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Of carrots and sticks: The effect of workfare announcements on the job search behaviour and reservation wage of welfare recipients

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Abstract

The German workfare scheme 'One-Euro-Jobs' that provides additional jobs of public interest for welfare recipients has a number of different goals. One the one hand, One-Euro-Jobs are intended to increase the participants' employment prospects in the medium term. On the other hand, they can be used to test welfare recipients' willingness to work. Using survey data from the Panel Study "Labour Market and Social Security" and propensity score matching methods, we study the effect of receiving a One-Euro-Job announcement on job search behaviour, reservation wage and labour market performance of welfare recipients. We find that receiving a One-Euro-Job announcement increases job search activities and decreases the reservation wage significantly, whereas no effects on the short-term employment probability can be found.

Keywords: activation, threat effect, attraction effect, propensity score matching, welfare receipt

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1. Introduction

The German Hartz reforms in the early 2000s changed the functioning of the unemployment benefit system. They implied a shift towards activation with the aim of shortening individual unemployment and increasing employment (Eichhorst/Grienberger-Zingerle/Konle-Seidl 2010). They implemented a principle of rights and duty. Benefit recipients are required to take up any job or participate in active labour market programmes (ALMPs). Moreover, more possibilities than before the reforms are available to assist unemployed individuals in taking up a job. Activation policies thus have enabling as well as demanding elements. This is particularly evident for One-Euro-Jobs, a large-scale workfare programme, which was introduced for welfare recipients. One-Euro-Jobs are temporary jobs, which have to be additional and of public interest. One the one hand, they aim at improving employment prospects of hard-to-place individuals, who ideally get used to regular work schedules again and improve their social integration during participation. One the other hand, One-Euro-Jobs can be used to test welfare recipients' willingness to work.

Recent studies find lock-in effects in the short term and moderate positive effects of participating in a One-Euro-Job on the medium-term employment prospects for several groups of participants (e.g., Hohmeyer 2012; Hohmeyer/Wolff 2012). However, it is most likely that not only actual participation affects individual behaviour but that the mere announcement of participation does so as well. Therefore, classical evaluation studies on the effects of actual participation capture programme effects only partially.

According to the literature, "announcement" effects can be regarded as a type of "threat effect" (Bjørn/Geerdsen/Jensen 2005). An announcement occurs if job-seekers are informed about a potential participation in a programme. A threat effect can however already occur beforehand even prior to unemployment, e.g., if people are aware of compulsory programme participation during a potential future period of welfare benefit receipt and therefore put more effort into avoiding job loss. However, the label "threat effect" is somewhat misleading as a welfare recipient might regard One-Euro-Job participation either as beneficial or detrimental.

There are several reasons for announcement effects (Bjørn/Geerdsen/Jensen 2005). On the one hand, welfare recipients could increase their job search activities and lower reservation wages when a One-Euro-Job is announced to them to circumvent participation. One reason for this is that they could expect potential employers to perceive One-Euro-Job participation as an adverse signal of their employability. Another reason could be a mismatch between the programme and the participant, in the sense that participation does not improve her

employability, but takes away time that she could have allocated to more productive job search. Moreover, participation generally reduces time that could have been allocated to other activities including leisure, household production or activities in the shadow economy, from which a welfare recipient derives some utility. On the other hand, at least for some welfare recipients beneficial factors might dominate, if they expect to improve their employability and derive some direct utility from participation (e.g., due to the psychosocial functions of work such as time structure, social contacts, participation in collective purposes, status and identity, and regular activity (Jahoda 1982)). In response, they could reduce their search activities and increase reservation wages due to the announcement of a potential One-Euro-Job participation (also known as "attraction effect"). As announcement effects are likely whereas the sign of the effect is theoretically ambiguous, a comprehensive assessment of programme effects must also include announcement effects.

The paper at hand studies the effect of receiving a One-Euro-Job announcement on the job search behaviour, the reservation wage and the short-term labour market performance of welfare recipients receiving such an announcement. It is the first paper to provide evidence on announcement effects of the large-scale German workfare programme. In contrast to most previous studies on ex ante effects of ALMPs, our estimates on threat effects are based on data surveying One-Euro-Job announcements and their exact timing directly within the Panel study "Labour and Social Security" (PASS). We find that receiving a One-Euro-Job announcement increases several measures of job search activities and decreases the reservation wage significantly, whereas no effects on the short-term employment probability can be found.

2. Institutional framework

In 2005, the last step of the Hartz reforms came into force and merged the former unemployment assistance and social assistance to form a new means-tested benefit (Unemployment Benefit II, UB II) for needy individuals capable of working. One aim of the reform was activating a broad group of needy individuals with the goal of integrating them into the labour market (Eichhorst/Grienberger-Zingerle/Konle-Seidl 2010). Compared with other countries, being capable of working is defined very broadly as by being able to work for at least three hours per day. Neediness is determined on household level (*Bedarfsgemeinschaft*). In contrast to the former system of the unemployment assistance, all

members of a needy household capable of working are in principle supposed to help reduce the neediness of the household. The basic principle of the system is "*Fördern* (enabling)" and "*Fordern* (demanding)", i.e., supporting the jobseekers on the one hand and demanding individual effort on the other hand. One demanding and enabling element of the Hartz reforms was the introduction of a workfare programme called One-Euro-Jobs. In the first years after their introduction, One-Euro-Jobs were one of the most widely used ALMPs in Germany. Between 2006 and 2009 more than 700,000 welfare recipients started the programme per year. The programme inflow decreased in the following years to 261,000 new participants in 2014 (Department for Statistics of the Federal Employment Agency 2015).

