

## Temporary employment and work-life balance in Australia

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### Abstract

While it is often believed that temporary forms of employment, such as fixed-term contracts, casual work and temporary agency work, provide workers with more flexibility to balance work and private commitments, convincing empirical evidence on this issue is still scarce. This paper investigates the association between temporary employment and work-life balance in Australia, using longitudinal data from the Household, Income and Labour Dynamics in Australia Survey for the period 2001 to 2017. In contrast to previous studies, we compare results from pooled cross-sectional and fixed-effects regressions to investigate the role of time-constant unobserved worker characteristics in linking temporary employment and work-life outcomes. The results show that, after accounting for job characteristics and person-specific fixed-effects, among women only casual employment is unequivocally associated with better work-life outcomes than permanent employment. For men, we mostly find negative associations between all forms of temporary employment and work-life outcomes, but the magnitudes of these associations are much smaller and mostly insignificant in fixed-effects models. This result suggests that male temporary employees have stable unobserved traits that are connected to poorer work-life balance.

**Key words:** temporary employment, casual work, HILDA Survey, work-life balance, work-family conflict, Australia, longitudinal methods



## 1. Introduction

Profound changes in both the labour market and the home sphere – such as increased female labour force participation, the trend towards more involved fatherhood, and the increase in electronic work communication (which has facilitated a greater blurring of the boundaries between work and leisure) – have resulted in researchers paying increased attention to how workers balance the demands of the work sphere and other areas, especially the family sphere. But despite the appearance of hundreds of studies on work-family, or more generally, work-life balance (WLB), in recent decades (summarised, for example, in Byron 2005; Casper et al. 2007; Chang et al. 2010), some questions remain unanswered. In particular, the role that the type of employment contract, and especially contracts that provide for temporary or ongoing/permanent employment, plays in the relationship between work and private life has received little attention. This is surprising given the intense debate about both the significance of temporary forms of employment and their potential impacts on workers (e.g., Booth et al. 2002; Gash & McGinnity 2007; Giesecke & Groß 2003; Kalleberg et al. 2000; Keller & Seifert 2013; McVicar et al. 2019; Scherer 2009; van Lancker 2012; Watson 2005).

In terms of WLB, temporary employment appears to be a mixed blessing. On the one hand, certain strains related to temporary work, especially high job insecurity, may negatively impact on the ability to balance this type of work with other areas of life. On the other hand, temporary work may provide workers with more schedule flexibility, suggesting an increased ability to wrap work around other commitments. Ultimately it is an empirical question whether temporary employment will have positive or negative effects on WLB. Previous research, at least that based on survey evidence, has tended to find relatively little difference between permanent and temporary workers on various work-life outcome measures (e.g., Heponiemi et al. 2010; Pocock & Charlesworth 2015; Russell et al. 2009; Scherer & Steiber 2007). Hours of work, however, is often found to be a critical moderating variable, with outcomes more favourable for workers employed on permanent contracts only once hours are controlled for (e.g., Hosking & Western 2008; Scherer 2009; Skinner et al. 2012).

Existing empirical studies on the relationship between employment contract type and WLB, however, suffer from methodological shortcomings. First, many studies are either based on small-scale qualitative samples (Bohle et al. 2004; Pocock et al. 2004) or surveys of one select company or industry (Bohle et al. 2011; Heponiemi et al. 2010; Mauno et al. 2015; McNamara et al. 2011), limiting the generalisability of results to the broader workforce. Second, studies that have investigated the impact of temporary employment using nationally representative survey data (Hosking & Western 2008; Pocock & Charlesworth 2015; Russell et al. 2009; Scherer 2009; Scherer & Steiber 2007; Skinner et al. 2012) have either relied on the presentation of simple descriptive statistics or used cross-sectional regression methods. Previous research has thus been unable to account for the impact of unobserved worker characteristics. This is potentially important given unobserved characteristics, such as motivation, productivity, organisational skills or resilience, may be expected to influence both workers' choice of contract type and their WLB.

In this study, data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey spanning the period 2001 to 2017 are used, which overcomes the men-

tioned problems: Not only is the survey based on a nationally representative sample (of the Australian workforce), but it also provides annual panel data on both workers' employment situations and their WLB. Importantly, the panel nature of the data makes it possible to control for the effects of unobserved individual characteristics that are time invariant.

Our study stands out in that it examines two different, yet related, outcomes: (i) an overall measure of WLB among all workers, which reflects workers' satisfaction with the flexibility to combine work and non-work commitments; and (ii) a measure of work-family conflict (WFC) among parents, which we understand as one sub-dimension of WLB (or, more precisely, an indicator of a *lack* of WLB). While our first measure of WLB thus allows providing a broad perspective on the link between work and all other areas of life, our second measure of WFC focuses on the link between work and family as one of the most important spheres of life. Through the use of longitudinal data, we are also the first to investigate the role of unobserved heterogeneity in the link between contract type and WLB. Finally, we go beyond previous studies by comparing three different types of temporary work – casual employment, fixed-term contract employment, and temporary agency work.

The Australian case is of interest given the relatively large share of temporary workers in total employment in Australia. Data from the HILDA Survey for 2017, for example, show that roughly one in three employees are employed either on a casual or fixed-term contract or through a temporary employment agency. Further, given the relatively low levels of support for the combination of work and family in Australia – reflected, for example, in the absence of state-funded parental leave until 2011 and relatively high levels of out-of-pocket expenses for child care – the role of the employer in providing good conditions for the combination of work and family life may be of large importance in this country.

## **2. Temporary employment and the combination of work and private life in Australia**

### *2.1 Linking employment types to WLB*

As Greenhaus and Beutell (1985) have outlined, work can interfere with other spheres of life through several channels, among them time-based and strain-based conflicts between the two spheres. Time-based conflicts relate to situations where time devoted to one role makes it difficult to fulfil the requirements of another role, whereas strain-based conflict appears if strain produced by one role makes it difficult to fulfil requirements of another role. More recently, it has also been pointed out that work can also have an enriching or facilitating impact on other spheres of life (Voydanoff 2004). Similar concepts have been put forward as “negative” and “positive spillover” from work to family (Edwards & Rothbard 2000; Lambert 1990).

With respect to strain-based conflicts, the lack of employer commitment to an ongoing employment relationship ensures that temporary forms of employment are associated with higher levels of perceived job insecurity (Aletraris 2010; Green & Leeves 2013) and a greater risk of unemployment (Wilkins & Wooden 2013) than permanent contracts. Job

insecurity, in turn, is a source of psychological strain (Sverke et al. 2002) that threatens the economic basis needed for a stable and high-quality family life (Voydanoff 2004) and has repeatedly been shown to negatively influence WLB (Batt & Valcour 2003; Kinnunen & Mauno 1998; Pichler 2009; Richter et al. 2010). Indeed, both casual and agency work (but not fixed-term contracts) have been found to be associated with lower annual household income than permanent employment (Laß & Wooden 2020). Further strains that can be connected to temporary forms of employment and may spill over to workers' private lives are a lack of social integration and appreciation at the workplace as a result of being treated as outsiders or newcomers (Pocock et al. 2004), and frequently changing workplaces and employers.

Whether we should also expect a link between temporary employment and time-based conflict is more difficult to judge. On the one hand, there is a range of arguments for why temporary contracts (*ceteris paribus*) should reduce time for non-work activities compared to permanent contracts: To the extent that temporary workers hope to have their contract converted to permanent, they might invest heavily in their jobs and accept overtime or unsuitable shifts. Casual and agency workers are also more likely than others to work schedules other than a regular day schedule (Lass & Wooden 2017), which have been shown to negatively influence work-life/family balance (Costa et al. 2006; Davis et al. 2008; Gallie & Russell 2009; Grosswald 2003; Jansen et al. 2003; Pichler 2009; Tausig & Fenwick 2001). For example, varying work volumes and schedules can make it more difficult for temporary, and especially casual workers, to use child care services given these usually require parents to settle for fixed days per week. More generally, permanent workers are in a better bargaining position than temporary workers as their dismissal is costlier for the employer, suggesting that they are more likely to obtain desirable working conditions (such as the desired number of working hours and time schedules, or the option to work from home) that, in turn, will likely ease the time conflict between work and non-work commitments. The time temporary workers have for other activities may also be reduced through potentially longer work commutes, given their relatively short job tenures mean having to change employers (and hence workplaces) more frequently. Further, HILDA Survey data show that casual workers and, to a lesser extent, fixed-term contract workers are more likely than permanent workers to be multiple job holders, which is another source of strain given it requires coordination of one's work schedule not only with other spheres of life but also with a second work schedule (Sliter & Boyd 2014). Additionally, lower household incomes may prevent temporary workers from purchasing services that alleviate time pressures, such as child care or household help.

