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Does casual employment provide a "stepping stone" to better work prospects?

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1. Introduction

Australia has experienced strong economic growth since 1992 and the concomitant employment growth has resulted in generational low rates of unemployment. However, the strong job growth has been accompanied by two major trends which have raised questions about the quality of the expansion. First, full-time work has declined in relative terms. At the start of the last growth cycle (January 1992), full-time work constituted 77 per cent of all jobs (January 1992). By October 2008, this proportion had dropped to 72 per cent. Of the 3106 thousand jobs that have been created between January 1992 and October 2008, 42.3 per cent have been part-time (ABS, 2008a). Second, a rising proportion of the part-time jobs created are of a casual nature, the latter constituted 26 per cent of total employment in 2006 having risen from 20 per cent in 1992 (ABS, 2006).

Table 1 shows the labour market transitions rates for the labour force categories with employment decomposed into casual and non-casual work. The data shows that around 25 per cent of the sample makes the transition between successive panels of the Households, Income and Labour Dynamics in Australia (HILDA) dataset (2001 to 2006) into non-casual employment. There is considerable state dependence revealed with around 55-58 per cent of the sample not moving out of casual work. Another striking feature of the data is the stability of those in non-casual employment across the waves.

Economic theory is divided about the interpretation of these trends. Human capital (HC) theory, a central pillar of neo-classical microeconomics since the 1960s, argues that the outcomes of education and training are embodied in the individual influencing both labour market participation and productivity differences. Wage differentials then relate to the investment decisions made by individuals about their own capacity development. Closely linked is job search theory, which constructs job search behaviour as the activity of individuals who are deemed to be rational, maximising agents. Accordingly, any labour market participation, including unemployment and casual work, is considered a productive activity in the context of expanding the information required for individuals to make career advancement (see, for example, Phelps, 1970). According to this view, the search for work involves the worker continually testing the market for his/her "real value" which generates a feedback loop whereby the market information and the workers perception of her "real value" (embodied in the reservation wage) interact to condition the decision making. Search involves time. HC theory suggests that job search is triggered by the prospect of finding a job or – in case of on-the-job search – finding a better one.

HC and job search theory constructs a notion of poorly paid and precarious casual work as being a paid vehicle for individuals to gain work experience and information necessary to improve their career prospects. In this context, job search (whether from a state of unemployment or within a casual job) is an investment activity which provides the person with the opportunity to escape from the bottom of the labour market.

HC theory also suggests that variations in the non-pecuniary characteristics of employment provide market signals which compel the employer to offer extra pay to compensate workers for the bad job characteristics. Precarious casual employment, other things equal should be rewarded more fully than secure employment.

Neo-classical time-use theory also suggests that workers trade-off various competing activities to maximise their real incomes. In this context, casual employment is seen as being of benefit to both employers and employees because it allows increased flexibility to combine work and family commitments.

However, the empirical reality would seem to contradict the orthodox construction of casual employment as being a path to better things. First, Watson (2004) argues that entrenched casual employment for many is a vicious cycle of disadvantage. Casual workers receive reduced entitlements, inferior training opportunities, poor working conditions (diminished quality of occupational health and safety) and become trapped. The idea that poor work conditions are compensated for by higher pay does not accord with the reality of the labour market (Watson, 2004).

Second, the claim that the rising proportion of part-time and casual work signals the changing supply-side preferences of the workers towards more flexible arrangements is contradicted by the fact that while the aggregate unemployment rate in Australia has gradually fallen over the growth cycle, the level of underemployment and the impact of marginal attachment have risen sharply. Underemployment (648.7 thousand at August 2008) constitutes a larger source of labour underutilisation than official unemployment (453.6 thousand at August 2008) (ABS, 2008b). The total labour underutilisation rate is estimated by the ABS to be 9.9 per cent in August 2008, which is considerably higher than the official unemployment rate of 4.1 per cent. The quality of work is also declining with more workers being subjected to poor working conditions (for example, Watson, 2004).

