DISCUSSION PAPER SERIES

IZA DP No. 8811

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January 2015

Forschungsinstitut
zur Zukunft der Arbeit
Institute for the Study
of Labor

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Discussion Paper No. 8811
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ABSTRACT

Coaching, Counseling, Case-Working: Do They Help the Older Unemployed Out of Benefit Receipt and Back into the Labor Market?*

Job search assistance and intensified counseling have been found to be effective for labor market integration by a large number of studies, but the evidence for older and hard-to-place unemployed individuals more specifically is mixed. In this paper we present key results from the evaluation of "Perspektive 50plus", a large-scale active labor market program directed at the older unemployed in Germany. To identify the treatment effects, we exploit regional variation in program participation. Based on survey evidence, we argue that participation of regions is not endogenous in the vast majority of cases. We use a combination of different evaluation estimators to check the sensitivity of the results to selection, substitution and local labor market effects. We find large positive effects of the program in the range of five to ten percentage points on integration into unsubsidized employment. However, there are also substantial lock-in effects, such that program participants have a higher probability of remaining on public welfare benefit receipt for up to one year after commencing the program.

JEL Classification: J68, J14

Keywords: active labor market programs, evaluation, long-term unemployment, older unemployed

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* We wish to thank the Institute for Employment Research (IAB), Nürnberg, for providing the data. We gratefully acknowledge the collaboration of Matthias Knuth, Holger Langkabel, Charlotte Klempt, Rolf Kleimann, Tim Stegmann, Florian Storz, and Lina Zink. Furthermore, we wish to thank participants at seminars in Trier, Hannover and Eichstätt and at the EEA and EALE Conferences 2014 for helpful comments. This paper is based on the evaluation of the second phase of the Federal Program "Perspektive 50plus", commissioned by the German Ministry of Labor and Social Affairs (BMAS). It does not necessarily reflect the opinions and views held by the BMAS.

1 Introduction

Unemployed persons aged 50 and above have long been considered to be one of the groups most difficult to integrate into the labor market. Demographic change in many industrialized countries, however, has led to a scarcity of younger workers and a higher official retirement age, and as a consequence, the labor market potential of older workers is increasingly acknowledged. In this context, the specific problems of older unemployed workers have been attracting increasing attention from governments and public employment services (see OECD 2006).

In this paper, we estimate the effects of "Perspektive 50plus", an active labor market policy (ALMP) program directed at long-term unemployed workers aged 50 and above in Germany.[1] The program was introduced by the German government as a special federal program in 2005 and was provided with substantial government funding. The program continues until the year 2015, after which the successful components will be implemented more broadly and become part of regular labor market policy. The results reported here are part of the official evaluation of the second phase of "Perspektive 50plus" (2008 to 2010). The scale of the program is large; more than 280,000 unemployed older workers participated in the program in 2010, which represents more than a fifth of the stock of unemployed workers aged 50 and above, registered as of June 2010.

The program is targeted at a group that faces severe integration problems with respect to the labor market. These problems stem from both the demand and the supply side. For a number of reasons, many firms are reluctant to hire older workers (Daniel and Heywood 2007, Heyma et al. 2014, Heywood et al. 2010, Ilmakunnas and Ilmakunnas 2011). Moreover, older unemployed workers are often characterized by multiple placement constraints: they have low levels of formal education; have worked in structurally disadvantageous jobs; and are often affected by problems such as bad health, a lack of social integration and a long history of unsuccessful attempts at

1 There exist similar programs for older jobseekers in other countries, such as the program Talent 45plus in the Netherlands (http://www.esfage.eu/network-products/netherlands/supporting-unemployed-find-work/programmes/talent-45), but they tend to be less comprehensive than "Perspektive 50plus". The UK introduced the New Deal for Older Workers in 1999, but has abandoned programs targeted at particular groups of unemployed workers.

returning to work. Arguably, integration often fails due to these obstacles to employment rather than due to the effect of age taken alone.

"Perspektive 50plus" is oriented towards integrating older long-term unemployed workers into the first labor market, i.e. non-publicly sponsored, self-paying jobs covered by social security. This approach represents a significant change in German labor market policy. Before 2005, older unemployed workers have either been ignored and given passive benefits, or they have been assigned to public employment schemes. By contrast, the use of public sponsored employment schemes has been discouraged by the government in the program considered here.

The governance structure of the program is unique among the numerous German ALMP programs. The program is implemented by regional employment pacts, consisting of varying partners, among them job centers, local supporters, firms, and business associations. The implementation is strongly decentralized and central interference has almost completely been restricted to providing targets for job centers regarding the number of annually integrations. The degree to which these targets are fulfilled counts towards the financial means received for the program, creating strong incentives for job centers to fulfill their quotas.

In our evaluation of the program, we make use of the fact that program participation is voluntary for job centers and geographical coverage is not universal, so that there are both participating and non-participating regions at the same point of time, meaning that a control group is available. Based on survey evidence, we argue that participation by specific regions is mainly due to organizational and administrative reasons and, hence, can be taken as exogenous to program participation. Additionally, we use matching techniques on the basis of official register data covering a wide range of observable characteristics. Using treatment variation between regions and comparing between difference-in-differences, matching and differences-in-differences matching estimators allows us to address displacement and selectivity effects.

The remainder of the paper is structured as follows: in Section 2, we present evidence on the effects of job search assistance, coaching and similar policies on hard-to-place unemployed persons. To be able to assess the appropriateness of the estimators, we give a brief overview of the institutional structure of the program in Section 3. Sections 4 and 5 then explain the methodology, introduce the data and provide

descriptive statistics. Section 6 contains results for the average effect of treatment on the treated (ATT) from matching and difference-in-differences matching estimations. Section 7 compares these results to intent-to-treat effects from differences-in-differences estimations. Section 8 concludes.

2 Previous evidence on programs for hard-to-place workers

This section gives a brief overview of and compares our paper with analyses of similar ALMP programs, i.e. job search assistance, coaching and intensified counseling programs and programs targeted at hard-to-place, and especially older, unemployed persons. These policies are generally aimed at integrating the unemployed quickly into the first labor market and focus on specific groups (the older unemployed, the long-term unemployed, single mothers, and unemployed workers with certain disabilities or other obstacles).

There is a large literature on job search assistance. In general, the majority of studies find positive effects for services such as intensive counseling, short-term training, skills assessment, mobility enhancement and other types of assistance for populations who most use them, including those on short-term benefits as well as unemployed workers with placement difficulties (Ashenfelter et al. 2005, Meyer 1995). Similar conclusions are drawn in the meta studies by Card et al. (2010), Kastoryano and van der Klaauw (2011). Wunsch (2013) studies the role of job search assistance programs in optimal welfare-to-work programs. She shows that the main role of job search assistance is to delay or prevent situations in which it is no longer optimal to incentivize the worker to apply positive search effort and that, in line with existing policies, these programs should mainly be used at the beginning of unemployment and for short durations.

There is a large literature on ALMPs especially designed or targeted at older workers (for an overview of recent papers, see Table A.1). Boockmann et al. (2012) estimate the effects of hiring subsidies for older workers on transitions from unemployment to employment in Germany using a natural experiment. Evidence for an employment effect of hiring subsidies can only be found for women in East Germany. For other groups, dead-weight losses dominate. Deuchert and Kauer (2013) test the effectiveness of hiring subsidies for people with disabilities by the Swiss Disability

Insurance using a small scale social field experiment. Their results reveal that the subsidy is ineffective or even counterproductive in a group of adolescents who are at the end of their vocational training program, but may increase call-back rates in a group of clients of job coaching services. Bloemen et al. (2011) use a recent policy change in the Netherlands to study how changes in search requirements for older unemployed individuals affect their transition rates to employment, early retirement and use of sickness/disability benefits. Estimating various duration models and using difference-in-difference and regression discontinuity approaches, they find that stricter search requirements significantly increase entry rate into employment for treated individuals. Job search assistance and similar policies have proven successful for older or otherwise disadvantaged workers in other studies such as Arni (2010) and Wunsch (2013). Arni (2010) uses a social experiment for the evaluation of counseling and training policy, especially designed for older workers in Switzerland. He finds that the policy increases the job finding rate in the treatment group and attributes this change to an increase in job search efficiency and a reduction of reservation wages. He stresses that early interventions are important. The study is limited to unemployed workers who have entered unemployment relatively recently. By contrast, the policy studied here is directed at long-term unemployed workers who have prolonged spells of unemployment. It is less clear that counseling has an effect on this group. From the methodological side, Arni (2010) has a relatively small number of individuals in the treatment (186) and control (141) groups, which limits the possibility to investigate the effects on sub-groups of the population.

The literature on coaching and job search assistance studies uses different outcomes, for example transitions into employment or transitions into early retirement, among others. This enriches the findings and points to the behavioral foundations of the results (Babcock et al., 2012). Among the outcomes studied are unemployment duration, benefit duration (Arni, 2010), exit to employment (Behaghel et al., 2014; Kastoryano and van der Klaauw, 2011), job stability and type of employment contracts (Arni, 2010; Crépon et al., 2013), reservation wages (Arni, 2010) and search strategy (Arni, 2010).

Crépon et al. (2013) study a program for young job seekers in France and put particular emphasis on displacement effects. Unique to this study is randomization at two levels: at the job seeker and at the job centers. This allows them to identify effects on non-treated individuals. The authors find little evidence for displacement effects. The presence of displacement effects may hinge on labor market tightness. That is, they may be large in those parts of the labor market where there is intense competition. This may apply in particular to older unemployed workers.

3 Structure and governance of the program

The federal program "Perspektive 50plus" was introduced in 2005 in 93 regional job centers (i.e. local agencies responsible for activating and administering benefits to the long-term unemployed) across Germany. It is directed at unemployed workers aged 50 and above[2] who receive means-tested public welfare benefits for individuals who are able to work (Unemployment Benefit II, UB II). The program was introduced by the Federal Ministry for Labor and Social Affairs (BMAS) as a competition among job centers, which were called on to apply jointly as regional employment pacts.[3] The pacts had to submit detailed strategies on how to counsel older unemployed workers. They often involve local partners such as employers and business networks, non-profit organizations, health provides or volunteer networks. This process was meant to mobilize resources at the local level, to advance creative solutions and to induce a competition for best practices. In return, the federal level provided substantial financial means for the program. In addition, the ministry also provided some degree of coordination and a platform for the dissemination of experiences through a series of regular workshops and conferences.