On the other hand, in both Europe and Australia, temporary employment tends to come with fewer working hours than permanent jobs (Laß & Wooden 2019; Paoli & Merllié 2001; Scherer 2009; Skinner et al. 2012). For example, HILDA Survey data for 2017 shows that in Australia, three quarters of casual employees and 38% of agency workers aged 18 to 64 years work part-time (i.e., less than 35 hours per week) in their main job, compared to only 21% of workers on permanent and 22% on fixed-term contracts. Even when adding working hours in second jobs, mean weekly working hours differ considerably between these employment types, averaging 39.5 for permanent workers, 38.9 for fixed-term contract workers, 33.8 for agency workers, and just 24.8 for casual workers. Many studies have reported negative associations between working hours and WLB

(Abendroth et al. 2011; Batt & Valcour 2003; Gallie & Russell 2009; Pausch et al. 2016; Pichler 2009), thus suggesting that casual employment in particular will be associated with less time-based conflict.

Additionally, it has frequently been argued that temporary employment provides more schedule flexibility (Dawson & Veliziotis 2017; Feldman et al. 1994; Gannon 1984; Van Hippel et al. 1997), thereby potentially decreasing time-based conflicts. For example, casual employment potentially allows workers to reject or cancel unsuitable shifts. Similarly, some agency workers may be able to choose convenient assignments. However, obviously, rejection and cancellation of shifts presupposes that the worker is not financially dependent on continuous employment.

## 2.2 *The Australian context*

### 2.2.1 Contractual work relationships in Australia

Australian employees usually hold one of three different types of employment contracts — permanent, casual or fixed-term contracts. Another distinction is whether workers are hired directly by the company where they provide the labour service or by an intermediary (or temporary employment agency) that temporarily assigns workers to different host companies. In this paper, we refer to casual contracts, fixed-term contracts and temporary agency work as temporary forms of employment.

Among these three forms of temporary employment, casual work is by far the most prevalent: 19.4% of employees aged 18 to 64 were employed on a casual basis (not counting agency workers on casual contracts) in 2017. While casual work in Australia lacks a clear and agreed upon definition, its most prominent characteristic is the lack of any advance commitment by the employer regarding both the duration of employment and the number of days or hours to be worked (Stewart et al. 2016). In other words, casual employees can be dismissed or have their hours varied at any time. Additionally, casual workers usually lack any entitlement to paid leave (e.g., sick leave or annual leave). In compensation for these disadvantages, they are usually entitled to a pay loading, which in the late 1990s and early 2000s was typically around 20% of the wage of a comparable non-casual worker (Watson 2005). New legislation introduced in 2010, however, has raised this norm to 25%. As mentioned, casual employment also provides workers with the theoretical possibility to reject or cancel shifts that do not suit them. That said, the limited empirical evidence (e.g., Markey & McIvor 2018; McGann et al. 2016; Pocock et al. 2004) suggests that the schedule flexibility connected to casual employment is often one-sidedly used by employers to adjust their workforce to demand, rather than by workers to fit employment to other activities.

Fixed-term contracts — that is, employment contracts that end on a specified date or with the completion of a specified task — accounted for 10.4% of employees aged 18 to 64 years in 2017 (again, not counting agency workers). Fixed-term contracts generally come with the same entitlements (such as paid annual and sick leave) and obligations (i.e., contractual commitment to specific working days or a specific number of hours) as permanent contracts.

Temporary agency work accounts for a relatively small share of employees – 2.6% of employees aged 18 to 64 years in 2017. While temporary agency workers can in theory have any of the three contract types already described, only a minority of these workers (17%) had permanent contracts with the agency in 2017; most were employed on either a casual (61%) or fixed-term contract (22%). Given the specific employment situation of agency workers – characterised by frequent changes of workplace and thus working conditions – we treat agency work as a separate form of temporary employment in this paper.

### 2.2.2 The role of the Australian institutional context

In Australia, the dominant arrangement for couples with children is the modified male breadwinner model, in which men focus on employment and women are secondary earners and at the same time primarily responsible for housework and care (Craig & Mullan 2009). Most women assume the role of full-time carer while their children are young but later re-enter the labour market (Baxter 2013). Whereas almost all fathers work full-time (regardless of their children's ages), most mothers revert to part-time work as the major method for reconciling the demands of work and family (Baxter et al. 2007). Overall, maternal employment in Australia is relatively low compared to other OECD countries (63% in 2014 compared to an OECD average of 66%) (Organisation for Economic Co-operation and Development 2018, Table LMF1.2), which may in part be a consequence of high childcare costs. According to data available from the OECD.Stat website, for example, couple parents who both earn the average wage spent 28% of their income on net childcare costs in Australia in 2015, which compares with an OECD average of just 14%.<sup>1</sup>

Still, some conditions for the combination of work and family have improved considerably during the period under study. One major example is Paid Parental Leave (PPL) regulations: Until 2011, Australia and the USA were the only two OECD countries without a state-funded PPL scheme. PPL was at the discretion of employers and distributed highly unevenly, with low-skilled and casual employees the most likely to miss out (Brennan 2007). In contrast, the state-funded PPL scheme, which was introduced in 2011 and explicitly targets mothers, involves a flat-rate payment at the national minimum wage level for up to 18 weeks, meaning that low-paid and part-time workers benefit the most relative to their previous earnings.

Another change in legislation to support working parents was the introduction of a right to request part-time hours for working parents in 2009. Before 2009, it was argued that many Australians seeking part-time hours had to accept casual employment due to a lack of permanent part-time positions (Pocock 2003). Since then, and as shown by HILDA Survey data, the share of mothers with permanent part-time positions has increased, while that of mothers with casual part-time positions has decreased. For example, among working mothers with children aged five years or younger, 33.1% held permanent part-time positions in 2017, compared with 28.6% in 2008. By contrast, 14.8% of these working mothers were in casual part-time employment in 2017, while the share was 19.6% in 2008.

Despite increasing policy support for working parents, incentives persist for secondary earners to limit their working hours or stay out of the labour force beyond the period

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1 Sourced from data on net childcare costs for parents using childcare, found in the Social Protection and Well-Being section, Benefits, Taxes and Wages sub-section, of OECD.Stat (<https://stats.oecd.org>).

of parental leave. For example, many family benefits are subject to family income tests and, as mentioned, childcare costs are very high.

Additionally, several policies supporting working parents cater more to the situation of permanent workers than other workers. For example, while Australian legislation provides for generous periods of unpaid parental leave, the job guarantee that comes with parental leave does not hold if the worker has a fixed-term contract that runs out during the leave period and typically does not extend to casual employees.<sup>2</sup> Moreover, to be eligible for unpaid parental leave employees must have worked for their employer for 12 months, and meeting this requirement is less likely for workers on casual and fixed-term contracts given they often have shorter tenure. Eligibility to PPL is also tied to a relatively strict work test, but it is slightly more generous than that of unpaid leave. It requires the parent to have worked for 10 of the 13 months before the birth or adoption of the child, and to have worked at least a total of 330 hours (about one day per week), with the specific employer being irrelevant. Workers with intermittent employment careers are thus at risk of getting into the odd situation of qualifying for the PPL payment while not being entitled to take time off work after all (because they do not qualify for unpaid leave). Further, working parents' right to request part-time work only applies if they have been with the same employer for at least 12 months.

In sum, while Australian legislation and family benefits are increasingly supporting working parents (in particular through PPL and the right to request part-time hours), the role of the employer in providing good conditions for the combination of work and family life remains crucial. To the extent that granting these conditions is the result of bargaining outcomes between employer and worker, permanent workers can be expected to have better access to family-friendly working conditions than temporary workers. Further, the highly gendered nature of the division of paid and unpaid work in Australia suggests that temporary employment may impact differently on men's and women's WLB. Whereas the career insecurity connected to temporary contracts may threaten men's ability to fulfil the role as primary breadwinner, the flexibility that may be provided by temporary employment might support women in taking over the lion's share of housework and care.