If casual work "traps" an increasing proportion of workers in jobs that carry low wages, and truncated or non-existent career ladders then the life cycle outcomes of these workers will not resemble those predicted by HC theory. This was an insight developed by dual labour market (DLM) theory (see Doeringer and Piore, 1971; and Piore, 1975) which directly challenged the orthodox conception of individual labour market dynamics. DLM theory considers good and bad job characteristics to be cumulative and segmented. Workers in the secondary labour market are more likely to cycle through regular spells of unemployment and insecure work. This is direct contradiction to HC theory which posits that job changes will be made by an individual as part of his/her career development.

A way of advancing this dispute is to explore whether casual employment provides a "stepping stone" to more secure, better paid, non-casual employment. There is very limited research on this question in Australia. However, it is a significant issue because the dominant policy approach to labour market disadvantage, characterised by the active labour market policies to bolster full employability rather than full employment, are predicated on the orthodox view of labour market transitions (see Mitchell and Muysken, 2008).

The contemporary Australian research has explored whether the transition rate from casual to non-casual employment is greater than the transition rate from unemployment to non-casual employment. It is this comparison which allows us to explore the question: Does casual employment serves as a "stepping stone" to non-casual employment or does it trap workers into regular spells of unemployment and insecure work?

Table 1 Labour market transition rates (in brackets: excluding casuals combining school/study with work), 2001-2006

	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Not in labour force to:					
Not in labour force	87.5	88.8	87.5	86.5	87.1
Unemployed	3.3	2.9	3.1	3.0	3.3
Casual employment	5.7	4.6	5.5	6.0	6.2
Non-casual employment	3.5	3.7	3.9	4.6	3.4
Unemployed to:					
Not in labour force	27.4	27.0	24.4	25.7	22.7
Unemployed	30.8	26.2	27.7	21.1	22.1
Casual employment	24.6	23.8	26.1	28.9	26.9
Non-casual employment	17.1	23.0	21.9	24.2	28.4
Casual employment to:					
Not in labour force	11.6 (13.4)	12.0 (12.6)	13.1 (14.7)	11.2 (12.2)	13.0 (13.3)
Unemployed	4.7 (4.7)	4.0 (4.1)	3.8 (3.9)	4.0 (4.7)	4.0 (4.2)
Casual employment	59.0 (52.9)	55.7 (51.5)	56.4 (51.7)	57.7 (55.7)	57.7 (55.1)
Non-casual employment	24.7 (28.0)	28.3 (29.8)	26.6 (29.8)	27.1 (27.5)	25.3 (27.3)
Non-casual employment to:					
Not in labour force	4.0	3.9	4.2	3.7	3.9
Unemployed	1.5	1.2	1.0	1.4	1.1
Casual employment	5.6	5.3	4.8	5.0	5.6
Non-casual employment	88.9	89.6	90.1	90.0	89.5

Source: HILDA, Waves 1-6, 2001-2006.

Unfortunately, the existing econometric studies of available longitudinal data (Gaston and Timcke, 1999; Chalmers and Kalb, 2001; Buddelmeyer *et al.*, 2006) that have sought to validate the "stepping stone" hypothesis are all inconclusive and, as we argue in this paper, constrained by a poor research design.

The deficiency in their research design arises because they all assume that job- and employer-related characteristics in addition to the conditions prevailing in the relevant regional (local) labour markets are irrelevant to the determination of the transition rates. In the comparison between casual to non-casual versus unemployment to non-casual transition, the studies assume these factors do not matter because the unemployed do not have a job to start with. The supply-side emphasis on the individual's ascriptive characteristics also reflects the tendency in neoclassical models to assume away demand side constraints. The exclusive focus on employee behaviour also allows these models to explain the failure of those casually employed workers to move into non-casual employment in terms of their individual characteristics. Policy is then targeted at the individual's capacities and/or attitudes rather than at employer, regional or macroeconomic deficiencies.