After the first program phase ended in 2007, the program has been gradually extended by the accession of more job centers to the existing employment pacts. Figure 1 displays the growth of the program. In the year 2010, only 88 of the 438 job centers did not belong to a regional employment pact, i.e. did not participate in the

2 Participation may start at slightly earlier ages if it is expected that individuals will reach the age of 50 during their current benefit spells.

3 More institutional details can be found in IAQ/IAW (2012).

program. In the last stage of the program (2011 to 2015), the participation rate was 95 percent among all job centers.

Total spending of all regional pacts during the second program phase amounted to 787.3 million euros. Among these funds, 56 percent were provided by the ministry and the rest by other levels of government, either by the job centers' own budgets, from the federal states or from the operational programs of the European Social Fund (ESF). The employment pacts annual spending ranged between 1.97 and 44.3 million euros over 2008-2010, with a mean spending of 12.7 million euros, such that there is a large amount of heterogeneity in spending between pacts.

The scale of the program can also be measured by the total number of individuals receiving activation benefits. The number of participants was 283,332 during the year 2010. Among the participants, 188,817 received activation benefits, which means that they received more than 25 hours of counselling, training or other services (IAQ/IAW 2012, p. 7). The fraction of program participants among all older unemployed persons was substantial. According to the statistics of the Federal Employment Agency, 1.23 million individuals aged between 50 and 65 received UB II in June 2012.[4]

For the governance of the program, a specific mode was designed. Whereas ALMP programs are usually administered by the Federal Employment Agency, "Perspektive 50plus" was implemented directly by the Ministry of Labor and Social Affairs. A private service provider was contracted to coordinate the activities of the employment pacts and provide the monitoring for the program. The governance did not focus on detailed guidelines on the implementation of ALMP; rather, it provided financial incentives. Depending on the concrete agreement between the federal and the local level, between 75 and 100 percent of the federal contribution depended on the fulfillment of integration quotas; these quotas were negotiated in advance between the federal government and the employment pacts.[5] Local autonomy, decentralized

4 See Federal Employment Agency (2010): Statistik der Grundsicherung für Arbeitsuchende nach dem SGB II, Übersichtstabellen SGB II für Bund und Länder, June 2010.

5 Within "Perspektive 50plus", a separate module for the least able to work was set up and named "Impuls 50plus". In this module, financing did not depend solely on the number of unemployed

implementation, and governance by objectives were introduced by the federal program as radically new elements to German ALMP, which had hitherto been strongly shaped by the central control of the Federal Employment Agency over local branch offices.

Taking the number of integrations as a key indicator, the governance structure creates specific incentives for job centers to concentrate on individuals with better labor market characteristics, to include individuals which are known to transit to employment shortly and to exclude those who are known to leave the welfare system for the unable-to-work and other parts of the social security system. These incentives mirror those known from the U.S. literature on performance standards (Heckman et al. 2002; Courty et al. 2008). We take them into account by looking in detail at the composition of participants and non-participants.

To implement the program, employment pacts and jobs centers have used their autonomy to introduce a variety of approaches and measures; yet there are common priorities shared by almost all employment pacts. These priorities are visible from Table 1, which provides information on which individual measures were administered by the job centers. The assessment of the jobseekers' skills is often the first step in individualized casework; it constitutes 14.2 percent of all individual activation measures. General job search assistance and coaching account for nearly 40 percent of all activation measures. There is also a substantial fraction of training measures (12.5 percent). Interventions to improve health and mobility add a further 13.6 percent. Most notably, public sector sponsored employment, hitherto a frequent element of ALMP for the target group of older unemployed workers, only accounts for about 3 percent of all program starts; whereas it accounts for roughly 30 percent of the program starts in regular ALMP for older workers (see IAQ/IAW 2012, p. 50). This underlines the orientation of the program towards integration into the first labor market, i.e. unsubsidized employment.

Corresponding to the variety of specific measures, there is also a variety of different modes of implementation. Some employment pacts apply voluntary participation; others obliged older unemployed to participate. Some use external

integrated, but on other, "softer" indicators as well. In this paper, however, we are not concerned with this part of the program and only look at participants in the standard program.

providers for activation measures; others implement them using their own staff. In some, separate teams are formed for the implementation of the program, in others implementation is closely connected to the regular process of counseling unemployed workers. In our analysis, we do not differentiate between these modes of implementation. Given a limited degree of variation when the relevant unit is one of 69 employment pacts, it is difficult to establish statistically significant differences.[6]

4 Estimation approach

In the following, we estimate treatment effects on the treated for individuals who participated in "Perspektive 50plus" during the year 2010 on integration into unsubsidized employment and exit from dependence on means-tested benefits for the able to work. In the absence of randomization, we use different sources of variation in participation. First, we use participation at the regional level, comparing between participating and not participating job centers and using the fact that not all job centers participated in 2010. Second, we also use differences in participation at the individual level.

Regional participation of job centers is important because relying on the individual participation only may result in a low fraction of comparable cases if access is very selective. Moreover, the control cases may be affected indirectly by the program if there is competition for scarce jobs within the same local labor market. In addition, caseworkers at the participating job centers will become informed about the program and may apply similar approaches to non-treated individuals. The case studies conducted for the evaluation show that there is evidence for the existence of spill-over effects from the program to the regular operations of the job centers (see Büttner et al. 2011, p. 84). For these reasons, a control group drawn from individuals in non-participating regions is a better choice.[7]

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6 The interested reader is directed to IAQ/IAW (2012) for a description of how results vary with different types of implementation.

7 Previous research (e.g. Heckman et al. 1997, 1998, and Smith and Todd ,2003) has shown that using control observations from the same local labor market is crucial to avoid biases. In further estimations, we also used a control group from participating job centers. Treatment effects were

The participating job centers are chosen from those that entered the program in the second half of 2009 or in the beginning of 2010. There are three reasons for not choosing job centers with earlier access dates. First, we wish to focus on the first participation of individuals in the program. Since individual participation information is available only for the year 2010, we would be running the risk of including individuals with repeated participations in the treatment group if we included job centers participating in earlier years. Second, we can use job centers that changed their participation status in order to perform either difference-in-differences (DiD) or DiD-matching estimations, using information from a period before the access to the program (see below). Third, it turns out that the regional characteristics of newly acceding job centers are very similar to non-participating regions, while job centers which have joined earlier into to program tend to differ in several respects, such as size and regional employment conditions. Table 2 shows the distribution of the characteristics between the newly acceding job centers and those remaining outside of the program. In general, the standardized differences are low, in particular regarding the composition of welfare recipients.

In the standardized e-mail survey that was part of the project, we addressed potential policy endogeneity by asking non-participating job centers for the reasons why they had not joined the program. Multiple answers were admitted; they point to a diversity of reasons. Some job centers had intended to join the employment pacts but had had difficulties establishing contacts (27 percent); others had applied but had been refused entry (19 percent). Only a minority (18 percent) stated that they had not joined because they had "no particular problems with the target group 50plus". From the 27 job centers which gave other reasons, only one stated that participation was not worthwhile because there were too few potential participants. All others named organizational and administrative reasons.

Figure 2 shows the gradual extension of the program from 2008 until 2010. Geographically, the program spreads evenly over all German regions. The map also suggests that the extension of the program is based on existing regional clusters. This

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comparable in size to the ones reported here, although they tended by be slightly larger in magnitude. These results are not reported here but are included in IAQ/IAW (2012).

reflects the fact that the number of regional employment pacts was kept fixed from 2008 to 2010 and extension occurred mainly when neighboring job centers joined existing pacts.

We use several different non-experimental micro-econometric evaluation methods.[8] First, we use the data for the year 2010 and apply propensity score matching (PSM) to obtain a control group from non-participating job centers. In the matching process, participants are compared with non-participants that have a similar treatment probability. This probability is predicted at the individual level using a variety of characteristics (see next section). The estimated average treatment effect on the treated is:

$$ATT^M = \sum_{i=1}^{m_1} \left[y_{1i} - \sum\nolimits_{j=1}^{n_0} w_{ij} y_{oj} \right].$$

In view of the relative large pool of control observations, we use a one-to-one nearest neighbor matching, such that $w_{ij} = 1$ for the non-treatment observation j with the lowest distance to treatment observation i in terms of the propensity score and equals 0 otherwise.[9] We impose a caliper of 0.01 to exclude observations relatively distant in terms of the propensity score.

The matching estimator uses the conditional independence assumption (CIA). We justify this assumption on two grounds. First, our data set comprises rich administrative data on all of the essential aspects to safeguard the CIA according to Lechner and Wunsch (2013) and Caliendo et al. (2014). Thus, we are confident that we capture all relevant factors that affect both participation in treatment and our outcome variable of interest. Second, most participants are assigned to the program relatively early in their unemployment spell, i.e. shortly after they enter unemployment. This means that they are not likely to be assigned on the basis of knowledge acquired during the process of counseling but rather on the basis of the characteristics visible to the

8 Imbens and Wooldridge (2009) provide an extensive discussion of the properties and assumptions of different non-experimental estimation approaches.

9 As a robustness check, we estimated the model by kernel matching. The differences to our nearest-neighbor matching model were small.

caseworkers from the same administrative data that we use at the start of the welfare spell.

