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Bridge or Trap? Temporary Workers' Transitions to Unemployment and to the Standard Employment Contract

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Abstract

This paper analyses the transitions of temporary workers to the standard employment contract and to unemployment. Adopting a comparative framework in an attempt to identify whether labour market institutions parameterise outcome, four countries with different forms of market structuration are analysed: France, West-Germany, Denmark and the UK. Using the European Community Household Panel survey (ECHP), spanning a period from 1995 to 2001, temporary workers' transitions are investigated using event history analysis techniques (Allison 1984; Blossfeld and Rohwer 1995). This paper establishes higher rates of transition to permanent employment than to unemployment for most temporary workers, though strong between-country differences are found.

Keywords: contracts, event history analysis, cross-national analysis.

JEL: J41, J62.

1. Temporary Employment, Bridge or Trap?

Unusually for academe, most agree that temporary jobs are of inferior quality and status to permanent jobs. This consensus is apparent across disciplines, with publications in both sociology and economics confirming the lower wages and inferior occupational status of temporary workers (i.e. OECD 2002; Booth Francesconi and Frank 2002; Kalleberg Reskin and Hudson 2000). With 14 percent of workers on temporary contracts across the European Union (Eurostat 2006, p.259), the implications are considerable. Yet, temporary employment has a potentially redeeming feature: it is thought to provide a point of entry to the standard employment contract for those who may otherwise remain unemployed. Therefore this paper focuses on the presumed redeeming characteristic of temporary employment: its ability to integrate workers to the standard employment contract. It does so by assessing the relative proportions of temporary workers who go on to either obtain a permanent contract or are fired/dropped at the end of their contract and become unemployed. The dichotomy between these two

outcomes was chosen as a stark illustration of the capacity of contract employment to integrate or marginalise. While unemployment is not the only risk temporary workers face; temporary workers are also exposed to repeat spells of temporary work (i.e. Giesecke and Groß 2003; Gash and McGinnity 2007), unemployment remains a clear indicator of temporary work's inability to integrate workers. Some authors have investigated the transitions of temporary workers to permanent employment (i.e. Booth *et al.* 2000), though few have been able to conduct multi-country comparisons. As national variation in institutional structure is thought to influence individuals at the micro-level (i.e. Mayer 2004; Blossfeld Buchholz and Hofäcker 2006), this paper presents a comparative analysis of four countries with very different institutional structures: France, West-Germany¹, Denmark and the United-Kingdom. Such an analysis has only recently been made possible through the collection of cross-national comparative panel data in the European Community Household Panel survey (ECHP). This paper uses the full panel sequence, spanning a period from 1995 through to 2001, and through careful data construction observes and measures the transitions of temporary workers through time.

2. Theory and Expectations

The majority of the literature on temporary employment presents us with a 'good-job' versus 'bad-job' scenario, where temporary jobs and the outcomes of temporary employment are compared to permanent employment. Most of the research on the topic establishes temporary work to be of inferior quality, with temporary workers found to have lower wages (Mertens and McGinnity 2004; Gash and McGinnity 2007) fewer benefits (McGovern Smeaton and Hill 2004; Houseman 2001) and to have reduced access to employer-provided training (OECD 2002). From the employee's perspective, temporary work is, nonetheless, thought to have some redeeming characteristics. First,

some argue that workers voluntarily choose temporary employment for its flexibility (Polivka 1996). Second, temporary employment is thought to provide a ‘bridge’ to the standard employment contract (Booth, Francesconi and Frank 2002). The literature reviewed below presents theories that regard temporary contracts as either a ‘bridge’ to permanent employment, or a ‘trap’ leading to unemployment.

Theories Predicting a Bridge

Broadly the theories reviewed below regard the employment of workers on temporary contracts as an opportunity for employees to either prove themselves on the job, or as a means to flexibilise a rigid market and thereby render it more amenable to all labour market transitions.

At their most basic one can regard temporary contracts as a form of ‘probationary contract’, where workers are hired for a short period so that employers can screen their skills and abilities before offering them a standard contract (Wang and Weiss 1998; Henguelle 1994). Such a perspective would predict a reasonable flow of workers from temporary contracts to permanent contracts and would, moreover, predict greater recourse to this form of ‘probationary contract’ in markets where employers’ information concerning skills and capabilities is bound by poor skills development and co-ordination (Hall and Soskice 2001; Soskice 1999) such as the UK and to some extent France (DiPrete, Goux, Maurin and Tåhlin 2001). One of the limitations of screening theories is that they fail to recognise employers’ differential use of probation by skill. The transaction costs of screening are expected to be too costly for a lower skilled job. For this reason we can expect a greater proportion of highly skilled temporary workers to be “on probation” than lower skilled temporary workers, and can therefore expect more transitions to permanent employment for highly skilled workers.

