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Is a Temporary Job Better Than Unemployment? A Cross-country Comparison Based on British, German, and Swiss Panel Data[1]

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Abstract

While many previous studies on temporary work have found disadvantages for temporary workers as compared to workers with a permanent contract, this study compares temporary work to the alternative of unemployment. Specifically, this paper investigates the potential integrative power of taking up a temporary job for unemployed workers as compared to the counterfactual situation of remaining unemployed and searching for another job. Applying a dynamic propensity-score matching approach based on British, (West and East) German, and Swiss panel data during the period of 1991–2009, it is shown that taking up a temporary job increases the employment chances during the subsequent five years in (West and East) Germany and the UK. Moreover, the chances of having a permanent contract remain higher and a persistent wage premium can be found during the subsequent five years of the career. Advantages of taking up a temporary job are slightly stronger in West Germany compared to East Germany, where temporary contracts are often based on public job creation measures with limited integration potential. Neither long-run advantages nor disadvantages of taking up a temporary job can be found in the case of the flexible Swiss labour market.

JEL Classification:
C14, C41, J41, J60, J64

[1] A shorter version of this discussion paper, excluding the case of East Germany, will be published in the Journal of Applied Science Studies (Schmollers Jahrbuch), 2013, Vol. 133, Issue 2. Previous versions of the paper were presented at the 10th International German Socio-Economic Panel User Conference in Berlin (2012), the research seminar "Life course and inequality" of the Centre LINES et PRN LIVES in Lausanne (2012), the 6th International conference of panel data users in Lausanne (2011), the Understanding Society/BHPS Conference at the University of Essex (2011), and the ISA RC28 Summer Meeting at Yale University (2009). I am grateful to the participants at these events for helpful comments and discussions. This study has been realized using data from the German Socio-Economic Panel Study (German Institute for Economic Research DIW), the Swiss Household Panel Study (Swiss Centre of Expertise in the Social Sciences FORS), and the British Household Panel Study (Institute for Social and Economic Research, provided by UK Data Archive).

1. Introduction

A large body of economic and sociological literature has shown that temporary contracts are associated with disadvantages compared to permanent contracts. While these studies make an "upward comparison" of temporary jobs to permanent ones, there is less research of the integrative power of temporary contracts for the unemployed, i.e. the "downward comparison". This is surprising, as temporary jobs have been promoted as an instrument to improve the labour market integration of the unemployed. Specifically, in order to ease the labour market (re-)integration of unemployed workers, many European governments deregulated and promoted the use of temporary contracts as an instrument of labour market flexibilization (Gebel/Giesecke, 2011). Through temporary contracts, employers are given the chance to employ workers at much lower firing costs because these contracts of limited duration can be dissolved without firing costs at their date of expiry (Cahuc/Postel-Vinay, 2002).[2] The promotion of temporary jobs has been connected with the hope that the employer will eventually transform the temporary job into a permanent job, such that temporary jobs act as effective stepping stones for the unemployed workers.

However, doubts have occurred regarding the effectiveness of this partial deregulation (Gash, 2008; Giesecke/Groß, 2003; Kalleberg et al., 2000). It has been questioned whether unemployed workers who enter a temporary job will ever become integrated into permanent work. This pessimistic view portrays temporary work as a "dead end" because temporary workers allegedly remain trapped in cycles of temporary work and unemployment in the secondary labour market segment. Also, studies on unemployment scar effects promoted the beneficial role of unemployment insurance that prolongs unemployment, but avoids strong negative scar effects (e.g. Gangl, 2004). The key argument is that welfare state support for unemployed workers allows them to search longer for better jobs, instead of directly accepting low-quality temporary jobs offering insufficient job stability. Thus, it seems to be more advisable to remain unemployed in order to continue searching for better jobs, instead of taking up just any temporary job.

Which view is the right one? This paper will address the politically significant research question of the consequences of temporary jobs for unemployed workers: Does entering a temporary position turn out to be a *trap* with few chances to find stable employment and

[2] In the following the terms "temporary contract/employment/job" are used as a synonym for jobs based on fixed-term contracts and other contracts that have a contractually-defined limited duration.

permanent contract work? Or, are temporary contracts a *bridge* for unemployed workers towards stable employment and permanent contracts?

Against this background, our contribution to the literature is threefold. First, based on German, British, and Swiss panel data and by applying a dynamic propensity score matching approach, the consequences of taking up a temporary job for unemployed workers is investigated in an individual-level dynamic perspective, looking both at the short-term and long-term effects. Second, the consequences are evaluated in a multidimensional perspective in order to detect cumulative (dis-)advantages or potential trade-offs. Specifically, the exit dynamics from unemployment to temporary employment and the long-term employment chances are analysed during the subsequent five career years. This broad look at employment dynamics is accomplished by studying the wage dynamics and the chances of finding permanent contracted work, with the aim of illustrating the quality of the subsequent jobs. Third, the cross-country comparative design will test whether effects are similar across countries or whether they vary according to the institutional and the economic conditions.

The next section offers a literature review of empirical findings on the career consequences of temporary jobs in Europe. In the subsequent theoretical section two opposing scenarios – the entrapment and the integration scenario – of the consequences of taking up a temporary job for unemployed workers are discussed. Furthermore, expectations about different consequences across countries are formulated based on the cross-country variation in institutional and macro-economic conditions. We then present the data set and the variables used, as well as the statistical methods, before extensively documenting our empirical findings in a detailed separate section. In the final section, we offer concluding remarks.

2. Literature Review: The Career Consequences of Temporary Employment in Europe

Investigating the career consequences of temporary jobs has become a central issue of European economic and sociological research. Despite the large number of empirical studies, however, there is no consensus to whether temporary jobs are good or bad for one's future career. There are many studies that offer either evidence for the "entrapment" or the "integration" perspective of temporary jobs. In the following paragraphs it is argued that many of these seemingly contradictory findings are just a matter of using different comparison groups and/or analysing different European countries.

First, there are many studies which analyse the *exit dynamics* from a sample of temporary workers. Specifically, these studies investigate the determinants and the timing of conversions of temporary contracts into permanent contracts. By restricting the analysis to the pool of temporary workers, however, such a research design misses any comparison group. For example, Mertens/McGinnity (2004) find that for Germany about 40% of fixed-term employees have a permanent contract in the following year, of which 70% are retained in their firm. The authors interpret this as support for the view of fixed-term contracts as screening contracts and bridges to permanent work for a substantive share of employees. The notion of temporary contracts as effective routes into permanent employment also applies to other Western and Northern European countries. Remery et al. (2002) report evidence that about one half of all temporary workers transited to permanent employment after two years, about one quarter continued temporary employment, and only about 8–11% became unemployment in the Netherlands during the period of 1986–1996. Using Swiss Household panel data, Henneberger et al. (2004) show that 37% of temporary workers find a permanent job one year later. Booth et al. (2002) report that 36–38% of fixed-term workers made a transition to a permanent contract in the UK in the period of 1991–1997.

This integration scenario does, however, not seem to apply to Southern and Eastern European countries. According to Gagliarducci (2005), only about 24% of all temporary employment spells end in permanent contracted work in Italy after one year. In Spain, only 12% of those on a fixed-term contract in 1995, had a permanent contract one year later, whereas 61% remained trapped in fixed-term contracts and 25% became unemployed or inactive (Alba-Ramírez, 1998); findings which are also confirmed by Amuedo-Dorantes (2000) for the same period and by Güell/Petrongolo (2007) for the period of 1987–2002. Using data of a large-scale Polish school-leaver survey, Baranowska et al. (2011) show that, among labour market entrants who leave their first temporary job, only about one quarter move to a permanent contract, whereas three quarters became non-employed.

Furthermore a few European comparative studies on the exit dynamics from temporary work exist. For example, Gash (2008) analyses situations in France, West Germany, Denmark, and the UK between 1995–2001. Gash finds that the majority of temporary workers enter a permanent contract, with West Germany and the UK providing better chances of obtaining a permanent contract relative to encountering unemployment compared to Denmark and France. Based on ECHP data for 13 Western European countries, Muffels/Luijkx (2008) report evidence that transitions from a temporary contract into a permanent job are much less likely

to occur in Continental, and particularly Southern welfare state regimes, and more likely to occur in Anglo-Saxon and Nordic welfare state regimes.

Second, most of the empirical studies investigate the *career effects of temporary employment in comparison to permanent workers*. For example, there is evidence for Germany (Gebel, 2009; Mertens/McGinnity, 2004) and the UK (Booth et al., 2002) that temporary workers suffer from lower initial wages, but higher wage growth, in comparison to permanent workers, which indicates some compensating wage growth. Barbieri/Scherer (2009) show that in Italy, entering the labour market via temporary jobs has strong and long-lasting negative career consequences in terms of lower employment chances and lower chances of ending up in stable employment. In contrast, McGinnity et al. (2005) find that in Germany, the unemployment rates of those who started with a temporary job are higher in the short run, yet tend to converge with those of permanent contracted workers after five years.