In addition, we use a cross-sectional version of the difference-in-difference-matching (DiDM) estimator, similar to Blundell et al. (2004) and Centeno et al. (2009). The estimator is based on the change in the outcome variables between the treatment and the matched control group between two periods. For the pre-treatment period, we use information for the year 2007, i.e. a year in which none of the job centers had introduced the program.

$$ATT^{DiDM} = \sum_{i=1}^{m_{1,t}} \left[y_{1i} - \sum\nolimits_{j=1}^{n_0,t} w_{ij} y_{oj} - \left(\sum\nolimits_{k=1}^{n_{1,t-1}} w_{ik} y_{ok} - \sum\nolimits_{l=1}^{n_{0,t-1}} w_{kl} y_{ol} \right) \right].$$

We follow Centeno et al. (2009), which in turn refers back to Smith and Todd (2005), by implementing the DiDM model sequentially. We identify individuals that would have participated in the program had the program been introduced in 2007 by defining the treatment as being unemployed in 2010 and use propensity matching on all observations in the job centers that participated in 2010. We then use another propensity score matching step to identify control observations in 2007. After obtaining these four groups, a simple unconditional difference-in-difference estimation is performed on the basis of these four groups.

While the cross-sectional matching estimator cannot account for unobserved heterogeneity, the DiDM estimator gets rid of unobserved heterogeneity (potentially correlated with treatment and outcomes) at the level of the welfare agency (but not at the individual level). Heckman et al. (1997, 1998) and Smith and Todd (2003) argue that unobserved heterogeneity between regional labor markets may matter substantially for the results. Thus, accounting for regional unobserved heterogeneity may be an important benefit for our analysis.

To provide a benchmark estimator that is not affected by potential selection into the program based on individual unobserved heterogeneity, we also use the difference-in-difference (DiD) method and estimate an intent-to-treat effect of the program. This effect concerns all welfare recipients in participating and non-participating regions. It is based on the idea that, if the program is effective, this fact should be visible in the average outcomes of participants and non-participants in the program regions:

$$ATT^{DiD} = \sum_{i=1}^{n_{0,t}} y_{1i} - \sum_{j=1}^{n_0,t} y_{oj} - \left[\sum_{k=1}^{n_{1,t-1}} y_{ok} - \sum_{l=1}^{n_{0,t-1}} y_{ol}\right].$$

The DiD estimator does not use the information on individual participation. Hence, it does not rest on the CIA with respect to individual treatment status. However, it requires common trends between program and non-program regions. As in the DiDM approach, we exploit changes in program participation at the job center level over time, i.e., the gradual process of entry of job centers into the federal program, as depicted in Figure 1. We discuss specification issues after we have introduced the data in the following section.

5 Data and descriptive analysis

The database used for this study consists of two parts. As mentioned in Section 3, the program is not implemented by the Federal Employment Agency but by the BMAS directly. The data on individual participation was, therefore, collected by a service provider, the Society for Social Business Consultancy (gsub).

These data are then merged to the Integrated Employment Biographies (IEB), an administrative data set assembled and provided by the Federal Employment Agency. Detailed information on a random sample from the IEB can be found in Dorner et al. (2010). We can observe a large number of control variables and are able to track all observations for several years. A discussion of the data and their use in the evaluation of ALMPs is contained in Lechner and Wunsch (2013), whom we also follow broadly in the preparation of the data. In addition the IEB, we complement the information from other data products. For instance, we used the retention indicator which provides information on individual employment status with a delay in publication of only six months in order to include more recent information than is available in the IEB, where the delay exceeds one year.

For the evaluation, we use information on a sample of older workers that have entered unemployment in the sample regions in 2010 (inflow sample) and compare them to individuals in non-program regions. Furthermore, we make a similar comparison for the pre-treatment year 2007 (see Figure 3). The outcomes of these individuals are tracked over a period of 12 to 21 months. Our sample consists of over 17,000 unemployed individuals in job centers that joined the program in the years 2008-

2010. Of these individuals, 3,415 persons or roughly 20 percent actually participated in the program. In the control regions, our sample includes more than 14,000 individuals for the year 2010. The observation numbers are slightly higher for 2007. We include only individuals who are (1) between 48 and 65 years of age, (2) dependent on means-tested public welfare benefits for individuals able to work (UB II), and who are (3) unemployed at the time they enter their welfare spells.

Figure 4 shows the numbers of individuals in the sample entering the program, depending on the time they had spent receiving welfare benefits. Most participants are assigned to the program relatively early during welfare receipt. The number of entries peaks in the first month of the welfare spell and declines gradually. Very few new persons enter the program after more than 180 days of benefit receipt. Figure 5 contains the number of entries into "Perspektive 50plus" by calendar month. Inflow into welfare and inflow into the program balance each other so that in spite of the high inflow rate at the beginning of the welfare spell, access remained fairly constant from March to September 2010.

The outcome variables are defined as integration into the first labor market and exit from public welfare dependence. We look at the first transition from unemployment to employment and the first exit from welfare dependence as the immediate outcomes, since program participation is necessarily terminated in these two cases. Integration into the first labor market is defined as an employment subject to paying social security contributions. We do not differentiate between part-time and full-time employment as there is no exact information on hours worked in the IEB; however, to be subject to paying contributions, earnings must be above 400 euro per month. Furthermore, we require that employment is not publicly subsidized nor part of a public employment scheme or any other form of active labor market program. This is implemented by excluding all those employment spells which are accompanied by a spell in an active labor market program starting at the same time (this includes all forms of employment subsidies). We allow for inconsistencies in the data by specifying a tolerance of 31 days.

Exit from public welfare (UB II) receipt means the end of a benefit receipt spell as noted in the data.[10] Exit from UB II welfare receipt can occur for various reasons. Apart from integration into employment, the integration of another household member (in particular, the partner) may also lead to a suspension of welfare payments. Similarly, a change in the composition of the household may result in a jump above the threshold defined by means-testing. In addition, individuals may be declared unable to work, such that they leave UB II for other kinds of public transfers, such as social assistance or invalidity benefits. In the data, we are not able to distinguish between these competing risks. Yet the diversity of exit routes underline that integration into employment and exit from UB II receipt are not two sides of the same coin.

Table 3 shows the distribution of characteristics of program participants and non-participants. Column 1 contains the sample means for individuals living in the participating regions. Columns 2 and 3 differentiate this group according to individual participation in "Perspektive 50plus". Columns 4 and 5 contain sample average for individuals in non-treatment regions and for the year 2007. Regarding the issue of selectivity into the program, we observe from columns 2 and 3 that treated individuals tend to have somewhat more favorable labor market characteristics than untreated individuals residing in the same regions; for instance, they have on average one month more of employment during the years 2006-2008, and they have a lower average incidence and duration of unemployment. The share of males is four percentage points higher among participants. Furthermore, participants tend to be older, have a higher likelihood of a university degree, live in smaller households and have a smaller likelihood of having health problems than non-participants. Yet the differences are moderate. This indicates that despite the incentives for job centers induced by "management by objectives", the degree of cream-skimming is not too large. Similarly, the differences between individuals in treated and untreated regions are also small. Between the years 2007 and 2010, the most important differences concern the labor market history. This reflects differences in labor market conditions but also institutional

10 It would be interesting to analyze the degree of public welfare dependence by looking at the amount of benefits received. However, the actual benefit payment depends, in addition to work income, on a number of factors such as the composition of the household or benefit sanctions imposed which cannot be disentangled in the data.

reforms. In order to be eligible for benefits, individuals able to work had to register as job seekers from 2005 on; this explains why individuals have spent less time in unemployment 5 to 7 years back in 2010 compared to 2005.

6 Estimation based on the conditional independence assumption

6.1 Model specification

This section presents results based on propensity score matching using individual information for the year 2010. In the sample period between January 1st, 2010 and December 31st 2010, there are twelve months in which a participant can enter the treatment. The propensity score is estimated separately for each month. As participation is binary, estimations of the propensity score are implemented by Probit models.

To estimate the probability of participation, a variety of variables at different levels are available. In addition to those included in Table 3, we also use dummy variables indicating the sector and occupation of the last employment, and the type of employment sought. The temporal dimension also plays an important role; we would like to match individuals with the same duration of welfare benefit receipt. This is done by including control observations repeatedly with different durations from the start of the welfare spell until individual exit from welfare. As opposed to choosing hypothetical starting dates for the non-treated, we form matched pairs of treated and non-treated with the same benefit duration and observe the outcome from this date (see the discussion in Stephan, 2008). Moreover, we include the quarter of entry into welfare receipt among the determinants of the propensity score in order to balance any seasonal effects.

In addition to individual characteristics, characteristics of the regional labor market also play a role. Therefore, regional information is linked at the level of job centers to account for the situation in the region: economic performance measured in GDP at market prices per person employed, the proportion of foreigners in the area, the percentage of employees in industry and services, migration rates, the population density, the proportion of the population aged 50 to 65, and the unemployment rate.

Standard balancing tests show that the performance of propensity score matching is satisfactory in all matching steps (see Table 4). Both mean and median bias between treatment and control observations for the covariates are reduced substantially

by matching. Re-estimation of the Probit model on the matched sample results in an explained treatment variation of almost zero, as measured by the McFadden-R^2 and the corresponding LR statistic (Sianesi, 2004).

6.2 Transitions into unsubsidized employment

The average treatment effects on the treated (ATT) regarding integration into the first labor market (i.e. unsubsidized employment subject to social security contributions) are displayed graphically in Figure 6. The upper panel contains the results from cross-sectional matching across program and non-program regions. The treatment effects are measured in percentage points for each month after the entry of the individual into the treatment.

The graph exhibits positive and large treatment effects of program participation on labor market integration on the treated. At three months after entering the program, participants in the program have increased their integration probability by 6.4 percentage points due to program participation; the effect is statistically significant from the second month on. The ATT rises further to a maximum of 14.0 percentage points at 17 months after program start. At this date, roughly 52 percent of treated welfare recipients have been integrated.[11] This means that the chance of being integrated rises by 27 percent. The treatment effect is reduced after 18 months in the program; however, the number of individuals for whom an effect can be estimated at this duration is relatively small, because this group is confined to individuals starting their welfare spell in January 2010 and joining the program immediately (see Figure 4).