### **3. Methods**

#### *3.1 Data, sample and method*

As previously mentioned, we use data from seventeen waves of the HILDA Survey, a longitudinal study that follows members of a nationally representative sample of Australian households drawn in 2001 (see Watson & Wooden 2012). A total of 11,693 households were identified as in-scope at wave 1 (i.e., in 2001), with interviews completed with members of 7682 of these households (providing an initial responding sample of 13,969 persons). Interviews are conducted with all adult (persons aged 15 years or older) members of

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<sup>2</sup> Casual workers must have had a reasonable expectation of continuing employment had it not been for the child in order to be eligible for unpaid parental leave.

the original sample, as well as any other adults who, in later waves, are residing with an original sample member. Annual re-interview rates are high, rising from 87% in wave 2 to 96% by wave 9 (and remaining at or above that level ever since).

Among other topics, the HILDA Survey provides comprehensive annual information on individuals' employment situations as well as subjective indicators of WLB. The sample used here is restricted to workers aged between 18 and 64 years. Observations where the respondent did not report whether they were employed on a permanent, fixed-term or casual contract (just 449 observations) were excluded. All results are thus conditional on individuals being in paid employment.

Our two outcome variables target different groups of respondents, so the analyses are based on two different samples: Information on WLB is collected from all workers who are interviewed, and only a small share of our sample of workers (161 observations) did not respond to this question and thus had to be excluded. This leaves us with a sample of 22,364 persons contributing 149,559 observations (the WLB sample). In contrast, the items making up the WFC scale are collected in a separate Self-Completion Questionnaire, which is only completed and returned by around 89% of our sample. Further, these questions are only asked of persons with parenting responsibilities for children aged 17 or less. We additionally restrict this sample to those parents who are living with their children (who may be biological or social parents). We also exclude those working parents who are missing information on two or more of the four items making up the WFC scale (406 observations). The final working sample for the analysis of WFC (the WFC sample) comprises 8,820 persons, contributing 48,415 observations.

We investigate the association between contract type and WLB by means of multivariate regression analysis. To account for differences in unobserved worker characteristics, our preferred model is a fixed-effects (FE) regression. Fixed-effects estimation relies entirely on within-person changes; that is, for the same individual, it compares the work-life outcomes for periods when the individual is on one type of contract (e.g., a permanent contract) and for periods when the individual is on another type of contract (e.g., a casual contract). While this has the advantage that the effects of all time-constant characteristics, whether observed or unobserved, are held constant, the downside is that workers who are only employed once or who never change employment type are not used in the estimation of the coefficients for employment types. However, due to the long-run nature of the panel, the large majority of our working sample is observed in employment at least twice. Further, among the group of workers who are observed repeatedly in the WLB sample, most transition between employment types. In the WFC sample, about half of the workers observed in employment repeatedly change employment type.

We present additional information on the nature of the two samples, and in particular how the characteristics of those that change employment type differ from those that do not, in Appendix Tables A1 and A2. Table A1 shows that in both samples, temporary workers are more likely to change employment type than permanent workers. For example, in the WLB sample, 59% of fixed-term contract workers, 37% of casual workers and 66% of temporary agency workers leave their employment type each year, compared to 12% of permanent workers. Temporary workers, especially fixed-term contract workers, are also more likely to transition into permanent employment than vice versa, suggesting that temporary employment is often a stepping stone to permanent employment.

When looking at the characteristics of those workers who change employment type and those who do not (see Table A2), we find relatively little difference with respect to our outcome measures between these groups. However, workers who change employment type are more likely to work in temporary employment, tend to be female, younger (especially in the WLB sample), and less likely to be highly educated (in the WFC sample) than those who are observed repeatedly but never change contract type. Further, the group of workers who are observed in employment only once differs most strongly from the other two: These workers tend to be younger, lowly educated, childless (in the WLB sample) or only have one child (in the WFC sample), single and living with their parents or others in the household.

We also compare our results to those from pooled OLS models to investigate the extent to which results from these models may be biased by unobserved heterogeneity.<sup>3</sup> We run all models separately by gender to account for potential differences in the relationship between temporary employment and WLB among men and women. All standard errors are clustered on the individual.

Finally, we admit that we cannot claim that our FE approach will deliver causal estimates. Most obviously, there may be unobservable time-varying factors that simultaneously influence respondents' reports of WLB and their type of employment contract. This problem is inherent to studies based on observational data and hence where experimental conditions do not exist.

## 3.2 Measures

### 3.2.1 Dependent variables

We investigate two different outcome variables: a measure of WLB and a measure of WFC. The advantage of using these two measures is that we can account for the different personal circumstances of temporary workers: The first measure – WLB – applies to all workers and encompasses all spheres of life outside work (such as family, friends, study and volunteering). We can thus see how temporary employment affects the lives of the broader workforce. The second measure – WFC – focuses on family as one of the most important spheres of life and on parents as a group of workers with particularly high personal commitments, and who can thus be expected to have a particularly large need for a good fit between work and personal life.

Information on WLB is collected through the following question: (...) *please pick a number between 0 and 10 to indicate how satisfied or dissatisfied you are with the following aspects of your job. The more satisfied you are, the higher the number you should pick. The less satisfied you are, the lower the number. ... The flexibility available to balance work and non-work commitments?* It is interviewer administered.

WFC is derived from four items taken from Marshall & Barnett (1993), measuring work-family strains and work-parenting strains on a scale from 1 (strongly disagree) to 7 (strongly agree). As previously mentioned, these items are included in a separate self-

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<sup>3</sup> Additionally, we estimated random-effects models, but in all cases the Hausman test rejected the suitability of these models and hence we do not report results from these models.

administered paper questionnaire. The relevant question begins: *The following statements are about combining work with family responsibilities. Please indicate, by crossing one box on each line, how strongly you agree or disagree with each.* There are 16 items with the 4 items used in the construction of our WFC measure being:

- i) *Because of the requirements of my job, I miss out on home or family activities that I would prefer to participate in.*
- ii) *Because of the requirements of my job, my family time is less enjoyable and more pressured.*
- iii) *Working leaves me with too little time or energy to be the kind of parent I want to be.*
- iv) *Working causes me to miss out on some of the rewarding aspects of being a parent.*

The items were summed to form an index and then scaled back to their original 1 to 7 scale. For the sake of comparability with our first measure of WLB, we have reflected the WFC scale so that larger numbers indicate more beneficial outcomes, thus ranging from 1 (highest conflict/worst balance) to 7 (lowest conflict/best balance). Following Hosking and Western (2008), we assign respondents with missing values on one item the mean value of the remaining three items but exclude cases with more than one missing item. The Cronbach's alpha for this composite measure is 0.84. Correlation between the reflected WFC scale and the WLB question is moderate (0.37).

### 3.2.2 Employment type

We distinguish between permanent employment, fixed-term contracts, casual employment and temporary agency work. The first three categories are mutually exclusive. Temporary agency workers, however, could be employed on either a permanent, fixed-term or casual basis. We thus create a fourth category, with all employees who report being employed through a labour-hire firm or temporary employment agency, regardless of their contract type, classified as temporary agency workers. Additionally, we create a category for other employed persons; that is, the self-employed and unpaid family workers.

### 3.2.3 Control variables

In the base specification, we include a range of socio-demographic and family characteristics as control variables. Specifically, we include age (in quadratic form), and dummy variables identifying highest educational level, whether a full-time student, and the presence of a long-term health condition that impacts on work. The family context is considered by indicators for the partnership situation (no partner, partner not working, partner working part-time and partner working full-time) as well as indicators for parental status (accounting for whether there are own resident children below the age of 18 years and, if yes, the age of the youngest child and the number of children). Additionally, we include an indicator for whether one's parent(s) or parent(s)-in-law live in the household and an indicator for whether persons other than one's partner, parents and children live in the household. We also control for time effects through the inclusion of year dummies.

In the extended specification, we additionally include controls for employment characteristics other than employment type. These are: working hours, length of tenure with the current employer (specified as a quadratic), whether employed in the public sector,

whether has supervisory responsibilities, whether works a schedule other than a regular day schedule, occupation (according to the major groups within the Australian and New Zealand Standard Classification of Occupations) and firm size (including a dummy for missing information on firm size). All mentioned job characteristics relate to the main jobs. Additionally, we include a dummy indicating multiple job holders.