The expectation that a considerable portion of temporary work will lead to permanent work is similar to Giesecke and Groß' (2003) "integration scenario", and to Schmid and Gazier's (2002) "transitional labour market theory" though both of these theories offer predictions for the entire labour market. The integration scenario postulates a win-win situation for both employers and employees on the introduction of temporary contracts, with temporary contracts allowing employers to fluctuate the supply of labour in accordance to demand, as well as lowering costs. Employees are seen to benefit from a more open market and from the products of a more efficient economy, the combination of which should lead to greater transitions between atypical and standard contract employment (Schmid and Gazier 2002). Further examples of research which is consistent with an 'integration scenario' include the following. In the Netherlands Zijl, van den Berg and Heyma (2004) find temporary work to shorten the duration of unemployment. In West Germany, Hagen (2003) finds temporary work to lead to the standard employment contract and McGinnity, Mertens and Gundert (2005) establish convergence in the labour market outcomes of West German fixed-term and permanent workers overtime.

Theories Predicting a Trap

Broadly the theories and findings reviewed below suggest that temporary work is a 'trap' offering few opportunities for upward progression.

Evidence from employer surveys reveal significant proportions of employers use temporary contracts to provide external flexibility, i.e. to increase or decrease the size of their workforce. Employers have been found to use temporary workers to fill short-term vacancy gaps and staff absences and to adjust to workload fluctuations, be they

seasonal or due to fluctuations in product markets (Houseman 2001; Houseman Kalleberg and Erickcek 2003; Olsen and Kalleberg 2004). These are all situations where the nature of the job is short-term and where we have less reason to expect temporary jobs to lead to permanent employment.

Type-of-contract segmentation theories (Polavieja 2001, 2003; Giesecke and Groß 2003) also predict reduced transitions to permanent contract employment, though they also articulate the segmenting effect that contract type has on market structure. Both theories have their origin in dual labour market (Doeringer and Piore 1985; Piore and Sabel 1984) and segmentation theories (Edwards 1979; Gordon, Edwards and Reich 1982). These theories predict stark skills differences between workers in the ‘core’ and ‘peripheral’ segments as a result of the different technological requirements of each sector. In the core market, production and employment are stable, though their stability requires both economies of scale and consistency in product demand to offset the costs of technological advancements required in the core market. In the peripheral market production is based on low-skill, low-cost labour that is hired and fired in accordance to fluctuations in product demand. Proponents of this perspective argue that the flexibility required in the secondary sector is likely to be obtained through the generation of temporary work, which by definition is hired and fired with greater ease. Polavieja (2001, 2003) develops his theoretical position to incorporate the role that institutional context plays in the stratification of labour markets, with type-of-contract segmentation most likely to occur in markets where dismissal costs for permanent employment are high relative to temporary employment. For the four countries analysed here this is most likely to affect German and French employers, though they face considerable procedural inconveniences on the termination of permanent contracts rather than high dismissal costs (OECD 2004).

Previous research which suggests that temporary employment is most likely to lead to further unemployment includes the following. Using French data, Blanchard and Landier (2002) analyse changes in the working conditions of fixed-term contract work for young workers. They found decreasing probabilities of moving from fixed-term work to permanent work over the 1990s while the probability of remaining in fixed-term employment was found to increase for the same time period. Giesecke and Groß in a series of papers (2003, 2004) find temporary workers more likely than permanent workers to become unemployed and to obtain further temporary contracts, using West German and UK data. Scherer (2004) finds a similar dynamic in Italy, with temporary workers more exposed to unemployment and labour market drop-out than permanent workers.ⁱⁱ

The theories reviewed present us with competing hypotheses concerning temporary workers' propensity for mobility to permanent contracts. From the perspective of screening theories and of transitional labour markets we would expect temporary workers to be quite likely to make transitions to permanent contract employment (corresponding with the 'bridging thesis'), while segmented market theories lead us to expect temporary workers to be peripheral market occupants with reduced access to permanent contracts (corresponding with the 'marginalisation thesis'). Both theories also offer us competing expectations of temporary workers' unemployment risks. Screening theories lead us to expect a proportion of temps, those who after probation failed their employers' expectations, to be at risk of unemployment. Crucially, this theory also leads us to expect unemployment risk to be associated with unobserved criteria, such as motivation or collegiality; attributes which can only be determined on probation. Screening theories, therefore, lead us to expect little observed difference

between temporary workers who make transitions to unemployment and those who do not. Conversely, market segmentation theories lead us to expect a strong tendency for temporary employees to be exposed to unemployment. Segmentation theories also lead us to expect stark differences between the attributes of individual workers exposed to unemployment.

While the theories reviewed suggest that institutional structures will influence both; the utilities employers derive from temporary contract employment as well as the structure of the markets temporary workers find themselves in, few have investigated the differential impact of these structures on the transitions of temporary workers. This paper compares temporary workers chances of obtaining a permanent contract against their risk of experiencing unemployment, this is different from previous analyses that revealed the extent to which temporary workers faced an inferior market *to permanent workers* (i.e. Giesecke and Gross (2003) for Germany and the United-Kingdom; and Scherer (2004) for Italy). This paper also aims to determine whether some markets are more supportive of temporary workers' transitions and if so, which institutional components appear to offer support. A review of the institutional components of the countries chosen for the analysis is presented in the next section.