But the increased dispersion of casual employment throughout the occupational structure makes this assumption less tenable and as we show, skews the results in favour of the "stepping stone" hypothesis.

In this paper, we break with the previous research in this area of study and present a richer analysis which incorporates both individual and systemic influences. We argue that individuals have to interact with job characteristics (determined by employers and technology) and local labour market conditions which are heavily conditioned by macroeconomic activity. Thus, an individual can have involuntary constraints imposed upon their possible labour market outcomes that contradict the neoclassical dynamics which are driven by the primacy of individual volition and individual characteristics.

However, we limit our analysis in this paper to exploring the transition between casual work and non-casual work. The segmented labour market approach characterises disadvantaged workers as transiting between spells of unemployment, spells of casual work, and even spells outside the labour force (hidden unemployed) over the course of their working lives. To fully appraise the stepping stone hypothesis we would need to incorporate all the transitions from and into casual employment.

Related, is the concept of "duration dependence". This arises if the probability of exiting a particular state (for example, casual employment) falls as the time spent in that state lengthens. This idea is mostly applied to the so-called "scarring" effects of unemployment but is equally applicable to our question. We do not examine this question in this paper, because as we noted in the previous paragraph, we would need to consider the transitions between unemployment and casual work to fully understand the life cycle of the casual worker.

To incorporate the extended set of non-employee related factors into the transition rate analysis and explore the possibility that duration dependence further constrains those in casual employment, we use a research methodology (hazard rate analysis), which is significantly different to that employed by the extant Australian research.

We use all the six waves of the Households, Income and Labour Dynamics in Australia (HILDA) dataset (2001 to 2006) within a hazard rate econometric model. The hazard rate is defined as the probability of exiting casual employment to non-

casual employment, given the time spent in casual employment. Using hazard rate analysis we are able to determine the extent to which the likelihood of moving from casual to non-casual employment depends on individual characteristics and the extent to which it depends on other non-individual characteristics (for example, job, employer and regional characteristics).

We find that: (a) highly casualised industries trap casual workers in casual employment as predicted by dual labour market theory; (b) larger firms provide greater social networks for casual workers to transit to non-casual employment; (c) unfavourable local labour market conditions do not appear to intensify the role of signalling in hiring decisions; (d) employment rich metropolitan labour markets enhance the transition rate towards non-casual employment; and (e) once we control for non-individual factors, individual characteristics have little influence on the transition rate.

The paper is organised as follows. Section 3 provides a literature overview relevant to our research focus. Section 4 develops the key research hypotheses that are formally tested in the paper, while Section 5 details the data source and the construction of the survival analysis dataset. Section 6 presents the formal econometric analysis and Section 7 provides concluding comments.

2. What is casual employment?

A person is employed according to the Australian Bureau of Statistics (ABS) if they have worked one or more hour in the survey week. The ABS then uses a two-step procedure to define casual employment. First, they split employees into two categories: (a) Employees that are entitled to paid sick leave and paid annual leave; and (b) Employees who are not entitled to at least one of these paid leave conditions. The former category is labelled 'employees on permanent contracts'. The latter category of workers is further scrutinised in Step 2. That is, they are asked explicitly whether they consider themselves casually employed. If they answer in the positive, the employee is conclusively classified as casually employed. The remainder are then classified as holding non-casual employment. The HILDA Survey provides sufficient information to allow us to mimic the ABS two-step procedure with some modifications. We outline how we render this correspondence in Section 5.

Following Buddelmeyer *et al.* (2006), we exclude owner managers of businesses from our definition of casual employees. The ABS classifies them as being casually employed because they typically report that they do not take paid leave entitlements. For our analysis it seems fair to exclude them from the analysis, because their labour market and financial position is typically not precarious and they have authority to hire and fire and shutdown the business.