Again, there are only a few European comparative studies. For example, Giesecke/Groß (2004) show that fixed-term contracts increase subsequent unemployment risks and risks of temporary employment cycles in Germany and the UK. Gebel (2010) finds that British and German youths who start their working life in temporary jobs suffer from initial wage penalties and risks of temporary employment cycles. However, those differences as compared to entrants with permanent contracts diminish during the early career, especially in the UK. Using French ECHP and German SOEP data between the period of 1994–2001, Gash/McGinnity (2007) observe that German men working in temporary contracts register lower wages, higher unemployment risks, and cycles of temporary employment as compared to male permanent contracted workers. Whereas female temporary workers register no significant disadvantages compared to female permanent contracted workers. While there are no wage penalties for temporary workers at all in France, female temporary workers face higher relative unemployment and temporary employment risks in comparison to French men with temporary contracts. Comparing the situations in Denmark, Germany, Spain, and the UK using ECHP data, Leschke (2009) finds that subsequent unemployment risks for fixed-term workers as compared to permanent workers are highest in Spain and lowest in the UK.

While the above cited literature makes the "upward comparison" of temporary contracts to permanent contracts, there are, third, some studies that investigate the integrative power of temporary contracts for the unemployed, i.e. studies that make the *"downward comparison" of temporary contracts to remaining unemployed*. For example, there is evidence that in

comparison to remaining unemployed, taking up temporary work increases employment chances in Sweden (Korpi/Levin, 2001), Germany (Hagen, 2003; Lehmer, 2012), and even in Italy (Barbieri/Sestito, 2008; Picchio, 2008). For example, Picchio (2008) finds for Italy that, compared to unemployment, temporary employment increases the probability of getting a permanent job two years later by 13.5–16%. According to De-Graaf-Zijl et al. (2011), fixed-term contracts shorten the unemployment duration in the Netherlands but they do not increase the fraction of unemployed workers who become integrated into regular jobs.

What general conclusions can be drawn from the existing literature? One main conclusion is that the results of the studies heavily depend on the *choice of the comparison group*. Many previous summaries concluded that the results are mainly contradictory. However, distinguishing the studies according to the comparison group seems to highlight several trends of the results of these empirical studies: The worst consequences are observed when temporary employment is compared to permanent employment. More support for the integration scenario can be found in the studies that focus on the exit dynamics from the sub-sample of temporary workers (without applying a control group design). These studies show that a large proportion of temporary workers quickly move to permanent work. The most positive view is derived when analysing the integrative power of temporary jobs for unemployed workers. Another main conclusion is that *results vary across countries*. Given the lack of comparable longitudinal data there are, however, only a few cross-country comparative studies on the career consequences of temporary employment. This especially applies to the studies on the "downward comparison" of temporary contracts to remaining unemployed. This paper will try to fill this gap with a cross-country comparative study on the "downward comparison".

3. Theories and Hypotheses

3.1. The Micro-level Perspective: "Entrapment" versus "Integration"

A convenient starting point of studies on the career consequences of temporary employment, is the confrontation of the entrapment and the integration perspective (e.g. Giesecke/Groß, 2003; Korpi/Levin, 2001). We will draw on these perspectives but focus the discussion on the comparison between entering a temporary job versus remaining unemployed, instead of comparing temporary jobs to permanent jobs.

According to the *entrapment perspective*, temporary work is precarious work located in the secondary labour market connected with limited mobility chances into the primary labour

market. While the primary labour market segment offers well-paid, stable positions with structured career ladders, the secondary segment entails low-paid, short term work providing no career prospects and leading to cycles of temporary contracts and recurrent unemployment (Doeringer/Piore, 1971). The associated career interruptions and frequent job changes might even imply human capital depreciation and consequently a decrease in productivity. This is mostly due to the loss of job-specific capital. Human capital deterioration may hamper the chances of temporary workers receiving a permanent job offer. Moreover, if employers use temporary contracts as a short-term buffer to satisfy fluctuations in demand, employers may be reluctant to move temporary employees into permanent positions, irrespective of the workers' human capital. Furthermore, following signalling and statistical discrimination theories, unemployed workers who (re-)enter their professional life via temporary jobs, might be viewed as a bad hire by prospective employers, inducing a stigmatizing signal (Hagen, 2003). Hence, it might not be the optimal strategy for unemployed workers to accept a readily available temporary job in the secondary sector; rather, it may be better to reject such offers and attempt to find adequate re-employment. Moreover, unemployed workers taking on a temporary job have to invest time into their job, whereas unemployed workers who reject such offers can allocate all their time and efforts into a full-time search in order to find a permanent position (Korpi/Levin, 2001). Hence, the search intensity and, thus, the search success for better and permanent positions should be higher for those who wait, instead of entering precarious temporary jobs in the secondary labour market. Thus, one can expect that accepting a temporary job is coupled with persistently worse labour market prospects as compared to staying unemployed, i.e. a continued search (for better jobs) *(Hypothesis 1a)*.

The alternative *integration perspective* emphasizes the potential integrative power of entering a temporary job for unemployed workers. First, taking up a temporary position gives the unemployed, at least for a short time, the chance of gathering labour market experience. Furthermore, while periods of unemployment clearly undermine or even depreciate the accumulation of human capital (Pollmann-Schult/Büchel, 2005), a temporary job may put a halt to human capital depreciation. However, this argument applies only if employers invest into the human capital of temporary workers and if entering a temporary job induces a roughly continuous sequence of jobs. A temporary worker's productivity may specifically increase through the accumulation of general work skills (Gagliarducci, 2005). Second, unemployed workers who enter temporary jobs may search more effectively on-the-job for better and permanent jobs than from a position of unemployment because they get access to social networks within the working community (Hagen, 2003). Similarly, job-shopping theory

underlines the importance of actual work experience in gaining information on better matching vacancies (Johnson, 1978; Korpi/Levin, 2001). In contrast to the segmentation perspective, it is assumed that on-the-job search might be more effective than off-the-job search. This should particularly apply in institutional settings, where the support for the unemployed, in terms of activation schemes, search assistance, and unemployment benefits is less pronounced. Third, taking up a temporary job instead of staying unemployed may be a positive signal of employability or individual dynamism, while remaining unemployed produces stigma effects. This directly contradicts the signalling argument of the entrapment perspective. Fourth, employers may use temporary contract arrangements as a riskless screening device to prospect and recruit workers for permanent positions (Loh, 1994; Wang/Weiss, 1998). If the employee fulfils the employer's expectations, the employment relationship will be maintained or converted into a permanent contract, inducing incentives for training and wage growth. Against this background, according to the integration perspective, we expect that taking up a temporary job instead of staying unemployed is associated with persistently better labour market prospects *(Hypothesis 1b)*.

3.2. The Mediating Institutional and Economic Context

Whether the entrapment or the integration perspective dominates, depends on the contextual conditions such as the nation-specific institutional and economic settings. It can be assumed that the nation-specific institutional and economic settings enforce or hamper these counteracting forces of the entrapment and integration perspective.

In contrast to Switzerland and the UK, Germany is characterised by strong employment protection and strong unions. More specifically, according to OECD (2012b) the regulation on permanent work contracts was rated on average at 2.76 during the period of 1991–2009 (Switzerland: 1.16, 1999–2009; UK: 1.04, 1991–2009).[3] Collective bargaining coverage, as a proxy for union power in negotiating wages and employment conditions, was on average 66% in Germany during the period of 1991–2009 (Switzerland: 48%, 1999–2009; UK: 35%, 1991–2009) (Visser, 2012). In view of the strict protection of permanent jobs strong insider power through unions, employers may use temporary jobs as a screening period such that temporary

[3] The OECD employment protection legislation (EPL) indicator theoretically range between 0 (least stringent) and 6 (most restrictive). It measures the procedural difficulties (e.g., length of notification period) and direct costs (e.g., severance payments) involved in dismissing workers It takes into account restrictions stemming from legislation, court rulings, collectively-bargained conditions of employment and customary practice (Venn, 2009).

jobs may function as a necessary "stepping stone" into the rigid German labour market.[4] Obtaining such a contract may act as a positive signal of employability, particularly during the times of high unemployment in Germany during the observation period.[5]

However, differences can be expected between East and West Germany because subsidized temporary jobs based on job creation schemes ("Arbeitsbeschaffungsmaßnahmen") were widespread in East Germany during the 1990s and early 2000s when the economic situation deteriorated (Caliendo et al., 2006; Caliendo et al., 2008). There have been doubts about the effectiveness of such programs in integrating unemployed workers into long-term employment.[6] Hence, as temporary jobs in East Germany were often based on job creation schemes and mainly located in the secondary labour market segment, it can be expected that unemployed workers have fewer chances becoming integrated into stable, high-quality employment via temporary jobs in East Germany as compared to West Germany.

Compared to Germany, employment protection and unions are much weaker, and unemployment was lower in Switzerland and the UK, creating very flexible labour markets. Thus, Swiss and British employers do not have strong incentives to use temporary jobs as screening devices, because they can easily dismiss newly hired permanent workers. Moreover, only obtaining a temporary job in a flexible, low-unemployment labour market represents a negative rather than a positive signal. Hence, it might be a better strategy for the British and the Swiss unemployed to continue job searching and directly access permanent jobs. This argument should especially apply to the Swiss case, where financial support of the unemployed is more generous than in the UK. For example, the net replacement rate overall summary measure of benefit entitlements (including social assistance and cash housing assistance) for two earnings levels, three family situations, and five years of unemployment, was on average 69% in Switzerland, and just 51% in the UK during the period of 2001–2009 (OECD, 2012a). Also, active labour market policies play a more important role in Switzerland and should thus guarantee a successful search for unemployed workers, because such

[4] At the same time, the regulation on temporary contracts decreased on the OECD scale from 3.75 to 1.25 in Germany (OECD, 2012b). Therefore, due to strict employment protection of permanent jobs and the partial deregulation of temporary employment, German employers both have strong incentives and increasing opportunities to use temporary contracts (Gebel/Giesecke, 2009).