3. Divergence or Convergence? How Different can Labour Markets Be?

There is a tendency to attribute between-country differences in labour market outcome to between-country differences in employment protection legislation (EPL) (Grubb and Wells 1993; OECD 1999, 2002). Broadly, countries with rigid EPL, such as Germany and France, are expected to have low job-to-job mobility and high unemployment. Rigid EPL is seen as a cost for employers and therefore an impediment to demand-side market flexibility. Meanwhile, countries with flexible EPL, such as Denmark and the

United-Kingdom, are expected to have high job-to-job mobility and lower unemployment as a result of their more ‘business friendly’ institutional structure. While the debate has become more nuanced, with the economic and social benefits of EPL increasingly recognised (i.e. Fella 2004); the role of educational and industrial relation systems can sometimes be marginalised. This paper hopes to reveal the impact of both EPL as well as education and industrial relations systems on the market outcomes of temporary workers. We analyse countries with different levels of EPL as well as different systems of skilling and industrial relations. Denmark and the United Kingdom are examples of flexible economies while France and Germany are examples of rigid economies. Meanwhile the industrial relations and educational systems of Denmark and Germany tend to be regarded as supportive of workers’ transitions to employment (Müller and Gangl 2003; Hall and Soskice 2001), whereas this is not the case in either France (DiPrete, Goux, Maurin and Tåhlin 2001; Visser, Dufour, Mouriaux and Subilieu 2000) or the United-Kingdom (Heath and Cheung 1998; Deakin and Reed 2000).

3.1 Employment protection legislation and demand-side flexibility

Rigid employment legislation is thought to decrease job-to-job transitions and increase unemployment risk for non-permanent workers (e.g., OECD 2004). In France and Germany, dismissal regulations for permanent workers stipulate notice periods based on measures such as tenure, age and job type; additionally the employer needs to specify a reason for dismissal. Moreover, in Germany, the works council (*Betriebsrat*) will typically be involved in the dismissals procedureⁱⁱⁱ, while in France this is not necessarily the case^{iv}. German and French employers, however, do not face large redundancy payments. German employees are not automatically entitled to redundancy pay and French employees are only entitled to quite low payments of 3 days pay per

year of service. Though in principle these forms of employment protection might make temporary workers an attractive source of external flexibility, legislators have sought to cap the maximum duration of temporary contracts to 24 months in Germany and 18 months in France. This cap, however, may have the unintended consequence of increasing temporary workers unemployment risk at the end of their contracts. The situation is quite different in Denmark and the UK where both temporary and permanent employees have low levels of employment protection. There are few procedural inconveniences in the termination of employment contracts and end-of-contract payments are low to non-existent in both countries even after considerable years of service (OECD 2002).^v Moreover, there are few legislative specifications concerning the length of temporary contracts, and few limitations to the number of times an employee can be re-employed on successive temporary contracts.^{vi}

Rigid EPL is also likely to encourage the use of temporary contracts as extended probationary periods particularly when trial periods before eligibility to unfair dismissals are short. In Germany and France the trial period for permanent contracts is 6 months and 1.5 months respectively, and both countries have relatively stringent criteria in their definitions of an unfair dismissal. Meanwhile, both Denmark and the UK have much longer probationary periods, 10.5 and 24 months, and crucially their definition of an unfair dismissal is not as stringent (OECD 2004, p. 110).

These components of EPL reviewed suggest that employers in Germany and France are more likely to use temporary employment as both a means of obtaining external flexibility and also as a means of obtaining an extended period of probation than in either Denmark or the United-Kingdom.

3.2 Coordination in Educational and Industrial Relation Systems

While some argue that rigid EPL will lead to market failure, the varieties of capitalism literature (Soskice 1999, Hall and Soskice 2001), challenges this assertion. This literature identifies two different market economies: coordinated and liberal market economies (CMEs and LMEs respectively). The authors explain how ‘rigid’ EPL can support coordinated economies; where employers, strong unions and the state ensure a match between skill formation and employer demand for firm and industry-specific skills. From this perspective market ‘rigidity’ fulfils; employees’ needs for security - encouraging them to invest in specific skills, as well as; employers’ needs for a highly trained workforce. Meanwhile the coordinated industrial relations system ensures that employers provide their workers with further portable skills and that these investments are not lost due to poaching (Soskice 1999). Flexible markets, or ‘LMEs’, on the other hand cannot provide the incentives for specific skill investment as a result of low job security, poor coordination between the state and employers and weak trade unions. Here the educational systems are rather seen to produce general skills, with skills directly relevant to firms’ needs obtained through work experience. This perspective leads us to expect support for temporary workers’ transitions to permanent employment in countries where coordinated economies impart desired and recognisable skills.

In both the ‘variety of capitalism’ literature, as well as literature on the transition from school-to-work (i.e. Müller and Gangl 2003), Germany and Denmark are identified as having coordinated educational systems that; support stable occupational careers and low youth unemployment (i.e. Gangl *et al.* (2003) for Germany; ^{vii} and Cort (2002) and Enevoldsen (1989) for Denmark). Meanwhile, the educational system in the United Kingdom is described as uncoordinated, with an underdeveloped vocational training system relative to Denmark and Germany. Rather, a large portion of occupationally

relevant skills are acquired through work experience with the link between educational credentials and market outcome comparatively weak (Heath and Cheung 1998). While some have tried to characterise the French educational system as coordinated (Hancke and Soskice 1996) others accuse it of failing to provide workers with relevant skills (Goux and Maurin 1998); with the locus of coordination found amongst its upper echelons. Compounding this dynamic is a training system described as dualistic (DiPrete, Goux, Maurin and Tåhlin, 2001).