Furthermore we exclude workers who combine school/study and work. Students who used casual work to support studies which then enable them to enter skilled work upon graduation are clearly not examples of casual workers making successful transition to permanent work as a result of the casual work *per se*. For these employees the type of casual employment typically will be unrelated to the industry that they enter after finishing school/studies. Therefore limited transition possibilities to non-casual employment are not relevant to them and their inclusion in the sample will distort the estimate of the true transition probability.

3. Literature overview

Though flexible work arrangements (that is, short duration and irregular working hours) also exist in other countries, casual employment in Australia is distinct. This is because casual workers often experience long spells in casual employment with regular working hours, even though job loss is always a real threat. In this context, Buddelmeyer *et al.* (2006: 12) argue that 'with the possible exception of New Zealand, it follows that overseas research on casual employment transitions is both unlikely to exist and unlikely to be directly comparable (and we are unaware of any New Zealand literature on casual employment transitions).' We sympathise with this viewpoint and thus concentrate on Australian research throughout this paper.

The existing but scant empirical literature on the transitional probabilities of casual employment in Australia, which exploits various longitudinal data sources, focuses nearly exclusively on the alleged "stepping stone" function of casual employment. Chalmers and Kalb (2001: 417) point to three ways in which casual employment acts as a "stepping stone" compared to unemployment:

- Casual employment provides work experience which enhances human capital formation while unemployment leads to skill atrophy;
- Casually employed workers signal their ability and willingness to accept work by accepting casual employment;
- (Casual) employment enlarges the social network of job seekers, which in turn, provides valuable linkages to a wider knowledge of job vacancies.

Taken together, these advantages should increase the probability that casual workers will find non-casual employment. Gaston and Timcke (1999) used the Australian Youth Survey (AYS) to assess the likelihood of using casual employment as a "stepping stone" to non-casual employment. They conclude that if casual employment has such a function, it is only a short term effect. Gaston and Timcke (1999: 345) conclude that 'adult labour market outcomes may, for the most part, be unrelated to early labour market experiences.'

Chalmers and Kalb (2001) use the Survey of Employment and Unemployment Patterns (SEUP) and find that casual employment does provide a "stepping stone" towards permanent employment for some groups of unemployed. Especially disadvantaged job seekers benefit from casual employment, indicating the signalling role of casual employment. But overall, Chalmers and Kalb (2001: 429) conclude that '(a)lthough some individual characteristics are associated with an increased likelihood of benefiting from casual work, there is a large variability in outcomes and a large proportion of the group will remain unemployed or at best in a casual job.'

Buddelmeyer *et al.* (2006) use the HILDA Survey and find that casually employed women have no greater chance of finding permanent employment than unemployed women. They do find small "stepping stone" effects for men.

However, all studies focus on labour supply and leave a much wider set of explanatory variables of the transition rate of casual employment to non-casual employment aside. Moreover, they include casually employed workers (pupils and students) in the analysis who do not seek non-casual employment in their current job sphere and arguably should be left out of the analysis. The mixed results derived from these Australian studies suggest that casual employment is not a homogeneous form

of employment. Instead, it is probable that it provides different "stepping stone" capacities to non-casual employment for different labour force cohorts.

In this paper, we contend that personal, occupational, and firm-related factors together with labour demand related spatial factors will have a significant impact on the stepping stone capacity of casual employment. To test this, we have to abandon the methodological approach used by the aforementioned authors and focus exclusively on casual employment in our analysis (that is, exclude the unemployed).

To our knowledge there is only one recent paper (Chalmers and Waddoups, 2007) that has followed this route. They conduct a hazard rate analysis of the escape from casual employment (to various forms of non-casual employment) over time, which allows them to test a wider set of explanatory variables, but they still focus on the role of family composition on tenure in casual employment. Chalmers and Waddoups (2007: 1) finally conclude that we 'cannot definitively conclude that casual employment acts as either a "bridge" to permanent work or a "trap" in substandard employment.'