[5] The overall unemployment rate was on average 8.5% in Germany during the period 1991–2009 compared to 6.7% in the UK and only 3.6% in Switzerland (1999–2009) (OECD, 2012b).

[6] The main criticism concern the lack of training, inefficient non-market allocation mechanisms and the specific kind of work conducted. Participants in job creation schemes were mainly engaged in the public and non-profit sector, which provides fewer opportunities to make the transition to stable jobs in the regular labour market. Furthermore, participants in job creation schemes are often stigmatized as primarily long-term unemployed workers and unemployed workers with limited skills or other labour market disadvantages were assigned to these schemes.

programs (e.g. job search assistance, training schemes, etc.) may counteract human capital depreciation and make the job search more effective.[7] In sum, we expect that the integration of unemployed workers via temporary jobs is most effective in West Germany, followed by East Germany, Great Britain, and then Switzerland (*Hypothesis 2*).[8]

4. Data, Variables and Method

The analyses are based on comparable data of the British Household Panel Study (1991-2009), the German Socio-Economic Panel (1991-2009), and the Swiss Household Panel Survey (1999-2009). The years of the recent economic crisis were excluded because deviant effects are to be expected (Lehmer, 2012). The analyses were run separately for West and East Germany because of prevailing economic differences between these two and because temporary contracts in East Germany are often based on job creation schemes. All three panel surveys collect longitudinal data on employment and job characteristics at the time of the interview on a yearly basis, as well as a detailed monthly calendar of economic activity for the year preceding the interview. We combine the yearly and monthly data in order to create an inflow sample of unemployed and follow these individuals up to five years after their exit of unemployment. Unemployed workers who hold any kind of job are treated as employed. The analyses are restricted to unemployed individuals aged 15–54, this is done in order to fade out the issue of the retirement processes.

The event of interest for unemployed workers is entering temporary work versus remaining unemployed. Across all three surveys, temporary work is defined as any kind of work that is limited in time. In line with previous studies we define apprenticeship contracts as being in education and not as temporary work. Unfortunately, information about job characteristics such as the type of contract pertains to the time of the yearly interview. Hence, misclassifications might occur if there is a contract change between the month of the unemployment exit and the survey month.[9] In order to get a broad perspective on the

[7] Active labour market policy expenditures were on average 0.64% of GDP in Switzerland (1999–2009) compared to 0.33% of GDP in UK (1991–2009) (OECD, 2012b).

[8] Of course, the arguments just refer to the "downward comparison" of temporary jobs to unemployment. Regarding the "upward comparison", one could assume that, in comparison to the UK and Switzerland, German temporary workers are most disadvantaged compared to persons in permanent job due to the strong insider protection and labour market segmentation (for detailed arguments, see, for example, Gebel, 2010).

[9] As the average time span between month of unemployment exit and month of interview is about 6 months, the number of misclassifications should be low because temporary contracts are on average longer. Furthermore, there is a state dependence in the contract status. The remaining biases are expected to cancel each other out: On the one hand, we will underestimate the incidence of extremely unsuccessful temporary contracts (ending quickly in non-employment) and we will underestimate the incidence of extremely successful temporary

employment career consequences of entering a temporary contract as compared to remaining unemployed, we look at different outcomes. More precisely, we measure the probability of being employed, irrespectively of the contract type, as a proxy for subsequent employment stability and employability. Additionally, we investigate the subsequent job quality because being employed does not tell us anything about the quality of the job. The quality of future jobs is measured as the probability of holding a permanent contract and the natural logarithm of real hourly wages.[10] We investigate the employment probability biannually and the job quality measures annually up to five years after unemployment exit. This is an improvement in comparison to most previous studies that followed workers over a shorter observation period (e.g. Korpi/Levin, 2001).

We apply a *dynamic propensity score matching approach* (Sianesi, 2004) that estimates the propensity score based on a logistic hazard rate model. It is advisable to specify such a hazard model in order to capture the dynamics of exits from unemployment and to account for the problem of right-censoring. The event of central interest is entering temporary work after a certain elapsed unemployment time *u* (treatment group *D=1*) versus not taking up the temporary job at time *u*, remaining unemployed for at least one additional month (and searching for other jobs) (control group *D=0*).[11] In the second step of matching, future outcomes of the unemployed who exited to temporary jobs are compared to the hypothetical situation of not accepting the temporary job at time *u* and staying unemployed for at least one additional month (Sianesi, 2004). The corresponding average treatment effect of the treated *(ATT)* is then defined as

$$ATT_t = E\left(Y_t^1 - Y_t^0 \middle| D = 1\right) \text{ for } t = u+1,\ldots,T \qquad (1)$$

where outcomes $\{Y_t\}_{t=u+1}^{T}$ are measured for the months $t=u+1,\ldots,T$ after the exit from unemployment. The hypothetical situation of not entering a temporary job for those who took up a temporary job $(Y_t^0 | D=1)$ is approximated with similar individuals who remained unemployed for at least one additional month.[12] Similarity means that we compare only

contracts (ending quickly in permanent jobs). Sensitivity analyses of a sub-sample, where the difference between the unemployment exit date and the interviewing date is less than three months, do not produce different results.

[10] For Germany, the analysis of the probability of holding a permanent job is restricted to the years after 1995 because the contract information is only available for new jobs in the years before.

[11] In line with the independent competing risk framework of event history analysis, unemployed exits to other absorbing states such as permanent contracts, re-entering education, becoming inactive or going into business for oneself are treated as right-censored events.

[12] While unemployed workers who enter temporary jobs and became unemployed may serve as comparison units for another unemployed person who enters a temporary job, unemployed who remain unemployed may enter temporary jobs at a later stage and serve as treatment observations (Hagen, 2003).

unemployed persons who have similar chances of exiting to a temporary job at time *u*, given their observed characteristics *X*. Identification is based on the conditional independence assumption (CIA):

$$Y_t^0 \perp D \mid X \text{ for } t = u, u+1, \ldots, T \qquad (2)$$

It postulates that, after accounting for differences in terms of observed characteristics *X*, the treatment group (*D=1*) – in case of the absence of the treatment (i.e. in case of not taking up a temporary job at time *u*) – would experience the same subsequent career outcomes as the control group (*D=0*). Of course, if both groups still differ in terms of unobservables (such as motivational differences) even after accounting for observable differences *X*, results will be biased (Morgan/Harding, 2006). However, we account for observed differences in a flexible way by controlling semi-parametrically for several background characteristics and by estimating separate models for each country. Specifically, we control for previous work and unemployment experiences. The recent labour market history of an individual is captured by their activity status before entering unemployment, which distinguishes between entries from education, from inactivity, and from employment to unemployment. Entries from employment are further distinguished according to their social class (EGP) position in their previous job. We also account for socio-demographic variables such as education[13], gender, marital status, presence of children in the household, citizenship, as well as information on disability/health problems. Dummies for unemployment exit cohorts (5-year intervals) and regions will proxy for labour market conditions. All control variables are measured before the treatment of exiting unemployment. Summary statistics on control variables before and after matching are provided in Table A2. Furthermore, compared to studies that compare temporary workers with permanent workers, who differ substantially in their work biographies, our study design of restricting the sample to unemployed workers should reduce the sample heterogeneity in terms of (un-)observed differences and, thus, increase the plausibility of the CIA.

Imposing a common support condition does not lead to the exclusion of treatment observations because all the treated can be matched due to the large number of available control observations in the monthly data set. We compared different matching algorithms and found rather consistent results, yet we decided for a 10-Nearest Neighbour matching (with replacement) because it outperforms the other algorithms in terms of balancing the observed covariates and reducing the mean standardized bias (Caliendo/Kopeinig, 2008).

[13] Educational qualification of the respondent is measured by combining information about the highest school and vocational degree obtained following the CASMIN classifications (Müller/Shavit, 1998).

5. Estimation Results

5.1. Descriptive Statistics on Unemployment Exit Dynamics

Descriptive analyses of unemployment exit dynamics reveal some interesting cross-country similarities and differences (see Table 1). Amongst the observed completed unemployment spells, about 69% of all unemployed Germans find a job, while the rest either exit to inactivity or education. The shares of unemployment-employment transitions are even higher in the more flexible British (75.8%) and Swiss labour markets (77.3%). Focusing on the exits to employment, we can observe the highest transition rate to temporary jobs in East Germany (39.9%), followed by West Germany (32.1%), Switzerland (26.0%), and then the UK (24.5%). In comparison, the overall stock of temporary workers is much lower, e.g. about 5-7% in West Germany during the observation period (Gebel/Giesecke, 2009).