Summary statistics for all variables (except year dummies), differentiated by gender and sample, are provided in Table 1. With respect to contract type, the table shows that among both men and women, and both in the broader sample used to assess WLB and in the smaller sample of parents used to assess WFC, the majority of workers have a permanent contract (between 58% of women in the WLB sample and 66% of men in the WFC sample). Among men, the second largest group is the self-employed, followed by casual workers, whereas the order is reversed for women. Only a relatively small share in all samples has fixed term contracts (between 6 and 9%) or works for a temporary employment agency (2-3%).

Table 1: Summary statistics for analysis samples

	Men				Women			
	WLB sample		WFC sample		WLB sample		WFC sample	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Employment type								
Permanent contract	0.59	0.49	0.65	0.48	0.58	0.49	0.58	0.49
Fixed-term contract	0.07	0.26	0.07	0.25	0.09	0.28	0.08	0.28
Casual contract	0.12	0.32	0.05	0.23	0.20	0.40	0.19	0.39
Temporary agency work	0.03	0.16	0.02	0.14	0.02	0.14	0.02	0.13
Self-employed	0.19	0.39	0.21	0.41	0.11	0.32	0.13	0.33
Age (years)	39.33	12.51	40.95	8.11	39.15	12.52	40.02	7.32
Educational level								
High (bachelor or higher)	0.25	0.43	0.30	0.46	0.33	0.47	0.37	0.48
Medium (year 12, cert III, IV, diploma, advanced diploma)	0.56	0.50	0.54	0.50	0.47	0.50	0.44	0.50
Low (year 11 and below)	0.19	0.39	0.16	0.37	0.20	0.40	0.20	0.40
Full-time student	0.05	0.22	0.01	0.09	0.07	0.26	0.02	0.13
Age of youngest resident child								
No child below 18 years	0.61	0.49	0.00	0.00	0.61	0.49	0.00	0.00
0 to 3 years	0.15	0.36	0.39	0.49	0.11	0.31	0.27	0.44
4 to 7 years	0.08	0.27	0.20	0.40	0.08	0.28	0.22	0.41
8 to 12 years	0.09	0.28	0.23	0.42	0.10	0.30	0.27	0.45
13 to 17 years	0.07	0.26	0.18	0.39	0.09	0.29	0.24	0.43

Table 1: Summary statistics for analysis samples (continued)

	Men				Women			
	WLB sample		WFC sample		WLB sample		WFC sample	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Number of own resident children								
One child	0.14	0.34	0.34	0.47	0.15	0.36	0.39	0.49
Two children	0.17	0.37	0.44	0.50	0.16	0.37	0.43	0.50
Three or more children	0.08	0.28	0.22	0.41	0.07	0.26	0.18	0.38
Work-limiting health condition	0.08	0.27	0.07	0.25	0.09	0.29	0.07	0.25
Partner situation								
No partner	0.30	0.46	0.03	0.16	0.34	0.47	0.17	0.38
Partner not employed	0.17	0.37	0.29	0.45	0.05	0.22	0.04	0.20
Partner part-time employed	0.25	0.43	0.43	0.50	0.06	0.24	0.06	0.23
Partner full-time employed	0.28	0.45	0.26	0.44	0.55	0.50	0.73	0.44
Parents in the household	0.12	0.33	0.02	0.13	0.12	0.32	0.02	0.15
Other people in the household	0.15	0.35	0.03	0.17	0.14	0.35	0.03	0.18
Working hours (main job)	41.99	13.59	44.86	11.52	31.25	13.91	28.31	13.26
Multiple job holder	0.07	0.26	0.07	0.25	0.10	0.30	0.10	0.30
Tenure (years)	7.38	8.58	8.10	7.84	6.21	7.29	6.25	6.27
Public sector	0.17	0.38	0.20	0.40	0.27	0.45	0.31	0.46
No regular day schedule	0.24	0.43	0.21	0.41	0.25	0.43	0.22	0.41
Supervisory responsibilities	0.52	0.50	0.60	0.49	0.42	0.49	0.43	0.50
Occupation								
Manager	0.17	0.37	0.22	0.41	0.10	0.30	0.10	0.30
Professional	0.20	0.40	0.23	0.42	0.28	0.45	0.31	0.46
Technician and Trades	0.23	0.42	0.21	0.41	0.04	0.20	0.04	0.20
Community and personal service	0.06	0.24	0.06	0.23	0.16	0.36	0.16	0.37
Clerical and administrative	0.07	0.25	0.07	0.25	0.23	0.42	0.24	0.43
Sales	0.05	0.23	0.04	0.18	0.11	0.31	0.08	0.27
Machinery Operators and Drivers	0.11	0.31	0.10	0.30	0.01	0.11	0.01	0.10
Labourers	0.11	0.31	0.08	0.27	0.07	0.25	0.06	0.24
Firm size								
Less than 20 employees	0.35	0.48	0.33	0.47	0.28	0.45	0.28	0.45
20-99 employees	0.14	0.34	0.13	0.34	0.13	0.34	0.13	0.34
100-499 employees	0.11	0.31	0.11	0.31	0.10	0.30	0.09	0.29
500 and more employees	0.36	0.48	0.40	0.49	0.42	0.49	0.43	0.50
Missing firm size	0.04	0.20	0.03	0.17	0.07	0.25	0.06	0.24
N (observations)	77,773		25,110		71,786		23,305	

Note: SD denotes standard deviation.

## 4. Results

### 4.1 Descriptive results

Table 2 presents the mean scores for our measure of WLB, the WFC index, and the four individual items making up the WFC index. The most striking result is that casual workers appear to have the best work-life outcomes. They are more satisfied with their WLB and have the lowest WFC, both according to the overall index and the individual items it consists of. Work-life outcomes are particularly good for women employed on casual contracts, while differences between men employed on a casual and a permanent basis are not as striking. Fixed-term contract workers have similar work-life outcomes as permanent workers and agency workers fare only slightly better than these two groups. However, given average working hours differ considerably between the groups, and hours are a strong predictor of WLB, it is important to move past these descriptive results to multivariate regression.

Table 2: Mean values of work-life outcomes

	Permanent	Fixed-term	Casual	Agency	Self-employed
WLB					
Women	7.35	7.23	7.86	7.55	8.08
Men	7.30	7.25	7.48	7.09	7.58
Total	7.32	7.24	7.70	7.28	7.75
WFC					
Miss out on home/family activities (original scale)					
Women	3.94	3.91	3.31	3.64	3.27
Men	4.30	4.39	4.09	4.16	4.05
Total	4.14	4.14	3.50	3.92	3.80
Family time less enjoyable/more pressured (original scale)					
Women	3.24	3.40	2.77	3.11	2.98
Men	3.31	3.42	3.23	3.22	3.25
Total	3.28	3.41	2.89	3.17	3.16
Too little time or energy to be aspirational parent (original scale)					
Women	3.78	3.87	3.24	3.61	3.27
Men	3.80	3.81	3.90	3.87	3.68
Total	3.79	3.84	3.40	3.75	3.54
Miss out on rewarding aspects of being parent (original scale)					
Women	4.20	4.19	3.43	3.91	3.31
Men	4.46	4.49	4.39	4.48	4.17
Total	4.34	4.33	3.67	4.22	3.89
WFC index (reflected scale)					
Women	4.21	4.15	4.81	4.43	4.79
Men	4.03	3.97	4.10	4.07	4.21
Total	4.11	4.07	4.63	4.23	4.40

Note: Data weighted using cross-sectional responding person population weights.

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## 4.2 *Multivariate results*

Table 3 presents regression results with respect to our first measure of WLB. For reasons of space, the table focuses on the coefficients of the main variables of interest; that is, the indicators of employment type (but full models can be found in Appendix Table A3). For both men (top panel) and women (bottom panel), results from four models are presented: two models based on pooled OLS regression and two models based on fixed effects regression.

Starting out with the results from the pooled OLS base model for men, we see that both fixed-term contract workers and temporary agency workers have significantly worse WLB, whereas the opposite is true for casual and self-employed workers. Extending the list of control variables to job-related factors does not impact notably on the coefficients for fixed-term contracts and agency work, which remain negative and are of a similar magnitude. However, the significant positive relationship of WLB with casual work turns into a significant negative relationship. Further, the positive association between self-employment and WLB becomes weaker after controlling for job-related factors.

