and permanent employees, but there were clear differences across countries in wage penalties for non-permanent workers. For example, the OECD (2015) found that the non-permanent worker wage penalty ranged from 2-3% in Australia to 19% in Greece.

Apart from wages, work-related training is also an important aspect of employment in terms of improving workers' skills and productivity, which raises their earning potential and ability to transition to better and more secure jobs. Evidence from the literature clearly indicates that non-permanent employees receive considerably less work-related training from their employers than their permanent counterparts (Booth et al., 2002; Buddelmeyer, Leung, McVicar, & Wooden, 2013; ILO, 2015; OECD, 2002, 2014).

Another very important aspect of job quality is job security. Some studies have examined the precariousness of non-permanent employment using the probability of job loss in the next 6-12 months as a proxy for job insecurity (OECD, 2014, 2015; Watson, 2013). These studies find that non-permanent employees typically have less job security than permanent employees, although there are differences across gender and contract types. Watson (2013) estimated random intercept MNL models using HILDA data and found that casual employees are more likely to become jobless (unemployed or out of the labour force) than fixed-term employees.

The question of whether non-permanent jobs are "stepping stones" to more stable/permanent employment has also been the focus of a considerable amount of research in Australia (Buddelmeyer & Wooden, 2011; Chalmers & Kalb, 2001; I. Watson, 2013) as well as in other countries (Booth et al., 2002; de Graaf-Zijl, Van den Berg, & Heyma, 2011; Gash, 2008; Giesecke & Groß, 2003; Mooi-Reci & Dekker, 2015; OECD, 2015; Yu, 2012). Empirical evidence from these studies suggests that some non-permanent employees manage to move into permanent jobs while others get trapped in non-permanent jobs. For example, mobility into permanent jobs tends to be higher for men than women (Buddelmeyer & Wooden, 2011; de Graaf-Zijl et al., 2011; I. Watson, 2013); higher for fixed-term employment or high status non-permanent jobs than casual employment or low status non-permanent jobs (Booth et al., 2002; Buddelmeyer & Wooden, 2011; I. Watson, 2013; Yu, 2012); higher for full-time workers than part-time workers (Booth et al., 2002; OECD, 2015); and higher for single persons compared to persons with partner (de Graaf-Zijl et al., 2011; Yu, 2012).

Several studies have examined how some labour market outcomes and negative income shocks like job loss/unemployment are associated with financial hardship (Bauman, 2002; Eamon & Wu, 2011; Gundersen & Gruber, 2001; Lovell & Oh, 2006; OECD, 2015). Bauman (2002) examined the relationship between work, welfare payments and financial hardship using the Survey of Income and Programme Participation (SIPP) in the US and found that hardship was high among households that only worked half of the year and those who were the past or are currently welfare receipients. Eamon & Wu (2011) used data from the 2004 panel of the SIPP) and examined the relationship between underemployment and financial hardship among single mother families. The results showed that compared with families whose mothers were sufficiently employed, families whose mothers were unemployed or had involuntary job gaps and were underemployed had higher odds of experiencing various types of financial hardships such as bill-paying, healthcare access, and housing hardships.

It appears only one study has directly examined the relationship between financial hardship and employment type, a cross-sectional analysis by Buchler et al. (2009). The authors used the HILDA Survey data and restricted the sample to include only employees to examine the difference in financial wellbeing between casual and permanent employees. They estimated models with modest controls, and found that, compared to permanent employees, casual employees face significant financial stress, such as not being able to pay utility bills and rent/mortgage on time, pawn or sell something, go without meals, etc. Buchler et al. (2009) could not control for individual specific time invariant heterogeneity due to cross-sectional data. Controlling for individual heterogeneity is important as many negative consequences could be driven by individual differences in unobservable factors such as ability, motivation to work and attitudes towards risk. Also, by restricting their sample to employees, the authors may have introduced sample selection issues. Moreover, as discussed previously, it is also important to consider fixed-term employment because it differs quite significantly from casual employment in terms of benefits and other conditions (Wooden & Warren, 2003). This study addresses all these limitations. I consider both fixed-term and casual employment and estimate two-way fixed-effects models (individual and time fixed-effects) and with an extensive set of time-varying control variables to minimise omitted variable bias. I also include three types of non-employees (unemployed, out of labour force and self-employed) to avoid sample selection issues and to undertake a relative comparison of financial hardship of non-employees with non-permanent employees.

Conceptual framework linking non-permanent employment and financial hardship

The key feature of non-permanent emplyment is income volatility due to higher probability of employment gaps/shocks, insufficient hours of work, and lack of entitlement benefits. The framework that allows us to understand how volatile or unpredictable income can contribute to financial hardship (or decline in consumption) is the framework used by Jappelli & Pistaferri

(2010) and Meghir & Pistaferri (2011). In this framework, an individual maximises his/her expected lifetime utility of consumption over a fixed time horizon subject to an intertemporal lifetime budget constraint. The individual can lend and borrow at the same interest rate (perfect credit markets); the utility function is state and time-separable; the individual faces a terminal condition on wealth; and all variables in the model are known except the individual's labour earnings. Given these assumptions, ex-ante an individual's current level of consumption is the best predictor of the next period level of consumption; ex-post, consumption will change only if expectations regarding labour earnings are not realised.

Under the maintained assumptions the model generates two main predictions:
First, current consumption will respond to an anticipated change in future income level, such as the announcement of a tax reform or a promotion at work. Second, current consumption will respond to unanticipated earning and income shocks such as a sudden job loss or an unexpected decline in pay levels.

Within this framework, one can define financial hardship as occurring when a person's level of consumption of goods and services falls below a particular threshold in any given time period (say C*(t)) due to lack of sufficient income/financial resources.

The conceptual framework provides several explanations of why non-permanent employees might be more vulnerable to experiencing financial hardship than permanent employees. They are likely to experience more unemployment spells/shocks, and more likely to have uncertain and/or insufficient hours of work. Also, non-permanent employees lack standard statutory benefits and protections. Each of these factors may adversely affect the level and stability of earnings, and contribute to financial hardships.

Research data

The data used in this study come from the Household Income and Labour Dynamics in Australia (HILDA) Survey (see Watson & Wooden (2012) for more details). Commencing in

2001, it is a nationally representative annual longitudinal survey of youths and adults from more than 7,600 households with an emphasis on employment, income and family. The first 13 waves of HILDA data (but excluding wave 10 as hardship question was not asked in wave 10) are used for the purpose of this analysis.

Measuring financial hardship

With the exception of wave 10, the self-completion questionnaire (SCQ) of the HILDA survey asks respondents about seven types of hardship that they might have experienced since the start of the calendar year 'because of a shortage of money'. The hardships include: 1) an inability to pay electricity, gas or telephone bills on time; 2) an inability to pay the mortgage or rent on time; 3) pawning or selling something; 4) going without meals; 5) an inability to heat the home; 6) asking for help from welfare or community organizations, and 7) asking for financial help from family or friends[1]. Following Butterworth & Crosier (2005), I use this information to create binary indicator variables for affirmative responses to each of the seven hardship questions and sum those variables to form an index of financial hardship with a possible range of 0 to 7. The index is coded as missing when the response to any of the seven hardship questions is missing for the respondent.

It is important to note some limitations of this financial hardship measure. As noted by Butterworth & Crosier (2005), hardship indicators are not neutral as they involve subjective decisions about selecting what constitutes hardship or basic needs.

Measuring employment arrangement

Each wave of the HILDA Survey collects extensive information about the respondent's main job held at the time of the interview, including the nature of the contract of employment. There are four mutually exclusive categories of employment arrangements: (i) permanent or ongoing;

[1] As three of the hardship questions are measured at household level, it is important couples agree in their response to these questions. Hence, I examined the concordance in responses between couples in the HILDA and overall it is very high-90.8% (See appendix A2). I thank my supervisors for this helpful suggestion.

(ii) casual; (iii) fixed-term; and (iv) 'other', for persons who cannot be easily characterised in the other three categories. Additionally, the survey identifies (v) persons who work without pay in a family business, (vi) persons who work in their own businesses, (vii) the unemployed, and (viii) those out of the labour force (OOLF).

I create indicator variables (0,1) for each of the 8 enumerated categories and use permanent employment as the reference category. Even though I include separate dummies for the 'other' employment and unpaid family member category, because of the very small sample size I am not able to estimate precisely the estimates for people in these categories.

The employment measures have some limitations as well. The type of employment contract of the main job is measured at the time of the interview and job start and end dates are not recorded. Thus, it indicates the type of employment that a respondent had at the time of the interview and not over the entire year up to the time of the interview, unlike the hardship measure.

Explanatory variables

My empirical analyses account for many observed characteristics. The evidence from the literature suggests that experience of financial hardship and the consequence of non-permanent employment may differ significantly for men and women (McGovern et al., 2004; OECD, 2015; Yu, 2012). Moreover, changes in family composition are likely to influence people's preference for flexibility in the job (Watson et al., 2003). Hence, the consequences of non-permanent employment might also differ for families with greater carer responsibilities. Therefore, to have a relevant comparison group, it is important that when examining the differences between permanent and non-permanent employees in terms of some outcome, we

compare persons who are otherwise homogeneous in terms of their family situation. Therefore, I disaggregate the analysis by both gender and family type[2].