4. Hypothesis development

In this paper, we use hazard rate analysis to examine a much wider range of covariates to explain the transition rate from casual employment to non-casual employment. In part, this allows us to determine whether the contemporary research incorrectly oversimplifies the analyses by focusing exclusively on employee characteristics.

4.1 Industry idiosyncrasies

Table 2 presents the industry breakdown of shares of casual employment in total employment, based on pooled HILDA data 2001-2006 (for employees who do not combine work and school or study). Casual employment is concentrated in four sectors: Agriculture; Retail Trade; Accommodation, Cafes and Restaurants; and Cultural and Recreational Services.

Hypothesis One: *Casually employed workers will find it harder to transit to non-casual employment if they are employed in sectors where the share of casual employment in total employment is high, because that erodes the social network function of casual employment*

Hypothesis One reflects a view that the share of casual employment in total employment erodes the capacity of a social network to provide non-casual work. This is consistent with Chalmers and Kalb (2001: 417) who state that if 'employment in an industry or occupation is dominated by casual work, a casual job is unlikely to advance permanent job search in this (the social network effect, CI) fashion.' Although Chalmers and Kalb (2001) mention this possibility, they did not formally test it.

4.2 Occupational differences

Hypothesis Two: *Casually employed workers will find it harder to transit to non-casual employment if they are employed in the secondary labour market, that is, if they work in low skill occupations.*

The motivation for this hypothesis comes from DLM theory which argues that the labour market is segmented into two separate labour markets each with different processes for allocation and reward. The most basic demarcation is between the Primary Labour Market (PLM) and the Secondary Labour Market (SLM). The PLM

worker who is typically employed in a tight internal labour market structure which provides for career advancement will use search activity to enhance her career aspirations. Conversely, the SLM worker may search for different reasons especially given the precariousness of their employment. Search thus may not be motivated by potential employment improvement, but might, rather, be fuelled by fear of future job loss. The two markets are separated by rigidities which inhibit mobility across them. Accordingly, if a worker becomes 'trapped' into the SLM, access to the better outcomes in the PLM becomes severely limited if not intractable.

Table 2 Share of casual in total employment to industry, 2001-2006

Industry	2001-2006
Agriculture, Forestry and Fishing	44.3
Mining	8.9
Manufacturing	15.2
Electricity, Gas and Water Supply	10.9
Construction	20.9
Wholesale	16.5
Retail Trade	31.1
Accommodation, Cafes and Restaurants	53.3
Transport and Storage	19.7
Communication Services	10.8
Finance and Insurance	5.4
Property and Business Services	17.5
Government Administration and Defence	5.8
Education	15.8
Health and Community Services	19.0
Cultural and Recreational Services	29.7
Personal and Other Services	21.3
Total	20.1

Source: HILDA, Waves 1 to 6, 2001 to 2006.

Table 3 shows that the DLM distinction manifests in the breakdown of the incidence of casual employment to occupational groups. The first six waves of HILDA thus show clear support for segmented theory.

4.3 Firm size

Hypothesis Three: *Casually employed workers will find it easier to transit to non-casual employment if they are employed in large firms, because they are more likely to be exposed to a broader and deeper social network.*

The motivation for this hypothesis comes from the social networks literature (Calvó-Armengol, 2004). If the social network argument is valid then firm size (in terms of employees) should be positively related to higher rates of transition from casual to

non-casual employment. Therefore we seek to test whether the transition rate from casual employment to non-casual employment increases with firm size.

Table 3 Share of casual in total employment to occupational group, 2001-2006

Occupational groups	2001-2006
Managers and professionals	9.1
Associate professionals	9.7
Tradespersons and related workers	16.6
Advanced clerical and service workers	17.2
Intermediate clerical, sales and service workers	24.2
Intermediate production and transport workers	23.8
Elementary clerical, sales and service workers	41.5
Labourers and related workers	46.8
Total	20.1

Source: HILDA, Waves 1 to 6, 2001 to 2006.