Further analyses (results not shown) suggest that this dramatic change in the relationship between casual work and WLB from the OLS base to the OLS extended model is primarily due to the introduction of working hours into the model. If we only add working hours in the main job (and no other job-related characteristics) to the OLS base model, the coefficient for casual work changes from 0.113 to -0.386. Hours of work is clearly the single largest factor responsible for pulling the coefficient on casual contracts downwards.

The standard test for the significance of 'group' effects (where each group comprises repeated observations from the same individual), however, leads to the rejection of pooled OLS as the most efficient estimator, and suggests that the FE estimates are preferred. More importantly, once accounting for fixed effects, negative associations become less negative and positive associations become more positive. For example, the negative coefficient on fixed-term contracts is notably attenuated and becomes statistically insignificant in the FE model. Further, the positive coefficient on casual employment in the FE base model is larger than in the pooled OLS base model, and the negative coefficient in the extended model is much smaller than in the pooled OLS. These results suggest that male temporary workers have stable unobserved traits that are linked to lower WLB, regardless of the type of contract they work in at present.

Table 3: Employment type and WLB: Comparison of estimates from pooled OLS and fixed-effect regression

	Pooled OLS		Fixed effects	
	Base model	Extended model	Base model	Extended model
<b>Men</b>				
Fixed-term contract	-0.159***	-0.130***	-0.031	-0.049
Casual contract	0.113***	-0.273***	0.234***	-0.080*
Temporary agency work	-0.352***	-0.318***	-0.156**	-0.241***
Self-employed	0.353***	0.146***	0.413***	0.263***
N	76,960	76,630	76,960	76,630
F test that all individual fixed effects are zero			5.26	4.90
Prob > F			0.000	0.000
<b>Women</b>				
Fixed-term contract	-0.069	-0.042	0.013	-0.001
Casual contract	0.445***	-0.009	0.443***	0.091***
Temporary agency work	0.130*	0.025	0.192***	0.075
Self-employed	0.687***	0.400***	0.673***	0.468***
N	70,960	70,534	70,960	70,534
F test that individual fixed effects are zero			4.34	4.07
Prob > F			0.000	0.000

Notes: Reference group is direct-hire permanent employment. Base model excludes job-related control variables. \*\*\*, \*\* and \* denote statistical significance at the .01, .05 and .10 levels, respectively. All models are estimated with cluster-robust standard errors. F-Test obtained from models with regular standard errors.

Given the sample differences (with fixed-effects estimations relying only on persons who change status), we also re-estimated the extended pooled OLS model with the smaller sample of persons who change employment type. Comparing the pooled OLS with the full sample to the pooled OLS with changers shows us what part of the difference in coefficients between the pooled OLS and FE models reported on in Table 3 can be attributed to differences in samples. Comparing the pooled OLS with changers only to the FE model, in turn, gives an indication of what part of the difference can be attributed to unobserved heterogeneity. The results show that among men, the negative associations between temporary contract types and WLB become weaker when moving from the pooled OLS (full sample) to the pooled OLS (changers). This suggests that temporary workers who change employment type have better WLB than temporary workers who do not change. However, the association becomes even weaker when moving from the pooled OLS model (changers) to the FE model, pointing to the important role of unobserved heterogeneity.<sup>4</sup>

Moving to the results for women in the bottom panel of Table 3, the pooled OLS model suggests that there is no significant difference in the WLB of fixed-term contract and

4 Precisely, when moving from pooled OLS (full sample) to pooled OLS (changers) to FE regression, the coefficient for fixed-term contract attenuates from -0.13\*\*\* to -0.09\*\* to -0.05, the coefficient for casual work from -0.27\*\*\* to -0.22\*\*\* to -0.08\*, and that for agency work from -0.32\*\*\* to -0.29\*\*\* to -0.24\*\*\*. Complete results for these models are available on request from the authors.

permanent workers, whereas temporary agency work, and even more so casual employment, are associated with a significantly better WLB. However, once other job characteristics are accounted for, these significant associations with casual employment and temporary agency work entirely disappear. Again, the prime driving factor is the fewer working hours of these groups of workers. If we only added working hours in the main job to the OLS base model, the coefficient for casual employment would change from 0.445 to -0.091, and that for agency work from 0.130 to -0.065. The self-employed also have a significantly better WLB, and this association persists in the extended model, although the magnitude of the coefficient is smaller.

Compared with the results for men, the results from the FE models for women do not differ as strongly from those from the pooled OLS, suggesting that the link between unobserved characteristics, temporary employment and WLB is weaker for women. A notable exception, however, is casual work in the extended model: Unlike in the pooled OLS, there remains a small positive coefficient on casual employment in the extended FE model.<sup>5</sup>

To account for the possibility that parents may have greater needs for working conditions that accommodate their private commitments, the models were also re-estimated separately for parents and non-parents. Focusing on the extended FE model, the results<sup>6</sup> indeed show that among men, fixed-term contracts and casual employment are only significantly and negatively associated with WLB for fathers, but there is no significant link for non-fathers. Also, among women, the positive effect of casual employment on WLB is confined to non-mothers, while there is no significant difference between casual employment and permanent contracts for mothers. In contrast, agency work only significantly reduces WLB for childless men, while there is no significant effect for fathers.

Table 4 presents the results from a similar set of models analysing WFC for parents of children aged 17 or younger. The full models can be found in Appendix Table A4. Across almost all models, workers on fixed-term contracts do not differ significantly in terms of their WFC from workers on permanent contracts. For men, there appears to be a small negative association with low WFC, but which only becomes statistically significant in the extended FE model. Casual contracts, in contrast, are significantly and positively related to low WFC in the pooled OLS base model, for both men and women, with the association being much stronger for women. For men the estimated relationship reverses into a negative association once accounting for job-related characteristics in the extended pooled OLS model. For women, the association remains positive but becomes weaker in the extended model. Temporary agency work is not linked significantly to men's WFC. For women, there is a significant positive association with low WFC, but which disappears upon controlling for job-related characteristics. Across the board, self-employment is positively associated with low WFC.

Accounting for unobserved heterogeneity yields a similar pattern as found with respect to WLB among men: Most positive associations become more positive and negative

5 Comparison with a pooled OLS model that is based only on workers who change employment type suggests that, like for men, this change in coefficient from the pooled OLS to the FE model for female casual workers is due to both differences in samples and unobserved heterogeneity. Precisely, the coefficient moves from -0.01 in the pooled OLS model (full sample) to 0.05 in the pooled OLS model (changers) to 0.09\*\*\* in the FE regression.

6 Detailed results are available on request from the authors.

associations less negative.<sup>7</sup> For example, the negative relationship between casual contracts and low WFC in the extended pooled OLS model disappears in the FE model, and the null effect of temporary agency work turns into a positive association.

At first sight, the positive coefficient for agency work still appears to be at odds with Table 3, where we found a strong negative association of agency work with men's WLB even in the extended FE model. However, it does align with the finding that, within the group of agency workers, WLB is significantly better for fathers than for non-fathers. Additional analyses (results not reported) show that among the group of agency workers, fathers also rate their jobs as significantly less stressful and are significantly more satisfied with the hours they work than non-fathers. But it should also be noted that fathers in agency work account for less than half of one percent of the workforce, so the number of workers benefiting from these favourable working conditions is very small.

*Table 4: Employment type and WFC (reflected scale) of parents with children aged 17 and younger: Comparison of estimates from pooled OLS and fixed-effects regression*

	Pooled OLS		Fixed effects	
	Base model	Extended model	Base model	Extended model
<b>Men</b>				
Fixed-term contract	-0.065	-0.051	-0.046	-0.063*
Casual contract	0.100*	-0.187***	0.198***	0.014
Temporary agency work	0.057	-0.005	0.202***	0.123**
Self-employed	0.210***	0.191***	0.266***	0.208***
N	25,045	24,957	25,045	24,957
F test that all individual fixed effects are zero			7.69	7.28
Prob > F			0.000	0.000
<b>Women</b>				
Fixed-term contract	0.006	-0.022	-0.006	-0.018
Casual contract	0.611***	0.150***	0.366***	0.100***
Temporary agency work	0.239**	0.036	0.104	0.003
Self-employed	0.563***	0.349***	0.453***	0.295***
N	23,153	23,047	23,153	23,047
F test that all individual fixed effects are zero			7.13	6.72
Prob > F			0.000	0.000

*Notes:* Reference group is direct-hire permanent employment. Base model excludes job-related control variables. \*\*\*, \*\* and \* denote statistical significance at the .01, .05 and .10 levels, respectively. All models are estimated with cluster-robust standard errors. F-Test obtained from models with regular standard errors.