The difference-in-differences matching estimator yields slightly smaller treatment effects (see lower panel of Figure 6). After 90 days in the program, the ATT is 4.8 percentage points. Again, there is a further increase up to a maximum of 12.1 percentage points after 16 months in the program and a (non-monotonic) decline after

11 The relatively high integration rate is due to the fact that we concentrate on new entrants into welfare receipt. These individuals have a much higher integration probability than long-term welfare benefit recipients. In IAQ/IAW (2012), we also report integration rates for a mixed stock/inflow sample of welfare recipients drawn in 2010; the integration rate is less than half as compared to the inflows.

this duration. Thus, controlling for regional unobserved heterogeneity changes the results to some extent, but not qualitatively.

The lack of a lock-in effect with respect to integration is a notable result. Indeed, the increase in the integration probability is steepest at the beginning of program participation. This may reflect the fact that the program does not promote measures with a large lock-in potential, such as subsidized employment, public job creation schemes, or retraining.[12] We cannot completely rule out, however, that some systematic selection is at work in the initial period of program participation. Since program funding depends on the fulfillment of the target integration quota, job centers may have an incentive to raise the quota by including individuals in the program who have already been offered a job by an employer. This would create some upward bias in the treatment effects. The service provider implementing the program noted that this kind of behavior did occur, but there is no evidence of how frequent it is.

6.3 Exit from UB II welfare receipt

Figure 7 contains the ATT for the second outcome variable, exit from public welfare (UB II) receipt, arranged in the same way as in the previous graph. The results between matching and DiDM are again similar in direction and magnitude. There is a negative effect on transitions out of welfare dependence during the first year of program participation. The effect is largest in the second month, where the ATT drops by 8.1 or 9.5 percentage points, respectively. The ATT is, however, quickly reduced in magnitude, and it becomes statistically insignificant at 240 or 270 days of program participation. Towards the end of the observation period, the sign of the ATT seems to have reversed; however, most of these results fail to be statistically significant.

The effects on exit from public welfare receipt in the initial periods of program participation seem to lead to the opposite conclusion to the results for employment. However, a negative effect of the program on exit from welfare receipt is not implausible, even in view of the positive effects on integration. While some individuals leave welfare due to integration into the labor market, this effect may be over-

12 A recent example for substantial lock-in effects is contained in the analysis of training vouchers by Doerr et al. (2014).

compensated by the effect on those who leave UB II for other reasons. For instance, health measures administered to program participants may prevent these individuals from claiming invalidity benefits or leaving the workforce altogether.[13] This example also suggests that the decline of the exit rate from UB II due to the program should not be judged without further qualification.

As in the case of integration, systematic selection may also be relevant here. In particular, job centers may exclude individuals from participation who are known to change to invalidity or other transfer systems in the near future, because these individuals are unlikely to contribute to the quota. We will come back to the relevance of this argument when we discuss the DiD results further below.

6.4 Results for men and women

There is substantial evidence that active labor market policy has different effects according to gender (see, e.g., Bergemann and van den Berg 2008). Figure 8 contains results from the same specification as in the lower panels of Figures 6 and 7, but separately for men and women.[14] The results indicate that the treatment effects on both outcome variables are indeed different between the sexes. The ATT on integration into the first labor market is substantially higher for men than for women; the maximum for males is 18.6 percentage points as compared to 10.8 percentage points, and the effect for women even remains statistically insignificant for a large part of the duration in the program. In absolute terms, 41.4 percent of female participants are integrated one year after entering the program, while for males the share is 47.3 percent.

Regarding exit from UB II welfare receipt, the time pattern of the ATT is strikingly different for males and females. The effect on males is strong initially but reverses with the time elapsed after the program start. For women, the effect remains negative and statistically significant over a large part of the observation window.

The gender differences in the two outcomes are consistent insofar as the stronger effect on integration for men helps to pull these individuals out of welfare dependence.

13 Lammers et al. (2014) make a similar argument with respect to leaving unemployment for disability pensions in the Netherlands.

14 The propensity scores are also estimated separately for this specification.

As the integration effect is weaker for women, the negative initial effect on exit out of UB II receipt prevails. Another explanation of the gender differences for transfer receipt is based on the male breadwinner model. If women tend to contribute less to household income, they may be more prepared not to pick up transfer benefits they are entitled to. If the program is conferring specific benefits to participants apart from improving their chances on the labor market – social inclusion, health treatments and others – this may constitute a reason why individuals decide not to leave welfare receipt.

7 Difference-in-differences estimation

7.1 Specification

In this section, we present estimation results that do not rest on the conditional independence assumption with respect to individual participation. Compared to the previous estimations, we extend the sample with those individuals who have not been treated in the participating regions and individuals who have not been chosen as matching partners. Otherwise, the sample is unchanged and all the features of the sample – time, location, composition of the groups – are held constant.

The difference-in-differences estimator represents an intent-to-treat-effect (ITT), i.e. the effect of potential rather than actual treatment. The estimated treatment effects are, therefore, smaller in magnitude due to an effect of "dilution". To make them numerically comparable to the ATT, we have to divide them by the expected probability of treatment until the observation date. This probability is in the order of 0.2 over much of the observation period.[15]

For our estimation, we use a conditional difference-in-difference estimator, accounting for the same characteristics that have been used in the matching model to estimate the propensity scores. We use the same dependent variables as before. The model is implemented by ordinary least squares using a linear probability model.[16]

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15 The formula is $ATT_t = ITT_t / P_{t_0,t}$, where $P_{t_0,t}$ is the expected probability of treatment until the observation date.

16 As a robustness check, we have also performed non-linear probit models, where the treatment effect is estimated accordingly to Puhani (2008). The results do not change from the ones presented using a linear probability model. Results from all regressions are available on request from the authors.

The main assumptions of the difference-in-differences estimator are the common trends assumption and the no-anticipation of treatment assumption (see Lechner, 2012). The common trends assumption is supported by the fact that regional characteristics are similar in the treatment and control groups (see Table 2). Anticipation of treatment is also not an issue because our observations for the pre-treatment period lie several months ahead of potential entry (see Figure 3). Therefore, this effect should not influence the results.

7.2 Estimation results

Estimation results are displayed in Figure 9. The upper panel shows integration into unsubsidized employment. The time scale is measured here from the start of UB II welfare benefit receipt, not program participation, which has to be accounted for when comparing the results with those reported earlier.

Compared to the matching and DiD-matching results, we find much smaller effects of about 1 percentage point at maximum. Moreover, the effect remains statistically insignificant over the major part of the observation period. To some part, the small magnitude reflects the intent-to-treat effect, i.e. the effect of a job center entering the program on all older unemployed, not only the participants. However, given a participation rate of about 20 percent, the ATT of actual participation would still be in the range of only 5 percentage points, which is substantially smaller than the ATT reported in the previous section.

A negative effect is found for welfare benefit receipt, similar to the results of matching and DiDM. The magnitude of the effect is 1.9 percentage points, which corresponds quite closely to the magnitude of the ATT in Figure 7. The effect is also statistically significant from the third month of the observation period on.

The difference in time patterns visible in Figure 9 compared to Figures 6 and 7 is easily explained. While entry the program occurs mostly in the first months of the welfare spell (see Figure 3 above), a substantial fraction of treated observations enter after more than two months of welfare benefit duration. Because the treatment effects in the DiD estimations are measured from the start of welfare benefit receipt, while they are measured from the start of program entry in the PSM and DiDM estimations, we have to account for the delay in program entry when interpreting the results.

From the regression results (not reported), we note substantial time effects. Depending on elapsed benefit duration, the time effect reaches a magnitude of about 11 percentage points. This large effect clearly increases the relevance of the assumptions inherent in the specification of the DiD model, in particular linearity, and clearly makes the results less robust to potential specification changes. This is much less the case in the DiDM approach, where the magnitudes of the treatment and time effects are similar. The differences in the outcomes between treated and non-treated regions are mostly below 1 percentage point.

The DiD effects on integration are substantially lower than those estimated for the participants using matching or DiDM. This could be the result of non-participants being adversely affected by the program due to displacement and substitution. There is also the possibility that matching and DiDM results suffer from (positive) selectivity not accounted for by the covariates included in the propensity score. However, previous evidence on the basis of the same data source, such as Lechner and Wunsch (2013) and Caliendo et al. (2014), suggests that sufficient information is used to avoid selectivity. Therefore, we favor indirect effects as an explanation for the differences.

The effects on exit from UB II welfare benefit receipt, by contrast, are consistent between the different approaches. Spill-over effects to the non-treatment group are less likely in this case. The similarity of the results suggests that the kind of selectivity mentioned in the previous section does not play a big role here and that the estimated treatment effects are indeed due to changes in behavior.

8 Interpretation and conclusions

The results of our analysis point to positive treatment effects of program participation on the integration of the older unemployed into the labor market using several different estimation methods. The size of the coefficients obtained from matching and difference-in-differences matching estimations is large. The difference-in-differences approach used as an alternative framework yields somewhat smaller effects. Our favored explanation for these differences is the presence of displacement effects between beneficiaries and non-participants.

The results regarding the chance of leaving dependence on means-tested unemployment benefits are consistent between alternative estimators. The program

unambiguously reduces the intensity of transitions out of welfare receipt, in particular, during the first months after entry into the program. Since it is not possible to observe the destination states of individuals, it is difficult to attach a behavioral interpretation to this finding. It does seem plausible, however, that the benefits conveyed by the program such as social inclusion, health services, and others reduce the incentive to turn to other forms of social transfers.

Compared to previous findings regarding the effect of job search assistance and activation policies, out results stand out in several ways. We find, firstly, regarding the target group, large effects for a disadvantaged or hard-to-place group of the unemployed. Our results point, secondly, to relatively large effects of job search assistance programs, compared to other types of ALMP programs. Thirdly, comparing our results to the existing literature, it appears that the effectiveness of similar programs is different for younger and older unemployed workers. However, it is not possible to attribute this finding causally to age. Older workers may have specific needs that set them apart from other jobseekers. But the older unemployed may also comprise individuals with particularly severe labor market obstacles who have, incidentally, grown older. Disentangling these effects will be a challenge for future research.

