Queen Mary
University of London

Centre for Globalization Research
School of Business and Management

Reemployment effects from increased activation: Evidence from times of crisis

CGR Working Paper 52

Pedro S. Martins, Sofia Pessoa e Costa

Abstract

Although activation services such as monitoring, training, job subsidies or workfare have been shown to increase exits from unemployment, there is no evidence about their effects during recessions. We address this policy-relevant question by evaluating a large activation programme introduced in Portugal in early 2012, a time of very high and still increasing unemployment. The programme was based on requiring specific unemployment benefit recipients to meet caseworkers in jobcentres and then participate in active labour market policies. Our analysis draws on rich longitudinal data, the targeted nature of the programme (namely of its component focused on those unemployed for at least six months), and fuzzy regression discontinuity methods. We find that, despite the weak labour market, the programme is very succesful as it doubles the monthly reemployment probability. Moreover, we find no effects in terms of income or transitions to non-employment. The results are robust to a number of checks, including a falsification exercise based on pre-programme data.

http://www.busman.qmul.ac.uk/cgr

CGR Working Paper Series

1

Reemployment effects from increased activation: Evidence from times of crisis

Pedro S. Martins and Sofia Pessoa e Costa

Centre for Globalisation Research Working Paper 52

June 2014

Policy Summary

Activation programmes seek to increase work incentives and job opportunities for the unemployed, in particular those that receive benefits. They include services such as counselling, training, job subsidies and workfare but also monitoring of job search efforts and sanctions. This paper evaluates the impact of one such activation programme, in particular in terms of the transitions from unemployment to employment.

This paper evaluates the impact of a large activation programme implemented in Portugal in early 2012 at a time of very high unemployment. This programme, *Convocatórias*, was based on requiring that certain groups of unemployed individuals participate in meetings in jobcentres. Following the meetings, and depending on the specific individual assessment conducted by their caseworkers, including further monitoring of the job search efforts, the targeted unemployed would be directed towards active labour market measures. Some unemployed would also be required to participate in job interviews.

The empirical analysis draws on two detailed administrative datasets, from the Portuguese public employment service and from social security registries, each one including longitudinal individual information on the population of those unemployed over the first twelve months of the programme. The econometric methods are based on a regression discontinuity approach, drawing on the fact that the programme was targeted at specific groups of unemployed.

Our results indicate that the increased activation efforts delivered by the programme had large positive effects in terms of reemployment despite the challenging labour market conditions and the relatively light nature of the intervention. Our estimates, robust to different checks, imply a doubling of the probability of next-month reemployment for those subject to the intervention. The programme is also found to have substantial gains from a cost-benefit perspective.

Reemployment effects from increased activation:

Evidence from times of crisis[*]

Pedro S. Martins[†]

Queen Mary University of London

& CEG-IST & IZA

Sofia Pessoa e Costa[‡]

Université catholique de Louvain

& CGR-QMUL

June 22, 2014

Abstract

Although activation services such as monitoring, training, job subsidies or workfare have been shown to increase exits from unemployment, there is no evidence about their effects during recessions. We address this policy-relevant question by evaluating a large activation programme introduced in Portugal in early 2012, a time of very high and still increasing unemployment. The programme was based on requiring specific unemployment benefit recipients to meet caseworkers in jobcentres and then participate in active labour market policies. Our analysis draws on rich longitudinal data, the targeted nature of the programme (namely of its component focused on those unemployed for at least six months), and fuzzy regression discontinuity methods. We find that, despite the weak labour market, the programme is very succesful as it doubles the monthly reemployment probability. Moreover, we find no effects in terms of income or transitions to non-employment. The results are robust to a number of checks, including a falsification exercise based on pre-programme data.

---

1 Introduction

The current high levels of unemployment across many countries, following the 2008 financial crisis, raise considerable interest on the relative merits and potential of activation programmes (OECD 2013). These programmes involve a number of measures, typically led by public employment services, directed towards reducing the length of a joblessness spell such as counselling, training, workfare, monitoring or sanctions (OECD 2007). However, although several studies have evaluated activation programmes, across different countries and time periods,the literature - which we review in the next section - does not include, to the best of our knowledge, any analysis of such interventions implemented during periods of high unemployment.