4.4 Labour market conditions

Labour market conditions may also impact on the "stepping stone" capacity of casual employment. Casual work is precarious by nature and therefore highly cyclically sensitive. In slack labour market conditions the casual workforce will be among the first to lose their jobs or have their hours cut. Accordingly, casual workers who maintain employment during deteriorating economic conditions may have more favourable characteristics, which predispose them to transiting to non-casual employment in the future (Greenwald, 1986).

Hypothesis Four: *Casually employed workers will find it easier to transit to non-casual employment if they have held on to their casual job in poor economic conditions.*

Empirical support for this hypothesis would challenge the conventional argument that the unemployed would be better placed to find non-casual employment by first taking any casual job on offer. Finding support for Hypothesis Four would suggest that the "stepping stone" capacity of casual employment may reflect definable or latent characteristics, which the unemployed may not have.

4.5 Metropolitan labour markets

Hypothesis Five: *Casually employed workers will find it easier to transit to non-casual employment in metropolitan areas, because the availability of alternative employment is larger in metropolitan capitals.*

Gordon (2005: 1) argues that modern cities owing to their growing 'density, diversity and flexibility' have a unique capacity for matching workers and employers, promoting job mobility. Therefore we expect casually employed workers to transit more easily into non-casual employment in metropolitan areas in Australia.

5. Data sources and data construction

5.1 Data overview

Formal testing of the five hypotheses developed in Section 4 is performed using hazard rate analysis. To motivate the analysis we used HILDA to construct a data set containing information on employees, their jobs and their employers which allows us to track specific employees through time. HILDA has now published six waves of data from 2001 to 2006. The hazard rate analysis requires states and transitions to be defined and as HILDA's waves are annual, we have 5 transitions within the 6 waves of data.

HILDA provides enough information to allow us to distinguish whether a worker is employed casually. First, the questionnaire explicitly asks respondents whether their job is a casual one. Secondly, the questionnaire asks the respondent whether (s)he has entitlements to holiday and/or sick leave. The responses to both questions provide similar demarcations across the sample. We adopt the first demarcation (the respondents own assessment) and exclude business owners from our analysis as explained in Section 2.

Table 4 gives the shares of casual employment in total employment from the six waves of HILDA. These shares bear a reasonable similarity with ABS estimates once we consider that we have excluded business owners from our definition of casual worker. The majority of casually-employed workers do not combine work with school or study. Fluctuations in the "work only" casually-employed workers predominantly drive the fluctuations in the total share of casually-employed workers. In our analysis our dependent variable will be the "work only" cohort for reasons outlined previously.

In total, the sample includes 3,791 spells of casual employment, of which 1,488 end once non-casual employment is found. We do not study the type of non-casual employment that a casually employed worker finds after leaving casual employment, nor will we study casually employed workers who become unemployed at the end of a spell of casual employment. These questions are examined in a further paper.

Table 4 Share of casually employment in total employment, HILDA, 2001-2006

Job description	2001	2002	2003	2004	2005	2006
Casually employed	25.3	26.0	24.0	23.6	23.5	24.3
Work only	17.2	17.5	16.4	15.5	15.7	16.4
Work and school	3.4	3.9	3.2	3.7	3.5	3.6
Work and study	4.7	4.6	4.5	4.4	4.3	4.3
Non-casually employed	74.7	74.0	76.0	76.4	76.5	75.7

Source: HILDA, Waves 1 to 6, 2001 to 2006.

5.2 Explanatory variables

The explanatory variables we use to determine the hazard probabilities include controls for a range of personal characteristics, notably age, sex, educational level and ethnicity.

To test Hypotheses One, Two and Three we add industry, occupational and firm size dummies, respectively to the analysis.

To test Hypothesis 4 we sourced state level unemployment rates from the ABS for 2001 to 2006. We merged these figures to the data set using the state identifiers provided in HILDA.