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Table 1: Specific benefits provided by "Perspektive 50plus"

Benefits	Number of cases	Percent
Measures to increase mobility	63.026	6,6
Health measures	66.958	7,0
Social integration benefits	29.071	3,0
Job search assistance	160.255	16,8
Coaching	212.850	22,3
Skills assessment	135.679	14,2
Training and skill development	119.471	12,5
Job application training	66.881	7,0
Language training	16.707	1,8
Start-up grants	36.318	3,8
Marginal employment	9.562	1,0
Public sector sponsored employment	29.836	3,1
Voluntary sector placements	904	0,1
Placement vouchers	8.751	0,9
Total	956.269	100,0

Source: IAQ/IAW (2012) based on calculations from the IAB Employment Histories.

Table 2: Means of participating and non-participating regions

	Partici-pating job centers in treatment group	Non-partici-pating job centers	Standar-dized difference
Composition of welfare recipients			
Number of persons able to work in household	1.565	1.579	-1.89
Number of persons aged < 15 in household	0.202	0.199	0.44
Number of persons aged >65 in household	0.011	0.012	-0.80
Household size	1.908	1.920	-1.01
Share of individuals with impaired health	19.6	19.0	1.56
Share of men	57.8	58.2	-0.75
Average age	50.91	50.94	-0.59
Share of foreigners	13.4	13.4	0.16
Share of migrants with German citizenship	5.5	5.8	-1.14
Share of immigrated German nationals from Easter Europe	5.7	5.3	1.66
Share of persons without migration background	75.3	75.5	-0.40
Share of persons with disability	3.2	3.0	1.58
Share of persons without completed schooling	15.8	15.6	0.71
Share of persons with basic schooling	49.1	46.9	4.56
Share of persons with intermediate schooling degree	25.3	26.9	-3.61
Share of persons with vocational training degree	59.2	59.4	-0.30
Share of persons with university degree	2.7	3.0	-1.27
Share of persons without completed vocational training	31.0	30.4	1.33
Share of persons with college degree	2.1	2.2	-0.58
Other regional characteristics			
GDP per employee	56,987	55,948	12.85
Share of employees in agricultural sector	1.5	1.6	-4.37
Share of employees in manufacturing sector	21.1	20.3	10.23
Share of employees in service sector	77.4	78.2	-9.37
Number of employees	123,226	142,687	-15.24
Household migrating from job center region	9,499	9,985	-4.93
Household migrating into job center region	9,736	10,263	-4.87
Population density (persons/square km.)	887	1,084	-17.16
Share of persons aged between 50 and 65	18.7	18.8	-7.76
Number of unemployed	11,825	14,100	-17.74
Population size	233,209	262,494	-14.86

Note: The table contains averages over all welfare recipients or averages over the population. Source: IAB Employment Histories, own calculations.

Table 3: Characteristics of program participants and non-participants

Variable	1	2	3	4	5
Gender: male	0.59	0.62	0.58	0.60	0.55
Age 50-52	0.30	0.34	0.29	0.30	0.31
Age 53-55	0.24	0.28	0.22	0.24	0.26
Age 56-58	0.19	0.21	0.18	0.18	0.21
Age 59-61	0.12	0.12	0.12	0.12	0.08
Age 62-65	0.04	0.03	0.04	0.04	0.03
Vocational training school	0.02	0.02	0.02	0.02	0.01
Classroom training degree	0.03	0.03	0.02	0.03	0.03
University degree	0.03	0.03	0.03	0.03	0.03
Without vocational training	0.25	0.25	0.25	0.24	0.28
Polytechnic college degree	0.02	0.03	0.02	0.02	0.02
Basic schooling degree (9 yrs.)	0.48	0.51	0.47	0.46	0.49
Intermediate schooling degree (10 yrs.)	0.24	0.21	0.25	0.25	0.22
Upper secondary education (12 yrs.)	0.04	0.06	0.03	0.04	0.03
Abitur (A-levels) (13 yrs.)	0.06	0.07	0.06	0.07	0.06
Household size	1.73	1.67	1.74	1.72	1.76
Health impairment	0.22	0.17	0.23	0.22	0.20
Immigrated German nationals from Eastern Europe	0.07	0.07	0.07	0.06	0.06
Migrants with German citizenship	0.05	0.05	0.05	0.06	0.05
Foreign nationals	0.13	0.10	0.13	0.13	0.12
Last occupation: blue collar, semi-skilled	0.14	0.12	0.14	0.13	0.11
Last occupation: white collar	0.14	0.16	0.13	0.14	0.12
Last occupation: part-time > 15 hrs/week	0.24	0.23	0.24	0.23	0.29
Last occupation: part-time < 15 hrs/week	0.11	0.10	0.11	0.11	0.11
Number of half-months in employment, year 1 before start of welfare spell	6.43	6.34	6.45	6.38	5.87
Number of half-months in employment, year 2 to 4 before welfare receipt	28.26	29.98	27.83	27.43	24.60
Number of half-months in employment, year 5 to 7 before welfare receipt	30.13	31.75	29.74	29.83	32.32
Number of half-months in registered unemployment, year 1 before welfare receipt	7.80	7.87	7.79	7.69	8.87
Number of half-months in registered unemployment, year 2 to 4 before welfare receipt	19.59	17.41	20.13	20.51	22.38
Number of half-months in registered unemployment, year 5 to 7 before welfare receipt	20.07	18.68	20.43	20.91	13.90
Number of half-months in job search, year 1 before welfare receipt	0.91	0.74	0.96	0.97	1.05
Number of half-months in job search, year 2 to 4 before welfare receipt	2.24	2.13	2.27	2.43	1.07

Table 3: Characteristics of program participants and non-participants

Variable	1	2	3	4	5
Number of half-months in job search, year 5 to 7 before welfare receipt	0.89	0.83	0.91	0.84	0.42
Number of half-months in labor market programs, year 1 before welfare receipt	3.10	3.24	3.07	3.56	2.15
Number of half- months in labor market programs, year 2 to 4 before welfare receipt	5.89	5.75	5.93	6.58	4.31
Number of half-months in labor market programs, year 5 to 7 before welfare receipt	3.95	3.73	4.00	4.36	4.00
Number of half-months out of the labor force, year 1 before welfare receipt	5.75	5.80	5.73	5.40	6.06
Number of half- months out of the labor force, year 2 to 4 before welfare receipt	16.02	16.72	15.84	15.05	19.64
Number of half-months out of the labor force, year 5 to 7 before welfare receipt	16.96	17.02	16.92	16.06	21.35
Number of observations	17,189	3,415	13,778	14,130	21,071

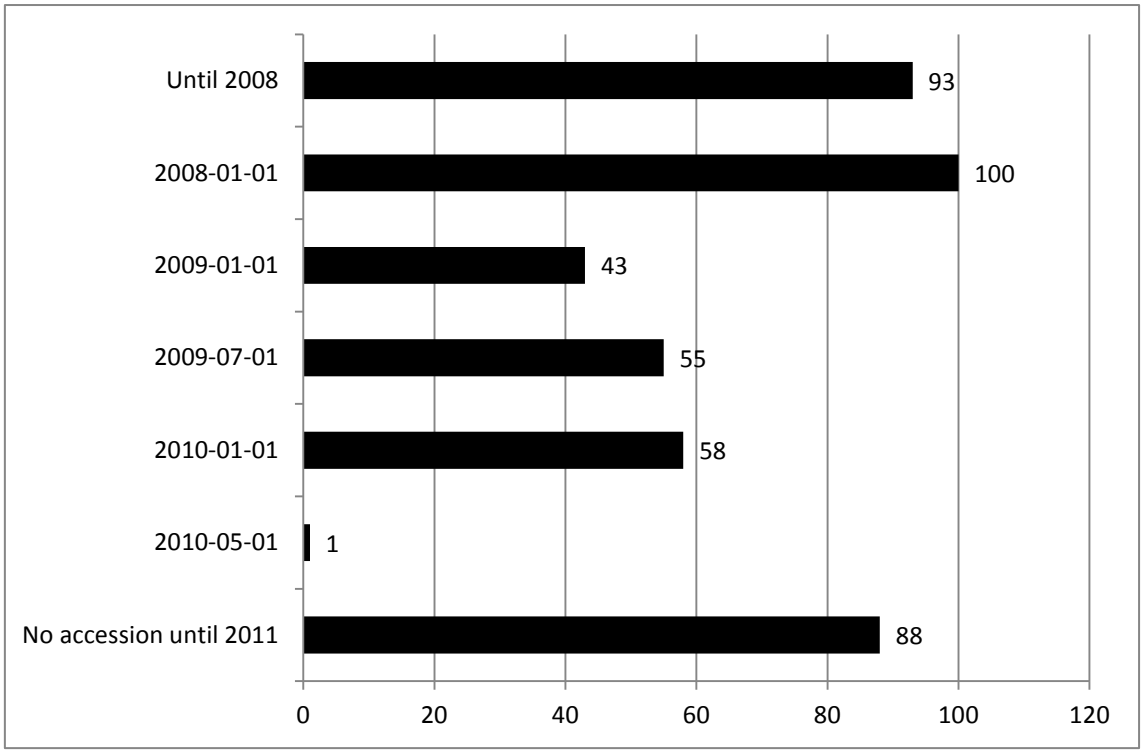
Column 1 contains the sample means for individuals living in the participating regions. Columns 2 and 3 differentiate this group according to individual participation in "Perspektive 50plus". Columns 4 and 5 contain sample means for individuals in non-treatment regions and for the year 2007 (treatment and non-treatment regions taken together). Source: IAB Employment Histories, own calculations.