One-Euro-Jobs are temporary jobs, which are supposed to be additional and of public interest and from April 2012 on also neutral in terms of the effect on competition. These requirements should prevent crowding out of regular employment and windfall gains of subsidised employment. During participation the welfare recipients continue to receive their welfare benefit plus one to two Euros per hour worked as an allowance for their additional expenses. Participation in a One-Euro-Job can have different goals. On the one hand, One-Euro-Jobs are intended to increase the medium-term employment prospects of participants. Given that the programme is designed to additional jobs of public interest, this goal is mainly pursued by providing participants, who often have been out of work for several years, with social contacts and a daily routine. A further goal is for One-Euro-Jobs to improve the social integration of participating welfare recipients. Finally, One-Euro-Jobs can be used to make welfare recipients reciprocate for their benefit receipt. Once assigned to the programme, participation is compulsory and benefits can be cut in case of non-participation without good reason (Wolff/Moczall 2012). Overall, One-Euro-Jobs have an ambivalent character and can be used both as "carrot" and as "stick".

Participation is subordinate to regular employment or participation in other ALMPs. Given this "last resort" character and the design of the programme, the primary target group of the programme comprises hard-to-place individuals, who cannot find a job otherwise. However, given the potential use of One-Euro-Jobs as a work test, welfare recipients with good labour market prospects can be a target group of the programme as well.

Different steps can lead to assignment to and participation in a One-Euro-Job (Hohmeyer/Kopf 2009). In a typical assignment procedure, the first step would be that the welfare recipient and the case worker talk about One-Euro-Job participation in general. In

about two third (63%) of the cases the caseworker mentions One-Euro-Jobs as a topic first.[1] Eventually, the caseworker suggests a concrete One-Euro-Job for participation. Often, a job interview takes place in the operating establishment. The final participation in the programme always works through a written assignment to a concrete One-Euro-Job. Non-participation in a reasonable One-Euro-Job that the welfare recipients has been assigned to can be sanctioned. About 58% actually participate in the One-Euro-Job they had been announced.[2] Main reasons for non-participation are illness, disinterest and rejection by the establishment (Hohmeyer/Wolff 2015). Only in a minority of cases is taking up employment or leaving welfare receipt the reason for non-participation.

3. Theoretical background: Job search model framework

The framework of the job search model enables us to discuss the impact of receiving a One-Euro-Job announcement on the job search behaviour and reservation wages of participants. In the basic job search model with endogenous search effort, unemployed individuals maximize their expected utility by choosing the reservation wage x (the lowest wage that they will accept) and the job search intensity e (Cahuc/Zylberberg 2004). The reservation wage x is defined by

$$x = b - c(e) + \frac{\alpha\lambda(e)}{r+q}\int_{x}^{+\infty}(w-x)dH(w)$$

with gains b (e.g., unemployment benefits) and costs c associated with job search periods, an indicator of the labour market state α and the arrival rate of job offers λ(e) and the real interest rate r. In each short period, jobs disappear with the rate q. The real wage w is the only relevant aspect of jobs offered. The job seekers do not know the exact wage each job pays but only the cumulative distribution H(w) of possible wages. The expected unemployment duration is determined by the reservation wage and the arrival rate of job offers, which are themselves influenced by factors such as job search intensity or personal characteristics.
To study announcement effects of ALMPs, van den Berg/Bergemann/Caliendo (2009) integrate the perceived treatment probability by an ALMP and the expected treatment effect

[1] Own calculations, Source: PASS, weighted.

[2] Own calculations, Source: PASS, weighted. We measure participations that started before the interview of the next wave.

into the job search model framework. The treatment can affect the job finding rate and the wage offer distribution. If the expected gain of the treatment is positive, then a positive perceived treatment probability leads to a decrease in job search and an increase in the reservation wage. If the welfare recipient expects a loss by treatment, then the search intensity increases and the reservation wage decreases.

If we regard receiving a One-Euro-Job announcement as an increase in the perceived treatment probability, then the effect of this announcement on the job search intensity and the reservation wage depends on whether the respondent expects treatment to be beneficial or not: If the welfare recipient expects the One-Euro-Job participation to be beneficial, then the job search intensity decreases and the reservation wage increases in response to the announcement (also known as attraction effect or Ashenfelter's Dip (1978)). If the recipient of the announcement expects the One-Euro-Job participation to harm her job finding rate and the arrival rate of job offers, then she increases her job search intensity and decreases the reservation wage to circumvent or shorten participation by finding a job quickly.[3]

Remember that more than half of the welfare recipients receiving a One-Euro-Job announcement also participate in this One-Euro-Job within the near future. As some of them already have started the One-Euro-Job participation by the time of the next interview, when our outcomes are measured, we cannot explicitly distinguish between announcement and participation effects here. Participation in an ALMP reduces the time available for job search (also known as lock-in effects). Moreover, the short-term effects of participation also depend on the welfare recipient's perception of the programme: If participation reduces the value of benefit receipt, we would expect an increase in job search intensity and a decrease in the reservation wage due to participation. If the treatment is beneficial to the welfare recipient, reservation wages could in contrast increase and job search intensity decrease.

Overall, the effect receiving an announcement depends very much on the perception and the use of One-Euro-Jobs and is thus likely to vary across subgroups. Considering that One-Euro-Jobs as a workfare programme can be used as a work test, we would expect positive overall effects on the job search intensity and negative effects on the reservation wage.

[3] The main reasons for a welfare recipient's beneficial or detrimental expectation concerning the consequences of an announced One-Euro-Job participation were already discussed in the introduction.

4. Literature review: Announcement effects of ALMPs

In recent years, evidence on ex ante effects of ALMPs has been increasing (for a literature review see, e.g., Andersen 2013). Despite all differences between ALMPs and benefit regimes studied, most studies find evidence that individuals change their job search and labour market behaviour when participation in an ALMP is approaching. Most studies find a threat effect, while an attraction effect is found less often. There are different approaches to study ex ante effects of ALMPs. Several studies estimate the effect of the perceived ALMP participation probability on job search behaviour and labour market outcomes (e.g., Bergemann et al. 2011; Rosholm/Svarer 2008; van den Berg/Bergemann/Caliendo 2009). Bergemann et al. (2011) and van den Berg/Bergemann/Caliendo (2009) use survey data to study the effect of the perceived ALMP participation probability on job search behaviour and reservation wages of newly unemployed individuals in Germany. They find a negative effect on the reservation wage and a positive effect on job search efforts. Other studies make use of the fact that ALMP participation is mandatory only for some (age) groups of benefit recipients (e.g., Cockx/Dejemeppe 2012; Toomet 2008) or at some points in time during benefit receipt, partly exploiting changes in rules (e.g., Geerdsen 2006; Graversen/Larsen 2013; Lalive/van Ours/Zweimüller 2008; Tuomala 2011).