To test Hypothesis 5 we group respondents who reside in Sydney, Melbourne, Perth, Brisbane, Adelaide and the ACT. We consider that these areas are metropolitan regions.

5.4 The hazard function

We use the term "spell" to be a period of casual employment (defined per HILDA wave). So a person finishes a spell if they enter non-casual employment in a subsequent wave. A hazard rate is defined as the probability that a spell ends between t and t+1, knowing that it survived until t.

We cannot use multiple regression techniques to estimate which independent variables influence the hazard rate. First, the dependent variable is not normally distributed. Second, there is truncation in the data. Given the discrete nature of the dataset and common to all "event history" datasets, we are unable to observe the end of each spell for every observation. For example, in Wave 6, there are spells of casual unemployment that will finish in a subsequent year. This problem is one of "right censoring". We also have "left censoring" in the data because we do not know when the casual person in Wave 1 started their current spell.

To overcome these issues we use the proportional hazard or Cox regression model (Cox, 1972), which is the most general survival model available, in that it makes no prior assumptions concerning the nature or shape of the underlying survival distribution. The Cox regression model assumes that the underlying hazard rate (as opposed to the survival time) is a function of the independent covariates, x such that:

$$(1) \qquad h(t) = h_0(t)\exp(\beta_1 x_1 + \ldots + \beta_k x_k)$$

The aim is to estimate the β coefficients.

The proportionality assumption (related to the multiplicative specification of the hazard function) means that if we take two different individuals, the ratio of the hazard functions will be independent of time (constant). In many applications this model would be inapplicable – that is, where survival rates increase or decline with time. However, the proportionality assumption is testable using a chi-squared test (Pike, 1966). If we reject the proportionality hypothesis, then we would have to employ other distributions (such as the Weibull or exponential specifications).

6. Hazard rate analysis

6.1 Results

In this Section, we present the results as hazard rates, which refer to the chances of leaving casual employment and making the transition into non-casual employment between HILDA waves. So a negative coefficient indicates that a variable reduces the likelihood of a person leaving casual employment for non-casual employment.

Table 5 presents the results of the hazard rate study. We tested the estimated equation for proportional hazards (as explained in Section 5) and found the model

overwhelmingly supported the null hypothesis of proportionality. This suggests the Cox model is a suitable specification for this exercise.

The results in Table 5 reveal that gender, ethnicity and educational level have no significant effect on the survival rate. Unlike the previous studies discussed in Section 3, once we control for job-, employer- and region-related factors, these personal characteristics play no significant role in explaining the transition rate. However, we find that the transition rate from casual to non-casual employment decreases with age. Older workers are more prone to being trapped in casual work than younger workers.

Hypothesis One suggests that casually employed workers will find it hard to transit in industrial sectors that have high shares of casual employment, simply because of a lack of non-casual jobs. Industries with high casual shares are Agriculture; Retail Trade; Accommodation, Cafes and Restaurants; and Cultural and Recreational Services. The hazard rate analysis supports the hypothesis. We use one of the four (that is, Retail Trade) as the reference category and find the nearly all industry sector with lower incidences of casual employment have significantly higher hazard rates, while the remaining three high casualisation industries have comparable or even lower hazard rates than the sector Retail Trade. It is possible that the low hazard rates in these sectors may also reflect the seasonality of the work involved in these industries. However, if that is true, it provides no comfort for the claim that personal characteristics determine the "stepping stone" capacity of casual work.

We find little support for Hypothesis Two, which posits that the transition rate from casual to non-casual employment varies with the occupational status of the job. We find that the higher incidence of casual employment in the secondary segment of the labour market does not stem from longer spells of casual employment, but instead arises from the higher share of casual job openings to total job offers in these occupations.

Hypothesis 3 relates to the capacity of social networks to improve transition from casual to non-casual work. The claim is that these networks are likely to be deeper and broader in larger firms. The results in Table 3 unequivocally show that the transition rate increases with firm size.