All of the empirical analyses are conducted separately for men and women within the following family types: 1) Couples without dependent children; 2) Couples with dependent children; 3) Lone parents with dependent children and 4) Single persons[3]. The proportion of men who are lone parents with dependent children is very small in the analysis sample with only 711 person-wave observations[4]. As a consequence, it is difficult to estimate precisely the effects of non-permanent employment for this sub-sample. Hence, I do not report results for this group.

I also include time-varying control variables that are arguably exogenous- age, education, area of residence (regional, remote area or city); and several time-varying controls that might be potentially endogenous:- controls for job-related factors such as being a member of a union or employee association, number of jobs held by a respondent in the preceding financial year, industry, occupation, a control for private sector employee; controls for various health related factors such as presence of a long-term health condition that affects the person's ability to work, health shock which identifies whether the respondent suffered a serious personal injury or illness in the preceding 12 months, and mental and physical health measured using SF-36 derived index variables[5]. I also include a control for the interview mode. Moreover, given that my outcome variable has a reference period that varies in length across

[2] Disaggregating the analysis by gender and family type also allows the effects of other factors, including not only employment type but also mental and physical health, income, and hours worked to vary by gender and family type. The examination of data suggested that incidence of hardship differs by both family type and gender (see appendix A3). I thank my supervisors for this helpful suggestion.

[3] The first category includes couples (either married or defacto) that don't have any children or those who have non-dependent children; the second category includes couples (either married or defacto) that have dependent children <15 or dependent students; the third category includes lone parents with dependent children or dependent students; the fourth category includes single unmarried individuals or lone parents but with non-dependent children.

[4] The proportion is small even in the overall data, only 1.84% (1,595 obs.).

[5]For complete information about the SF-36 see Ware et al (1993, 2000). The variables used are *ghgh* to control for physical health and *ghmh* to control for mental health.

persons depending on the date the interview is undertaken, I include dummies for the month of the interview to control for differences that might arise due to this.

An important issue in my analysis is the issue of non-random attrition associated with non-return of the SCQ which could be potentially associated with one's employment arrangement (see appendix A4) and several other factors. I include an indicator variable proposed by Verbeek & Nijman (1992): a regressor identifying whether the sample member is observed at the next survey wave, that is intended to control for this selectivity bias.

Measures for potential mechanisms

Guided by the conceptual framework I explore two potential mechanisms. First, the income level effect of working in non-permanent jobs. I capture this by two measures: a continues measure of the log of the respondent's level of gross total household income in year *t* adjusted by the OECD equivalence scale[6]; and a continuous measure for hours worked per week in the main job at the time of the interview. I include respondent's household income instead of solely focusing on his/her wages because of the issue of how to measure wages for non-employees. Second, I capture the volatility of income experienced in non-permanent jobs using two binary measures for employment shocks: an indicator for a respondent being fired or made redundant in the preceding 12 months from the date of the interview, and an indicator for a respondent changing jobs in the 12 months preceding the date of the interview.

Some of the control variables such as union membership, private sector, industry, occupation, and hours worked are applicable for only employed people. For people who were not working the values for all these controls were coded as zero. Thus, in the multivariate analyses the interpretation of the coefficients for unemployment and out of labour force is different in the presence of these controls because of the change in the reference category and

[6] OECD equivalence scale assigns a value of 1 to the household head, of 0.5 to each additional adult member and of 0.3 to each child.

hence, the coefficient estimates for these two categories are likely to increase once these controls are added. Also, there is a possibility of multicollinearity when controls for job characteristics are added because of the way these variables are incorporated (constructed) for these two categories[7].

Analysis sample

The original sample consists of 182,799 observations from 27,894 unique individuals. Several restrictions are placed on the sample for this study. The sample is restricted to the working-age population of persons aged 18 to 55 excluding full-time students aged less than 25 years. I excluded full-time students because employment while pursuing full-time studies is not likely to have a large effect on one's future employment and income.

Second, the sample is further restricted to single-family households that also includes persons living alone: households that include other related or non-related persons have been excluded. The HILDA survey identifies around 93% of people to be living in single family households. This restriction is imposed to avoid issues that arise due to the ambiguity regarding how resources and expenses are shared within joint or grouped families.

Third, the sample used for the analyses is restricted to cases with non-missing data on financial hardship, employment and mechanism measures. Further, the sample is restricted to non-missing values on all explanatory variables (except those with missing flag)[8]. The employment contract variable had 0.29% and the financial index had 13.54% (excluding the cases missing from wave 10) of the observations missing for the initial analysis sample. As some of my explanatory and mechanisms variables control for events or shocks in the previous

[7] There is never an overlap with any of the union membership, industry, occupation, private sector and hours worked measures, implying that unemployment and OOLF indicators never take value 1 when any of the union membership, industry, occupation and hours worked takes value 1 (or >1 in case of hours worked).

[8] These include two variables-mental and physical health measures based on SF-36 index. These two variables had a total of 1,027 missing observations for non-missing response of my hardship variable. For these variables I filled up any missing value for the respondent with his/her average value for the years he/she is observed to minimise the missing data and include indicators for missing response.

year, I further lose the first wave of the data. Hence, the analyses are based on 11 waves of data from release 13. The final sample size is 73,149 observations from 15,687 unique persons.

The HILDA survey dataset provides sampling weights. However, I do not use these weights because I have imposed several restrictions on the sample, and because I use fixed-effects methods on an unbalanced sample that requires at least two observations on the same individual and as a result people who are only interviewed once are dropped. Consequently, the use of weights is not appropriate for my study. Solon, Haider, & Wooldridge (2015) showed that weighting actually reduces the efficiency of the estimates when estimating fixed-effects model with unbalanced panel.

Descriptive analysis

I start by describing how the incidence and characteristics of financial hardship vary by employment status and gender. The first row of panel A and panel B in Table 1 lists the means of the financial hardship index for men and women, respectively. It shows that men and women who are not in permanent employment arrangements report a higher incidence of hardships, on average, than men and women who are in permanent employment. The second component of panels A and B (part ii) presents the distribution of the financial hardship index by employment type for each gender. Among both men and women, around 20% of permanent employees, report facing one or more hardships. By contrast, among men, 40 % of casual employees and among women, 33% of casual employees report facing one or more types of hardships. The incidence of financial hardships does not, however, appear to be very different between fixed-term employees and permanent employees among both men and women.

The third component of panels A and B (part iii) presents the rates of different types of financial hardships experienced by men and women, respectively. Not being able to pay utility bills on time, mortgage/rent on time and asking friends/family for financial help are the three most commonly experienced hardships among both men and women. But compared with

permanent employees, the incidence of each of the hardship is much higher among casual employees, the unemployed and those out of the labour force.

Gender differences also appear in types of hardships experienced by respondents. Male casual employees experience more financial hardship than female casual employees and so do men that are out of the labour force. This may reflect that typically, women are the secondary earner in the household.

Table 2 summarises how various demographic, economic, health, and work-related characteristics vary for people in different employment arrangements.

*Fixed-term employees***.** Fixed-term employees are, compared to permanent employees, more likely to be women, young, and single. In terms of employment and job characteristics, fixed-term employees are more likely to have held multiple jobs and to have changed jobs in the past 12 months. However, fixed-term employees are also more likely than permanent employees to have university qualifications, to be working as professionals, and to be employed in the public sector, particularly in the education and training industries.

Casual employees. Casual employees are, compared to permanent employees, more likely to be women, young, less educated, living in regional or remote areas, and of Aboriginal or Torres Strait Islander origin. They are also more likely to be lone parents with carer responsibilities or single and are more likely to have poor mental health and physical health. In terms of employment and job related characteristics, compared with permanent employees, casual employees are less likely to be professionals and government employees, and more likely to be a community and personal service workers, sales workers or labourers. As expected almost none of them are provided with paid leave. They have lower levels of household income, they are significantly more likely to have experienced job loss, to have changed jobs in the past 12 months, and to be working significantly fewer hours,

These results suggest clear differences between permanent and casual employees. The differences between fixed-term and permanent employees, however, are not as striking.

Self-employed, unemployed persons and those out of the labour force (OOLF). Table 2 suggests that self-employed workers are, compared to those in permanent jobs, more likely to be men, older, less educated, and belong to a couple family with carer responsibilities. Unemployed people, compared to those in permanent jobs, are more likely to be women, young, less educated and single. They are also more likely to have poor mental and physical health. People who are out of the labour force are more likely to women, older, less educated and with carer responsibilities. They are also more likely to have poor mental health and poor physical health.

Multivariate empirical analysis

To allow for the rank order in the hardship measure, but without making any assumptions about the relative degree of difference between each of the individual hardships, I treat my financial hardship index variable as an ordinal measure and estimate fixed effects ordered logit regression models of the following form for men and women in different family types[9]:

$$f_{it}^{*} = \beta E_{it}' + \delta X_{it}' + \eta_i + \mu_t + \varepsilon_{it,} \qquad i = 1, \dots, N \qquad t = 1, \dots, T$$

f_{it}^{*} is a latent index describing financial hardships of person i at time period t. E_{it} is a vector of dummy variables identifying the type of employment arrangement held by person i; X_{it} is a vector of person's other time varying observable characteristics; β and δ are the vectors of coefficients; η_i is a time-invariant person specific unobserved term; μ_t is a time (or wave) fixed-effect; ε_{it} is an idiosyncratic error term.