Most relevant to us are studies investigating the effect of receiving a concrete announcement of participation in an ALMP. These studies are mainly based on experimental data. First, the selection problem can be overcome if participants are randomly selected. Second, in an experimental design information on programme assignment is available. In contrast, in a non-experimental design based on administrative data, which is often used for programme evaluations as it provides sufficient numbers of observations, this piece of information is often missing. One exception is a study by Crépon et al. (2014), who use administrative data on training notifications in Paris. They find training notifications to come along with a lower probability of leaving unemployment (attraction effect). Using experimental data from the "Worker Profiling and Reemployment Services", Black et al. (2003) find a sharp increase in early exits from unemployment insurance benefit receipt, after benefit recipients had been informed about their programme participation. Similarly, using experimental data from Denmark, Graversen/van Ours (2008) find that being assigned to a mandatory activation programme increases job finding rates of newly unemployed. Using data from three experiments in Sweden, Hägglund (2011) provides evidence on increased exit rates from unemployment insurance benefit receipt due to programme assignment in Jämtland, where a

broad group of unemployment insurance recipients was targeted. In contrast, he does not find well-determined threat effects in Uppsala and Östergötland, where locally specific groups were targeted. To our knowledge, there is only one study for Germany based on experimental data. Büttner (2008) finds that announcement of training programme participation increases exit rates from unemployment for women looking for part-time employment and unemployed persons aged between 20 and 27 years.

Overall, evidence is still limited with only few studies on Germany and none on workfare announcements for the group of welfare recipients so far. In contrast to most existing studies, we not only look at labour market outcomes, such as employment or unemployment, but also study job search behaviour and reservation wages. Whereas labour market outcomes are an interaction of different factors, we can have a look into the black box studying job search behaviour and reservation wages directly.

5. Data and method

Data and sample design

Our analyses are based on survey data from the first seven waves of the Panel Study "Labour Market and Social Security" (PASS) (for a description see Trappmann et al. (2013)). The PASS provides data on topics such as unemployment, poverty and the social situation of households receiving welfare benefits. We use the subsample of the PASS of households receiving welfare benefits the July before entering the panel survey, drawn from recipient registers at the Federal Employment Agency.

The PASS surveys One-Euro-Job announcements and participations from wave four onwards. Persons (excluding pupils/students) aged between 15 and 64 years who indicate that they know One-Euro-Jobs and who live in a household that received welfare benefits for some time during the last year are asked, whether and in which month the job centre announced a particular One-Euro-Job to them that they should participate in.[4] Whether this announcement was in written or oral form is left open. Waves four to seven contain information on the One-Euro-Job announcements between the current and the previous wave. Interviews on

[4] The question is phrased as follows „Irrespective whether in such a discussion or in another situation: Was at least once [since the previous interview] a definite One-Euro-Job pointed out to you by the [job centre], in which you were supposed to participate? Please also indicate One-Euro-Jobs that you did not participate in, after all."

announcements were conducted between February 2010 and September 2013 and the reported announcements date from the period between January 2009 and June 2013. To ensure that the covariates in our models are not influenced by the treatment, they are measured at the time of the interview of the previous wave (see Figure 1 on sample design). Therefore, our final sample only comprises individuals who also were interviewed in the previous wave (i.e., wave three to six respectively).

We selected the sample as follows: We started with 21,493 observations in wave 4 to 7 who were also interviewed in the previous wave (Table 1). The questions concerning One-Euro-Jobs were posed to 12,493 of these observations represent people, who received UB II at some point in time during the previous year. In the next step, we restricted the sample to 7,831 observations at risk of receiving a One-Euro-Job announcement at the time of the previous interview. This step mainly consisted in excluding observations without UB II receipt at the time of the previous interview as well as those who were employed, in education, retired or on maternity/paternal leave. After excluding observations with missing information as well as observations starting a contributory job or leaving benefit receipt before the (hypothetical) announcement date (see next Section *Method and Operationalisation*), we are left with 5,500 observations. 707 (12.9%) of these observations received a One-Euro-Job announcement (Table 2).

Method and Operationalisation

We applied propensity score matching to estimate the effect of receiving a One-Euro-Job announcement on the job search behaviour, reservation wage and labour market performance. Basic idea of this approach is to compare the outcomes of treated individuals to non-treated individuals comparable in all relevant characteristics influencing both treatment status and outcomes (Roy 1951; Rubin 1974). Our parameter of interest is the average treatment effect on the treated (ATT)

$$E(Y_i^1 - Y_i^0 | D = 1)$$

which is the expected difference in the outcomes in case of treatment Y_i^1 and non-treatment Y_i^0 for treated (D=1).

The crucial, non-verifiable assumption is that we observe all relevant aspects and selection into treatment is solely on observables (Conditional Independence Assumption (CIA)). If the CIA holds, the ATT can be estimated by first computing for each treated person the difference

between her outcome and the average outcome of the matched controls and then by computing the mean of these differences.

We use the propensity score as a balancing score. Hence, we first use a probit model to estimate the parameters of pre-treatment characteristics X that determine a treatment equation and predict each individual's treatment probability. We then match treated and controls on their predicted treatment probability using algorithms of nearest neighbour matching with replacement (Rosenbaum/Rubin 1983). We thus select for each treated person controls with the lowest (absolute) differences between their propensity score and the one of the treated person. This approach requires observations with the same values of X to have a participation probability larger than 0 and smaller than 1 (common support). Furthermore, the distributions of the participation probabilities of treated and potential controls have to overlap such that for each participant there is a sufficient number of non-participants with similar propensity score values. The consideration of the effect for single individuals requires that neither the participation probability nor the job search behaviour of an individual is influenced by the treatment status of other individuals (Stable Unit Treatment Value Assumption) (Sianesi 2004). The large number of One-Euro-Job announcements particularly in the beginning of our observation period may give reason to question this assumption. Therefore, results have to be interpreted with care.