Crucial to the success of a coordinated economy is the character of its trade unions which are expected to be supportive of all workers, including temporary workers. As with the education system, Germany and Denmark, have coordinated and consensual trade union movements. French trade unions, on the other hand, are far from consensual (Crouch and Streeck 1997) and while trade union coverage is high, their ability to enforce agreements is diminished with only one-in-ten employees members of trade unions (Visser *et al.* 2000). Trade unions in the United Kingdom are also comparatively weak, and while trade union density is somewhat higher than in France, with approximately one-third of workers members of a trade union (Ebbinghaus and Visser 2000, p.63), English trade unions tend to have little to no say in market management (Deakin and Reed 2000).

3.3 Hypotheses

1- An analysis of employment protection legislation, in isolation of other institutional features, led us to expect temporary workers in the ‘flexible economies’ of Denmark and the United-Kingdom to be the most likely to obtain permanent employment relative to temporary workers in the ‘rigid economies’ of Germany and France. Rigid

employment protection legislation is thought to decrease overall job-to-job mobility and increase unemployment risk for outsiders.

2- However, once we bring in the competing arguments from the varieties of capitalism literature, which suggest that rigid employment protection legislation is supportive of a coordinated economy, we have reason to expect the coordinated education and industrial relations systems of Denmark and Germany to provide the most supportive structures for temporary workers. Coordinated economies are thought to improve the match between workers' capabilities and firms' requirements; whilst their unions are expected to support the interests of all workers.

3- Nonetheless, it is important to note that not all 'rigid economies' are coordinated economies. France, with its rigid EPL, does not possess a coordinated or consensual union movement, nor is its educational system comparable to the German and Danish systems. For these reasons we can expect French temporary workers to be the most exposed to market risk.

4. Data and Methodology

The analyses are run on the final seven waves of the European Community Household Panel Survey (ECHP), a standardised comparative cross-national survey conducted in the Member States of the European Union under the auspices of the Statistical Office of the European Communities (EUROSTAT). The samples were drawn by each member state as simple random samples, with information collected from respondents in interviews in each panel year (1994-2001). The panel was not supplemented by new samples to counteract sample attrition given its relatively short data window. We do not use the first wave of the ECHP, 1994, as they did not ask contract type in the first wave. We define temporary workers as all workers who are on fixed-term or other short-term contract. The numbers were not sufficient for us to conduct separate

analyses for different types of temporary contract. In principle the sample excludes all workers on training schemes or in apprenticeships, as contract status was only asked of employees. Nonetheless it is possible that workers on apprenticeships have incorrectly classified themselves as temporary workers. While previous analyses using the ECHP have dropped respondents less than 29 years to ensure that apprenticeships and university students are excluded (Dieckhoff 2007), such a strategy was not possible here given the high proportions of young workers in our sample.

The statistical technique applied, event history analysis (Allison 1984; Blossfeld and Rohwer 1995), allows us examine the transition rates of temporary workers to the standard employment contract and to unemployment. The methodology controls for *right censored* data, that is data which identifies when an event began but not when it ended. The key statistical concept within event history analysis is of the hazard/transition rate: the conditional likelihood that an event takes place at time interval $t \rightarrow t+1$, conditional on it not having occurred before time t . We apply ‘competing risks models’ to analyse the transitions of temporary workers to permanent contract employment and to unemployment. Competing risk models treat all exits other than the one we are interested in, to inactivity or education for instance, as censored. The models applied are continuous time models; in a competing risk format these models assume that each destination-specific hazard is independent. Tests were conducted to ensure that a continuous time format, rather than a discrete time format, offered adequate descriptions of the data. We chose to apply the piecewise constant exponential model as it relaxes the assumptions concerning the distribution of the hazard function by allowing the hazard to vary between specified segments of the time-axis. This allows us to establish whether the risk of exiting a temporary contract to unemployment, for instance, increases or decreases through time. The functional form

of the model was also chosen on the basis of an empirical investigation of model fit, with the piecewise exponential model tested against the standard exponential and the Weibull.^{viii} The formal specification for a piecewise constant exponential model is the following:

$$r_{jk}(t) = \exp\left\{\bar{\alpha}_l^{jk} + V^{jk} \alpha^{jk}\right\} \quad \text{if } t \in i_l$$

For each transition from status j to status k (j,k) $\bar{\alpha}_l^{jk}$ is a constant associated with the time period l . V^{jk} is a vector of covariates and α^{jk} is a vector of covariates assumed not to vary across the segments of time.

Given the short-term nature of temporary employment, it was vital to use the information the dataset provides indicating whether job mobility occurred between panel years as well as the information provided at panel year. Job start and end information was available between panel years as was information on unemployment spells and their duration between panel years^{ix}. Failure to use this data is likely to offer an incomplete view of temporary workers' market transitions, though it also means that multiple incidences of unemployment or job mobility between panel years will go unrecorded. Nonetheless, this method provides greater detail than those that only use information at panel year. The dependent variable, the duration of the individual in a temporary contract, was constructed in the following manner: the *first recorded job start date* was set as the starting point of the dependent variable. The date at which the job ended was collected in later waves of the panel, as was the event at job-end, be it unemployment or permanent contract employment. In instances of non-response on

job-stop date, we approximated job-end dates as equal to the interview date of the panel year when they exhibited changes in their labour force status.