7 We have re-estimated the extended pooled OLS model for men with the smaller sample of changers to see whether this change in the association between contract type and WFC is due to differences in samples between the pooled OLS and the FE model or due to unobserved heterogeneity. The resulting coefficients for casual work (-0.12\*) and agency work (0.02) lie closer to those from the pooled OLS model with the full sample than to those from the FE model, suggesting that unobserved heterogeneity plays a larger role than sample differences in explaining the change in the associations.

The pattern is different again for women: The positive association of both casual work and temporary agency work with low WFC becomes weaker and, in the case of agency work in the base model, loses statistical significance, once accounting for fixed effects.

In an additional analysis, we checked whether the association between temporary employment and WFC differs for partnered and single parents, given single parents are primarily responsible both for generating income and caring for the children.<sup>8</sup> We focused on mothers as single fathers are a very small group in the sample. With respect to the extended FE model, we found that the positive relationship between casual employment and low WFC is confined to partnered mothers, while there is no significant difference between permanent and casual contracts for single mothers. Fixed-term contracts and agency work are not significantly related to WFC for either group of mothers.

## 5. Discussion and conclusion

In this paper longitudinal data from a large-scale Australian household survey was used to investigate the relationship between temporary forms of employment and workers' balance between the demands of the work sphere and other areas of life. The results, which vary with the specific outcome, gender and the method used, suggest four main findings.

First, temporary employment contracts appear, if at all, to only be beneficial for women's WLB. For men, the results point to negative effects. More specifically, the extended models (pooled OLS as well as FE) all revealed a negative or (less often) no association of fixed-term contracts, casual employment and agency work with men's WLB and WFC (with one very small exception being WFC among fathers in temporary agency work). In contrast, for women, casual employment was positively linked to both outcomes (while there was no association for fixed-term contracts and agency work). These findings likely reflect the dominant gender regime in Australia, which assigns men the role as primary breadwinners and women the roles as primary carers and secondary earners. The income and career insecurity connected to temporary contracts thus appears to threaten men's breadwinning capacity, whereas the flexibility provided by casual work seems to help women combine paid employment with housework and care.

Second, comparison of results of the different models (base, extended, pooled OLS, and fixed-effects) demonstrates the importance of choice of models and control variables for the overall assessment of the effects of temporary employment on WLB. In most cases, temporary employment is linked to better work-life outcomes in the base models that only accounted for socio-demographic and household characteristics of the worker. Most of these significant associations disappeared, however, upon control of job-related characteristics; most importantly, working hours. In other words, the reason temporary jobs help with WLB is because such jobs are often accompanied by part-time working hours. The flexibility connected to the temporary nature of the contract per se, in contrast, appears in most cases not to work in the favour of the worker.

Third, the results suggest that the magnitude of associations vary with the specific type of temporary employment. Focusing on the extended FE model, fixed-term contract

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<sup>8</sup> Detailed results are available on request from the authors.

workers did not (or only slightly) differ in their work-life outcomes from permanent workers. This result accords with other Australian research showing few differences between permanent and fixed-term workers on other outcomes, such as wages (Laß & Wooden 2019) and job satisfaction (Buddelmeyer et al. 2015). Casual work, in contrast, is in part harmful to men's, but beneficial for women's, work-life outcomes. As indicated above, this result suggests that men, as designated primary breadwinners, struggle with the uncertainty that comes with the fact that casual workers can be dismissed or have their hours varied by the employer at any time. Female casual workers, in contrast, who are often backed up by another earner, appear to benefit from the freedom to choose shifts to combine employment with housework and care. The results for agency workers are the most diverse as they varied by gender and outcome/sample, suggesting that jobs and working conditions differ markedly between different groups of agency workers. What was striking, however, was the particularly detrimental effect of agency work on WLB for men. Agency workers in particular are expected to have very little control over when and where they will be required to work. Often, their only freedom will be in deciding whether to accept or reject assignments, and especially many men may feel they cannot afford to reject assignments. In theory, casual employees should be in a similar position, but it is well recognised that in Australia a large proportion of the casual workforce work regular hours over extended periods for the same employers (e.g., Watson et al. 2003: 67), possibly explaining why casual employment has a less detrimental impact for men than agency work. Overall, the considerable differences in results by employment type highlight the need to analytically differentiate between specific types of temporary employment rather than lump them together into one broad category of "temporary work".

Fourth, the paper has provided new insights into the role of unobserved heterogeneity in linking contract type to WLB, given all previous papers had relied on cross-sectional data. One of the key results is not only the important role of unobserved heterogeneity in general, but also how unobserved factors work differently for men and women. While male temporary workers appear to have unobserved traits that are associated with poorer WLB than permanent workers, this did not always prove to be the case for women. This result may suggest that most men, as primary earners, aspire to a permanent position, and that only a very select group of men in terms of specific, unobserved traits, takes up temporary employment. For women, who are more likely to have intermittent employment careers and to combine work with a sizeable amount of housework and care, the experience of temporary work is more widespread and thus these forms of employment appear to be taken over by a less select group. Overall, not accounting for unobserved heterogeneity, as has been the norm in previous studies, will lead to an overstatement of the negative WLB effects of some types of employment, and to an understatement of the positive effects of others.

Our study also has limitations. Most importantly, we cannot make any claims to causality given workers may select into employment, and into a particular employment type, based on their existing family demands. We also recognise that while standard statistical tests reject the pooled OLS estimates in favour of fixed effects estimates, the results from these fixed effects models could be subject to selection bias given persons who change employment type have characteristics that differ from those who do not change. Further, while our study theoretically discussed a range of different mechanisms through which

temporary employment may affect WLB, we did not put them to a formal empirical test. This would be a useful task for future research.

All things considered though, it appears that the positive impetus of temporary employment on WLB is limited, and almost entirely traceable to the reduced working hours attached to such jobs. Temporary workers thus miss out on many of the protections and benefits afforded by a permanent contract, while in most cases not being compensated for these disadvantages by a better fit between their work and their private lives. Indeed, while not the primary subject of this paper, much more seems to be gained for workers by becoming self-employed, as this employment type consistently proved beneficial for work-life outcomes across gender and models. Policy approaches attempting to enhance workers' WLB could therefore comprise supporting transitions from temporary to permanent contracts, and especially to permanent part-time work, extending temporary workers' access to family policy measures, and, where appropriate, possibly supporting workers in establishing their own businesses.

## Acknowledgments

This paper uses confidentialised unit record file data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Survey Project was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research. This research was also supported under the Australian Research Council's *Discovery Projects* funding scheme (project # DP160103171).

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## Appendix

Table A.1: Number of pooled year-to-year transitions between employment types in the sample (row percentages in parentheses)

Panel A: WLB Sample						
Employment type at year $t$	Employment type at year $t+1$					
	PER	FIX	CAS	TAW	SE	Total
Permanent	62,405 (87.56)	3,786 (5.31)	2,760 (3.87)	758 (1.06)	1,560 (2.19)	71,269 (100)
Fixed-term	4,358 (47.36)	3,807 (41.38)	582 (6.33)	161 (1.75)	293 (3.18)	9,201 (100)
Casual	3,998 (23.62)	1,075 (6.35)	10,648 (62.92)	442 (2.61)	761 (4.5)	16,924 (100)
Labour-Hire	978 (38.34)	210 (8.23)	413 (16.19)	859 (33.67)	91 (3.57)	2,551 (100)
Self-employed	1,206 (6.56)	303 (1.65)	724 (3.94)	88 (0.48)	16,064 (87.38)	18,385 (100)
Total	72,945 (61.65)	9,181 (7.76)	15,127 (12.78)	2,308 (1.95)	18,769 (15.86)	118,330 (100)

  

Panel B: WFC Sample						
Employment type at year $t$	Employment type at year $t+1$					
	PER	FIX	CAS	TAW	SE	Total
Permanent	21,351 (89.67)	1,101 (4.62)	653 (2.74)	214 (0.9)	491 (2.06)	23,810 (100)
Fixed-term	1,285 (45.71)	1,270 (45.18)	141 (5.02)	39 (1.39)	76 (2.7)	2,811 (100)
Casual	986 (24.71)	240 (6.01)	2,464 (61.74)	95 (2.38)	206 (5.16)	3,991 (100)
Labour-Hire	267 (40.45)	60 (9.09)	92 (13.94)	209 (31.67)	32 (4.85)	660 (100)
Self-employed	397 (6.29)	100 (1.58)	201 (3.18)	25 (0.4)	5,588 (88.54)	6,311 (100)
Total	24,286 (64.62)	2,771 (7.37)	3,551 (9.45)	582 (1.55)	6,393 (17.01)	37,583 (100)

Note: PER - permanent; FIX - fixed-term; CAS - casual; TAW - temporary agency work; SE - self-employed.