To make sure that effects are not biased because control individuals enter employment and/or leave welfare very early after the interview, we computed hypothetical announcement months for members of the control group, randomly drawn from the distribution of announcement dates of the treatment group. Respondents who between the interview and their (hypothetical) announcement date already successfully found contributory jobs or exited benefit receipt (even temporarily) were excluded from the analyses.

The PASS allows us to control for a large variety of pre-treatment characteristics such as sociodemographic characteristics (age, gender, etc.), household composition, labour market status and history of the individual and the partner and regional information. In contrast to evaluation studies based on administrative data, we can also control for "soft factors" such as attitudes towards work, previous reservation wage, deprivation, life satisfaction or perceived social integration. Taken together these variables should also very closely proxy unobserved determinants of the treatment and the outcomes, like the motivation to find work. Given this large variety of information, we are confident that the CIA holds and differences in outcomes between treated and matched controls can be traced back to treatment. For the actual selection

of covariates in the participation equation, we chose to exclude some covariates, if they were highly insignificant according to Wald tests. To give an example of the selection of covariates, Table A1 displays the results of the probit estimates for the main model.
Results on the announcement effects displayed in Section 6 are based on nearest neighbour matching with five neighbours and replacement, with a caliper of 0.02 and with exact matching on gender, region and wave.[5] We study the effects on different outcomes concerning job search behaviour, reservation wage, employment and income. However, we cannot disentangle the pure announcement effect from a participation effect, because our outcomes on job search behaviour and reservation wages are reported at the subsequent interview. By that time, the One-Euro-Job participation might already have started. To learn about effect heterogeneity, we estimated the effects by gender, region, time since the end of the last contributory job and who was the first to mention the topic of One-Euro-Jobs.[6] The numbers of treated and of potential controls are displayed in Table 3.

6. Results

Selectivity of One-Euro-Job announcements

To give an impression of the selectivity of One-Euro-Job announcements, we highlight some selected results of the probit estimates of the participation equation (Table A.1 in the Appendix). In line with previous evidence on the selectivity of One-Euro-Jobs (e.g., Hohmeyer/Kopf 2009), we find that women in West Germany have a lower probability of receiving a One-Euro-Job than the other groups. Given the reduced inflow numbers into One-

[5] For comparison, we also applied nearest neighbour matching with one neighbour. Furthermore, we ran our estimations weighted by population weights. The chosen option was superior to these alternatives with respect to matching quality. The chosen caliper is mainly a means that helps to implement the exact matching:
We chose an integer number for each person type for which we want to achieve an exact matching and add this number to predicted treatment probability to compute a new propensity score. The integer numbers are chosen such that a caliper like 0.02 guaranties the exact matching for the above mentioned characteristics by applying a standard available matching procedure like psmatch2.

[6] The categorization is based on the question who mentioned the topic of One-Euro-Jobs first, the case worker, the welfare recipient or both. Please note that this information is surveyed retrospectively at the time of the measurement of the outcome variables. Therefore, it might be influenced by treatment.

Euro-Jobs in recent years, it is not surprising that the participation probability decreases with more recent waves.

Furthermore, we find some support that One-Euro-Jobs indeed target welfare recipients with particular difficulties finding a job. First, we find that welfare recipients without a degree/with other degree/information missing or with an intermediate degree have a higher probability of receiving an announcement than welfare recipients with a secondary schooling degree. Likewise, individuals without an occupational degree are more likely to receive a One-Euro-Job announcement than those with a vocational training degree. Second, welfare recipients whose last contributory job ended six or more years ago are more likely to receive an announcement.

Moreover, One-Euro-Job announcements target individuals who generally draw the attention of job centres. Announcements are more likely for welfare recipients who signed an integration agreement, who are obliged to search for a job and who were in contact with the job centre more than twenty times during the previous year.

Matching Quality

Before presenting results on the treatment effects, we show that the balancing of the relevant variables between treated and matched controls succeeded. The standardised absolute bias measures the distance in the marginal distribution of the covariates. Before matching, the mean standardised absolute bias (MSB) ranges from nine to 15 (Table 3). After Matching, the MSB is reduced to numbers below four. There is no theoretically defined threshold below which a value of the MSB implies a success of a matching procedure. However, following Caliendo/Kopeinig (2008), a reduction to values between three and five is in most studies regarded as sufficient.

Furthermore, we checked the balancing of the single covariates after matching using t-tests. There are no statistically significant differences in covariates between treated and matched controls after matching.[7]

[7] Results of t-tests are available on request.

Main analyses

We estimated the effects of receiving a One-Euro-Job announcement on different job search and application activity outcomes, the reservation wage, income and employment. Treatment effects of our propensity score matching analyses are displayed in Table 4. To give an impression of the situation without treatment, Table 5 displays mean outcomes for matched controls.

As a first group of outcomes we consider different aspects of job search behaviour such as staying informed about job offers and applying to potential employers. Job search activities (and the application activities discussed below) are surveyed for the period of the four weeks prior to each interview. First of all, we find that a One-Euro-Job announcement increases the probability of active job search by seven percentage points from a base level of 52%. Considering different channels of job search, we find an increased likelihood of job search between three and seven percentage points via newspapers, internet, initiative inquiry and family and friends, but no increased probability of using employment agency resources (via internet or placement officers) for job search due to a One-Euro-Job announcement. The number of different job search channels used increases by more than one fourth (0.28). Concerning application activities, we find that receiving a One-Euro-Job announcement increases the likelihood of replying to a job advertisement and of asking for a job at the company itself significantly by five to seven percentage points. We find no increase in the likelihood of application for a job more than 100 km away from the current residence. This means we find no increased willingness to make a concession concerning commuting for a longer distance (or moving). However, the likelihood of looking for any possible job increases by six percentage points from a base level of 27% for matched controls.