The ability of respondents to correctly relay information in the past, such as job-start or job-end dates is a concern for researchers (Gershuny and Hannan 1997; Davies and Dale 1994). Nonetheless, as incorrect recall is most likely to occur after a period of three years (Elias 1996), and the nature of temporary employment meant that almost no temporary workers gave a job-start date greater than three years from the interview date, the risk of incorrect recall is expected to be rather small for the sample analysed.

Table A1 presents the distribution for the change of status variable for each country analysed. We find that, other than censored cases, the most common destination states are to a permanent contract and to unemployment. This paper limits itself to the analysis of these two outcomes for two reasons. First, cell size restrictions prevent us from conducting a comparative analysis to the other destination states. Second, the paper chose to compare two clearly negative and positive outcomes of temporary employment, with a transition to further temporary employment or to economic inactivity more difficult to classify as troublesome than a transition to unemployment. The assumptions being that a temporary job is better than no job; and that a transition to inactivity does not imply a similar level of ‘social disqualification’ as time spent in unemployment (i.e. Gallie and Paugam 2000).

The dataset was created to maximise on cell size given the small number of workers in temporary contracts. We increased our temporary worker observations by allowing respondents’ job start dates to vary beyond the first wave of the panel. This allowed us to maximise cases by (1) using panel inflow and (2) using labour market information on

respondents who in the first wave of the panel were not in employment. It should be noted that the statistical software applied, STATA Special Edition 8, allows one to specify when each respondent becomes at risk of making a transition. Essentially this means that an individual who is in a temporary job in year 1 and remains in that job for 12 months will be measured according to the same ‘clock’ as someone who is not at risk of making a transition until year 2, as a result of their status as panel inflow, for instance. Sensitivity tests were carried out, nonetheless, to determine whether temporary workers who began their jobs in later years of the survey had similar employment durations, we found no tendency for different rates of tenure between years, no doubt due to the short-term nature of temporary contracts.

Finally, non-random sample attrition can represent one of the main pitfalls of using panel data. However, recent research on attrition within the ECHP has found no difference in the attrition rates of different labour force status groups (Gallo Mastrovita and Siciliani 2004). While the authors did find some evidence on non-random panel attrition they ultimately concluded that the longitudinal weights provided with the ECHP correct for any resulting bias (Gallo *et al.* 2004). Nonetheless, when we ran our estimations with these weights, they did not affect our results.

Variables Used

Human Capital Variables- We include education level as a categorical variable, with third level education excluded as the reference category.^x Possession of formal skills training is introduced as a time varying variable.^{xi} These variables should allow us to establish whether more educated/skilled workers are more likely to make transitions to permanent employment and also whether workers’ skills protect them from transitions to unemployment.

Demographic variables- Age and its square are introduced to the model, with age squared introduced to capture any non-linearities in workers transitions. Gender is also added to the model in an effort to determine whether women are more likely than men to make certain types of transition. ^{xii}

Labour Market Variables- Occupational status is included in the models to control for variations in the transitions of different grades of worker. The occupational classification used is based on the ISCO-88 occupational categorisation. ^{xiii} We distinguish between the public and private sector to identify potential difference in outcome by sector, with the public sector frequently thought of as a protected market. Working-time is included with a distinction made between those working more or less than 30 hours a week. A dichotomous variable measuring respondents' exposure to unemployment prior to current job start was also included to assess the implications of a spell of unemployment for temporary workers' future transitions. In the pooled multi-country analyses we generated weights to ensure that each country provided proportional samples. Tables with the covariate means for our temporary worker sample are presented in the appendix (table A1).

5. Findings

5.1 Bridge or Trap? Relative Hazards to Permanent Employment and to Unemployment

Does temporary employment lead to unemployment or can temporary workers expect to obtain a permanent job at the end of their contract? Are there differences between temporary workers, with lower skilled workers very unlikely to obtain a permanent job? Finally, which country offers the best prospects for temporary workers and can we attribute these prospects to institutional structures? These questions are answered in the following sections.

Figure 1 shows the proportions of temporary workers who make a transition to permanent employment by country. Note that if no workers obtained a permanent job the line would remain parallel to the x-axis. We find the majority of temporary workers obtain a permanent job within the observation period. West German and UK temporary workers are slightly more likely to enter a permanent contract relative to temporary workers in either Denmark or France and French workers exhibit the lowest rates of transition to permanent contract employment.

<FIGURE 1 HERE >

Figure 2 presents the proportions of temporary workers who make a transition to unemployment by country for the same time period as that reviewed in figure 1: 60 months. We find UK temporary workers to have the lowest transition rates to unemployment while French temporary workers have the highest transition rate. Tests revealed the survival curves for both figures to be significantly different.