Table 1: Descriptive statistics on unemployment exits (in % of completed spells)

	East Germany (N=1133)	**West Germany (N=1238)**	**Switzerland (N=252)**	**United Kingdom (N=1125)**
Exit to employment	69.3	68.9	77.3	75.8
→ permanent contract	→49.3	→55.6	→68.5	→66.8
→ temporary contract	→39.9	→32.1	→26.0	→24.5
→ self-employment/no contract	→10.8	→12.3	→5.5	→8.7
Exit to education [a)]	18.4	12.7	–	8.8
Exit to inactivity	12.3	18.4	22.7	15.4

Note: BHPS, SOEP 1991-2009, SHP 1999-2009; monthly data; own calculations. [a)] Switzerland: Status "exit to education" included in status "exit to inactivity".

Thus, temporary contracts play a central role in the employment entry dynamics amongst unemployed workers. However, the majority of unemployed workers who do find a job, enter into a permanent contract because the remaining employment exit routes of self-employment and non-contractual work are negligible. Thus, strong pessimistic views of unemployed job seekers having no chances of finding permanent contracted work can be clearly rejected in all countries. Regarding the country differences, employers hire unemployed individuals for temporary jobs more often in West Germany and, especially, in East Germany as compared to Switzerland and the UK. This can be related to the more rigid labour market institutions in Germany and, in addition, to the poor economic situation in East Germany.

5.2. Propensity of Entering Temporary Employment

Turning to the multivariate analyses, the propensities of exiting unemployment to temporary contracts are estimated separately by countries (see Table A1). Although the aim of this first-step estimation is to produce estimates of statistical similarity, the results of the discrete time,

piecewise constant logistic hazard rate models provide some indications about the determinants of the exit from unemployment to temporary work. However, the coefficients in Table A1 should not be interpreted as causal effects because mediating causal mechanisms are often partly controlled for.

Who makes the exit from unemployment to temporary work? Starting with the duration dependence pattern, we find across all countries the general tendency that the overall chances of entering a temporary job compared to the status of remaining unemployed decreases the longer the actual unemployment spell lasts. Thus, it is harder for the unemployed to find a temporary job the longer they search. With regard to socio-demographic factors, the results show that particularly young West German and British unemployed workers have higher chances of finding a temporary job as compared to older unemployed workers. With very few exceptions, gender, citizenship, and marital status, once all the other individual education and career history characteristics are controlled for, do not significantly affect the transition chances from unemployment to temporary employment. However, there are strong disadvantages for disabled unemployed workers in Germany.

While the social class position in the last job of the previously employed persons does not seem to matter a lot, we find strong education effects, although many mediating employment career characteristics are controlled for. Compared to the reference group of unemployed workers with a lower secondary education without any additional vocational qualifications, we find that all other groups with vocational or university qualifications have higher chances of entering a temporary contract in comparison to remaining unemployed in Germany. This is in line with many previous studies that show that additional vocational qualifications guarantee better labour market chances for young people in Germany (Müller/Shavit, 1998). In contrast, we find no benefits of vocational education in Switzerland but advantages for unemployed individuals with general upper secondary or university education. In the UK, education effects are rather linear, i.e. the higher the education level is the higher the chances are of finding a temporary job.

With the exception of Switzerland, there is a clear negative effect of the duration of overall unemployment experience. The longer the overall duration of unemployment during the working life is, the lower are the chances of exiting unemployment to a temporary job. Previous labour market detachment in the form of having been inactive instead of having been

in education or employment significantly decreases the chances of exiting unemployment towards temporary work.

5.3. Career Consequences of Entering Temporary Employment: Subsequent Employment Chances

In the second step we implement propensity-score matching based on the estimated propensity scores. Balancing tests show that 10-Nearest Neighbour matching produces a sample of matched controls that have similar observed characteristics compared to the treatment group. Table A2 exemplarily reports detailed balancing tests for all micro-level covariates for the outcome "employment probability after 6 months". The results show, with almost no exception, that the standardized bias decreases for each covariate below the commonly accepted threshold of 5 after performing matching (Caliendo/Kopeinig, 2008). Thus, pre-existing distributional differences (in terms of observable covariates) between the treatment and the control group are balanced.

Figure 1 displays the country-specific results with regard to the subsequent employment chances (during months 0 to 60) of the treatment group (i.e. the observed outcomes of the unemployed who entered a temporary job at time 0) and the matched control group (i.e. the estimated counterfactual outcome of having not entered a temporary job at time 0). [14] The gap between both lines represents the ATTs. To give a reading example of the East German case: after six months, employment chances of the treated are 90% compared to 35% for the matched controls, resulting in an ATT of 55 percentage points. However, initially high ATTs should not be overstressed because the unemployed who entered a temporary job are already by definition in employment. However, they may quickly lose this initial advantage if the entrapment hypothesis applies. This may happen if they are displaced, or if the unemployed who remained unemployed (i.e., the matched controls) got access to (more stable) jobs. Actually, this pattern of convergence of the dashed line and the dotted line, as well as, the corresponding decline in ATTs can be observed in all countries but the patterns of convergence differ across countries. For example, the subsequent employment chances of German temporary workers (the dashed line) quickly drop to about 60% in East Germany and about 70% in West Germany. At the same time, however, the matched control groups (the dotted line) cannot make up for its initial disadvantages in Germany. In Switzerland and in the UK, subsequent employment chances of the treatment groups are higher than in Germany,

[14] Table A3 contains detailed figures as well as standard errors of ATTs.

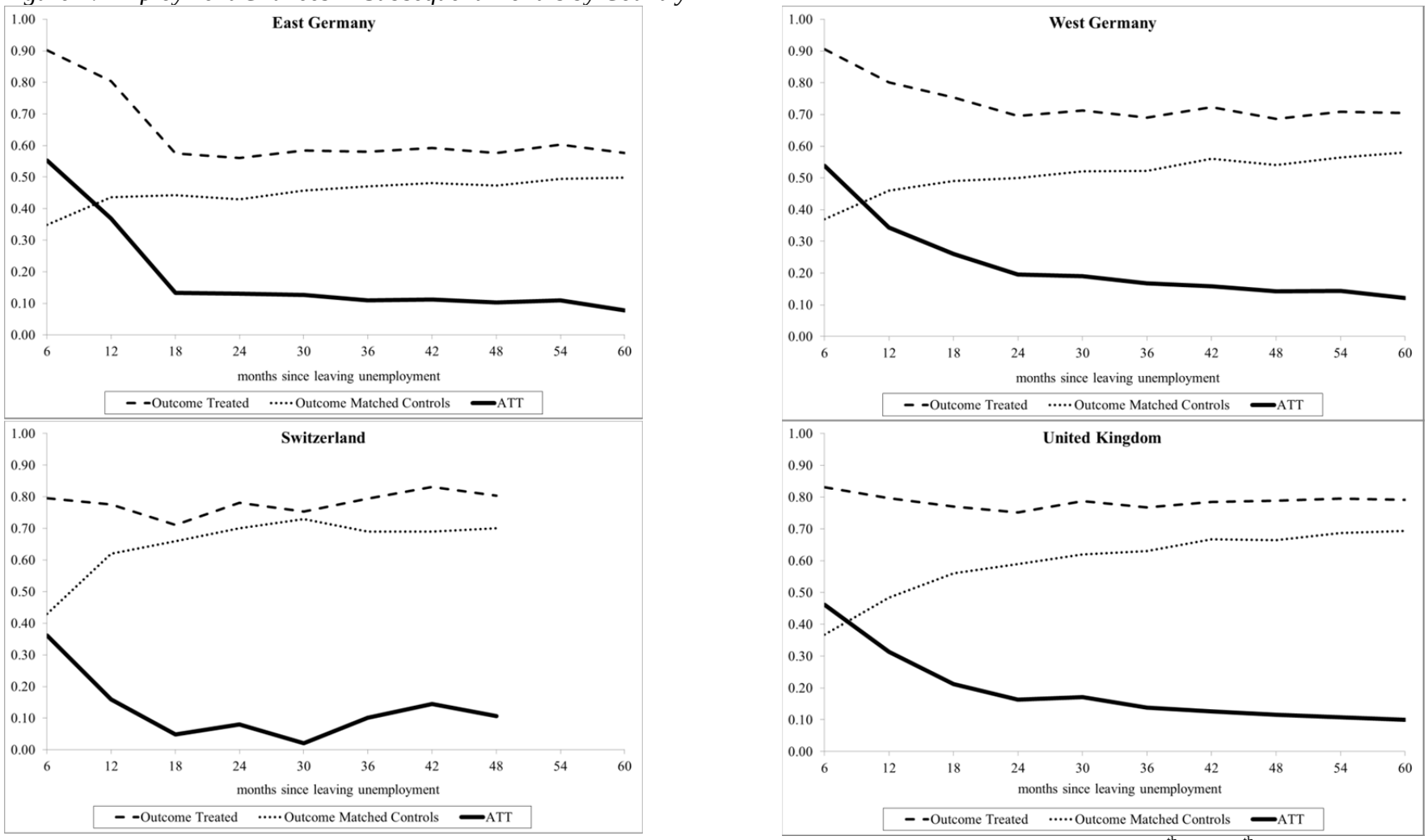
fluctuating around 80%. At the same time, however, we observe a steep increase in employment chances of the matched control groups in the UK and, particularly, in Switzerland.