We believe these are particularly important periods for such an assessment of activation programmes. Indeed, there is a pressing need, at such times of crisis, for policies that may deliver results relatively quickly in terms of reducing or, at least, containing unemployment. Moreover, from a theoretical perspective, it is unclear whether activation is more or less effective at such times. On the one hand, economic downturns may be exactly when the benefits from activation efforts, namely in terms of enhanced reemployment, are at their weakest, given the diminished number of vacancies available and the greater competition for them from the larger pool of job applicants, increasing the scope for displacement effects (Crepon et al. 2013). On the other hand, it may be that activation has a greater reemployment impact during recessions, if the unemployed focus more on formal job search at those times (van den Berg & van der Klaauw 2006), to the extent that activation tends to be more directed towards formal than informal job search.[1]

Findings regarding the effects of activation programmes during periods of downturn are also relevant from the perspective of the on-going policy debate in the European Union and elsewhere on the relative merits of structural reforms and aggregate demand expansion. Similarly, the major new European Union initiative establishing a 'Youth Guarantee' (European Union 2013), whereby all those aged below 25 are to obtain a job, training or education offer over the first four months of their unemployment spell, can also be informed by such findings.

This paper addresses this significant gap in the external validity of the activation literature by evaluating the impact of a large programme implemented in Portugal in early 2012. This is a country and time period when unemployment reached unprecedented levels: the

---

[1]Lechner & Wunsch (2009) consider the related case of training provision for the unemployed, finding that its effects are stronger during recessions.

unemployment rate was 14.9% in the first quarter of 2012, having increased from only 7.6% in the same quarter of 2008. Moreover, the increase in unemployment was largely driven by low hirings, caused by a 'perfect storm' of austerity measures, economic uncertainty, financial deleveraging, weakened external demand, increased minimum wages and downward wage rigidities. Such economic environment, prompting a substantially weakened labour demand, particularly in terms of new hires, combined with relatively generous unemployment benefits and other unfavourable institutional labour-market aspects (described later), made the public employment service activation efforts studied here particularly challenging.

The programme we evaluate, *Convocatórias*, was based on requiring that certain groups of unemployed individuals participate in meetings in jobcentres. Following the meetings, and depending on the specific individual assessment conducted by their caseworkers, including further monitoring of the job search efforts, the targeted unemployed would be directed towards active labour market measures, including training, counselling, traineeships, job subsidies, or workfare. Some unemployed would also be directed towards job interviews, if good matches with available vacancies were found. The introduction of *Convocatórias* also corresponded to a shift in the activation work of the public employment service, towards greater effort targeted at those registered with the public employment service for a period of time, including unemployment benefits recipients (UBRs, henceforth).

As indicated above, and crucially for identification purposes, the programme was targeted at specific groups of unemployed individuals. These groups were the UBRs of a certain age range (45 or above) or of a certain unemployment benefit (UB) duration range (six months or more). These criteria establish clear differences in programme eligibility across UB duration levels, which we explore through a fuzzy regression discontinuity approach (Lee & Lemieux 2010). In particular, in this paper we focus on those aged 44 or less that are targeted exclusively by the UB duration criteria. We then study the effects of the programme in terms of reemployment and other outcome variables on the unemployed on UB for six months or more in comparison with those on UB for less than six months.

The empirical analysis draws on two detailed administrative datasets, each one including longitudinal individual information on the population of those unemployed over the first twelve months of the programme. The first data set is drawn from the records of the Portuguese public employment service and includes information such as the date of registration

3

in the jobcentre and the date when the unemployed was subject to the *Convocatórias* programme (if applicable), as well as several background variables. The second data set is based on social security information and includes records on the employment status, salaries and unemployment benefits of each individual in each month. After merging the two data sets, we follow individuals as they are unemployed, subject or not to the *Convocatórias* intervention, and eventually return to employment.

Our results indicate that the increased activation efforts delivered by the programme had large positive effects in terms of reemployment and other related variables. This is an important result, particularly given the challenging economic and labour market conditions and the relatively light nature of the intervention. In fact, the estimates imply a doubling of the probability of next-month reemployment for those subject to the intervention. The effects estimated are typically of at least 4%, a percentage that exceeds the average monthly reemployment probability over the relevant unemployment duration range. These findings are also found to be robust to a large number of checks, including the analysis of different subsamples of unemployed individuals and a falsification exercise based on pre-programme social security data.