<FIGURE 2 HERE>

What figure 1 and figure 2 do not make clear is the relative proportion of temporary workers who at the end of their contracts become unemployed *or* accept a permanent job. Table 1 presents this statistic by identifying the difference in the survivor functions of temporary workers' transitions to permanent employment or to unemployment at specific cut-offs on the time-axis. If the difference is equal to zero, there is no difference in the relative tendency for temporary workers to enter unemployment or obtain a permanent job, if it is greater than zero there is a tendency for temporary workers to make more transitions to permanent employment and if it is less than zero

they have a greater tendency to make transitions to unemployment. While we find a greater tendency for unemployment in most countries after 1 year, we also find this tendency to switch with time, after three years we find temporary workers become more likely to obtain a permanent contract. We find the ‘bridging function’ of temporary employment to be the strongest in West-Germany and the United Kingdom.^{xiv} We need to be cautious in this conclusion, however, as it is not robust to different specifications of the change of status variable. If we broaden our conceptualisation of non-integrative exits to include all transitions other than those to permanent employment: i.e. to education, to inactivity or to a second temporary job, we find temporary workers less likely to obtain a permanent contract in all countries save for West-Germany.

The analysis in this section reveals the strong between-country differences in the relative risk of temporary work being a ‘bridge’ or a ‘trap’. The analyses in the following sections aim to identify whether multivariate analyses which control for differences in the composition of the temporary workforce equalise these differences. We start by looking at who gets permanent jobs and whether the cross-national differences identified in this section are a function of the lower skill profile of temporary workers in the France.

5.2 Who Gets Permanent Jobs?

The following section identifies the variables that account for the transitions of temporary workers to permanent jobs. We present six models, one for each country and the final two pooled models of all four countries. To ensure comparability the models are the same for each individual country analysis and the pooled analyses.

<TABLE 2 HERE>

We had expected human capital variables to be strong predictors of temporary workers' transitions to permanent employment though only find this to be the case for West German and UK temporary workers. In both these countries temporary workers with lower levels of education exhibit lower transition rates to permanent contract employment.^{xv} Ultimately, the strongest predictors of temporary workers' transitions to permanent employment relate to the type and grade of jobs temporary workers hold. These variables also show the strongest between-country variation. In Denmark and France temporary workers in manual occupations, the reference category, are less likely to make a transition to permanent contract employment than other occupational groups, with this tendency the most pronounced in France. This fits with our expectation that employers will use temporary employment for lower grades of worker to access external flexibility and in these situations we expect few transitions to permanent employment. Similarly, higher grades of worker are likely to be 'on probation', and once screened will be offered a permanent job. In West-Germany and the UK, however, we find temporary workers in the highest occupational positions to be *less likely* to make transitions to permanent employment than the reference group. Previous research on UK temporary workers' transitions has also found some higher grades of worker to be less likely to make transitions to permanent employment (Booth et al. 2002, p. 203-204) though the authors do not discuss these. It is suggested here that these results may be driven by higher professionals on temporary contracts of considerable duration such as consultancy, academic or research contracts. In France and West-Germany we find temporary workers in the private sector to be more likely to make a transition to a permanent contract than public sector workers. No similar effect is found for the other two countries. While in principle the sample excludes apprenticeships, it is possible that

some apprentices have incorrectly self-described as temporary workers. For this reason, we could attribute a portion of this finding to the considerable investment of the French state in active labour market programmes a large portion of which involve the generation of short-term contracts in the public sector, such as *Contrat Emploi Solidarité* and *Contrat Emploi Jeunes*. Both of these forms of contract have comparatively low training requirements relative to other active labour market programmes targeted at private sector employers (Gash 2003). Alternatively, we could attribute this finding to the generation of a buffer of temporary workers in the highly regulated public sector of both countries.^{xvi} This is consistent with Giesecke and Groß (2004), who found public sector temporary workers to have higher risks of repeat spells of temporary employment and of unemployment in West Germany. Other findings of note include: the strong negative effect of previous exposure to unemployment on French temporary workers' future transitions to permanent contract employment. This finding may be indicative of market segmentation where workers ability to move out of the temporary workforce is hindered by the conditions of that workforce. An analysis of the baseline hazards suggests that the risk of exiting a temporary contract to a permanent contract increases with time.

5.3 Which Country Offers the Best Access to Permanent Jobs?

The pooled multi-country models allow us to identify the country most supportive of temporary workers' transitions to permanent employment. The first equation identifies the country most supportive of transitions to permanent employment by country without controlling for differences between workers, while the second controls for a series of covariates (table 3). We place French temporary workers as the reference category as we expect them to be the least likely to make integrative transitions. As the case numbers differ substantially between countries, the pooled models are weighted

with country weights with an average of 1. We find West German and Danish workers (at the .10 level) more likely to make transitions to permanent employment than French temporary workers. We also note that West German temporary workers appear to make the most transitions to permanent employment. Once we control for the differences in the composition of the temporary workforce we find that West German temporary workers remain the most likely to make transitions to permanent employment, and note that the between-country difference in this tendency is no longer significant for Denmark. As a pooled model assumes all covariates operate similarly across countries, interaction terms were introduced to determine the source of the West German effect. We found that the West German effect was largely a function of the disproportionately high transition rates of manual, skilled manual and clerical workers relative to these workers in other countries (results not shown). Controlling for these interaction terms rendered the main West German effect insignificant.

<TABLE 3 HERE>

5.4 Who Becomes Unemployed?

We already know that temporary workers are disproportionately exposed to unemployment relative to permanent workers, even after we control for observed (i.e. Giesecke and Groß 2003) and unobserved (Gash and McGinnity 2007) differences. This is to be expected given the short-term nature of these contracts. What this section tries to uncover are (1) the differences between temporary workers in their unemployment risks and (2) the country within which temporary workers are most exposed to unemployment risk.