The latent variable is tied to the observed ordered variable f_{it} by the observation rule:

[9] Lagrange- multiplier (LM) test rejected OLS in the favour of random effects with a p-value of 0.000 for both men and women in each of the subsample. The Hausman-Wu test rejected random effects in favour of fixed-effects models with a p-value of 0.000 for both men and women in each of the subsample, indicating a significant correlation between time-invariant omitting variables and observed variables.

$$f_{it} = k \;\; if \;\; \tau_{ik} < f_{it}^{*} \leq \tau_{ik+1}, \qquad k = 0, \ldots, 7$$

The fixed effects ordered logit model assumes that the ε_{it} terms are independently and identically distributed with a logistic distribution. The estimation of non-linear fixed-effects models such as the ordered logit model is complicated by the incidental parameters problem (Lancaster, 2000). The usual approach adopted to obtain consistent estimates of β is to dichotomize the ordered outcome variable at a cut-off point and then apply conditional maximum likelihood (CML) estimation (Chamberlain, 1980). However, this approach ignores individuals who do not cross the dichotomous cut-off over time. I use an alternative estimator proposed by Baetschmann, Staub, & Winkelmann (2015) coined as the 'Blow-Up and Cluster' estimator (BUC) that is consistent and asymptotically efficient. This estimator uses all the available variation in the ordered outcome variable, is more efficient, outperforms existing alternative estimators (GMM, Empirical Likelihood (EL), Minimum Distance (MD)), if the ordered dependent variable displays extremely low responses for some categories (as in my study) , and produces robust estimates even in small samples.

In practice, the BUC estimator is implemented by replacing every person-year observation in the sample by K-1 copies of itself (hence, 'blowing up' the data) and then dichotomizing each of the K-1 copies of the person at each threshold /cut-off point. The resulting binary logit models are estimated using CML and standard errors are clustered at the individual level to account for the interdependence of person-year copies of observation. The resulting coefficients are combined by jointly estimating all dichotomizations subject to the restriction $\beta^{k} = \beta \;\; \forall k = 2, \ldots, K$. Given its advantages, this estimator has been used in many recent studies (for example, see Bell, Otterbach, & Sousa-Poza (2012); Buddelmeyer, McVicar, & Wooden (2015)). The coefficients β in my ordered logit models are interpreted as the approximate effect of a change in employment status on the odds ratio $\Pr(f_{it} > k) / \Pr(f_{it} \leq k)$, for all k.

The use of fixed effects methods exploits the within-individual variation in both the experience of financial hardship and employment status and thus mitigates the endogeneity arising from unobserved individual time invariant heterogeneity that might be correlated with both financial hardships and employment status. The empirical analysis also controls for an extensive set of time-varying observed factors such as, mental and physical health, union membership, industry, and occupation, thus minimizing the endogeneity arising from omitted variable bias.

I estimate fixed effects ordered logit models separately for men and women within each family type using the BUC estimator. Results for men and women are given in Table 3 and Table 4, respectively. I consider three specifications increasing in controls. Model A lists estimates from my baseline specification that only includes individual and time fixed-effects. Model B in the next column adds controls for arguably exogenous time-varying observed factors including age, education, area of residence, an indicator for the mode of interview, and an indicator of whether the respondent is observed in the sample at t+1. Model C adds controls that may be potentially endogenous. These include controls for mental and physical health, health shock, union status, the number of jobs held in the preceding financial year, industry, occupation, private sector employee and a binary indicator for whether information for the person's mental or physical health were missing.

Results

Results for men

Table 3 lists regression coefficient estimates and clustered robust standard errors from the fixed effects ordered logit models for men in couple families (partnered men) with dependent children (panel (i)), in couple families without dependent children (panel (ii)) and for men living alone (panel(iii)). For brevity, the table only lists the coefficients and standard errors for the measures of employment arrangements (complete results are available upon request).

In ordered logit model we can interpret the coefficients in terms of log odds by calculating [exp(β)-1]*100. For example, for partnered men with dependent children, I find that compared to permanent employment, casual employment increases the odds of experiencing more financial hardships by about 72% (or exactly by [exp(0.544)-1]*100)) after I control for exogenous and potentially endogenous variables in the final specification (model C). In contrast, the associations between fixed-term employment and financial hardship are not significant in any of the specifications. For partnered men without dependent children, again compared to permanent employment, casual employment, but not fixed-term employment is significantly associated with increased financial hardships in all the specifications. For men living alone, I find that compared to permanent employment, casual employment is significantly associated with more financial hardship in models A and B. However, the magnitude and significance of the casual employment coefficient declines noticeably in the final specification (model C) that adds measures for potentially endogenous variables, and it remains significant only at 10%. Also, for men living alone, I find no significant associations between fixed-term employment and financial hardship.

Additionally, the results suggest that for partnered men without dependent children and those living alone, self-employment is significantly associated with increased financial hardship compared to permanent employment. In contrast, for partnered men with dependent children, I do not find any significant association between self-employment and financial hardships when compared to permanent employment. Further, unemployment and being out of the labour force are significantly associated with increased financial hardships for men in all sub-samples except for those living alone, where estimates for unemployment and out of the labour force become insignificant once controls for health and job characteristics are added[10].

[10] However, standard errors increase significantly possibly due to the multicollinearity problem that I discussed earlier.

Results for women

Table 4 reports regression coefficient estimates and clustered robust standard errors from the fixed effects ordered logit models for women in couple families (partnered women) with dependent children (panel(i)), in couple families without dependent children (panel(ii)), in lone parent families with dependent children (panel(iii)) and for women living alone (panel(iv)). For brevity, the table only lists the coefficients and standard errors for the measures of employment arrangements (complete results are available on request).

The results reveal that for partnered women with and without dependent children as well as for lone mothers, compared to permanent employment, casual employment is significantly associated with increased financial hardship in all the specifications. In contrast, for women living alone, compared to permanent employment, casual employment is not significantly associated with increased financial hardship. Fixed-term employment is not significantly associated with increased financial hardship for women in any of the sub-samples. In fact, estimates for fixed-term employment for single women are negative, although not significant at conventional levels.

Additionally, the results suggest that self employment is significantly associated with increased hardships for partnered women without dependents but not for partnered women with dependents. For lone mothers and women living alone, the estimates for self-employment are imprecise due to the small cell size issue. Hence, it is not possible to draw conclusions for these two categories.

The findings for self-employment suggests that compared to permanent employment, self-employment might not be disadvantageous for partnered men and women with carer responsibilities in terms of their experience of financial hardship. It might offer them greater flexibility to manage and share child care and other household responsibilities resulting in economic gains by saving on the cost of formal childcare and paying for the other household

work. Alternatively, these findings may reflect self selection into self employment on the basis of unobservable time varying factors, an issue worth investigating for future research.

For women, both unemployment and being out of the labour force is significantly associated with increased financial hardship in all sub-samples in model A and B. In the specification that adds controls for job characteristics, the standard errors for unemployment and out of the labour force increase considerably leading to imprecise estimates.

Effects of covariates

I find that for both men and women in all sub-samples, poor mental health is significantly associated with increased financial hardships. Poor physical functioning is significantly associated with increased hardships for men and women in all sub-samples except for partnered men without dependents, and men and women living alone. Also, findings suggest that living in remote areas is associated with lower financial hardships for women in all family types, but for men this is true only for partnered men without dependents. Finally, being a private sector employee is significantly associated with increased financial hardship for men and women in couple families without dependents.

Mediating factors and sensitivity analyses

Exploring potential mediating factors

I examine whether the significance and magnitude of the effects change when I control for potential mediating factors in my model– level of income, number of hours worked, experience of job loss and job change. If most of the negative effect of non-permanent employment, particularly casual employment, arises because of these characteristics, we would expect the estimates to decline noticeably in magnitude and significance once I control for these characteristics. The results of the mediating factors analysis are presented in Table 5 for men and Table 6 for women. For brevity, the table only lists the coefficients and standard errors for

my two types of non-permanent employment forms: fixed-term and casual employment (complete results are available on request).

The first column of both the tables simply shows the main results from model C. In the second column, I add a control for the log of the person's gross total household income adjusted by OECD equivalence scale. In the third column, I add a control for hours worked and finally in the fourth column I add two controls for the two measures of employment shocks: -job loss and job change in the 12 months preceding the date of the interview.

For men, the results for fixed-term employment remain qualitatively unchanged. In other words, the finding of no significant association between fixed-term employment and financial hardship is robust to the inclusion of potential mediating factors in the model. In contrast, the inclusion of potential mediating factors noticeably alters the strength of association between casual employment and financial hardship for men. When I control for the level of household income and hours worked, the coefficient estimates for casual employment decline in magnitude for men in all sub-samples. Finally, when measures for job loss and job change are added, the coefficient estimates for casual employment decline considerably in magnitude and are no longer significant at conventional levels in all sub-samples for men. These findings suggest that the strong positive association between casual employment and financial hardship is largely explained by fewer hours of work and a higher vulnerability to employment shocks (job loss and job change).

For women, the results for fixed-term employment remain qualitatively unchanged after the inclusion of potential mediating factors in all sub-sample except for women living alone. For women living alone, the inclusion of potential mediating factors results in a negative and significant association between fixed-term employment and financial hardship. Moving to casual employment, the inclusion of potential mediating factors noticeably reduces the magnitude of the estimates of casual employment for women in all sub-samples. For partnered

women without dependents, the coefficient estimate for casual employment even becomes insignificant at conventional levels. However, for partnered women with dependents and lone mothers, the coefficient estimate for casual employment still remains statistically significant at 5%. In other words, for women with carer responsibilities (partnered as well as lone mothers) there still remains a significant positive association between casual employment and financial hardship. These findings suggest that other factors such as having access to paid carer/sick leave might also be equally important for women with carer responsibilities to manage their household and child care duties without suffering loss of income. Moreover, evidence from previous studies suggests that scheduling flexibility associated with casual jobs more frequently is created to increase employment flexibility for employers rather than workers' time-use preferences (OECD, 2002; Pocock, Prosser, & Bridge, 2004).