What really matters, however, is the long-term development of the ATTs, i.e. the difference between the treatment and the matched control group. West Germany and the UK stand out in terms of having ATTs that remain positive and highly significant even after 60 months (12 percentage points in West Germany and 10 percentage points in the UK). Thus, temporary employment seems to lead to a long-term integration into employment in West Germany and the UK, which supports the integration perspective according to Hypothesis 1b. The convergence of the dashed line and the dotted line is more pronounced in East Germany. This might be related to the large number of East German temporary contracts based on active labour market policy programmes during the 1990s and early 2000s. Employment advantages of East German temporary workers quickly diminish after 12 months, which is when many of the state-subsidized and short-term schemes end. Sensitivity analyses (results not reported) confirm that the Eastern German pattern is mainly related to state-subsidized temporary jobs that are ineffective in integrating unemployed workers in the medium and long-term. Nevertheless, on average, the ATTs remain positive and significant in East Germany even after 60 months (8 percentage points), i.e. the integration perspective – although to a lesser extent – also applies to East Germany in terms of subsequent employment probabilities.

There is less evidence for the integration hypothesis in Switzerland because the employment advantages quickly diminish and become insignificant after the first year. This is mainly related to the matched controls quickly finding a job, which shows that those remaining unemployed for an additional month are also quickly integrated into the flexible Swiss labour market. Nevertheless, ATTs do not turn negative during the observation period, such that we also do not find any evidence for the segmentation perspective (Hypothesis 1a) in Switzerland.[15] Regarding country differences, finding the strongest integration potential in West Germany and the weakest (no long-run effects) in Switzerland is in line with our country order hypothesis 2.

[15] There is even an increase in ATTs after months 30.

Figure 1: Employment Chances in Subsequent Months by Country



Notes: BHPS 1991-2009, SOEP 1991-2009, SHP 1999-2009; own calculations. Results from NN (10)-matching. Swiss results for 54th and 60th month not reported due to small sample size. "Outcome of treated" measures the observed average outcome of the treatment group (i.e., those who are taking up a temporary job instead of remaining unemployed); "outcome of the matched controls" measures the average outcome of the matched control group as a proxy for the counterfactual outcome of the treatment group if they had not entered a temporary job. "ATT" measures the average treatment effect of the treated for the respective outcome variable.

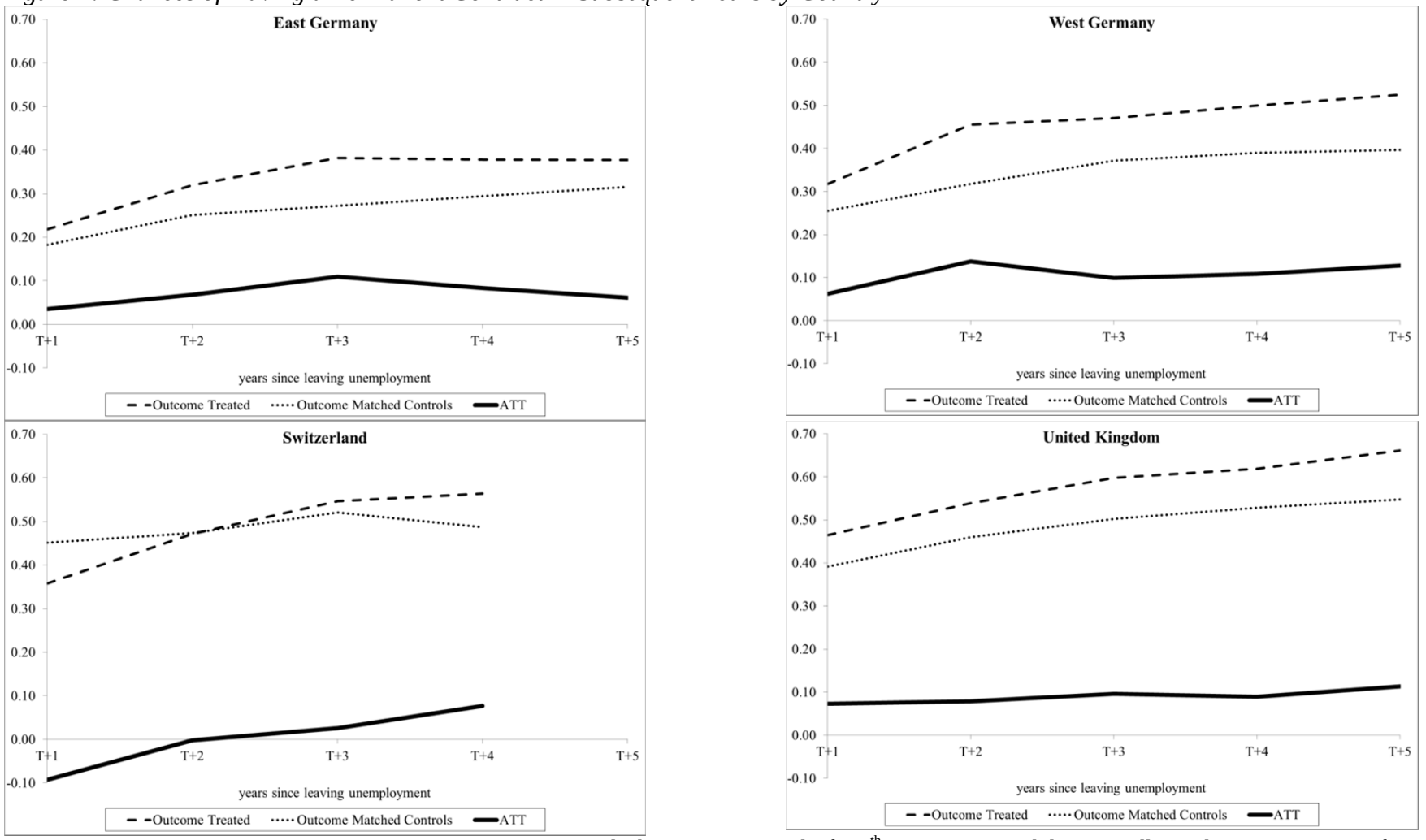
5.4. Career Consequences of Entering Temporary Employment: Job Quality

While the analysis of overall employment chances provides some first insights into the integrative power of temporary contracts for unemployed workers, it tells us nothing about the quality of the job positions. For example, higher employment chances for unemployed workers who start a temporary job, might be associated with more precarious jobs, whereas the counterfactual situation of remaining unemployed may have led to high-quality jobs. Figure 2 presents results for one central job quality dimension: whether temporary employment increases chances of having a permanent contract in subsequent years.[16] Like in Figure 1, the probability of having a permanent contract is displayed for the treatment group (i.e. the observed outcomes of the unemployed who entered a temporary job at time 0) and the matched control group (i.e. the estimated counterfactual outcome of having not entered a temporary job at time 0) for the five subsequent years. The gap between both lines represents the ATTs.

To give a reading example of the East German case: Already after one year, 22% of all unemployed workers who entered temporary work have found a permanent contract. In contrast, only 18% of the control group of similar unemployed workers who remained unemployed and directly searched for better (permanent) jobs had found a permanent contract. Thus, the ATT shows an advantage of about 4 percentage points, which is significant, as can be seen in Table A4. Chances of finding a permanent contract are even stronger for West German and British unemployed who entered a temporary job. After one year, already 32% of all West German unemployed workers who decided to enter temporary work have a permanent contract (compared to 25% of the matched control group), and already 46% of all British unemployed workers who decided to enter temporary work have a permanent contract (compared to 39% of the matched control group). Obviously, many previously unemployed workers make a fast transition from temporary jobs to permanent ones. ATTs are positive, significant, and they even increase in further years. Thus, temporary employment seems to be an effective and sustainable route to permanent employment for the unemployed, i.e., it is a stepping-stone towards permanent jobs in Germany and the UK. In order for the unemployed workers to become integrated into permanent contracted work in Germany and the UK, it seems better to accept a temporary job, instead of remaining unemployed and directly searching for permanent jobs.

[16] Table A4 contains detailed figures as well as standard errors of ATTs.

Figure 2: Chances of Having a Permanent Contract in Subsequent Years by Country



Notes: BHPS 1991-2009, SOEP 1995-2009, SHP 1999-2009; own calculations. Swiss results for 5th year not reported due to small sample size. "Outcome of treated" measures the observed average outcome of the treatment group (i.e., those who are taking up a temporary job instead of remaining unemployed); "outcome of the matched controls" measures the average outcome of the matched control group as a proxy for the counterfactual outcome of the treatment group if they had not entered a temporary job. "ATT" measures the average treatment effect of the treated for the respective outcome variable.

In contrast, we find smaller and mostly insignificant effects for Switzerland. Thus, taking up a temporary job has neither a long-term integrative nor a disintegrative effect in Switzerland. Finding the weakest (or, more specifically, no) effects for Switzerland, again supports hypothesis 2 on cross-country differences. Interestingly, the small ATTs in Switzerland go along with quite high chances of finding a permanent job for the treatment group. However, this also applies to the matched control group. Thus, both the treatment and the matched control group have good chances of becoming integrated in permanent jobs in the very flexible Swiss labour market; such that it does not make any significant difference whether one accepts a temporary job or continues job searching as an unemployed person.