<TABLE 4 HERE>

Table 4 identifies the variables which increase temporary workers transitions to unemployment by country. As with the previous models we added human capital variables to determine whether skills or education influenced workers transitions, and added demographic variables to identify whether age or gender was predictive. As with the previous analyses these variables were not found to be very revealing, though we did find lower educated workers more exposed to unemployment in France. Temporary workers with formal training were also less likely to become unemployed in Denmark. The strongest predictor, in each model and for each country, is the presence of a spell of unemployment before the start of a temporary job. This suggests that a portion of the temporary workforce is engaged in cycles of unemployment and temporary employment. Other notable findings include the decreased likelihood of unemployment for professional workers in the United-Kingdom, and the increased exposure to unemployment of reduced hour workers in France. While the results would appear to suggest the opposite tendency for reduced hour workers in the United Kingdom this is more likely to reflect the eligibility criterion for unemployment benefits in the United Kingdom. Many part-time workers are ineligible for unemployment benefits in the UK and are therefore unlikely to identify themselves as unemployed at the end of their contracts. ^{xvii}

5.5 Which Country Presents the Greatest Unemployment Risk?

Table 5 reveals the country which presents temporary workers with the greatest unemployment risk. The first model includes dichotomous variables identifying temporary workers as; Danish, English or West German, with the baseline hazards controlling for variations in the hazard rate overtime. We place French temporary workers as the reference category as we expect the French regime to place them at the

greatest unemployment risk. The second model controls for the same covariates used in the country specific models. Again the models include relative country weights. Without controls for variation in the composition of the temporary workforce we find English temporary workers considerably less likely to become unemployed than temporary workers in France. However, as model two reveals, this is a function of the composition of the temporary workforce: once we control for various covariates we lose the significance of the country level dummy. Finally, it should be noted that we tried to introduce a variable which controlled for the different unemployment rates between countries but found it to have little effect on the findings overall. We also note, however, the recognised difficulties in introducing institutional level factors into multi-country models, with the institutional frequently co-linear with the national dummy variables (Russell and O'Connell 2001).

<TABLE 5 HERE>

6. Discussion

This paper sought to reveal whether temporary contracts provide a 'bridge' to permanent work, or whether they are a 'trap': placing workers at future unemployment risk. It also sought to identify whether current classifications of countries as economically rigid or flexible offered adequate predictions of market dynamics for temporary workers. It did this by comparing the outcomes of temporary workers in four countries with different levels of employment protection legislation as well as different education and industrial relations systems.

When we compared the relative rates of transition to *either* permanent employment or unemployment, we found temporary employment to be a 'bridge' rather than a 'trap' in

each country. We also found strong differences by country with West Germany and the United Kingdom, two countries on opposing poles of the OECD's employment flexibility ranking, providing the best chances of obtaining a permanent contract relative to entering unemployment.

However, temporary employment is not a one-way street to secure employment. When we broadened our definition of a trap to include all other non-integrative exits (i.e. to labour market inactivity or to further temporary employment) the odds of obtaining secure employment dropped dramatically for all countries except for West-Germany. While West-Germany did not protect its temporary workforce from unemployment any better than the other countries analysed (figure 2 and table 5), it did provide the best routes to permanent employment.

Our first hypothesis was derived from standard theories of labour market dynamics which suggest that rigid EPL will inhibit temporary workers' chances of obtaining a permanent contract and will increase their risk of unemployment. This certainly appears to describe the situation for French temporary workers, but clearly is not applicable to the German context despite its rigid employment law. Our second hypothesis was derived from the varieties of capitalism literature. This literature suggests that rigid employment protection can be supportive of coordinated market relations; improving the match between workers' capabilities and firms' skill requirements whilst defending the interests of all workers. While Denmark does not have rigid EPL (it does, however, provide security from unemployment another key feature of a coordinated economy) both it and Germany do have highly coordinated trade union movements and education systems. This appears to offer some insight into the high transition rates to permanent employment in Germany despite its rigid employment legislation. While in principle

the analyses excludes workers on apprenticeships, it is possible that some have incorrectly self-described as standard temporary employees. Moreover, while this is true of all countries, it is most likely to be the case in Germany given the size and scope of its apprenticeship system. Nonetheless, even if the German result is due to rogue apprentices it is still reflective of its education and training system; one which ensures that high proportions of temporary workers on apprenticeships go on to obtain permanent contracts. Our third hypothesis concerned our expectation that French temporary workers would be the least well served from their country's combination of rigid employment law and a poorly coordinated economy. While the French temporary workforce was the most exposed to unemployment (Figure 2) this finding was found to be a function of its composition (table 5).

Conclusion

The vast majority of research into the quality of temporary employment, relative to permanent employment, suggests that it is of inferior status on a broad range of indicators. This paper does not dispute these findings. However, this paper did seek to analyse one of the “redeeming features” of temporary employment, its supposed ability to integrate workers to the standard employment contract and did so in four European countries with very different strategies towards market management.