It is important to highlight the caveats associated with these results. The employment shock measures capture events that can occur any time in the 12 months preceding the interview date. This means that shock events might not necessarily capture the experience associated with the contract of employment that the person reports at the time of the interview. Nonetheless, descriptive findings from this study and empirical research on casual employment has consistently shown that reduced hours of work and experiences of job loss and job change are much more common among casual employees compared to employees in permanent and fixed-term employment arrangements.

Sensitivity Analysis

A number of analyses were conducted to investigate the sensitivity of the main results and potential mediating factors analysis results to alternative functional forms, additional controls, alternative measure of the hardship index, and different specifications. First, I consider whether my results are robust if I treat the financial hardship index (f_{it}) as a cardinal measure by running

two-way linear fixed-effects regression models of the count of hardships. The results remain substantively the same as reported in the paper.

Second, I incorporate lags for the physical and mental health controls. Mental and physical health might be endogenous if financial hardships affect health outcomes. This could be more problematic in my analysis given that mental and physical health are measured at the time (or the previous four weeks preceding the interview) of the interview and hardships are measured from the start of the year. Hence, I additionally control for mental and physical health at the previous wave in the models. A comparison of the estimates suggests the findings are qualitatively similar to those reported in the paper.

Third, I exclude the 'inability to heat home' variable from the financial hardship index as the responses to it could be influenced by the geograpical location/climate of the place where respondents live. The findings are qualitatively similar to those reported in the paper.

Fourth, I restrict the index to include only true/actual hardships (pawning or selling something, going without meals, an inability to heat the home, asking for help from welfare or community organizations) and excluded the following variables: unable to pay utility bills on time, unable to pay rent/mortgage on time and asking financial help from friends and family (cash flow problems). However, it should be noted that the incidence of the actual hardships is very low in the sample and particularly among women (see Table 1). Hence, estimates for women might be imprecise due to small effective sample size. I find that for men the results remain qualitatively similar but estimates for all employment types are noticeably larger in magnitude. For women, I find that the results are qualitatively similar for lone mothers and single women, but again magnitudes of the estimates for fixed-term and casual estimates are noticeably larger. For partnered women, the standard errors of all estimates become large due to the small effective sample size, but still the direction of the associations between employment type and financial hardship were the same as the main finding of the paper.

Fifth, given that the experience of financial hardships is measured over the entire year until the date of the interview, but the majority of my explanatory variables are measured at the time of the interview, I also estimate models (both random and fixed effects) where I replaced current values with lagged values (*t-1*) for all explanatory variables. The results for the random effects ordered logit models suggest that casual employment at *t-1* is significantly associated with increased financial hardship during year *t* for both men and women in all sub-samples. But again the estimates of casual employment decline noticeably in magnitude and significane once controls for potential mediating factors are added. Fixed-term employment is not significantly associated with financial hardship for any group except for partnered men with dependents. Moving to BUC fixed-effect ordered logit models, the majority of estimates for the employment categories have expected sign, but are insignificant for both men and women. One potential reason for this could be that fixed-effects methods already take into account to some extent the transitions in employment from previous periods to the current period. Hence, estimating fixed-effects models with lagged variable for employment type would consider changes in the type of employment between t-2 and t-1 periods to estimate its effects on financial hardships faced during year t. The associations in such cases are likely to be very weak.

Sixth, given that a person's family type might vary over time, I examine the sensitivity of results to controlling for family using a set of indicators and estimating over all men and women separately instead of disaggregating the sample by family type. I again find that for both men and women, casual employment, but not fixed-term employment, is significantly associated with financial hardship in the specification that controls for all the observed factors and potential mechanisms (final specification in tables 4 and 5). Additionally, for men, compared to belonging to a couple-only family, belonging to a couple family with dependents

and living alone is significantly associated with increased financial hardship. For women, being a lone parent and living alone is associated with increased hardships.

Further, I estimate models where I add interaction terms between each of the employment types and each of the family types (excluded category is permanent employment for job type and couple family without dependents for family type). One way to think about the coefficients of the interaction terms is, as the modification of the effect of employment by family type.

For men, the majority of the interaction terms suggests statistically insignificant differences except for the interaction of *self-employment x couple with dependents,* where the coefficient is negative and significant in the final specification. The coefficient on *self-employment x couple with dependents* gives the difference in log-odds ratio comparing self-employed vs permanent in couple families with dependents and the log-odds ratios comparing self-employed vs permanent in couple-only family. Hence, the negative and significant coefficient on *self-employment x couple with dependents* suggests that for men, compared to permanent employment, self-employment is relatively less bad (in terms of financial hardship) in the presence of dependent children. This finding is consistent with the main finding of the paper.

For women, I find that the estimate for *fixed-term x living alone*, *casual x living alone*, *self-employment x couple with dependents*, *unemployment x couple with dependents* are negative and statistically significant. These finding suggest that for women, compared to permanent employment, fixed-term employment and casual employment are associated with lower financial hardship when living alone. Also, compared to permanent employment, self-employment and unemployment are associated with lower financial hardship in the presence of dependent children. Again, these finding are mostly consistent with the main findings of the paper. All of the sensitivity analysis results are available upon request.

Discussion and conclusion

This paper uses rich longitudinal data from the HILDA survey to examine the association between non-permanent employment and financial hardship, separately among men and women. Results indicate that the relationship between non-permanent employment and financial hardship is heterogeneous.

The descriptive analyses reveal that the incidence of financial hardship is relatively high among those in non-permanent employment arrangements compared to those in permanent employment. Also, as expected, unemployed persons and those out of the labour force report significantly higher number of financial hardships compared to those employed in both permanent and non-permanent jobs. The descriptive analyses further reveal that there are significant differences among the people working in different employment arrangements in terms of their personal, demographic, economic and work related characteristics.

The results from the multivariate models confirms the strong association between casual employment and financial hardship observed in the descriptive analysis, for both men and women in most household types. The finding from multivariate analysis also highlighted some exceptions, such as no significant association was observed between casual employment and financial hardship for men and women who are living alone. The results of multivariate analyses reveal that, for both men and women in all household types, fixed-term employment is not significantly associated with financial hardship.

These findings suggest that the results are not driven by the lack of permanency in a job. Factors like stable pay and certainty regarding the length of employment are important to overcome financial stress. Unlike casual employees, the level of earnings under fixed-term contracts is high and not variable during the contract period. In addition, while these jobs are for a fixed period, there is no uncertainty regarding the contract termination date which allows

one to plan accordingly about getting the next job. Moreover, the majority of fixed-term employees have access to paid time off and work for 40 hours per week on average.

Results from additional analysis suggest that low level of income, insufficient hours of work, and experience of job loss and job change that might result in volatile/unstable income are important mechanisms which cause employees increased financial hardship. Once these factors are taken into account in the empirical models, the significant positive estimates of casual employment on financial hardship decline considerably in magnitude and significance for men in all sub-samples. A similar pattern is observed for partnered women without carer responsibilities and those living alone. For partnered women with carer responsibilities and lone mothers, these factors do explain some association, but still an association between casual employment and financial hardship remains.

There are some important caveats to findings in this paper. First, while the estimation methodology and rich nature of the HILDA data allows me to control for unobserved time-invariant factors, common shocks and an extensive set of time varying observed characteristics, there might still be other time-varying factors that are not controlled for, leaving the possibility of endogeneity arising from omitted variable bias. Second, one cannot completely rule out the possibility that experiencing severe hardships (such as going without food for long) could affect employment prospects for at least some people. In such case the results of this study do not necessarily merit a causal interpretation.

With these caveats I draw out the following implications for policy: First, the significantly higher number of hardships faced by the unemployed and those out of the labour force people clearly suggests that having a job is better than not having one to avoid financial hardships. Therefore, if casual jobs are "stepping stones" for people to (re-) enter the labour maket and eventually move to more stable/permanent employment, then these jobs might improve the economic well-being of people in the long-term. However, for workers that get

trapped in casual or precarious jobs, the significant association between casual employment and financial hardships found in this study may provide sufficient grounds to provide these workers with some form of safety net. Mechanisms analysis suggests that this could come in terms of interventions that lower the vulnerability of casual workers to inadequate hours of work, and/or experience frequent job separations.

References

ABS. (2010). *Measures of Australia's Progress 2006, cat. no. 1370.0.*Australian Bureau of Statistics, Canberra.

Baetschmann, G., Staub, K. E., & Winkelmann, R. (2015). Consistent estimation of the fixed effects ordered logit model. *Journal of the Royal Statistical Society: Series A (Statistics in Society), 178*(3), 685-703.

Bauman, K. J. (2002). Welfare, work and material hardship in single parent and other households. *Journal of Poverty, 6*(1), 21-40.

Bell, D., Otterbach, S., & Sousa-Poza, A. (2012). Work hours constraints and health. *Annals of Economics and Statistics/ANNALES D'ÉCONOMIE ET DE STATISTIQUE*, 35-54.

Boden, R. J. (1999). Flexible working hours, family responsibilities, and female self-employment. *American Journal of Economics and Sociology, 58*(1), 71-83.