We continue the analysis of subsequent job quality in terms of wages. We restrict the analyses to those treated and control units that are employed (either in a permanent or a temporary job) at the respective subsequent year of investigation.[17] For simplification we only report ATTs and bootstrapped standard errors in Table 2. Our results from the previous job quality analysis on permanent contract chances are mainly confirmed. For West Germany, East Germany, and the UK significant wage advantages can be found during the subsequent five years. Thus, taking up a temporary job does not only provide employment advantages and a stepping-stone towards permanent jobs, but it also pays off.[18] In Switzerland, again, effects are weaker and, probably due to the small Swiss sample size, effects are not significant. In general, even for the Swiss case, we find that taking up a temporary job instead of continuing to search for a job (and successfully finding one) is not associated with wage disadvantages.

Table 2: Log Wage Effects in Subsequent Years, ATT by Country

	East Germany		**West Germany**		**Switzerland**		**United Kingdom**	
	ATT	**(s.e.)**	**ATT**	**(s.e.)**	**ATT**	**(s.e.)**	**ATT**	**(s.e.)**
T+1	0.085	(0.023)	0.108	(0.019)	0.037	(0.061)	0.065	(0.020)
T+2	0.094	(0.022)	0.096	(0.021)	0.046	(0.058)	0.053	(0.021)
T+3	0.099	(0.027)	0.114	(0.023)	0.051	(0.075)	0.055	(0.022)
T+4	0.065	(0.036)	0.084	(0.028)	0.031	(0.088)	0.076	(0.024)
T+5	0.097	(0.030)	0.082	(0.033)	–	–	0.090	(0.024)

Note: BHPS, SOEP 1991-2009, SHP 1999-2009; own calculations. Results from NN (10)-matching. Standard errors are bootstrapped with 200 repetitions.

[17] For example, at *T+3* we analyze only treated and controls who have a job at this time point. We do not assign zero wages to those who are not employed in order to estimate the wage effects net of being employed at *T+3*.
[18] One might expect that the Hartz reforms may have changed the effects in Germany. However, sensitivity analyses show that results are quite robust across time in Germany.

6. Conclusion

Using British, German, and Swiss panel data for the period of 1991–2009 we analysed the integrative power of taking up a temporary job for unemployed workers aged 15-54 as compared to the situation of remaining unemployed and searching for another job. Concerning the exit patterns from unemployment spells, we find that the majority of unemployed workers can be (re-)integrated into employment. Among those exits to employment, the share of exits to temporary jobs is highest in East Germany followed by West Germany, Switzerland, and then the UK. This can be related to the more rigid labour market institutions in Germany and the bad economic conditions in East Germany during the observation period. Regarding the determinants of exiting to temporary employment, we can show that a long unemployment duration, previous unemployment, and stints of labour market inactivity decrease the chance of exiting towards temporary work. While gender, citizenship, and marital status do not significantly affect the transition chances from unemployment to temporary employment, once all the other individual education and career history characteristics are controlled for, disabled unemployed workers and young workers are particularly disadvantaged in Germany. While the level of social class position in the last job of the previously employed persons does not seem to matter a lot, we find strong education effects, although many mediating career characteristics are controlled for. Transition rates to temporary jobs are raised for unemployed workers by vocational and university qualifications in Germany, whereas general education matters in Switzerland and higher education matters in UK.

Applying a dynamic propensity score matching approach we find that West German, East German, and British unemployed workers, who take up a temporary job have higher employment chances, higher chances of getting permanent jobs, and higher wages during the subsequent five years of their working careers. Detailed East-West German comparisons confirm our expectation that advantages of temporary jobs are stronger in West Germany because in East Germany many temporary jobs are based on job creation schemes that are not effective in integrating unemployed workers into regular employment in the long run. For Switzerland, there is neither support for the integration perspective nor for the entrapment perspective for unemployed workers, i.e. it does not make any difference whether a Swiss unemployed worker enters a temporary job or continues the job search. One should also emphasize cross-national similarities: many unemployed individuals (re-)enter employment

via temporary jobs and there is no evidence that these jobs harm the employment career as compared to the counterfactual situation of continuing the job search.

Three caveats of the analyses should be mentioned. First, despite using a rather homogeneous sample and controlling for observed differences in a detailed and flexible way, we cannot exclude biases due to selection on unobservables. Second, our analysis does not take general equilibrium effects into account. Despite finding an integration perspective for unemployed workers who take up a temporary job, the overall unemployment rate may not decline via temporary employment if substitution effects dominate job creation effects. Third, the focus of this paper was on the cross-country comparison and average effects were estimated in each country. This may, however, mask heterogeneous effects. For example, effects may vary across subgroups such as short-term versus long-term unemployed workers or low-skilled versus high-skilled workers. Moreover, treatment heterogeneity may matter. Whereas we grouped all kinds of temporary contracts in one category, different effects may occur for different kinds of temporary jobs such as subsidized temporary jobs or temporary agency work.

What kinds of implications arise for future research? The study has shown that a cross-country comparative design is necessary to analyze how the institutional and the economic macro-context conditions shape individual career patterns of temporary workers. However, what we still lack is robust quantitative evidence on which institutional and macro-structural conditions explain this variation. In order to do this, we need new comparative longitudinal data that will allow us to track the career of persons in an individual-level dynamic perspective. Existing comparative panel data such as the European Union Statistics on Income and Living Conditions (EU-SILC) follow individuals for only up to four years, which is too short to evaluate the long-term consequences. The few suitable large-scale national panel surveys such as BHPS, SHP, and SOEP are too few in number in order to allow for a quantitative cross-country comparison. Thus, comparable and long-run panel surveys for a larger number of countries are necessary for a more rigorous analysis of country differences.

Furthermore, while this study focused on the career consequences of taking up a temporary job for unemployed workers, a broader perspective would be important to understand all dimensions of social consequences. For example, social consequences in terms of risks of economic marginalization (i.e. living standards, increased poverty risks), social exclusion (i.e. social isolation) as well as lower psychological well-being and health problems seem to be

important. While there are already studies on single aspects (e.g. Gundert/Hohendanner, 2011, on social inclusion; and Lehweß-Litzmann, 2012, on poverty and deprivation), we are still missing a comprehensive picture on the interrelationships between different consequences. Future research could piece the puzzle together.

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8. Appendix

Table A1: Estimation of Propensity Score [a)]

	East Germany		West Germany		Switzerland		United Kingdom	
	Coeff.	**(z-stat.)**	**Coeff.**	**(z-stat.)**	**Coeff.**	**(z-stat.)**	**Coeff.**	**(z-stat.)**
Unemployment duration (Ref. 1 month)								
2 months	0.00	(0.04)	-0.04	(-0.37)	-0.46 **	(-2.42)	0.31 ***	(2.94)
3 months	-0.01	(-0.09)	0.04	(0.35)	-0.91 ***	(-3.63)	0.25 **	(2.17)
4-6 months	-0.10	(-0.89)	-0.19 *	(-1.83)	-1.14 ***	(-5.43)	0.08	(0.77)
7-9 months	-0.09	(-0.71)	-0.23 **	(-1.99)	-1.16 ***	(-4.53)	-0.25 *	(-1.88)
10-12 months	-0.15	(-1.10)	-0.26 **	(-2.01)	-0.68 **	(-2.56)	-0.20	(-1.39)
>12 months	-0.22 *	(-1.92)	-0.62 ***	(-5.58)	-1.15 ***	(-3.53)	-0.52 ***	(-3.73)
Socio-demographics *Age (Ref. 15-24)*								
Age 25-34	0.03	(0.21)	-0.04	(-0.40)	-0.07	(-0.31)	-0.18 *	(-1.75)
Age 35-44	-0.30 *	(-1.73)	-0.36 **	(-2.44)	-0.32	(-1.28)	0.00	(0.02)
Age 45-54	-0.29	(-1.21)	-0.75 ***	(-3.45)	-0.44	(-1.64)	-0.31 **	(-2.09)
Female	0.01	(0.15)	-0.07	(-0.92)	0.02	(0.16)	0.11	(1.27)
Native	-0.04	(-0.11)	0.22 **	(2.45)	0.26	(1.27)	0.13	(0.55)
Married	0.14	(1.61)	0.07	(0.88)	-0.61 ***	(-2.90)	0.08	(0.98)
Children in household [b)]	0.07	(0.84)	-0.13	(-1.52)	-0.28	(-1.52)	-0.39 ***	(-2.73)
Disability/health problems [c)]	-0.81 ***	(-3.73)	-0.30 **	(-2.18)	-0.18	(-1.05)	-0.33	(-1.09)
Education (Ref. Lower secondary)								
Lower secondary + vocational	0.45 ***	(2.62)	0.41 ***	(4.23)	-0.51	(-1.01)	–	–
Intermediate secondary + vocational	0.43 ***	(2.64)	0.42 ***	(3.83)	0.32	(1.17)	0.34 **	(2.14)
Intermediate secondary	0.23	(0.95)	-0.08	(-0.48)	0.69	(1.12)	0.19	(1.45)
Upper secondary	0.10	(0.28)	0.02	(0.07)	0.77 ***	(2.64)	0.53 ***	(3.27)
Upper secondary + vocational	0.92 ***	(3.82)	0.72 ***	(4.38)	0.29	(0.71)	0.63 ***	(4.06)