Table 4: Balancing statistics

Sample	Pseudo-R^2	LR-statistic	p-value	Mean bias	Median bias
Matching between treatment and control regions					
Raw	0.131	3755.4	0.000	6.6	3.8
Matched	0.007	62.7	0.999	1.8	1.3
Matching between periods, treatment regions					
Raw	0.222	6357.6	0.000	7.8	4.7
Matched	0.011	86.4	0.646	2.2	2.0
Matching between periods, control regions					
Raw	0.220	5620.7	0.000	7.4	4.8
Matched	0.014	97.8	0.458	2.4	1.8

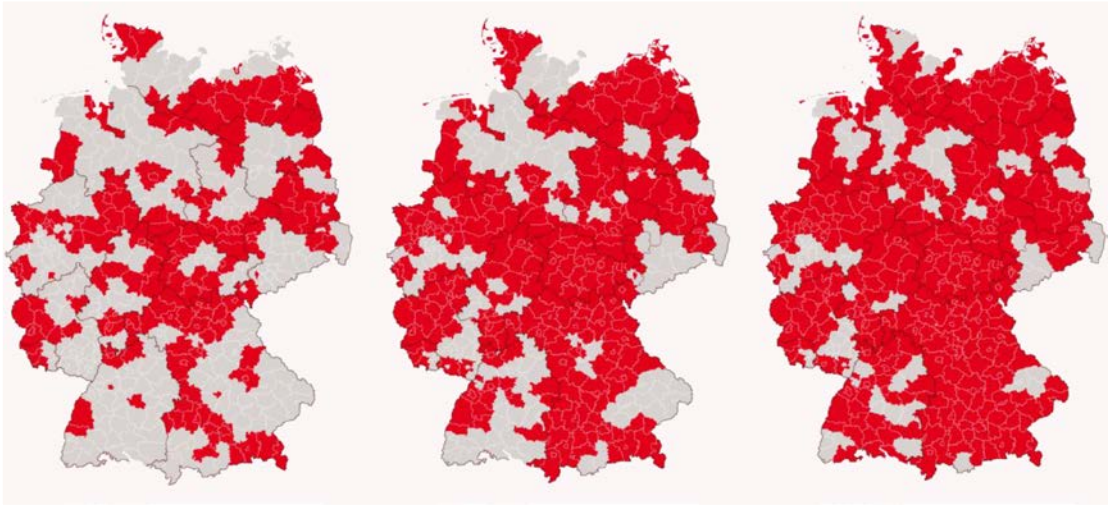
Source: IAB Employment Histories, own calculations.

Figure 1: Accession of job centers to "Perspektive 50plus"



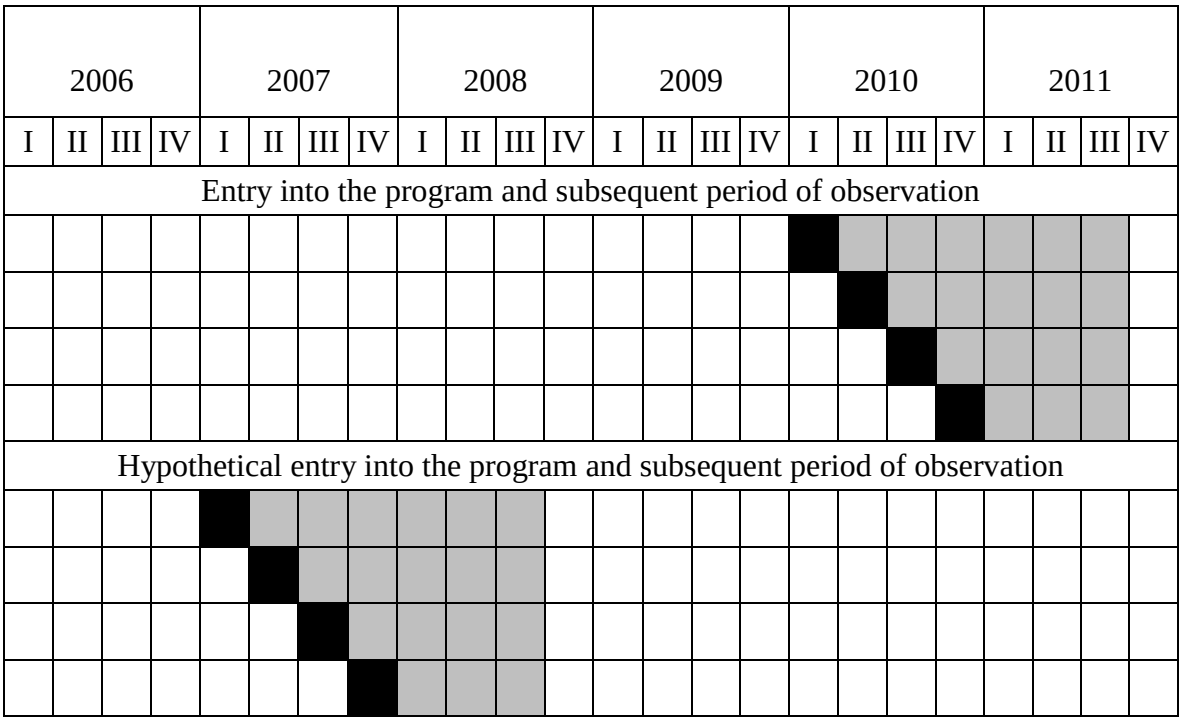
Source: Own representation based on publicly available information, c.f. IAQ/IAW (2012).

Figure 2: Geographical coverage of "Perspektive 50plus"

2008-01-01	2009-07-01	2010-01-01
		

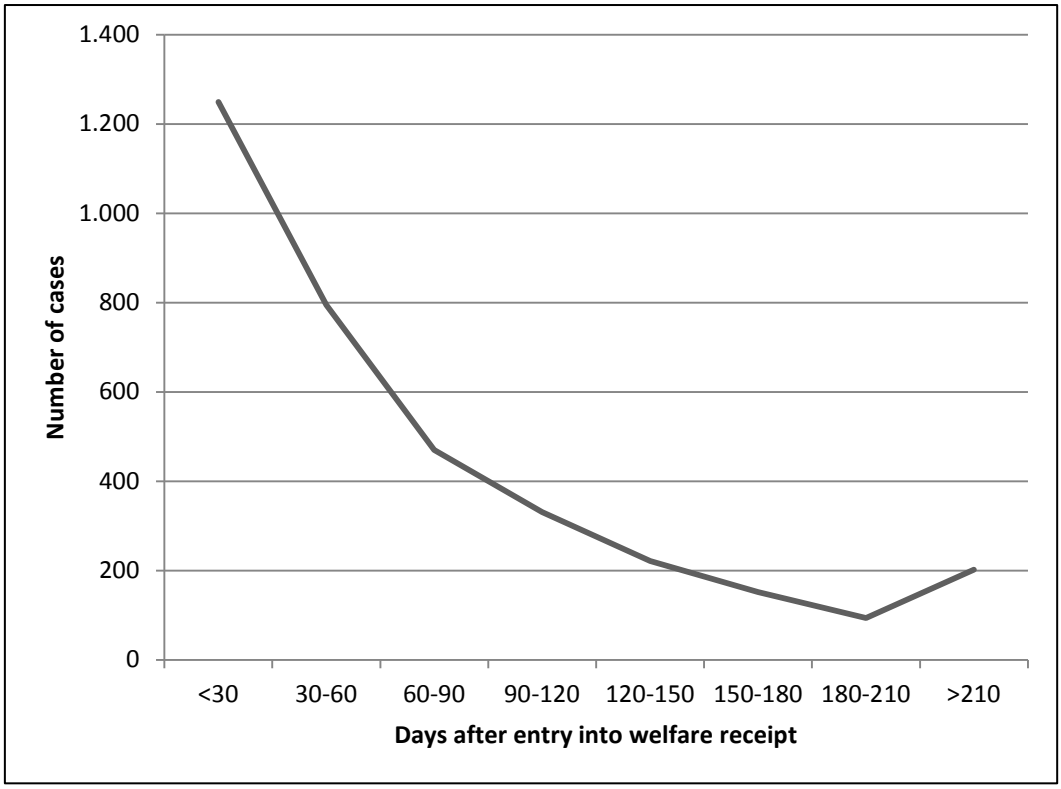
Source: Own representation based on publicly available information.

Figure 3: Structure of the evaluation sample



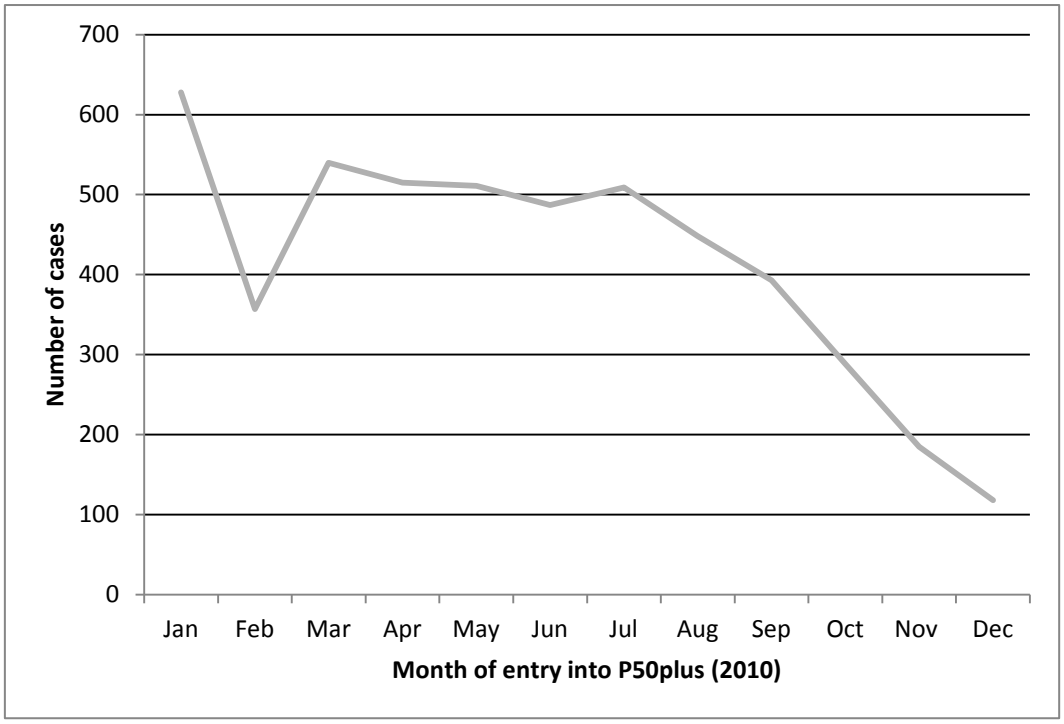
Source: Own representation, c.f. IAQ/IAW (2012).