The fourth hypothesis refers to the signalling function of retaining a casual job in adverse economic circumstances. The idea is that unspecified factors permit an individual to maintain employment continuity when the probability of gaining a job is lower (higher unemployment rate), even though the casual job is precarious, improve their likelihood of getting non-casual work. The hazard rate analysis fails to find evidence to support this signalling argument, which then also implies that improving labour market conditions does not necessarily increase the transition rate from casual to non-casual employment. We are investigating this result in later research.

Further, we find support for Hypothesis Five such that the relative richness of metropolitan labour markets increases the likelihood that casually employed workers will find non-casual employment.

Table 5 Determinants of hazard rate out of casual employment, 2001-2006

Covariates		Cox
Personal characteristics:		
Age:	16-20 years	0.59 ***
	21-30 years	0.49 ***
	31-45 years	reference
	46-60 years	– 0.42 ***
	61 and older	– 0.94 ***
Gender:	Male	0.04
	Female	reference
Ethnicity:	Indigenous Australian	0.15
	Non-indigenous Australian	reference
	Non-Australian	0.01
Education:	University degree	0.06
	Certificate / diploma	– 0.04
	Year 12 or less	reference
Industry idiosyncrasies:		
Agriculture, Forestry and Fishing		– 0.68 ***
Mining		0.67 ***
Manufacturing		0.31 ***
Electricity, Gas and Water Supply		– 0.05
Construction		0.04
Wholesale		0.40 ***
Retail Trade		reference
Accommodation, Cafes and Restaurants		– 0.44 ***
Transport and Storage		0.12
Communication Services		0.32
Finance and Insurance		0.65 ***
Property and Business Services		0.25 **
Government Administration and Defence		0.59 ***
Education		0.46 ***
Health and Community Services		0.43 ***
Cultural and Recreational Services		– 0.17
Personal and Other Services		0.35 **

Table 5 (continued) Determinants of hazard rate out of casual employment, 2001-2006

Covariates	Cox
Occupational differences:	
Managers and professionals	reference
Associate professionals	0.17
Tradespersons and related workers	0.07
Advanced clerical and service workers	0.14
Intermediate clerical, sales and service workers	0.22 **
Intermediate production and transport workers	0.06
Elementary clerical, sales and service workers	0.02
Labourers and related workers	0.02
Firm size:	
2 – 9 employees	reference
10 – 19 employees	0.86 ***
20 – 49 employees	0.93 ***
50 – 99 employees	1.05 ***
100 or more employees	1.07 ***
Local labour market conditions:	
State level unemployment rate	0.01
Metropolitan labour markets:	
Metropolitan area	0.10 *
Non-metropolitan area	reference
Log likelihood	– 10,683

Note: * is 10 per cent level of significance, ** is 5 per cent and *** is 1 per cent.

7. Conclusion

We hypothesised that conventional research into the stepping stone capacity of casual employment overlooks a wide set of explanatory variables. We contended that industry, occupational, firm, and local labour market characteristics impact on the transition rate and found ample support for that hypothesis.

We find that: (a) highly casualised industries trap casual workers in casual employment as predicted by dual labour market theory; (b) larger firms provide greater social networks for casual workers to transit to non-casual employment; (c) unfavourable local labour market conditions do not appear to intensify the role of signalling in hiring decisions; (d) employment rich metropolitan labour markets enhance the transition rate towards non-casual employment; and (e) once we control

for non-individual factors, individual characteristics have little influence on the transition rate.

In future work we plan to broaden the transitions out of and into casual work to more fully test the idea that a worker becomes trapped in the secondary labour market and transits between casual work, unemployment and marginal labour force status.

This paper represents a tentative step in that direction and improves on previous studies of the transition from casual to non-casual employment by extending the focus beyond worker characteristics. It is clear that once we broaden the covariates, the importance of individual characteristics wane.

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