-continued on next page-

	East Germany		West Germany		Switzerland		United Kingdom	
	Coeff.	**(z-stat.)**	**Coeff.**	**(z-stat.)**	**Coeff.**	**(z-stat.)**	**Coeff.**	**(z-stat.)**
Lower tertiary	0.84 ***	(3.40)	1.01 ***	(4.73)	0.27	(0.82)	0.44 ***	(3.57)
Higher tertiary	1.04 ***	(5.60)	1.00 ***	(7.11)	0.69 **	(2.23)	1.13 ***	(8.95)
Status before unemployment (Ref. Higher service (EGP I))								
Education [d)]	0.04	(0.19)	-0.29	(-1.52)	_	_	-0.32	(-1.44)
Inactivity	-0.47 **	(-2.15)	-1.07 ***	(-4.92)	-0.28	(-1.00)	-0.68 ***	(-2.81)
Lower service (EGP II)	0.31	(1.52)	-0.03	(-0.15)	0.48 *	(1.68)	-0.07	(-0.29)
Routine clericals/service/sale (EGP III)	-0.04	(-0.19)	-0.05	(-0.24)	0.14	(0.47)	0.19	(0.86)
Self-employed (EGP IV)	-0.88 **	(-2.21)	-0.24	(-0.80)	0.88 *	(1.83)	-0.56 *	(-1.82)
Foreman, skilled manual (EGP V+VI)	0.10	(0.48)	-0.08	(-0.37)	-0.34	(-0.80)	0.01	(0.06)
Semi-/unskilled worker (EGP VII)	0.20	(1.01)	-0.16	(-0.80)	0.02	(0.04)	0.34	(1.51)
Employed + missing EGP	0.23	(1.22)	-0.00	(-0.01)	-0.06	(-0.19)	-0.38 *	(-1.74)
Labour market experience (in years)								
Employment experience	0.01	(0.85)	-0.01	(-0.89)	-0.00	(-0.46)	-0.00	(-0.17)
Unemployment experience	-0.11 ***	(-5.35)	-0.09 ***	(-4.78)	-0.04	(-0.90)	-0.18 ***	(-4.93)
Constant	-4.26 ***	(-8.48)	-4.17 ***	(-15.11)	-2.68 ***	(-5.94)	-3.82 ***	(-10.75)

Note: BHPS 1991-2009, SOEP 1991-2009, SHP 1999-2009; monthly data; own calculations. [a)] Results from discrete-time logistic hazard rate model. Macro-level control variables (regions and unemployment exit cohorts) included in models but not reported for reasons of clarity and readability of tables. [b)] Germany, Switzerland: whether child in household, UK: whether responsible for child in household. [c)] Germany: registered disability or limited capability of gainful employment; Switzerland: self-assessed disability or long-term health problems; UK: registered disability. [d)] Switzerland: Status “education” before unemployment included in status “inactivity” before unemployment.

Table A2: Covariate Balancing: Mean Differences Before and After Matching

		East Germany			West Germany			Switzerland			United Kingdom		
		Treated	**Controls**	**%bias**	**Treated**	**Controls**	**%bias**	**Treated**	**Controls**	**%bias**	**Treated**	**Controls**	**%bias**
Unemployment duration													
1 month	Before	0.13	0.09	10.6	0.16	0.09	18.8	0.42	0.17	56.6	0.20	0.14	16.3
	After	0.13	0.13	-0.6	0.16	0.15	1.1	0.42	0.41	0.5	0.20	0.17	8.0
2 months	Before	0.11	0.08	9.0	0.12	0.08	13.6	0.17	0.13	10.2	0.19	0.11	21.4
	After	0.11	0.11	-0.8	0.12	0.12	-0.4	0.17	0.19	-7.1	0.19	0.18	1.2
3 months	Before	0.09	0.07	7.5	0.11	0.07	14.6	0.09	0.11	-6.8	0.14	0.09	13.6
	After	0.09	0.09	-0.9	0.11	0.12	-1.2	0.09	0.07	7.4	0.14	0.14	-2.0
4-6 months	Before	0.19	0.17	6.2	0.20	0.17	8.0	0.12	0.24	-32.3	0.23	0.20	6.7
	After	0.19	0.19	0.5	0.20	0.20	-0.4	0.12	0.14	-6.2	0.23	0.24	-2.7
7-9 months	Before	0.14	0.12	4.3	0.13	0.12	2.5	0.09	0.14	-16.0	0.11	0.13	-7.2
	After	0.14	0.13	1.5	0.13	0.13	-0.2	0.09	0.08	2.0	0.11	0.10	1.7
10-12 months	Before	0.09	0.09	-0.3	0.09	0.09	-0.6	0.07	0.08	-4.5	0.06	0.09	-12.4
	After	0.09	0.09	0.3	0.09	0.09	-0.6	0.07	0.06	4.2	0.06	0.05	0.9
>12 months	Before	0.26	0.37	-25.5	0.19	0.38	-41.4	0.05	0.13	-27.9	0.07	0.15	-26.8
	After	0.26	0.26	-0.3	0.19	0.19	1.1	0.05	0.04	2.6	0.07	0.06	1.2
Socio-demographics													
Age 15-24	Before	0.15	0.14	2.3	0.25	0.18	17.8	0.35	0.24	22.5	0.41	0.36	10.4
	After	0.15	0.14	2.3	0.25	0.25	0.5	0.35	0.35	-0.2	0.41	0.41	0.5
Age 25-34	Before	0.30	0.25	11.7	0.37	0.28	19.0	0.26	0.18	20.5	0.24	0.27	-6.3
	After	0.30	0.31	-2.3	0.37	0.38	-1.2	0.26	0.27	-1.8	0.24	0.25	-1.2
Age 35-44	Before	0.27	0.30	-8.0	0.24	0.27	-6.5	0.23	0.33	-22.1	0.23	0.22	2.3
	After	0.27	0.26	1.7	0.24	0.24	1.8	0.23	0.21	4.4	0.23	0.24	-1.3
Age 45-54	Before	0.28	0.30	-5.4	0.13	0.27	-33.8	0.16	0.25	-21.9	0.11	0.15	-9.7
	After	0.28	0.28	-1.1	0.13	0.14	-1.0	0.16	0.17	-2.5	0.11	0.11	2.5
Female	Before	0.57	0.58	-3.1	0.46	0.49	-5.6	0.58	0.64	-12.1	0.39	0.37	3.0
	After	0.57	0.57	0.5	0.46	0.44	3.1	0.58	0.58	-0.1	0.39	0.39	0.3

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		East Germany			West Germany			Switzerland			United Kingdom		
		Treated	**Controls**	**%bias**	**Treated**	**Controls**	**%bias**	**Treated**	**Controls**	**%bias**	**Treated**	**Controls**	**%bias**
Native	Before	0.99	0.99	-1.7	0.79	0.70	20.2	0.87	0.78	23.9	0.97	0.96	5.7
	After	0.99	0.99	2.1	0.79	0.78	1.1	0.87	0.86	1.0	0.97	0.96	2.2
Married	Before	0.57	0.52	10.3	0.45	0.52	-14.5	0.21	0.40	-42.6	0.47	0.46	1.5
	After	0.57	0.57	0.1	0.45	0.45	-0.5	0.21	0.20	0.2	0.47	0.46	1.9
Children in household	Before	0.40	0.35	9.8	0.32	0.36	-7.5	0.33	0.49	-33.3	0.11	0.17	-15.8
	After	0.40	0.39	1.4	0.32	0.32	-0.2	0.33	0.31	3.9	0.11	0.11	-0.5
Disability/health problems	Before	0.03	0.07	-18.6	0.06	0.11	-19.6	0.24	0.33	-18.7	0.01	0.03	-11.8
	After	0.03	0.03	-0.3	0.06	0.06	0.5	0.24	0.26	-3.5	0.01	0.01	1.2
Education													
Lower secondary	Before	0.06	0.10	-16.3	0.22	0.34	-27.3	0.14	0.17	-8.7	0.22	0.37	-32.5
	After	0.06	0.05	2.2	0.22	0.22	-0.7	0.14	0.14	-2.0	0.22	0.22	-0.5
Lower secondary + vocational	Before	0.22	0.24	-5.8	0.31	0.30	2.0	0.02	0.05	-20.6	–	–	–
	After	0.22	0.23	-3.2	0.31	0.31	0.4	0.02	0.02	-2.3	–	–	–
Intermediate secondary + vocational	Before	0.46	0.48	-3.4	0.20	0.17	7.1	0.30	0.35	-10.0	0.10	0.11	-2.6
	After	0.46	0.45	2.6	0.20	0.19	2.9	0.30	0.31	-2.0	0.10	0.09	3.7
Intermediate secondary	Before	0.04	0.04	-4.3	0.04	0.06	-7.8	0.03	0.01	9.6	0.13	0.14	-3.8
	After	0.04	0.04	-1.5	0.04	0.04	1.0	0.03	0.02	1.5	0.13	0.13	-0.1
Upper secondary	Before	0.01	0.01	-2.7	0.02	0.01	1.1	0.17	0.12	14.8	0.07	0.06	6.9
	After	0.01	0.01	1.1	0.02	0.02	0.1	0.17	0.17	1.0	0.07	0.08	-1.6
Upper secondary + vocational	Before	0.04	0.03	9.0	0.06	0.04	12.1	0.03	0.02	4.6	0.08	0.06	9.2
	After	0.04	0.04	1.6	0.06	0.06	-0.7	0.03	0.04	-2.9	0.08	0.08	-0.8
Lower tertiary	Before	0.03	0.02	5.8	0.04	0.02	14.1	0.12	0.11	1.5	0.20	0.18	4.1
	After	0.03	0.03	-1.3	0.04	0.04	-0.8	0.12	0.12	-2.5	0.20	0.19	0.7
Higher tertiary	Before	0.15	0.08	22.5	0.11	0.05	19.1	0.20	0.16	9.7	0.20	0.09	32.2
	After	0.15	0.15	-1.4	0.11	0.11	-3.4	0.20	0.17	7.2	0.20	0.20	-1.6