Considering the hourly reservation wage, we find a decrease by 0.22€ due to an announcement of a One-Euro-Job from a base level of 6.85€ which is already quite low. Concerning the employment situation, we do not find One-Euro-Job announcements to lead to (well-determined) changes in the likelihood of being in contributory or minor employment. This means that the increased job search intensity and willingness to make a concession does not lead to employment gains in the very short term for welfare recipients. Moreover, we have to consider that more than half of the welfare recipients receiving an announcement also participate in the programme. Therefore, lock-in effects are likely as well.

With respect to the income situation, we find no significant changes in the overall equivalent income (including benefit receipt) and the likelihood of receiving welfare benefits.

Overall, we find that receiving a One-Euro-Job announcement increases several aspects of job search intensity and applications activities. Also, the willingness to make a concession with respect to accepting any job or a lower wage increases, but not to looking for a job more than 100km away from the current residence. These effects on the job search behaviour and the willingness to make a concession do not lead to employment gains or changes in income or benefit dependency in the short term.

Subgroup analyses

The comparatively small number of observations limits our opportunities of studying effect heterogeneity. Due to the small sample sizes, estimates of the treatment effects in the subgroups are more frequently not and/or less well-determined than for the entire sample. The 95% confidence intervals of the estimated treatment effects (not displayed) indicate no significant differences between the effects for different groups. Therefore, we only briefly discuss selected results of our subgroup analyses (displayed in Tables 4 and 5).
First, we split the sample by gender and region to capture the differences in the labour market situation between men and women and between East and West Germany. Whereas we find an increase in the likelihood of informing about jobs via family and friends and asking for a job at the company itself for men, women are more likely to reply to job advertisements due to the One-Euro-Job announcement. Concerning the two regions, we find that while One-Euro-Job announcements increase job search activities mainly in East Germany, they increase the willingness to make a concession only in West Germany: The likelihood of looking for any possible job increases by seven percentage points and the reservation wage decreases due to treatment by 0.31€. As the initial willingness to make a concession is lower in West Germany (base level of looking for any job: 25% (West) vs. 32% (East) and of the reservation wage 7.34€ (West) vs. 6.35€ (East)), there is more scope for adjustments due to treatment.
Second, to capture one aspect of job finding prospects, we split the sample into two groups by the duration since the end of the last contributory job (less than four years; equal to or more than four years, never employed, information missing). We find that those who have not been employed for four years or more or have never been employed show a stronger response to a One-Euro-Job announcement in terms of increasing their job search activities and the probability of looking for any possible job, but a smaller reduction of their reservation wage. Furthermore, One-Euro-Job announcements lead to a decreased probability of being

employed for the group of those who have not worked for four years or more or have never been employed as well as to a reduction in the total equivalent income.
Third, to capture heterogeneity with respect to pathways to the One-Euro-Job announcement, we split the treatment group into two groups reflecting who was the first to mention One-Euro-Jobs (the caseworker or the welfare recipient/both). Both groups respond to treatment with a slight increase in job search activities. However, those who first mentioned One-Euro-Jobs themselves or together with the caseworker show an increased willingness to make a concession in terms of an increased likelihood of looking for any possible job and a decrease in the reservation wage. This result may seem surprising at first sight, as one might expect those who do not self-select into treatment to be more likely to perceive treatment as detrimental and respond more strongly in response to an announcement. However, the group of welfare recipients who self-select into treatment are a selective group, who might show a particular motivation to work.[8] Furthermore, the information on the pathway to treatment is surveyed ex post and might be therefore influenced by treatment.

7. Conclusion

The Hartz reforms in the early 2000s changed the unemployment benefit system in Germany dramatically and implied a shift towards activation. As one means of activation, a workfare programme called One-Euro-Jobs was introduced in 2005 on a large scale. So far, only knowledge on effects of actual participation on labour market performance exists. It is most likely that not only actual participation affects individual behaviour but that the mere announcement of participation does so as well. We provide first evidence on the effect of receiving a One-Euro-Job announcement on job search behaviour, reservation wage and short-term employment performance of welfare recipients.
Our results show that receiving a One-Euro-Job announcement increases job search and application activities. Also, willingness to make a concession with respect to accepting any job or a lower wage increases, but not willingness to looking for a job more than 100km away from the current residence. These results indicate that welfare recipients on average would like to circumvent an announced One-Euro-Job participation. As our group of participants

[8] Results from the probit estimations (not displayed) show that those self-selecting into treatment are on average older, are more likely to have some employment experience that is however less recent and are more likely to have worked as a blue collar worker in their last job.

mainly comprises hard-to-place individuals, increased job search intensity and willingness to make concessions does not lead to employment gains in the very short term.

Overall, our results indicate that not only participation effects of One-Euro-Jobs but also announcement effects occur. Though, the increased job search activities might also partly be the result of the treatment itself, if due to gains in employability some treated welfare recipients are more motivated to look for jobs. However, as One-Euro-Job participation leads to lock-in effects in the short term, we assume that job search intensity on average decreases during participation. Therefore, the effect of receiving a One-Euro-Job announcement that we have found cannot be entirely explained by a participation effect, but indicates that also announcement effects occur. These announcement effects have to be taken into account in a comprehensive assessment of the programme. Furthermore, our results indicate that although treatment effects are often regarded as moderate, workfare can be a tool for reducing the problem of moral hazard of unemployment benefit receipt. However, potential side effects on employment, earnings and job quality have to be considered and would be an issue for future research.