Table A.2: Characteristics of sample members by times observed in employment and whether employment type changed (means based on total person-year observations)

	WLB Sample			WFC Sample		
	Observed employed once	No change of contract type	Change of contract type	Observed employed once	No change of contract type	Change of contract type
WLB	7.47	7.50	7.45			
WFC index (reflected)				4.35	4.20	4.26
Employment type						
Permanent	0.43	0.69	0.55	0.49	0.72	0.55
Fixed-term	0.08	0.01	0.11	0.07	0.01	0.12
Casual	0.33	0.09	0.18	0.23	0.06	0.16
Temporary agency	0.04	0.00	0.03	0.03	0.00	0.03
Self-employed	0.12	0.21	0.13	0.18	0.20	0.15
Male	0.50	0.57	0.50	0.47	0.59	0.47
Age (years)	32.64	42.76	37.99	37.78	41.09	40.24
Educational level						
High (bachelor or higher)	0.18	0.30	0.29	0.23	0.37	0.32
Medium (year 12, cert III, IV, diploma, advanced diploma)	0.54	0.50	0.52	0.48	0.48	0.49
Low (year 11 and below)	0.28	0.20	0.19	0.29	0.15	0.19
Full-time student	0.14	0.04	0.07	0.03	0.01	0.02
Age of youngest resident child						
No child below 18 years	0.79	0.60	0.61	0.00	0.00	0.00
0 to 3 years	0.07	0.13	0.14	0.43	0.35	0.31
4 to 7 years	0.05	0.08	0.08	0.15	0.19	0.23
8 to 12 years	0.05	0.10	0.09	0.16	0.23	0.27
13 to 17 years	0.05	0.09	0.08	0.26	0.23	0.19
Number of own resident children						
One child	0.10	0.15	0.15	0.60	0.39	0.33
Two children	0.07	0.17	0.17	0.26	0.43	0.45
Three or more children	0.04	0.08	0.08	0.13	0.18	0.22
Work-limiting health condition	0.11	0.09	0.08	0.10	0.06	0.07
Partner situation						
No partner	0.50	0.26	0.34	0.13	0.07	0.11
Partner not employed	0.10	0.13	0.11	0.20	0.18	0.15
Partner part-time employed	0.10	0.20	0.15	0.17	0.29	0.23
Partner full-time employed	0.29	0.41	0.41	0.50	0.46	0.50
Parents in the household	0.21	0.09	0.13	0.05	0.02	0.02
Other people in the household	0.46	0.11	0.14	0.12	0.03	0.03
N (Observations)	4,349	44,191	101,019	1,695	19,929	26,791
N (Persons)	4,359	6,790	11,225	1,695	3,558	3,567

Table A.3: Employment types and WLB (full models)

	Men				Women			
	Pooled OLS		Fixed effects		Pooled OLS		Fixed effects	
	Base model	Extended model	Base model	Extended model	Base model	Extended model	Base model	Extended model
Employment type (ref.= Permanent contract)								
Fixed-term contract	-0.159***	-0.130***	-0.031	-0.049	-0.069	-0.042	0.013	-0.001
Casual contract	0.113***	-0.273***	0.234***	-0.080*	0.445***	-0.009	0.443***	0.091***
Temporary agency work	-0.352***	-0.318***	-0.156**	-0.241***	0.130*	0.025	0.192***	0.075
Self-employed	0.353***	0.146***	0.413***	0.263***	0.687***	0.400***	0.673***	0.468***
Age	-0.049***	-0.022**	-0.001	0.070**	-0.019*	0.003	-0.003	0.051
Age squared	0.001***	0.000**	0.000	-0.000**	0.000**	-0.000	0.000***	-0.000
Educational level (ref.= low (year 11 and below))								
High (bachelor or higher)	0.254***	-0.027	-0.113	0.027	-0.337***	-0.118**	-0.207*	-0.016
Medium (year 12, cert III, IV, diploma, advanced diploma)	0.078	0.016	-0.078	-0.034	-0.148***	-0.066	-0.077	-0.008
Full-time student	0.317***	-0.150***	0.186***	-0.141***	0.184***	-0.203***	0.179***	-0.183***
Age of youngest resident child (ref.= 0 to 3 years)								
No child below 18 years	0.040	0.056	0.012	0.036	-0.110**	0.300***	-0.246***	0.254***
4 to 7 years	-0.001	0.006	-0.011	-0.015	-0.050	0.088**	-0.041	0.110***
8 to 12 years	-0.028	-0.002	0.000	0.013	-0.164***	0.084*	-0.145***	0.157***
13 to 17 years	0.020	0.083	0.040	0.074	-0.156***	0.165***	-0.184***	0.229***
Number of own resident children (ref.= one child)								
Two children	-0.028	-0.030	-0.077**	-0.087**	0.194***	0.069	0.085**	0.002
Three or more children	-0.097	-0.072	-0.084	-0.077	0.118*	-0.008	0.071	-0.059
Work-limiting health condition	-0.174***	-0.336***	-0.079**	-0.159***	-0.259***	-0.374***	-0.100**	-0.185***

Table A.3: Employment types and WLB (full models) (continued)

	Men				Women			
	Pooled OLS		Fixed effects		Pooled OLS		Fixed effects	
	Base model	Extended model	Base model	Extended model	Base model	Extended model	Base model	Extended model
Partner situation (ref.= no partner)								
Partner not employed	0.010	0.073	-0.106**	-0.086*	0.140**	0.099*	0.037	0.003
Partner part-time employed	0.039	0.058	-0.067	-0.062	0.132**	0.018	0.033	-0.011
Partner full-time employed	0.007	0.048	-0.093**	-0.072*	0.177***	0.073*	0.069*	0.044
Parents in the household	0.021	-0.072	0.040	-0.004	0.081	-0.043	0.072	0.025
Other people in the household	0.020	-0.015	0.032	0.014	0.021	0.028	-0.059	-0.074*
Working hours (main job)		-0.044***		-0.039***		-0.043***		-0.041***
Multiple job holder		-0.209***		-0.262***		-0.212***		-0.271***
Tenure		0.019***		-0.008*		0.021***		-0.007
Tenure squared		-0.000***		0.000		-0.001***		0.000
Public sector		0.056		0.211***		-0.043		0.053
No regular day schedule		-0.419***		-0.295***		-0.314***		-0.218***
Supervisory responsibilities		-0.050*		-0.051**		-0.071***		-0.096***
Occupation (ref.= Professional)								
Manager		0.124***		-0.022		0.174***		-0.073
Technician and Trades		-0.288***		-0.072		-0.058		0.018
Community and personal service		-0.452***		-0.093		-0.126**		-0.184***
Clerical and administrative		-0.175***		-0.103**		0.388***		0.085**
Sales		-0.164**		-0.168***		-0.034		-0.122**
Machinery Operators and Drivers		-0.458***		-0.139**		0.070		-0.071
Labourers		-0.361***		-0.167***		-0.157**		-0.163**

Table A.3: Employment types and WLB (full models) (continued)

	Men				Women			
	Pooled OLS		Fixed effects		Pooled OLS		Fixed effects	
	Base model	Extended model	Base model	Extended model	Base model	Extended model	Base model	Extended model
Firm size (ref. = less than 20 employees)								
20-99 employees		-0.203***		-0.185***		-0.102**		-0.158***
100-499 employees		-0.273***		-0.267***		-0.170***		-0.180***
500 and more employees		-0.425***		-0.287***		-0.306***		-0.232***
Missing firm size		-0.447***		-0.237***		-0.305***		-0.208***
Constant	7.850***	9.998***	6.914***	7.333***	7.723***	8.840***	7.203***	7.422***
N (observations)	76,960	76,630	76,960	76,630	70,960	70,534	70,960	70,534
F test that all individual fixed effects are zero			5.26	4.90			4.34	4.07
Prob > F			0.000	0.000			0.000	0.000

Notes: All models additionally include dummies for calendar year and are estimated with cluster-robust standard errors. \*\*\*, \*\* and \* denote statistical significance at the .01, .05 and .10 levels, respectively.