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		East Germany			West Germany			Switzerland			United Kingdom		
		Treated	**Controls**	**%bias**	**Treated**	**Controls**	**%bias**	**Treated**	**Controls**	**%bias**	**Treated**	**Controls**	**%bias**
Status before unemployment													
Education	Before	0.23	0.24	-3.0	0.24	0.23	4.1	–	–	–	0.18	0.16	4.6
	After	0.23	0.22	2.4	0.24	0.24	1.7	–	–	–	0.18	0.19	-3.7
Inactivity	Before	0.06	0.12	-18.7	0.07	0.16	-28.8	0.31	0.40	-20.8	0.08	0.20	-36.8
	After	0.06	0.07	-2.7	0.07	0.07	-2.1	0.31	0.29	3.2	0.08	0.08	-1.0
Higher service (EGP I)	Before	0.03	0.02	7.2	0.04	0.02	12.9	0.07	0.08	-3.7	0.06	0.03	13.2
	After	0.03	0.03	-1.8	0.04	0.04	-3.2	0.07	0.06	3.0	0.06	0.06	0.9
Lower service (EGP II)	Before	0.09	0.06	12.4	0.07	0.05	9.6	0.17	0.11	18.3	0.06	0.04	8.7
	After	0.09	0.08	2.5	0.07	0.08	-1.6	0.17	0.17	-1.5	0.06	0.07	-3.2
Routine clericals/service/sale (EGP III)	Before	0.09	0.08	1.6	0.10	0.08	7.3	0.18	0.15	8.5	0.11	0.07	15.2
	After	0.09	0.09	-0.1	0.10	0.10	1.9	0.18	0.18	-1.4	0.11	0.10	3.0
Self-employed (EGP IV)	Before	0.01	0.02	-9.4	0.02	0.02	0.1	0.03	0.01	9.9	0.03	0.04	-5.7
	After	0.01	0.01	0.4	0.02	0.02	-0.2	0.03	0.02	1.5	0.03	0.02	0.8
Foreman, skilled manual (EGP V+VI)	Before	0.10	0.09	3.5	0.11	0.11	0.1	0.03	0.05	-8.3	0.09	0.08	2.3
	After	0.10	0.12	-4.4	0.11	0.12	-1.8	0.03	0.03	-0.8	0.09	0.09	-0.8
Semi-/unskilled worker (EGP VII)	Before	0.18	0.16	3.3	0.14	0.17	-8.6	0.06	0.05	3.9	0.20	0.14	16.6
	After	0.18	0.17	0.9	0.14	0.14	0.2	0.06	0.06	-2.8	0.20	0.20	1.3
Employed + missing EGP	Before	0.21	0.20	1.6	0.21	0.17	9.9	0.16	0.15	2.3	0.20	0.24	-10.1
	After	0.21	0.21	0.7	0.21	0.20	2.1	0.16	0.17	-1.9	0.20	0.19	2.5
Labour market experience (in years)													
Employment experience	Before	13.48	13.49	-0.1	8.76	11.18	-27.0	6.27	7.49	-11.9	3.60	3.06	11.7
	After	13.48	13.56	-0.9	8.76	8.82	-0.7	6.27	6.33	-0.5	3.60	3.57	0.6
Unemployment experience	Before	1.81	2.80	-37.7	1.48	2.62	-42.2	0.87	1.17	-19.2	0.98	1.67	-37.5
	After	1.81	1.78	1.1	1.48	1.51	-1.3	0.87	0.85	1.9	0.98	0.99	-0.1

Notes: BHPS 1991-2009, SOEP 1991-2009, SHP 1999-2009; monthly data; own calculations. Results based on STATA *pstest* command (Leuven/Sianesi, 2012): sample means of micro-level control variables for treatment (D=1) and potential control observations (D=0) before and after matching; outcome "employment probability after 6 months". The standardised percentage bias is shown before and after matching. Macro-level control variables (regions+ cohorts) not reported. For further information see notes of Table A1.

Table A3: Employment Chances in Subsequent Months by Country

	East Germany				West Germany				Switzerland				United Kingdom			
Month	**Treated**	**Controls**	**ATT**	**(s.e.)**	**Treated**	**Controls**	**ATT**	**(s.e.)**	**Treated**	**Controls**	**ATT**	**(s.e.)**	**Treated**	**Controls**	**ATT**	**(s.e.)**
6	0.90	0.35	0.55	(0.01)	0.91	0.37	0.54	(0.01)	0.79	0.43	0.36	(0.04)	0.83	0.37	0.46	(0.01)
12	0.80	0.44	0.37	(0.02)	0.80	0.46	0.34	(0.01)	0.78	0.62	0.16	(0.04)	0.80	0.48	0.31	(0.02)
18	0.58	0.44	0.13	(0.02)	0.75	0.49	0.26	(0.02)	0.71	0.66	0.05	(0.05)	0.77	0.56	0.21	(0.02)
24	0.56	0.43	0.13	(0.02)	0.69	0.50	0.19	(0.02)	0.78	0.70	0.08	(0.04)	0.75	0.59	0.16	(0.02)
30	0.58	0.46	0.13	(0.02)	0.71	0.52	0.19	(0.02)	0.75	0.73	0.02	(0.06)	0.79	0.62	0.17	(0.02)
36	0.58	0.47	0.11	(0.02)	0.69	0.52	0.17	(0.02)	0.79	0.69	0.10	(0.05)	0.77	0.63	0.14	(0.02)
42	0.59	0.48	0.11	(0.02)	0.72	0.56	0.16	(0.02)	0.83	0.69	0.14	(0.05)	0.79	0.67	0.13	(0.02)
48	0.58	0.47	0.10	(0.02)	0.69	0.54	0.14	(0.02)	0.80	0.70	0.11	(0.06)	0.79	0.66	0.12	(0.02)
54	0.60	0.49	0.11	(0.02)	0.71	0.56	0.14	(0.02)	–	–	–	–	0.80	0.69	0.11	(0.02)
60	0.58	0.50	0.08	(0.02)	0.70	0.58	0.12	(0.02)	–	–	–	–	0.79	0.69	0.10	(0.02)

Notes: BHPS 1991-2009, SOEP 1991-2009, SHP 1999-2009; own calculations. Results from NN (10)-matching. Standard errors are bootstrapped with 200 repetitions. Swiss results for 54th and 60th month not reported due to small sample size. "Outcome of treated" measures the observed average outcome of the treatment group (i.e., those who are taking up a temporary job instead of remaining unemployed); "outcome of the matched controls" measures the average outcome of the matched control group as a proxy for the counterfactual outcome of the treatment group if they had not entered a temporary job. "ATT" measures the average treatment effect of the treated for the respective outcome variable.

Table A4: Chances of Having a Permanent Contract in Subsequent Years, ATT by Country

	East Germany				West Germany				Switzerland				United Kingdom			
Year	**Treated**	**Controls**	**ATT**	**(s.e.)**	**Treated**	**Controls**	**ATT**	**(s.e.)**	**Treated**	**Controls**	**ATT**	**(s.e.)**	**Treated**	**Controls**	**ATT**	**(s.e.)**
T+1	0.22	0.18	0.04	(0.02)	0.32	0.25	0.06	(0.02)	0.36	0.45	-0.09	(0.04)	0.46	0.39	0.07	(0.02)
T+2	0.32	0.25	0.07	(0.02)	0.45	0.32	0.14	(0.02)	0.47	0.47	0.00	(0.05)	0.54	0.46	0.08	(0.02)
T+3	0.38	0.27	0.11	(0.02)	0.47	0.37	0.10	(0.02)	0.55	0.52	0.03	(0.06)	0.60	0.50	0.10	(0.02)
T+4	0.38	0.29	0.08	(0.02)	0.50	0.39	0.11	(0.02)	0.56	0.49	0.08	(0.07)	0.62	0.53	0.09	(0.02)
T+5	0.38	0.32	0.06	(0.02)	0.52	0.40	0.13	(0.02)	–	–	–	–	0.66	0.55	0.11	(0.02)

Notes: BHPS 1991-2009, SOEP 1995-2009, SHP 1999-2009; own calculations. Results from NN (10)-matching. Standard errors are bootstrapped with 200 repetitions. Swiss results for 5th year not reported due to small sample size. "Outcome of treated" measures the observed average outcome of the treatment group (i.e., those who are taking up a temporary job instead of remaining unemployed); "outcome of the matched controls" measures the average outcome of the matched control group as a proxy for the counterfactual outcome of the treatment group if they had not entered a temporary job. "ATT" measures the average treatment effect of the treated for the respective outcome variable.