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Tables and Figure

Figure 1: Design of the study

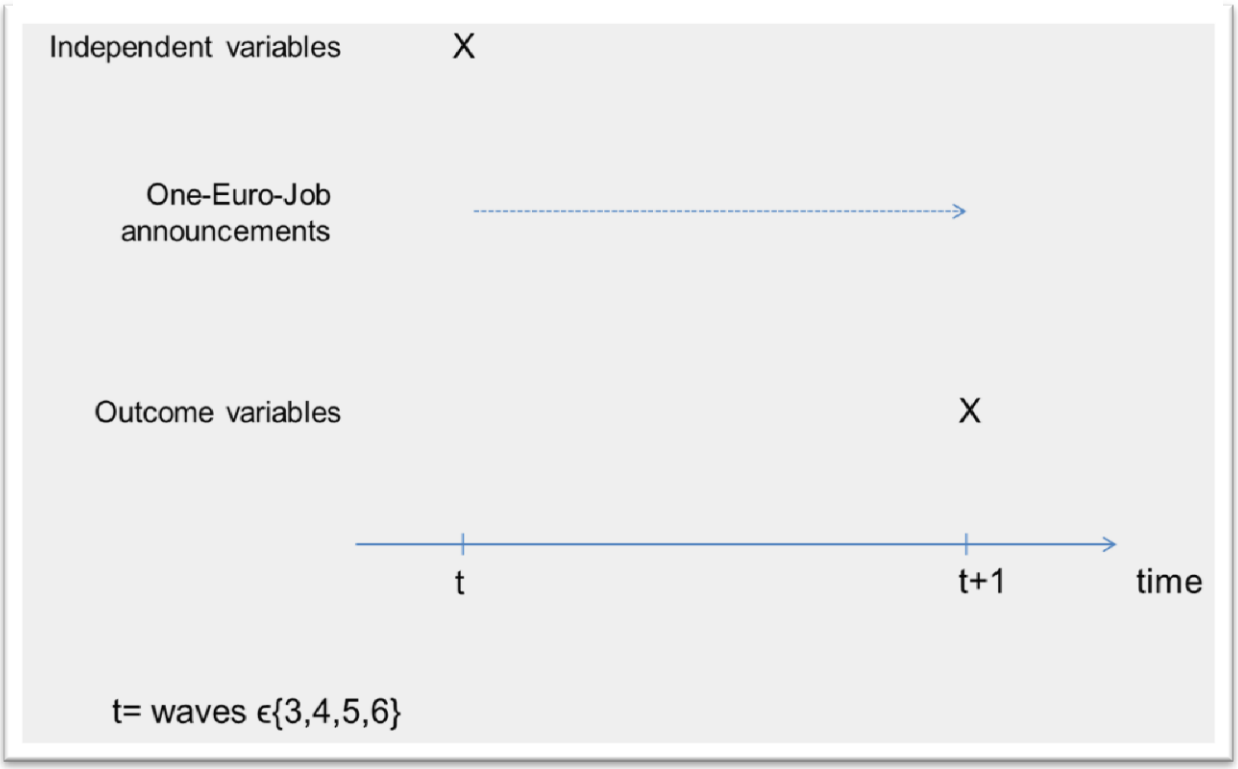

Table 1: Sample selection

Total number of observations waves 4 to 7	31,099
thereof with interview in previous wave	21,493
Observations excluded due to:	
Questionnaire design of One-Euro-Job module	
student	963
no UB II receipt since previous wave	7,940
One-Euro-Job questions not posed by mistake	97
Excluding individuals not at risk of One-Euro-Job announcement (at the time of the previous interview) due to…	
Current One-Euro-Job participation	483
no UB II receipt	1,577
in school, education, (alternative) military service	610
maternity / parental leave	177
retired	172
sick, incapable of working	61
socially insured employment	1,582
Missing information concerning…	
(Date of) One-Euro-Job announcement	33
Covariates	214
Outcomes variables	1,143
End of UB II receipt or start of employment before (random) announcement date	931
Remaining number of observations	**5,500**

Source: PASS_0613_v1

Table 2: Number of observations by wave

	Wave 4	Wave 5	Wave 6	Wave 7	Total
Number of observations	1,286	1,283	1,518	1,413	5,500
thereof with One-Euro-Job participation	240	182	148	137	707
(in %)	18.7	14.2	9.8	9.7	12.9

Source: PASS_0613_v1

Table 3: Numbers of observations and MSB before and after Matching

	Treated	Potential controls	MSB before Matching	MSB after Matching
Total	707	4,793	9.540	1.638
Men	369	2,201	9.186	2.491
Women	338	2,592	12.162	2.928
East Germany	352	1,738	9.186	2.567
West Germany	355	3,055	10.063	1.888
Last regular job ended < 4 years ago	203	1,593	12.208	3.250
Last regular job ended ≥ 4 years ago, never employed, information missing	497	3,164	10.689	2.004
Caseworker mentioned One-Euro-Jobs first	375	4,678	9.742	1.925
Both/welfare recipients mentioned One-Euro-Jobs first	229	4,515	14.628	2.575

Source: PASS_0613_v1

Table 4: ATT of receiving a One-Euro-Job announcement

	Total	Men	Women	East Germany	West Germany	Last regular job ended: < 4 years ago	Last regular job ended: ≥ 4 years ago, never employed, missing	Who was the first to talk about One-Euro-Jobs: Caseworker	Who was the first to talk about One-Euro-Jobs: Both/Welfare recipient
Job search activities during past four weeks									
Job search: yes	0.070 **	0.058 t	0.044	0.058 t	0.035	0.029	0.059 *	0.032	0.053
Job search via									
job advertisements in newspapers	0.070 **	0.060 t	0.042	0.026	0.052	0.060	0.057 *	0.046	0.058
employment agencies' online job market	0.033	0.008	0.016	0.053	-0.020	-0.001	-0.007	0.020	0.004
other internet sources	0.043 t	0.034	0.038	0.039	0.050	-0.013	0.037	0.038	0.030
family and friends	0.071 **	0.072 *	0.023	0.039	0.049	0.025	0.063 *	0.061 *	0.078 *
placement officer at the employment agency	0.021	0.043	0.025	0.023	0.037	0.034	0.016	0.000	0.038
private job placement service	0.006	0.014	-0.005	0.023	0.000	-0.020	0.015	0.023	-0.044 *
other, not coded	0.008	0.000	0.011	0.014	-0.003	0.023	0.007	-0.004	0.012
initiative inquiry	0.029 *	0.030 t	0.019	0.018	0.010	-0.007	0.028 t	0.025	0.008
No. of different search channels	0.281 **	0.262 t	0.168	0.235	0.174	0.101	0.216 t	0.209	0.184
Application activities during past four weeks									
Replied to job advertisements	0.053 *	0.002	0.062 t	0.031	0.042	0.010	0.041	0.013	0.059
Placed an "employment wanted" advertisement	0.006	-0.002	0.001	0.005	-0.004	0.014	0.000	0.006	-0.009
Asked for a job at the company itself	0.073 ***	0.085 **	0.045	0.067 *	0.054 t	0.046	0.101 ***	0.038	0.071 t
Submitted application without concrete job advertisement	0.001	-0.016	0.015	0.001	-0.022	-0.011	-0.017	-0.029	0.023
Job application more than 100 km away from current residence	0.016	0.007	0.004	0.010	-0.014	0.019	0.006	0.003	0.007