Booth, A. L., Francesconi, M., & Frank, J. (2002). Temporary jobs: stepping stones or dead ends? *The economic journal, 112*(480), F189-F213.

Buchler, S., Haynes, M., & Baxter, J. (2009). Casual employment in Australia The influence of employment contract on financial well-being. *Journal of Sociology, 45*(3), 271-289.

Buddelmeyer, H., Leung, F., McVicar, D., & Wooden, M. (2013). *Training and its impact on the casual employment experience*: NCVER.

Buddelmeyer, H., McVicar, D., & Wooden, M. (2015). Non-Standard "Contingent" Employment and Job Satisfaction: A Panel Data Analysis. *Industrial Relations: A Journal of Economy and Society, 54*(2), 256-275.

Buddelmeyer, H., & Wooden, M. (2011). Transitions out of casual employment: the Australian experience. *Industrial Relations: A Journal of Economy and Society, 50*(1), 109-130.

Butterworth, P., & Crosier, T. (2005). Deriving a measure of financial hardship from the HILDA survey. *Australian Social Policy*, 1-12.

Campbell, I. (2004). Casual work and casualisation: how does Australia compare? *Labour & Industry: a journal of the social and economic relations of work, 15*(2), 85-111.

Campbell, I., Whitehouse, G., & Baxter, J. (2009). Australia: Casual employment, part-time employment and the resilience of the male-breadwinner model. *Gender and the contours of precarious employment*. London, UK: Routledge.

Casey, L., & Liang, R. P.-T. (2014). *Stress and wellbeing in Australia survey 2014.* Retrieved from Australian Psychological Society: https://www.psychology.org.au/assets/files/2014-aps-npw-survey-web-reduced.pdf.

Chalmers, J., & Kalb, G. (2001). Moving from unemployment to permanent employment: could a casual job accelerate the transition? *Australian Economic Review, 34*(4), 415-436.

Chamberlain, G. (1980). Analysis of Covariance with Qualitative Data. *Review of Economic Studies, 47*(1), 225.

de Graaf-Zijl, M., Van den Berg, G. J., & Heyma, A. (2011). Stepping stones for the unemployed: the effect of temporary jobs on the duration until (regular) work. *Journal of population Economics, 24*(1), 107-139.

Eamon, M. K., & Wu, C.-F. (2011). Effects of unemployment and underemployment on material hardship in single-mother families. *Children and Youth Services Review, 33*(2), 233-241.

Forde, C., & Slater, G. (2005). Agency working in Britain: Character, consequences and regulation. *British Journal of Industrial Relations, 43*(2), 249-271.

Fuller, S., & Vosko, L. F. (2008). Temporary employment and social inequality in Canada: Exploring intersections of gender, race and immigration status. *Social indicators research, 88*(1), 31-50.
Gash, V. (2008). Bridge or trap? Temporary workers' transitions to unemployment and to the standard employment contract. *European Sociological Review, 24*(5), 651-668.
Giesecke, J. (2009). Socio-economic risks of atypical employment relationships: evidence from the German labour market. *European Sociological Review, 25*(6), 629-646.
Giesecke, J., & Groß, M. (2003). Temporary employment: chance or risk? *European Sociological Review, 19*(2), 161-177.
Gundersen, C., & Gruber, J. (2001). *The dynamic determinants of food insufficiency.* Paper presented at the Second food security measurement and research conference.
Houseman, S., & Osawa, M. (2003). The growth of nonstandard employment in Japan and the United States. *S. Houseman and M. Osawa, Nonstandard Work in Developed Economies: Causes and Consequences. Kalamazoo, Mich.: WE Upjohn Institute for Employment Research*, 175-214.
ILO. (2008a). Globalization, Flexibilization and Working Conditions in Asia and the Pacific. *ILO publications. International Labour Office, Geneva.*
ILO. (2008b). World of work report 2008: income inequalities in the age of financial globalization. *ILO publications, International Labour Organization, International Institute for Labour Studies- Geneva.*
ILO. (2015). Non-standard forms of employment. Report for discussion at the Meeting of Experts on Non-Standard Forms of Employment (Geneva, 16–19 February 2015). *ILO publications, Conditions of Work and Equality Department, International Labour Office-Geneva.*
Jappelli, T., & Pistaferri, L. (2010). The consumption response to income changes. *National Bureau of Economic Research.*
Kahn, L. M. (2013). The structure of the permanent job wage premium: evidence from Europe. *IZA discussion paper no. 7623, Institute for the Study of Labor*.
Kalleberg, A. L. (2000). Nonstandard employment relations: Part-time, temporary and contract work. *Annual review of sociology*, 341-365.
Kalleberg, A. L., Reskin, B. F., & Hudson, K. (2000). Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. *American Sociological Review*, 256-278.
Lancaster, T. (2000). The incidental parameter problem since 1948. *Journal of econometrics, 95*(2), 391-413.
Lovell, V., & Oh, G.-T. (2006). Women's job loss and material hardship. *Journal of Women, Politics & Policy, 27*(3-4), 169-183.
McGovern, P., Smeaton, D., & Hill, S. (2004). Bad jobs in Britain nonstandard employment and job quality. *Work and occupations, 31*(2), 225-249.
Meghir, C., & Pistaferri, L. (2011). Earnings, consumption and life cycle choices. *Handbook of Labor Economics, 4*, 773-854.
Mooi-Reci, I., & Dekker, R. (2015). Fixed-Term Contracts: Short-Term Blessings or Long-Term Scars? Empirical Findings from the Netherlands 1980–2000. *British Journal of Industrial Relations, 53*(1), 112-135.
OECD. (2002). *Taking the Measure of Temporary Employment, OECD Employment Outlook 2002*. Retrieved from OECD Publishing, Paris: http://dx.doi.org/10.1787/empl_outlook-2002-5-en:

OECD. (2014). *Non-regular employment, job security and the labour market divide, OECD Employment Outlook 2014*. Retrieved from OECD Publishing, Paris. http://dx.doi.org/10.1787/empl_outlook-2014-7-en

OECD. (2015). *In It Together: Why Less Inequality Benefits All*. Retrieved from OECD Publishing, Paris: http://dx.doi.org/10.1787/9789264235120-en

Pocock, B. A., Prosser, R. W., & Bridge, K. J. (2004). Only a Casual... How Casual Work affects Employees Households and Communities in Australia.

Presser, H. B. (1989). Can we make time for children? The economy, work schedules, and child care. *Demography, 26*(4), 523-543.

Presser, H. B. (1995). Job, family, and gender: Determinants of nonstandard work schedules among employed Americans in 1991. *Demography, 32*(4), 577-598.

Solon, G., Haider, S. J., & Wooldridge, J. M. (2015). What are we weighting for? *Journal of Human Resources, 50*(2), 301-316.

Verbeek, M., & Nijman, T. (1992). Testing for selectivity bias in panel data models. *International Economic Review*, 681-703.

Watson, I. (2013). Bridges or traps? Casualisation and labour market transitions in Australia. *Journal of Industrial Relations, 55*(1), 6-37.

Watson, I., Buchanan, J., Campbell, I., & Briggs, C. (2003). *Fragmented futures: New challenges in working life*. Annandale, Federation Press.

Watson, N., & Wooden, M. P. (2012). The HILDA survey: a case study in the design and development of a successful household panel survey. *Longitudinal and Life Course Studies, 3*(3), 369-381.

Wilkins, R., & Wooden, M. (2013). Gender differences in involuntary job loss: Why are men more likely to lose their jobs? *Industrial Relations: A Journal of Economy and Society, 52*(2), 582-608.

Will, L., Shomos, A., & Turner, E. (2013). Forms of Work in Australia-Productivity Commission Staff Working Paper,Canberra.

Wooden, M., & Warren, D. (2003). *The characteristics of casual and fixed-term employment: evidence from the HILDA survey*: Melbourne Institute of Applied Economic and Social Research, The University of Melbourne.

Yu, W.-h. (2012). Better off jobless? Scarring effects of contingent employment in Japan. *Social Forces*, sor031.