Figure 4: Entry into the program by elapsed duration of welfare benefit receipt



Source: IAB Employment Histories, own calculations.

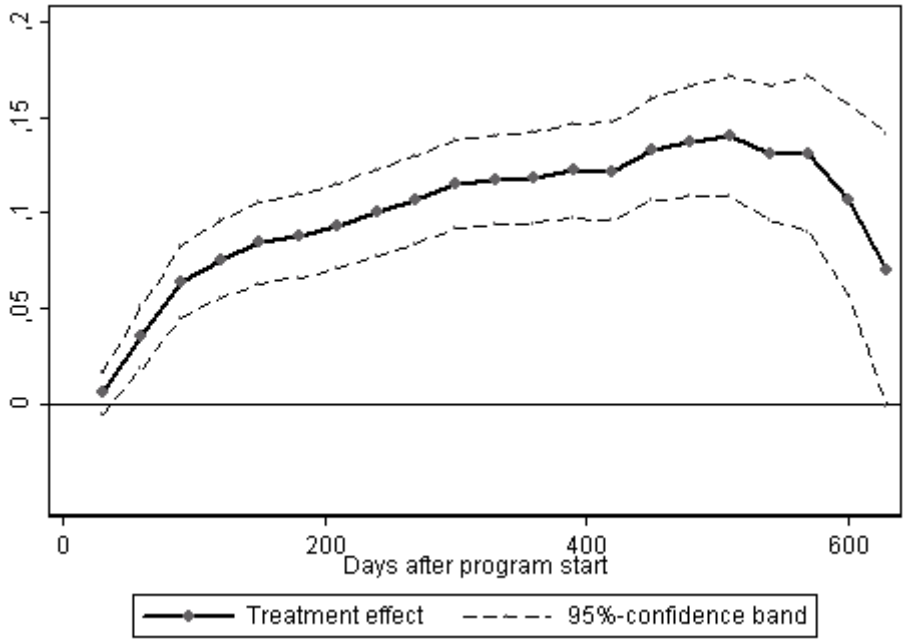
Figure 5: Entry into the program by calendar month



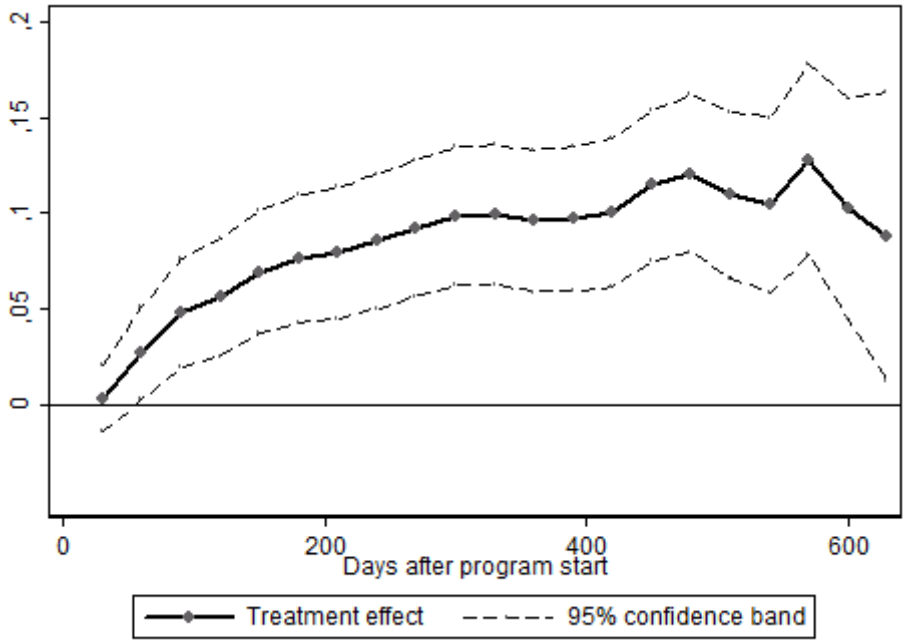
Source: IAB Employment Histories, own calculations.

Figure 6: Estimated treatment effects for integration into the first labor market

a) Matching



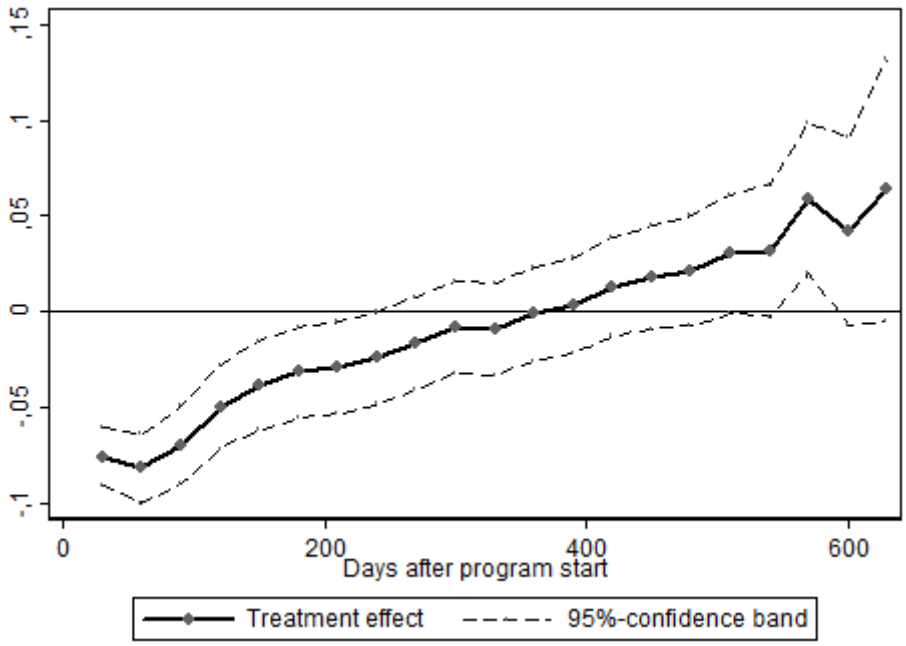
b) Difference-in-differences matching



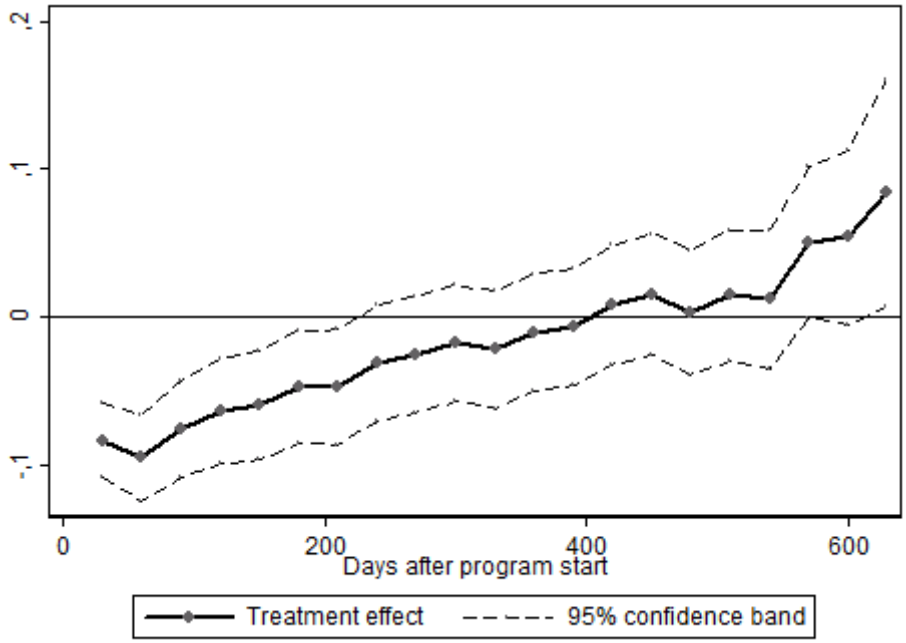
Source: IAB Employment Histories, own calculations. Note: Dependent variable: probability to enter an unsubsidized employment spell in time t.