Table A.4: Employment types and WFC (reflected scale) of parents with children aged 17 and younger (full models)

	Men				Women			
	Pooled OLS		Fixed effects		Pooled OLS		Fixed effects	
	Base model	Extended model	Base model	Extended model	Base model	Extended model	Base model	Extended model
Employment type (ref. = Permanent contract)								
Fixed-term contract	-0.065	-0.051	-0.046	-0.063*	0.006	-0.022	-0.006	-0.018
Casual contract	0.100*	-0.187***	0.198***	0.014	0.611***	0.150***	0.366***	0.100***
Temporary agency work	0.057	-0.005	0.202***	0.123**	0.239**	0.036	0.104	0.003
Self-employed	0.210***	0.191***	0.266***	0.208***	0.563***	0.349***	0.453***	0.295***
Age	-0.042**	-0.021	-0.131***	-0.104***	0.022	0.015	-0.109**	-0.086*
Age squared	0.001***	0.000*	0.001***	0.000**	-0.000	-0.000	0.001***	0.001***
Educational level (ref. = low (year 11 and below))								
High (bachelor or higher)	-0.039	-0.117*	-0.046	-0.040	-0.364***	-0.187***	-0.299	-0.178
Medium (year 12, cert III, IV, diploma, advanced diploma)	0.070	0.042	0.037	0.022	-0.108*	-0.055	-0.100	-0.062
Full-time student	0.072	-0.144	0.064	-0.072	-0.008	-0.128	-0.084	-0.270***
Age of youngest resident child (ref. = 0 to 3 years)								
4 to 7 years	-0.035	-0.012	-0.030	-0.021	-0.239***	-0.085**	-0.237***	-0.131***
8 to 12 years	-0.016	0.024	-0.051	-0.042	-0.254***	0.012	-0.307***	-0.129***
13 to 17 years	0.145**	0.213***	0.026	0.035	0.032	0.374***	-0.129*	0.082
Number of own resident children (ref. = one child)								
Two children	-0.075**	-0.073**	-0.166***	-0.169***	-0.028	-0.104***	-0.113***	-0.162***
Three or more children	-0.207***	-0.188***	-0.248***	-0.239***	-0.153***	-0.248***	-0.166***	-0.259***
Work-limiting health condition	-0.235***	-0.295***	-0.060*	-0.083**	-0.323***	-0.425***	-0.031	-0.093**

Table A.4: Employment types and WFC (reflected scale) of parents with children aged 17 and younger (full models) (continued)

	Men				Women			
	Pooled OLS		Fixed effects		Pooled OLS		Fixed effects	
	Base model	Extended model	Base model	Extended model	Base model	Extended model	Base model	Extended model
Partner situation (ref.= no partner)								
Partner not employed	-0.164*	-0.055	-0.130	-0.051	0.103	0.163**	0.047	0.076
Partner part-time employed	-0.019	0.056	-0.076	-0.008	0.184**	0.192**	-0.028	-0.011
Partner full-time employed	0.079	0.136	-0.050	0.009	0.397***	0.314***	0.051	0.033
Parents in the household	0.120	0.062	0.091	0.051	-0.214**	-0.190*	-0.032	-0.041
Other people in the household	-0.007	-0.022	0.075	0.070	-0.085	-0.011	-0.100	-0.106
Working hours (main job)		-0.030***		-0.022***		-0.038***		-0.035***
Multiple job holder		-0.219***		-0.214***		-0.276***		-0.229***
Tenure		0.002		-0.016***		0.019***		0.002
Tenure squared		-0.000		0.000**		-0.001***		-0.000
Public sector		0.029		0.064		0.071		0.029
No regular day schedule		-0.225***		-0.116***		-0.122***		-0.060**
Supervisory responsibilities		-0.123***		-0.099***		-0.178***		-0.118***
Occupation (ref.= Professional)								
Manager		0.054		-0.016		0.114*		0.029
Technician and Trades		-0.029		-0.018		-0.084		0.116
Community and personal service		-0.151*		-0.057		0.035		0.004
Clerical and administrative		-0.006		0.028		0.170***		0.084*
Sales		-0.153*		-0.107*		-0.041		-0.039
Machinery Operators and Drivers		-0.139**		-0.109**		0.281**		0.149
Labourers		-0.097		-0.035		0.046		0.033

Table A.4: Employment types and WFC (reflected scale) of parents with children aged 17 and younger (full models) (continued)

	Men				Women			
	Pooled OLS		Fixed effects		Pooled OLS		Fixed effects	
	Base model	Extended model	Base model	Extended model	Base model	Extended model	Base model	Extended model
Firm size (ref. = less than 20 employees)								
20-99 employees		-0.138***		-0.108***	-0.043		-0.084**	
100-499 employees		-0.128**		-0.126***	-0.135**		-0.156***	
500 and more employees		-0.157***		-0.079*	-0.191***		-0.144***	
Missing firm size		-0.105		-0.116**	-0.122**		-0.143***	
Constant	4.526***	5.753***	7.480***	7.997***	3.818***	5.244***	7.213***	7.638***
N (observations)	25,045	24,957	25,045	24,957	23,153	23,047	23,153	23,047
F test that all individual fixed effects are zero			7.69	7.28			7.13	6.72
Prob > F			0.000	0.000			0.000	0.000

Notes: All models additionally include dummies for calendar year and are estimated with cluster-robust standard errors. \*\*\*, \*\* and \* denote statistical significance at the .01, .05 and .10 levels, respectively.

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## Information in German

### Deutscher Titel

Temporäre Beschäftigung und Work-Life Balance in Australien

### Zusammenfassung

Wenngleich häufig angenommen wird, dass temporäre Beschäftigungsformen, wie befristete Verträge, Gelegenheitsarbeit und Zeitarbeit, Beschäftigten mehr Flexibilität zur Vereinbarkeit von Arbeit und privaten Verpflichtungen bieten, sind überzeugende empirische Belege hierfür bisher rar. Dieser Artikel untersucht den Zusammenhang zwischen temporärer Beschäftigung und Work-Life Balance in Australien mithilfe von Daten des Household, Income and Labour Dynamics in Australia Survey für den Zeitraum 2001 bis 2017. Im Gegensatz zu vorherigen Studien vergleichen wir Ergebnisse von gepoolten Querschnitts- und Fixed-Effects Regressionen, um herauszufinden, welche Rolle zeitkonstante unbeobachtete Charakteristika der Beschäftigten mit Blick auf den Zusammenhang zwischen temporärer Beschäftigung und Work-Life Balance spielen. Die Ergebnisse zeigen, dass unter Berücksichtigung von Arbeitsplatzcharakteristika und personenspezifischen zeitkonstanten Charakteristika bei Frauen nur Gelegenheitsarbeit eindeutig mit einer besseren Work-Life Balance verbunden ist als unbefristete Beschäftigung. Für Männer finden wir überwiegend negative Zusammenhänge zwischen allen Formen temporärer Beschäftigung und Work-Life Balance, allerdings sind diese Zusammenhänge in den Fixed-Effects Modellen schwächer und überwiegend insignifikant. Dieses Ergebnis deutet darauf hin, dass Männer in temporärer Beschäftigung unbeobachtete unveränderliche Charakteristika aufweisen, die mit einer schlechteren Work-Life Balance einhergehen.

**Schlagwörter:** Temporäre Beschäftigung, Gelegenheitsarbeit, HILDA Survey, Work-Life Balance, Work-Family Conflict, Australien, Längsschnittmethoden

JFR – Journal of Family Research, 2020, vol. 32, no. 2, pp. 214–248.

doi: 10.20377/jfr-357

Submitted: May 10, 2019

Accepted: December 19, 2019

Published online: March 02, 2020



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