Table 1.Incidence of financial hardship conditional on the employment arrangement

	Panel A. Men					
	Permanent	Fixed-term	Casual	Self-emp.	Unemp.	OOLF
Index of financial hardship (mean)	0.357	0.427***	0.968***	0.480***	1.563***	1.333***
Average number of financial hardships experienced (%)						
0	80.82	78.22	59.82	77.24	46.20	50.55
1	9.90	10.44	14.53	9.88	14.66	15.08
2	4.95	5.74	10.37	5.90	12.10	12.41
3	2.50	3.32	6.82	3.87	9.10	7.44
4	1.16	1.16	4.01	1.67	6.98	6.19
5	0.40	0.69	2.56	0.86	5.74	4.77
6	0.19	0.26	0.99	0.32	3.00	2.47
7	0.09	0.17	0.89	0.26	2.21	1.09
Experience of individual financial hardships (%)						
Could not pay utility bills on time	11.61	11.73	24.44***	14.87***	31.45***	28.43***
Asked financial help from friends or family	10.64	13.84***	25.72***	12.43***	37.10***	31.74***
Could not pay mortgage or rent on time	4.99	6.21**	15.45***	10.12***	18.46***	12.86***
Pawned or sold something	3.58	4.79***	10.23***	4.47***	22.61***	19.65***
Was unable to heat home	1.49	1.81	4.44***	1.58	8.57***	9.58***
Went without meals	2.36	2.59	7.96***	2.38	17.40***	15.08***
Asked help from welfare organizations	0.99	1.77***	8.53***	2.18***	20.67***	15.93***
Person-wave observations (N)	19,726	2,319	2,815	5,681	1,132	2,473
	Panel B. Women					
	Permanent	Fixed-term	Casual	Self-emp.	Unemp.	OOLF
Index of financial hardship (mean)	0.371	0.406*	0.721***	0.450***	1.533***	0.972***
Average number of financial hardships experienced (%)						
0	79.52	77.50	67.35	77.61	44.38	60.64
1	10.56	11.32	13.24	10.14	15.99	13.37
2	5.79	6.40	8.43	6.36	13.18	10.04
3	2.61	3.16	5.50	3.50	9.52	7.17
4	0.83	1.20	3.14	1.18	7.18	4.39
5	0.45	0.34	1.42	0.62	5.85	2.27
6	0.15	0.08	0.57	0.34	2.89	1.49
7	0.08	0.00	0.35	0.25	1.01	0.63
Experience of individual financial hardships (%)						
Could not pay utility bills on time	12.92	14.22*	21.32***	14.30**	38.22***	26.61***
Asked financial help from friends or family	11.70	12.87*	20.71***	11.79	38.30***	24.27***
Could not pay mortgage or rent on time	5.25	5.76	10.51***	8.84***	18.49***	11.65***
Pawned or sold something	2.76	2.60	6.01***	3.94***	17.39***	10.27***
Was unable to heat home	1.52	1.77	3.35***	2.17***	9.13***	6.49***
Went without meals	1.76	2.07	4.74***	1.77	14.43***	7.60***
Asked help from welfare organizations	1.15	1.28	5.48***	2.17***	17.32***	10.33***
Person-wave observations (N)	17,656	2,658	5,127	3,224	1,282	8,903

Notes: (a) The statistics reported in the table were calculated using unweighted longitudinal data from the HILDA survey for the analysis sample. (b) Asterisks indicate statistically significant differences using permanent employment as reference category (first column) based on *t* test. Significant at the .10 level; ** at the .05 level; *** at the .01 level. Results from χ^2 test of differences in the relationship distribution were significant at 0.001 level.

Table 2. Economic, demographic and job characteristics conditional on the employment arrangement

Variable	Permanent	Fixed-term	Casual	Self-emp.	Unemp.	OOLF
Gender (Female=1) (%)	0.472	0.534***	0.646***	0.362***	0.531***	0.783***
Household type (%)						
Couples with dependents	0.457	0.413***	0.444**	0.585***	0.360***	0.529***
Couples without dependents	0.340	0.360***	0.297***	0.274***	0.285***	0.215***
Lone parents with dependents	0.046	0.047	0.090***	0.028***	0.132***	0.120***
Single-persons	0.158	0.179***	0.169**	0.113***	0.223***	0.135***
Age (%)						
18-24 years	0.102	0.132***	0.195***	0.024***	0.257***	0.095**
25-34 years	0.278	0.306***	0.269*	0.181***	0.275	0.280
35-44 years	0.290	0.261***	0.258***	0.342***	0.237***	0.285
45-54 years	0.329	0.302***	0.278***	0.452***	0.231***	0.340**
Highest education achieved (%)						
Postgraduate	0.052	0.111***	0.016***	0.046**	0.032***	0.023***
Bachelor, honours or grad dip	0.273	0.330***	0.151***	0.218***	0.114***	0.144***
Diploma or Cert. III or IV	0.343	0.288***	0.305***	0.400***	0.292***	0.250***
Year 11 or less	0.332	0.271***	0.528***	0.335	0.562***	0.584***
Area of residence (%)						
Living in regional area	0.315	0.326*	0.411***	0.380***	0.385***	0.410***
Living in remote area	0.016	0.018	0.021***	0.034***	0.020	0.016
Living in city	0.669	0.655**	0.568***	0.587***	0.595***	0.574***
Aboriginal or Torres Strait Islander (%)	0.014	0.020***	0.027***	0.006***	0.073***	0.044***
Health variables						
Long term health condition affecting work						
No condition	0.863	0.866	0.810***	0.834***	0.711***	0.607***
Mild effect (no work limitation)	0.072	0.068	0.071	0.059***	0.076	0.059***
Moderate effect (limits in some way but not completely)	0.065	0.066	0.118***	0.107***	0.212***	0.313***
Severe effect (cannot work at all)	0.000	0.000	0.001**	0.000	0.001***	0.021***
Suffered from serious personal injury	0.062	0.060	0.063	0.065	0.097***	0.117***
Physical functioning (based on SF-36)	72.848	73.287	70.792***	73.438**	65.615***	61.981***
Mental health (based on SF-36)	75.843	74.597***	72.857***	76.122	66.617***	67.393***
Person-wave observations (N)	37,382	4,977	7,942	8,905	2,414	11,376

Notes: The statistics reported in the table were calculated using unweighted longitudinal data from the HILDA survey for the analysis sample. Asterisks indicate statistically significant differences in characteristics using permanent employment as the reference category (first column) based on *t* tests. *** indicate that the differences are significant at 0.01 level, ** at 0.05 level and * at 0.10 level.

Table 2 continued.

Variable	Permanent	Fixed-term	Casual	Self-emp.	Unemp.	OOLF
Job characteristics						
Jobs held in last financial year						
No job	0.028	0.032	0.070***	0.029	0.417***	0.740***
One job	0.797	0.683***	0.579***	0.803	0.412***	0.220***
Multiple (two or more)	0.175	0.286***	0.352***	0.168*	0.171	0.040***
Member of union	0.329	0.276***	0.126***	0.107***	0.000	0.000
Occupation (%)						
Managers and professionals	0.411	0.511***	0.158***	0.487***	_	_
Technicians and Trades Workers	0.134	0.119***	0.099***	0.213***	_	_
Community and Personal Service	0.089	0.099**	0.196***	0.052***	_	_
Clerical and Administrative Workers	0.181	0.144***	0.136***	0.094***	_	_
Sales Workers	0.061	0.057	0.134***	0.033***	_	_
Machinery Operators and Drivers	0.062	0.030***	0.077***	0.045***	_	_
Labourers	0.062	0.040***	0.200***	0.077***	_	_
Private sector employee (%)	0.687	0.551***	0.809***	0.988***	_	_
Other job characteristics (%)						
Have access to paid holiday leave	0.963	0.863***	0.047***	_	_	_
Have access to paid sick leave	0.964	0.871***	0.051***	_	_	_
Potential mechanisms						
Level of equi. HH income of respondent	11.012	11.005	10.635***	10.806***	0.929***	10.420***
Employment shocks						
Fired or made redundant in past year	0.021	0.043***	0.073***	0.023	0.419***	0.038***
Changed job in past year	0.154	0.302***	0.348***	0.124***	0.433***	0.053***
Hours worked per week in main job	40.030	39.319***	25.101***	40.985***	_	_
Person-wave observations (N)	37,382	4,977	7,942	8,905	2,414	11,376

Notes: The statistics reported in the table were calculated using unweighted longitudinal data from the HILDA survey for the analysis sample. Asterisks indicate statistically significant differences in characteristics using permanent employment as the reference category (first column) based on *t* tests. *** indicate that the differences are significant at 0.01 level, ** at 0.05 level and * at 0.10 level. The estimates for other variables used in the analyses like industry dummies are available upon request.

Table 3. Two-way fixed effects ordered logit model regression results for men of number of types of financial hardship faced since the start of calendar year

	(Model A)	(Model B)	(Model C)
	No controls	Plus controls for background & attrition	Plus controls for health & job charac.
Men in couple families with dependents (N=8,783)			
Fixed-term	0.102	0.114	0.033
	(0.208)	(0.205)	(0.203)
Casual	0.671***	0.681***	0.548***
	(0.158)	(0.159)	(0.162)
Self-employment	0.174	0.183	0.156
	(0.197)	(0.198)	(0.210)
Unemployment	1.088***	1.091***	1.380***
	(0.229)	(0.227)	(0.403)
Out of the labour force	0.957***	0.962***	1.193***
	(0.213)	(0.215)	(0.422)
Wald-test for joint significance[b]		0.870	0.000
Men in couple families without dependents (N=3,977)			
Fixed-term	0.359	0.369	0.378
	(0.262)	(0.266)	(0.291)
Casual	0.727***	0.726***	0.655***
	(0.206)	(0.205)	(0.221)
Self-employment	0.993***	1.016***	1.014***
	(0.304)	(0.307)	(0.325)
Unemployment	1.174***	1.201***	2.648***
	(0.282)	(0.285)	(0.557)
Out of the labour force	1.523***	1.457***	2.868***
	(0.252)	(0.270)	(0.548)
Wald-test for joint significance[b]		0.389	0.000
Men living alone (N=5,175)			
Fixed-term	0.118	0.189	0.115
	(0.290)	(0.293)	(0.307)
Casual	0.481**	0.476**	0.389*
	(0.202)	(0.204)	(0.220)
Self-employment	0.957***	0.886***	0.872***
	(0.262)	(0.265)	(0.264)
Unemployment	1.289***	1.324***	0.729
	(0.265)	(0.274)	(0.548)
Out of the labour force	0.976***	0.987***	0.235
	(0.260)	(0.259)	(0.556)
Wald-test for joint significance[b]		0.246	0.000

Notes: a) The reference category is men in permanent or ongoing employment within each family type. b) Model A includes only year dummies. c) P-value of Wald test of joint significance of variables added to each subsequent model based on χ^2. d) Standard errors are clustered at the individual level and are given in parentheses. Significant at the .10 level; ** at the .05 level; *** at the .01 level.