Figure 7: Estimated treatment effects for exit from welfare receipt

a) Matching



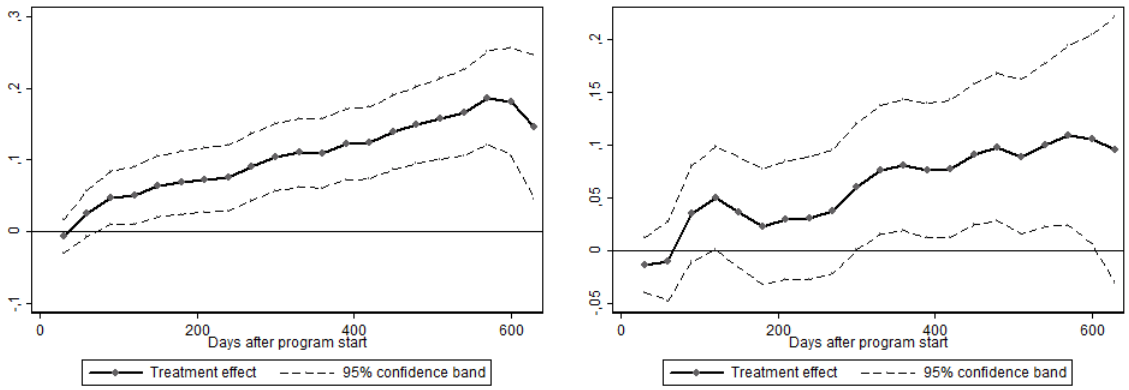
b) Difference-in-differences matching



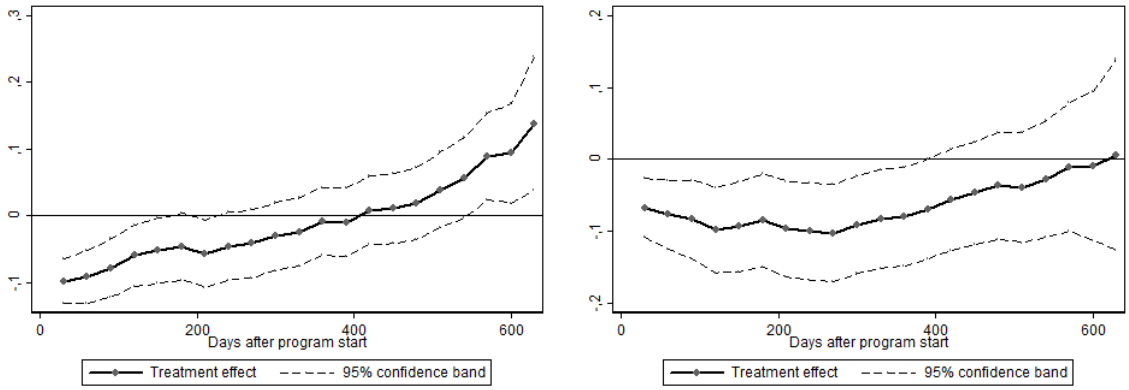
Source: IAB Employment Histories, own calculations. Note: Dependent variable: probability to have no unemployment benefits (ALG II) spell in time t.

Figure 8: Separate DiDM results for males and females

a) Integration into the first labor market



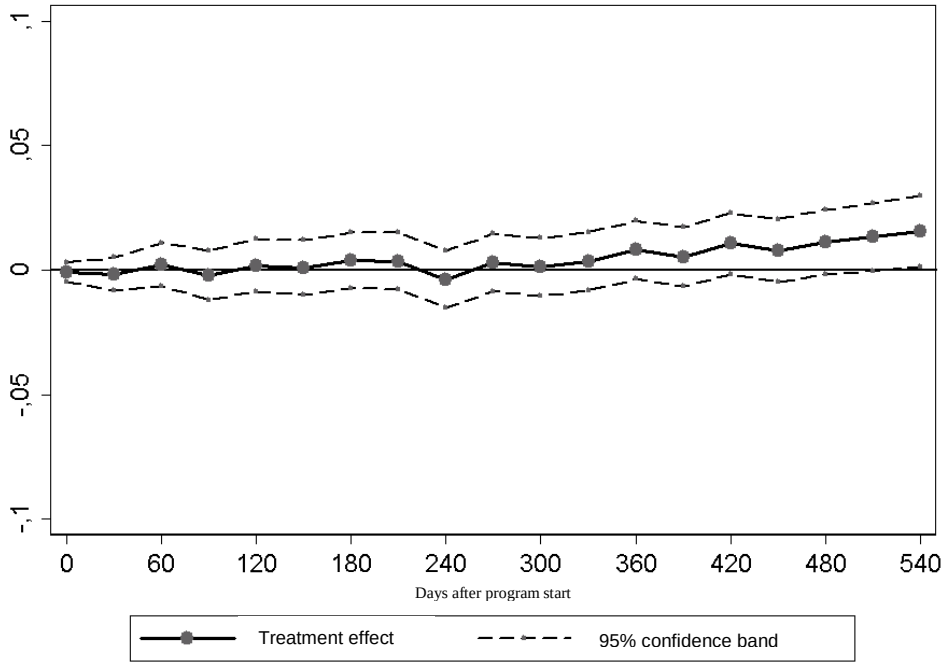
b) Exit from welfare receipt



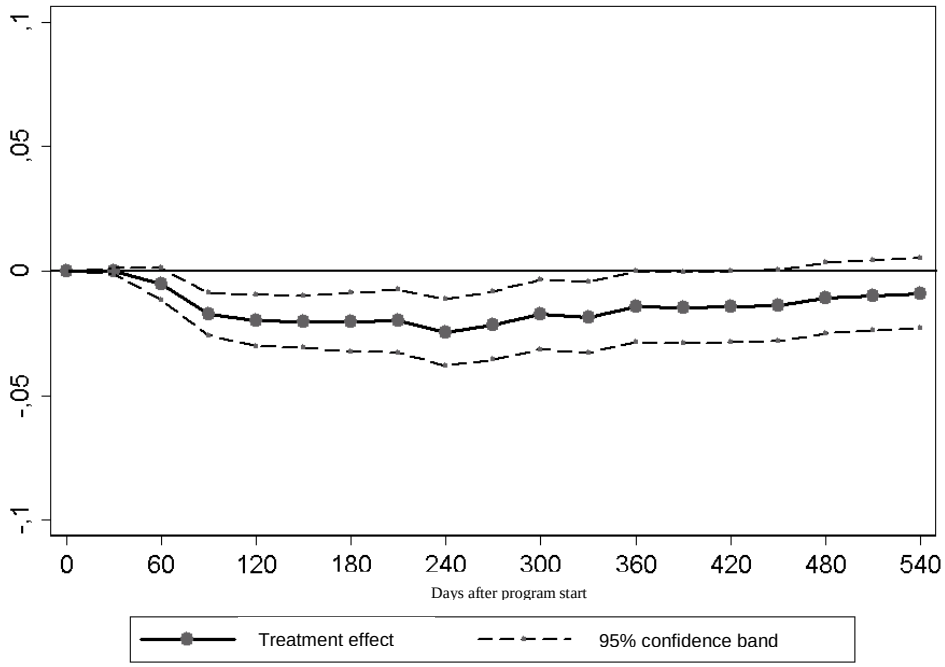
Source: IAB Employment Histories, own calculations. Note: Dependent variable: a) probability to enter an unsubsidized employment spell in time t. b) probability to have no unemployment benefits (ALG II) spell in time t.

Figure 9: Estimated intent-to-treat effects

a) Integration



b) Exit from welfare receipt



Source: IAB Employment Histories, own calculations. Note: Dependent variable: a) probability to enter an unsubsidized employment spell in time t. b) probability to have no unemployment benefits (ALG II) spell in time t.

Table A.1: Recent Evidence on ALMPs for Older Unemployed

Autor	Method	Type of Program	Target Group	Data	Results
Arni (2010)	Non-parametric approach based on Kaplan-Meier; Duration models with dynamic treatment effects	High Frequency Counseling+ targeted coaching	Older job-seekers (45+) with lower employability	Social Experiment in Switzerland 2008, Records of the Unemployment Insurance+ Surveys	The individuals in the treatment group have a higher job finding rate. The jobs they find are more stable. Job seekers reduce their reservation wages and search more efficiently as an effect of the program. The program induces higher job search motivation.
Bollens (2011)	Difference-in-difference, Propensity Score Matching	Mandatory activation scheme (search assistance, counseling and training) 2009	Newly unemployed, age 50-52	Unemployment register in Flanders	The estimation results suggest that the mandatory activation of older unemployed does have an impact on the probability that these unemployed return to employment, although the impact comes with a time lag. There is an employment gain of 3 to 4.5 percentage points four to seven months after individuals became eligible for the treatment.
Boockmann et al. (2012b)	Difference-in-difference, Continuous-time duration models, Kaplan-Meier	Integration Allowance	Older employees	IEB, Natural Experiment 2001-2002 and 2003-04	Hiring subsidies for older workers were ineffective for integration into employment except for East German women due to deadweight effects.
Centeno et al. (2009)	Difference-in-difference, DDM Estimator	Mandatory Intensive job-search assistance +small basis skills training	Young and Old (long-term) Unemployed Individuals	SIAGE dataset, Portugal 1997-2002	Impact of the programs in reducing unemployment duration is very limited. More positive impact for individuals aged 30 to 40 and among the better educated. The less educated individuals and those over 40 did not benefit at all from the programs. The programs reduced unemployment duration for young workers exiting the labor force, but increased it for older workers
Heyma et al (2014)	Conjoint analysis	Subsidies for potential employers	Older unemployed (58+)		Uncertainty about productivity levels of older job-seekers may cause riskaverse employers to choose younger job-seekers with lower, but more certain productivity levels. Increasing labour costs compared to steady or declining productivity levels of older workers. Older managers hire older job-seekers.

Autor	Method	Type of Program	Target Group	Data	Results
Hullegie and van Ours (2014)	linear probability model	Job search requirements for older workers in the Netherlands	Older unemployed (57,5+)	2001-2004 data from Statistics Netherlands	Imposing an obligation to unemployed workers to actively search for a job increases transitions to employment. Even workers with seemingly poor job prospects seem to benefit from the requirement to actively search for a job.
Koning and Raterink (2013)	linear probability model	Job search requirements for older unemployed	Older unemployed	1999-2008 data from Statistics Netherlands	Activating policies and birth cohort effects may contribute to the job prospects of older unemployed workers. Policies should be focused on e.g. improving the education level of workers at younger ages.
Lammers et al (2013)	Difference-in-difference and regression discontinuity approaches	Job search requirements for older unemployed	Older unemployed (57,5+)	2001-2005 data from Statistics Netherlands	The main conclusion is that although outflow to jobs increased with 6 percentage points in the 24 months after a tightening of search obligations. This was accompanied by a 2.5 to 4 percentage point increase in the number of individuals that used DI benefits as an alternative exit route.
Romeu Gordo and Wolff (2011)	Propensity Score Matching	Short-term training (classroom and in-firm training)	Older unemployed (50+)	IEB, jobseeker database, unemployment benefit II history, 2005	The estimated positive impact of classroom training on employment outcomes is only significant for West German men. In contrast to classroom training, in-firm training affected all outcomes of the participants positively and the effects are far higher than for classroom training participants. Evidence in favor of targeting specific groups of older workers is not strong. There is some evidence for a higher impact of classroom training for participants with a professional qualification in contrast to participants without such a qualification.