Essentially we established that the majority of temporary workers do, eventually, get permanent jobs. This is not to say, nonetheless, that those who have experienced temporary work will not experience negative repercussions in the longer term. The current analysis did not reveal the relative quality of the jobs they entered, nor did it identify the stability of these new-found permanent jobs.

Finally, our predictions of national variation in market outcome were poorly served by a simple assessment of employment protection legislation. Germany, with its rigid employment law, appeared to provide some of the best opportunities for permanent employment. Employment research that engages with institutional context should not, therefore, limit itself to the ease with which employers can hire or fire workers; national variation in education and industrial relation systems are also vital to our understanding of market outcome.

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Endnotes:

ⁱ The statistical analyses is restricted to West Germany given the ongoing differences in the labour market performance of East and West Germany. This is a common strategy in the literature on temporary employment in Germany, i.e. (McGinnity, Mertens and Gundert 2004; Giesecke and Groß 2003).

Nonetheless, as both regions have shared the same institutional systems since German reunification we do not distinguish East from West Germany when we speak of Germany's institutional structure.

ⁱⁱ The author also investigates West German temporary employment though these results are unusual. The author finds temporary workers in Germany to be less likely to become unemployed than permanent workers (p. 380) and also finds them less likely to make a transition to labour market inactivity. These findings are different to previous research on temporary workers labour market transitions (Giesecke and Groß 2003, 2004; McGinnity *et al.* 2005).

ⁱⁱⁱ Dismissals are regulated by the Dismissal Protection Act (*Kündigungsschutzgesetz*) of 1951, as amended in 1969 (see Schömann *et al.*, 1998). The description of regulations described here excludes the period from 1996-1999, when dismissal protection was somewhat modified. In addition, in January 2004 new legislation raised the minimum number of employees from 6 to 11, and new regulations have been introduced to facilitate redundancy payment settlements without going to court.

^{iv} Since the 1986 reform of the Code du Travail, the statute governing employment in France, there have been two separate procedures specified for dismissal of employees. These are divided into dismissals for economic reasons (*licenciement pour motif économique*) and for individual reasons (*licenciement pour motif disciplinaire/personnelle*). Previously a labour inspector was required to witness meetings between employers and employee concerning dismissals, now this is only the case for dismissals for economic reasons. Dismissals for economic reasons are generally those concerning firms' financial inability to continue the individuals post. In these instances the employer is required to offer their former employees re-training contracts (Schömann *et al.*, 1998).

^v In Denmark, blue-collar workers are ineligible for severance pay no matter the length of service. White-collar workers on the other hand are eligible but only if they have been employed with the same employer for a considerable amount of time: after twelve years of service they are entitled to one month of pay (OECD, 1999).

^{vi} While recent legislation in the UK, the 2002 *Fixed-Term Employees Regulations*, prevents employers from hiring the same worker on successive contracts over a four-year period, this legislation is not pertinent to the time period analysed.

^{vii} While this remains true for the period in question, the transition has become less co-ordinated in recent years (Ryan, 2001).

^{viii} We estimated plots of pseudoresiduals for each type of model. Cox and Snell (1968) developed the means by which residuals could be estimated from event history data and their algorithm is used in the Stata software applied. While the analyses suggested the piecewise constant exponential offered the best 'fit'; plots of pseudoresiduals are not strictly goodness of fit tests (Blossfeld and Rohwer 1995 p.210).

^{ix} The precise variables used were: the month (PE011) and year (PE012) when current job started; the existence of an unemployment spell (PE014) and its duration before the current job (PE015) and; the month (PJ002) and year (PJ003) the person stopped working in their previous job.

^x The categories of the education variable correspond to ISCED codes: 5-7 (third level education) 3-4 (upper secondary education) 0-2 (lower secondary education).

^{xi} The precise wording of the question is: 'Have you had formal training or education that has given you skills needed for your present type of work? Y/N'.

^{xii} It was unfortunately not possible to conduct separate analyses by gender due to cell size. Nonetheless, previous analyses on temporary workers' transitions have used a similar strategy to the one here (Hagan, 2003; McGinnity, Mertens and Gundert 2005; Giesecke and Groß 2003), though others have found considerable differences by sex (Gash, Mertens and Romeu-Gordo 2007; Giesecke and Groß 2004).

^{xiii} Industrial sector was introduced to the models but was eventually dropped as the coefficients were insignificant and when tested had no effect on the model overall.

^{xiv} Note this statistic was calculated by subtracting the survivor function of the transition to permanent employment from the survivor function of the transition to unemployment at the same cut-off on the time-axis.

^{xv} It is likely that educational level has little predictive power due to the failure of the ECHP to update information on educational level between the first and the fifth panel of the survey. Given that the observation window for our temporary worker sample begins in the second wave of the ECHP we already expect the educational level variable to be less precise.

^{xvi} In Germany civil servants can expect life-long employment under special legislation, the *Bundesbeamtengesetz*. This is also the case for the French civil service.

^{xvii} Many part-time workers in the UK do not make national insurance contributions as their earnings are below the qualifying threshold. For this reason many part-time workers are not eligible for unemployment insurance at the end of their contracts. Moreover, unemployment assistance is means tested with workers who are in a partnership with a worker (which is true of the majority of part-time

workers) unlikely to be provided with unemployment benefit if their partner is deemed to have sufficient income to provide for them both.