Table 4. Two-way fixed effects ordered logit model regression results for women of number of types of financial hardship faced since the start of calendar year

	(Model A) No controls	(Model B) Plus controls for background & attrition	(Model C) Plus controls for health & job charac.
Women in couple families with dependents (N=9,915)			
Fixed-term	0.136	0.138	0.174
	(0.205)	(0.207)	(0.209)
Casual	0.586***	0.583***	0.546***
	(0.154)	(0.153)	(0.156)
Self-employment	0.241	0.258	0.300
	(0.202)	(0.201)	(0.212)
Unemployment	0.566***	0.559***	0.712*
	(0.197)	(0.197)	(0.431)
Out of the labour force	0.363**	0.346**	0.475
	(0.144)	(0.143)	(0.407)
Wald-test for joint significance[b]		0.053	0.000
Women in couple families without dependents (N=4,255)			
Fixed-term	0.257	0.254	0.328
	(0.253)	(0.259)	(0.266)
Casual	1.018***	0.910***	0.778***
	(0.214)	(0.211)	(0.228)
Self-employment	0.942***	0.879**	0.871***
	(0.334)	(0.342)	(0.310)
Unemployment	1.337***	1.300***	1.969***
	(0.329)	(0.324)	(0.700)
Out of the labour force	1.285***	1.219***	1.762***
	(0.242)	(0.236)	(0.636)
Wald-test for joint significance[b]		0.000	0.001
Women in lone parent families (N=4,591)			
Fixed-term	-0.019	-0.005	-0.084
	(0.336)	(0.331)	(0.323)
Casual	0.686***	0.702***	0.675***
	(0.214)	(0.206)	(0.210)
Self-employment	0.599	0.568	0.892**
	(0.398)	(0.395)	(0.453)
Unemployment	1.123***	1.138***	0.295
	(0.269)	(0.262)	(0.766)
Out of the labour force	0.945***	0.971***	0.055
	(0.211)	(0.209)	(0.727)
Wald-test for joint significance[b]		0.680	0.000

Notes: a) The reference category is women in permanent or ongoing employment within each family type. b) Model A includes only year dummies. c) P-value of Wald test of joint significance of variables added to each subsequent model based on χ^2. d) Standard errors are clustered at the individual level and are given in parentheses. Significant at the .10 level; ** at the .05 level; *** at the .01 level.

Table 4 continued.

	(Model A) No controls	(Model B) Plus controls for background & attrition	(Model C) Plus controls for health & job charac.
Women living alone (N=3,908)			
Fixed-term	-0.360	-0.401*	-0.422
	(0.227)	(0.240)	(0.260)
Casual	0.186	0.201	0.249
	(0.236)	(0.241)	(0.263)
Self-employment	0.677	0.574	0.937*
	(0.506)	(0.519)	(0.520)
Unemployment	0.814***	0.744**	0.159
	(0.306)	(0.327)	(0.662)
Out of the labour force	0.687**	0.698**	0.040
	(0.305)	(0.321)	(0.688)
Wald-test for joint significance[b]		0.461	0.000

Notes: a) The reference category is women in permanent or ongoing employment within each family type. b) Model A includes only year dummies. c) P-value of Wald test of joint significance of variables added to each subsequent model based on χ^2. d) Standard errors are clustered at the individual level and are given in parentheses. Significant at the .10 level; ** at the .05 level; *** at the .01 level.

Table 5. The effect of potential mediating factors on coefficient estimates for men

	(1) Baseline results	(2) Plus control for HH income	(3) Plus control for hours worked	(4) Plus controls for emp. shocks
Men in couple families with dependents (N=8,783)				
Fixed-term	0.033	0.043	0.023	0.002
	(0.203)	(0.202)	(0.204)	(0.201)
Casual	0.548***	0.541***	0.406**	0.271*
	(0.162)	(0.161)	(0.160)	(0.161)
Potential mechanisms				
log total gross equi. HH income of the respondent		-0.114**	-0.107*	-0.109*
		(0.058)	(0.060)	(0.060)
Hours worked per week in main job			-0.020***	-0.019***
			(0.005)	(0.005)
Employment shocks				
Fired or made redundant in past year				0.540***
				(0.170)
Changed job in past year				0.367***
				(0.111)

Notes: a) The reference category is men in permanent or ongoing employment within each family type. b) Baseline results include controls for observed background, attrition, health, and some job characteristics. c) Standard errors are clustered at the individual level and are given in parentheses. Significant at the .10 level; ** at the .05 level; *** at the .01 level.

Table 5 continued.

	(1) Baseline results	(2) Plus control for HH income	(3) Plus control for hours worked	(4) Plus controls for emp. shocks
Men in couple families without dependents (N=3,977)				
Fixed-term	0.378	0.364	0.422	0.413
	(0.291)	(0.287)	(0.295)	(0.293)
Casual	0.655***	0.650***	0.519**	0.441*
	(0.221)	(0.224)	(0.227)	(0.227)
Potential mechanisms				
log total gross equi. HH income of the respondent		-0.273*	-0.213*	-0.210*
		(0.157)	(0.117)	(0.115)
Hours worked per week in main job			-0.030***	-0.029***
			(0.007)	(0.007)
Employment shocks				
Fired or made redundant in past year				0.363*
				(0.217)
Changed job in past year				0.131
				(0.172)
Men living alone (N=5,175)				
Fixed-term	0.115	0.106	0.099	0.075
	(0.307)	(0.308)	(0.315)	(0.305)
Casual	0.389*	0.379*	0.229	0.088
	(0.220)	(0.220)	(0.223)	(0.222)
Potential mechanisms				
log total gross equi. HH income of the respondent		-0.053	-0.057	-0.060
		(0.041)	(0.041)	(0.041)
Hours worked per week in main job			-0.019***	-0.018***
			(0.007)	(0.007)
Employment shocks				
Fired or made redundant in past year				0.740***
				(0.236)
Changed job in past year				0.359**
				(0.182)

Notes: a) The reference category is men in permanent or ongoing employment within each family type. b) Baseline results include controls for observed background, attrition, health, and some job characteristics. c) Standard errors are clustered at the individual level and are given in parentheses. Significant at the .10 level; ** at the .05 level; *** at the .01 level.

Table 6. The effect of potential mediating factors on coefficient estimates for women

	(1) Baseline results	(2) Plus control for HH income	(3) Plus control for hours worked	(4) Plus controls for emp. shocks
Women in couple families with dependents (N=9,915)				
Fixed-term	0.174	0.184	0.169	0.130
	(0.209)	(0.208)	(0.206)	(0.207)
Casual	0.546***	0.519***	0.425***	0.406**
	(0.156)	(0.158)	(0.164)	(0.166)
Potential mechanisms				
log total gross equi. HH income of the respondent		-0.197***	-0.202***	-0.200***
		(0.062)	(0.062)	(0.062)
Hours worked per week in main job			-0.011**	-0.012**
			(0.005)	(0.005)
Employment shocks				
Fired or made redundant in past year				0.060
				(0.215)
Changed job in past year				0.295**
				(0.122)
Women in couple families without dependents (N=4,255)				
Fixed-term	0.328	0.329	0.318	0.289
	(0.266)	(0.266)	(0.263)	(0.261)
Casual	0.778***	0.774***	0.584**	0.493*
	(0.228)	(0.228)	(0.250)	(0.254)
Potential mechanisms				
log total gross equi. HH income of the respondent		-0.097	-0.104	-0.099
		(0.091)	(0.095)	(0.094)
Hours worked per week in main job			-0.018**	-0.018**
			(0.008)	(0.008)
Employment shocks				
Fired or made redundant in past year				-0.019
				(0.247)
Changed job in past year				0.401**
				(0.156)

Notes: a) The reference category is women in permanent or ongoing employment within each family type. b) Baseline results include controls for observed background, attrition, health, missing response for health and several job characteristics. c) Standard errors are clustered at the individual level and are given in parentheses. Significant at the .10 level; ** at the .05 level; *** at the .01 level.

Table 6 continued.

	(1) Baseline results	(2) Plus control for HH income	(3) Plus control for hours worked	(4) Plus controls for emp. shocks
Women in lone parent families (N=4,591)				
Fixed-term	-0.084	-0.046	-0.033	-0.031
	(0.323)	(0.331)	(0.333)	(0.335)
Casual	0.675***	0.591***	0.461**	0.460**
	(0.210)	(0.208)	(0.219)	(0.219)
Potential mechanisms				
log total gross equi. HH income of the respondent		-0.680***	-0.665***	-0.670***
		(0.180)	(0.181)	(0.181)
Hours worked per week in main job			-0.016*	-0.016*
			(0.008)	(0.008)
Employment shocks				
Fired or made redundant in past year				0.216
				(0.312)
Changed job in past year				-0.034
				(0.184)
Women living alone (N=3,908)				
Fixed-term	-0.422	-0.481*	-0.459*	-0.462*
	(0.260)	(0.264)	(0.268)	(0.273)
Casual	0.249	0.212	0.079	0.011
	(0.263)	(0.260)	(0.269)	(0.277)
Potential mechanisms				
log total gross equi. HH income of the respondent		-0.196**	-0.188**	-0.193**
		(0.085)	(0.082)	(0.084)
Hours worked per week in main job			-0.018**	-0.018**
			(0.008)	(0.008)
Employment shocks				
Fired or made redundant in past year				1.050***
				(0.226)
Changed job in past year				0.212
				(0.198)

Notes: a) The reference category is women in permanent or ongoing employment within each family type. b) Baseline results include controls for observed background, attrition, health, and some job characteristics. c) Standard errors are clustered at the individual level and are given in parentheses. Significant at the .10 level; ** at the .05 level; *** at the .01 level.