Table 4 continued

	Total	Men	Women	East Germany	West Germany	Last regular job ended: < 4 years ago	Last regular job ended: ≥ 4 years ago, never employed, missing	Who was the first to talk about One-Euro-Jobs: Caseworker	Who was the first to talk about One-Euro-Jobs: Both/Welfare recipient
No. of applications for job advertisements	0.268	0.139	0.074	0.269	-0.098	0.419	-0.138	0.193	-0.427
No. of pro-active applications	0.129	0.055	0.020	-0.117	-0.122	0.293	-0.154	0.045	-0.123
Total No of applications	0.398	0.194	0.094	0.152	-0.220	0.712	-0.292	0.237	-0.551
No. of ways of looking for a job	0.133 *	0.069	0.123	0.104	0.071	0.060	0.126 †	0.028	0.144 †
Looked for any possible job	0.058 **	0.046	0.061 †	0.019	0.071 *	-0.008	0.050 †	0.016	0.100 **
Reservation wage									
Hourly reservation wage after tax (in €, deflated to price level 2010=100)	-0.217 *	-0.067	-0.282	-0.113	-0.306 *	-0.540 *	-0.260 †	-0.109	-0.399 *
Employment and income									
Socially insured employment	-0.016	-0.009	-0.007	-0.022	-0.012	-0.014	-0.019 †	-0.019	-0.007
Minor employment	-0.018	-0.029	-0.025	-0.040	-0.028	-0.045	-0.010	-0.018	-0.018
Household obtains UB II	0.017	0.019	0.004	0.031 †	0.012	0.014	0.011	0.010	0.038 *
Household equivalence income (in €, deflated to price level 2010=100) [1)]	-14.221	-11.252	-18.071	-20.175	-90.713 **	-1.702	-70.140 *	-19.581	-53.595

Notes: 1) This covers all sorts of income sources, also from social benefits. For details see Berg et al. (2013).

Source: PASS_0613_v1; † p ‹ .10; Effects on share of a positive answer (0=no, 1=yes) unless stated otherwise; *p ‹ .05; **p ‹ .01; ***p ‹ .001

Table 5: Mean outcomes for matched controls

						Last regular job ended		Who was the first to talk about One-Euro-Jobs	
	Total	**Men**	**Women**	**East Germany**	**West Germany**	**< 4 years ago**	**≥ 4 years ago, never employed, missing**	**Caseworker**	**Both/Welfare recipient**
Job search activities during past four weeks									
Job search: yes	0.52	0.56	0.50	0.55	0.53	0.56	0.54	0.56	0.57
Informed about jobs via									
job advertisements in newspapers	0.42	0.42	0.43	0.45	0.43	0.44	0.43	0.44	0.45
employment agencies' online job market	0.33	0.35	0.34	0.34	0.35	0.36	0.37	0.34	0.36
other internet sources	0.35	0.36	0.35	0.34	0.36	0.40	0.36	0.37	0.36
family and friends	0.34	0.37	0.34	0.38	0.34	0.39	0.34	0.35	0.37
placement officer at the employment agency	0.29	0.28	0.25	0.31	0.24	0.28	0.29	0.30	0.31
private job placement service	0.11	0.10	0.10	0.11	0.09	0.11	0.09	0.10	0.13
other, not coded	0.03	0.02	0.03	0.04	0.02	0.03	0.02	0.03	0.04
initiative inquiry	0.05	0.05	0.05	0.07	0.05	0.06	0.06	0.05	0.07
No. of different search channels	1.91	1.96	1.90	2.04	1.88	2.07	1.97	1.98	2.07
Application activities during past four weeks									
Replied to job advertisements	0.35	0.39	0.33	0.35	0.38	0.38	0.36	0.39	0.35
Placed an “employment wanted“ advertisement	0.03	0.04	0.03	0.03	0.03	0.02	0.03	0.02	0.04
Asked for a job at the company itself	0.30	0.33	0.26	0.34	0.28	0.32	0.28	0.32	0.32
Submitted application without concrete job advertisement	0.23	0.25	0.21	0.24	0.24	0.24	0.24	0.25	0.23

Table 5 continued

						Last regular job ended		Who was the first to talk about One-Euro-Jobs	
	Total	**Men**	**Women**	**East Germany**	**West Germany**	**< 4 years ago**	**≥ 4 years ago, never employed, missing**	**Caseworker**	**Both/Welfare recipient**
Job application >100km away from current residence	0.05	0.09	0.04	0.07	0.07	0.07	0.06	0.06	0.06
No. of applications for job advertisements	1.75	1.82	1.97	1.72	2.16	2.10	2.01	2.01	2.03
No. of pro-active applications	0.90	1.08	0.89	0.97	1.20	1.16	1.00	1.09	1.00
Total No. of applications	2.65	2.90	2.86	2.68	3.37	3.26	3.01	3.10	3.03
No. of ways of looking for a job	0.91	1.01	0.83	0.96	0.94	0.96	0.92	0.98	0.94
Looked for any possible job	0.27	0.28	0.27	0.32	0.25	0.27	0.30	0.28	0.30
Reservation wage									
Hourly reservation wage after tax in €, deflated (price level 2010=100)	6.85	6.95	6.65	6.35	7.34	7.31	6.84	6.91	6.78
Employment and income									
Socially insured employment	0.08	0.07	0.07	0.09	0.07	0.12	0.05	0.08	0.08
Minor employment	0.18	0.16	0.21	0.21	0.18	0.20	0.18	0.17	0.18
Household obtains UB II	0.92	0.93	0.92	0.90	0.92	0.88	0.95	0.91	0.91
Household equivalence income in €, deflated (price level 2010=100) [1)]	698.47	695.33	699.62	662.95	819.05	728.03	738.96	714.25	718.61

Notes: 1) This covers all sorts of income sources, also from social benefits. For details, see Berg et al. (2013).