Appendices

A1. Means of the variables used in the analysis

Variable	Mean	Std. Dev.	Min	Max
Employment variables				
Permanent	0.511	0.500	0	1
Fixed-term	0.068	0.252	0	1
Casual	0.109	0.311	0	1
Self-employment	0.122	0.327	0	1
Unemployment	0.033	0.179	0	1
OOLF	0.156	0.362	0	1
Other variables				
Gender	0.532	0.499	0	1
Couples with dependents	0.476	0.461	0	1
Couples without dependents	0.307	0.461	0	1
Lone parents with dependents	0.063	0.243	0	1
Single-persons	0.154	0.361	0	1
18-24 years	0.109	0.311	0	1
25-34 years	0.267	0.443	0	1
45-54 years	0.335	0.472	0	1
Postgraduate	0.046	0.210	0	1
Bachelor, honours or grad dip	0.231	0.422	0	1
Diploma or Cert. III or IV	0.326	0.469	0	1
Living in regional area	0.351	0.477	0	1
Living in remote area	0.019	0.136	0	1
Aboriginal or Torres Strait Islander (%)	0.021	0.145	0	1
Non-respondent at next wave	0.147	0.354	0	1
Telephonic interview	0.055	0.229	0	1
Long term health condition affecting work				
No condition	0.809	0.393	0	1
Mild effect (no work limitation)	0.068	0.252	0	1
Moderate effect (limits in some way)	0.119	0.324	0	1
Suffered from serious personal injury	0.072	0.258	0	1
Physical functioning (based on SF-36)	70.786	19.956	0	100
Mental health (based on SF-36)	73.841	16.891	0	100
Jobs held in last financial year				
One job	0.663	0.473	0	1
Multiple (two or more)	0.180	0.384	0	1
Member of union	0.214	0.410	0	1
Occupation (%)				
Managers and professionals	0.322	0.467	0	1
Technicians and Trades Workers	0.114	0.317	0	1
Community and Personal Service	0.080	0.271	0	1
Clerical and Administrative Workers	0.129	0.335	0	1
Sales Workers	0.054	0.226	0	1
Machinery Operators and Drivers	0.048	0.213	0	1

Private sector employee	0.598	0.490	0	1
Have access to paid holiday leave	0.557	0.497	0	1
Have access to paid sick leave	0.559	0.497	0	1
Industry (%)				
Agriculture, Forestry and Fishing	0.023	0.151	0	1
Mining	0.015	0.122	0	1
Manufacturing	0.079	0.269	0	1
Electricity, gas, water & Waste services	0.009	0.093	0	1
Construction	0.065	0.246	0	1
Wholesale Trade	0.028	0.164	0	1
Retail Trade	0.068	0.252	0	1
Accommodation and Food Services	0.036	0.187	0	1
Transport, Postal and Warehousing	0.035	0.184	0	1
Information Media and Telecom.	0.020	0.141	0	1
Financial and Insurance Services	0.034	0.181	0	1
Rental, hiring & real estate services	0.011	0.104	0	1
Professional, Scientific and Technology	0.067	0.250	0	1
Administrative and Support Service	0.024	0.153	0	1
Public Administration and Safety	0.061	0.240	0	1
Education and Training	0.085	0.279	0	1
Health Care and Social Assistance	0.106	0.308	0	1
Arts and Recreation Services	0.013	0.115	0	1
Log of total gross equi. HH income of respondent	10.830	0.881	0	14.04798
Fired or made redundant in past year	0.038	0.191	0	1
Changed job in past year	0.169	0.375	0	1
Hours worked per week in main job	30.916	19.551	0	140
Person-wave observations (N)				73,149

Note: The statistics reported in the table were calculated using unweighted longitudinal data from the HILDA survey.

A2. Percent of individuals for whom their answer to different hardship questions each year matches/agree with their partner in HILDA data

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2011	2012	2013
Type of financial hardship												
Could not pay utility bills on time	83.85	84.01	86.73	85.71	86.25	87.79	87.19	86.60	86.21	86.67	86.09	86.68
Asked financial help from friends/family	86.05	86.90	87.89	87.83	87.19	88.86	87.52	87.44	88.13	86.57	87.28	87.49
Could not pay mortgage or rent on time	88.75	89.03	89.83	90.11	90.99	91.62	90.21	90.94	90.49	90.39	90.58	91.22
Pawned or sold something	89.71	91.14	91.52	91.53	92.40	92.43	92.26	92.83	92.47	91.37	91.15	91.38
Was unable to heat home	92.35	92.84	93.78	93.08	93.75	94.62	93.70	93.92	93.93	93.22	93.12	93.62
Went without meals when hungry	92.37	92.66	93.56	92.56	93.65	93.67	93.55	93.45	93.33	93.41	93.49	93.47
Asked help from welfare organization	91.78	92.77	93.20	92.91	93.13	93.45	93.60	93.61	93.59	93.37	93.24	93.36
Overall concordance												**90.79**

Note: The statistics reported in the table were calculated using unweighted longitudinal data from the HILDA survey.

A3. Average number of types of financial hardship experienced by different types of employment arrangements conditional on gender and family type

	Couples with dependents		Couple without dependents		Lone parents with dependents		Single-persons	
	Males	Females	Males	Females	Males	Females	Males	Females
Employment contract type								
Permanent	0.345 (0.009)	0.328 (0.009)	0.284 (0.010)	0.267 (0.009)	0.676 (0.070)	0.792 (0.033)	0.502 (0.019)	0.513 (0.021)
Fixed-term	0.398* (0.029)	0.358 (0.027)	0.345** (0.029)	0.311* (0.024)	0.783 (0.259)	0.825 (0.085)	0.630** (0.062)	0.521 (0.047)
Casual	0.911*** (0.044)	0.523***$^{+++}$ (0.022)	0.778*** (0.045)	0.603***$^{+++}$ (0.032)	0.970* (0.163)	1.325***$^{++}$ (0.064)	1.308*** (0.064)	1.162*** (0.062)
Self-employment	0.412*** (0.017)	0.408*** (0.022)	0.398*** (0.015)	0.352*** (0.030)	1.0333** (0.161)	1.063*** (0.115)	0.890*** (0.057)	0.719*** (0.083)
Unemployment	1.451*** (0.090)	1.182***$^{++}$ (0.077)	1.473*** (0.108)	1.287*** (0.091)	1.283*** (0.206)	1.989***$^{++}$ (0.115)	1.833*** (0.113)	2.158***$^{+}$ (0.146)
OOLF	1.448*** (0.062)	0.771***$^{+++}$ (0.019)	0.951*** (0.054)	0.579***$^{+++}$ (0.030)	1.830*** (0.169)	1.963*** (0.053)	1.497*** (0.070)	1.606*** (0.067)
Person-wave obs. (N)	16,600	18,222	10,650	11,818	711	3,906	6,256	4,986

Notes: The statistics reported in the table were calculated using unweighted longitudinal data from the HILDA survey. Asterisks indicate statistically significant differences in means using permanent employment as the reference category (first row) based on *t* tests. *** indicate that the differences are significant at 0.01 level, ** at 0.05 level and * at 0.10 level. Plus (+) indicate statistically significant differences in means between men and women in same employment type and same family type based on t tests. $^{+++}$ indicate that the differences are significant at 0.01 level, $^{++}$ at 0.05 level and $^{+}$ at 0.10 level.

A4. SCQ response conditional on employment arrangements

	Permanent	Fixed-term	Casual	Self-emp.	Unemp.	OOLF
SCQ response status						
No response	9.97	10.12	12.42	12.30	16.19	11.69
Response	90.03	89.88	87.58***	87.70***	83.81***	88.31***

Note: The statistics reported in the table were calculated using unweighted longitudinal data from the HILDA survey. *** implies that means are statistically different from means in the first row, i.e., individuals employed on permanent contracts at 0.01 level, ** at 0.05 level and * at 0.10 level

A5. Respondents' preference for work hours compared to the current working hours

	Panel A. Men			
	Permanent	Fixed-term	Casual	Self-emp.
Prefer to work				
Fewer hours	30.27	31.45	13.54***	39.36***
About the same	60.97	58.24 **	49.06***	51.04***
More hours	8.76	10.31**	37.40***	9.60*
Person-wave obs.	19,717	2,318	2,813	5,676
	Panel A. Women			
	Permanent	Fixed-term	Casual	Self-emp.
Prefer to work				
Fewer hours	31.76	32.97	9.34***	27.44***
About the same	59.21	55.78***	55.23***	58.21
More hours	9.03	11.25***	35.44***	14.34***
Person-wave obs.	17,652	2,657	5,119	3,221

Notes: The statistics reported in the table were calculated using unweighted longitudinal data from the HILDA survey. Asterisks indicate statistically significant differences in means using permanent employment as the reference category (first column) based on *t* tests. *** indicate that the differences are significant at 0.01 level, ** at 0.05 level and * at 0.10 level


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