Source: PASS_0613_v1; Outcomes measured as shares of a positive answer (0=no, 1=yes) unless stated otherwise

Appendix

Table A. 1: Coefficients of probit estimates

	Coefficient	p-value
Female	-0.379	0.222
West Germany	1.027	0.040
Female* West Germany	-0.216	0.028
Wave	*Reference: Wave 4 (2010)*	
Wave 5 (2011)	-0.144	0.037
Wave 6 (2012)	-0.317	0.000
Wave 7 (2013)	-0.287	0.000
Age in years	*Reference: 15-24*	
25-34 years	-0.246	0.016
35-44 years	-0.185	0.105
45-54 years	-0.133	0.261
55-64 years	-0.197	0.157
Migration background	*Reference: none*	
Information missing	0.026	0.853
Person is immigrated	-0.057	0.555
At least one (grand-)parent immigrated	0.065	0.331
Health problems	*Reference: none*	
Health restrictions	0.048	0.245
Any mental disorders	0.079	0.138
School degree	*Reference: Secondary school*	
No degree, other degree, information missing	0.315	0.001
Intermediate school	0.148	0.003
Upper secondary school	-0.123	0.221
Occupational degree	*Reference: none, semi-skilled*	
Vocational training	-0.254	0.008
University degree	-0.080	0.646
Female*vocational training	0.205	0.290
Female*university degree	-0.023	0.932
Time since last occupational degree	*Reference: up to 10 years*	
Information missing	0.010	0.941
11 to 20 years	0.008	0.953
21 to 30 years	0.000	0.999
> 30 years	0.081	0.476
Female*information missing	0.462	0.044
Female*no degree	0.326	0.133
Female*11 to 20 years	0.346	0.110
Female*21 to 30 years	0.366	0.081
Female*> 30 years	0.162	0.358

	Coefficient	p-value
Own children living in the household	*Reference: none*	
Child aged 0 to 6 years	0.011	0.939
Child aged 7 to 14 years	0.028	0.841
Child aged 15 or above	0.253	0.027
Female*child aged 0 to 6 years	0.016	0.927
Female*child aged 7 to 14 years	-0.100	0.589
Female*child aged 15 or above	-0.132	0.296
Current status		
Providing informal care to relative or friend	0.005	0.957
Social engagement	-0.013	0.841
Minor employment	-0.318	0.000
Registered as unemployed	-0.106	0.729
Obliged to search for a job	0.173	0.013
Frequency of job centre contact during previous year	*Reference: 0 to 1x*	
2-10x	-0.001	0.990
11-20x	-0.018	0.879
>20x	0.186	0.081
Integration agreement signed	0.261	0.000
Time since last contributory job ended	*Reference: <2 years ago*	
Never employed	0.072	0.533
Information missing	0.205	0.078
2 to <6 years ago	0.107	0.153
≥ 6 years ago	0.199	0.003
Occupational status in last job	*Reference: blue collar*	
White-collar worker	-0.082	0.059
Else: Civil servant, self-employed, family worker	-0.129	0.095
Unemployment during previous year	*Reference: none*	
Some time unemployed	0.181	0.620
Unemployed throughout the year	0.220	0.543
Some time unemployed*female	-0.049	0.834
Unemployed throughout the year*female	-0.123	0.563
Some time out of labour force during previous year	-0.098	0.069
Living together with a partner	*Reference: no*	
Partner without further information in the data	-0.156	0.310
Partner with further information in the data, non-married	-0.068	0.583
Partner with further information in the data, married	-0.486	0.000
Female*partner without further information in the data	0.140	0.505
Female*partner with further information in the data, non-married	0.154	0.403
Female*partner with further information in the data, married	0.522	0.000
Household receives UB II for	*Reference: up to 5 months*	
6 to 11 months	-0.098	0.512
12 months and more	-0.020	0.886

	Coefficient	p-value
Deprivation index, weighted (item sum: 11.08)	*Reference: ≤1*	
1.1 to 2	0.059	0.412
2.1 to 3	-0.042	0.535
3.1 to 4	-0.047	0.572
>4	0.200	0.059
Regional labour market situation		
Regional unemployment rate missing	1.070	0.009
Unemployment rate*East Germany	0.155	0.000
Long-term unemployment rate*East Germany	-0.225	0.000
Vacancy-Unemployment rate*East Germany	1.856	0.346
Unemployment rate *West Germany	0.050	0.187
Long-term unemployment rate*West Germany	-0.104	0.161
Vacancy-Unemployment rate*West Germany	-0.658	0.196
Regional indicator for urban-rural ratio (BIK)	*Reference: <20,000 inhabitants*	
20,000-49,999 inhabitants; struct. type 1-4	-0.053	0.707
50,000-99,999 inhabitants; struct. type 2-4	-0.006	0.967
50,000-99,999 inhabitants; struct. type 1	0.012	0.921
100,000-499,999 inhabitants; struct. type 2-4	0.167	0.233
100,000-499,999 inhabitants; struct. type 1	-0.055	0.615
500,000+ inhabitants; struct. type 2-4	0.107	0.460
500,000+ inhabitants; struct. type 1	0.044	0.679
Constant	-2.148	0.000
Pseudo-R2	0.098	
Number of observations	5,500	

Notes:

Source: PASS_0613_v1