The structure of the paper is as follows: The next section provides a review of activation practices and of the literature on the impact of activation programmes. Section 3 describes the activation programme and also its context, namely in terms of several labour market institutions. Section 4 presents the data sets and their descriptive statistics. The econometric model is introduced in Section 5 and the results and robustness checks are presented in Section 6. Finally, Section 7 concludes.

2 Activation practices and programmes

Many countries have implemented activation strategies aimed at increasing work incentives and opportunities for UBRs and other unemployed individuals. These can be particularly important not only in terms of addressing moral hazard issues but also to foster effective lifelong learning perspectives. These activation strategies are generally two-fold, including monitoring and sanctions procedures, as well as ALMPs, counselling and job search assistance. Moreover, their implementation procedures tend to exhibit a considerable deal of diversity across countries.

To shed light on these aspects, we present a summary of their characteristics across eight countries, based on OECD (2007), in Tables A.2 and A.3. We consider several dimensions of such procedures, including placement efforts at initial registration, frequency of reporting, use of direct referrals, collective information sessions and job search verification during participation. Across the eight countries considered, the differences in activation practices appear to be particularly important in terms of 'Services provided by the Public Employment Service' and 'Participation in ALMPs'.

In most countries, the public employment service (PES, henceforth) uses direct referrals to help the unemployed re-enter the labour market, although there are variations on the average number of direct referrals per country, as well as on who reports on application outcomes. There are also important differences on how the PES relates to the unemployed, namely in terms of the frequency of interviews (some countries do not have a specific timing defined, others meet with the unemployed fortnightly), in terms of collective information sessions and in terms of individual action plans (in some countries the action plan is written up after one week to one month of unemployment while in other countries only after nine months). Participation in ALMPs tends to be compulsory in most countries although job search requirements are not imposed at those times.

From a theoretical perspective on activation, in particular in the context of job search models, activation programmes may increase the cost of being unemployed, leading the unemployed to either increase their job search or decrease their reservation wages (or both), which will lead to an increase in transitions out of unemployment.[2] This is indeed the result most commonly found in the literature that conducts evaluations of specific activation programmes, as we explain below and as we summarise in Table A.1.

Klepinger et al. (2002) studies the impact of tighter search requirements (a doubling of the standard number of employer contacts per month), monitoring (verification of work-search contacts) and counselling (participation in a job search workshop) on total UB paid and UB duration following a 1994 experiment in Maryland. They find that both more demanding search requirements and monitoring lead to a decrease of around 6% in UB payments and a decrease of between 6 and 7% in the number of weeks on UB. Counselling also reduces total UB payments and unemployment duration. Klepinger et al. (2002) also study the impact on

---

[2]See Cockx et al. (2014) for a theoretical analysis of welfare effects from job search requirements, in particular the extent to which procrastination may make such requirements Pareto improving.

employment and earnings and find little impact on both. Similar results were found for other countries, namely the UK (Dolton & O'Neill 2002) and Australia (Borland & Tseng 2007).

Despite the general finding of an increase in transitions out of unemployment, there is not a general consensus on the typical destination state of the unemployed who leave unemployment. One strand of the literature finds that the increase in transitions out of unemployment is accompanied by an increase in transitions to employment. Graversen & van Ours (2008) study the impact of a mandatory activation programme on employment transitions in Denmark. In their experimental setting, the treatment involves several steps: first, a notification letter; second, participation in a job search programme; and third, participation in an ALMP. They find that the programme decreases unemployment duration by 2.5 weeks (in a context in which the median unemployment durations are 11.5 weeks for the treatment groups and 14 weeks for the control group) and increases transitions to employment by 30%. Graversen & van Ours (2008) justify these large effects with programme duration and intensity. Indeed, during the job search programme ('step two'), the unemployed attend weekly or fortnightly meetings with caseworkers where they receive counseling, are referred to job offers and have their job search efforts monitored.

In another interesting study, McVicar (2008) evaluates the impact of a complete interruption in monitoring (everything else equal), when the UK job seekers allowance (JSA) was suspended for exogenous reasons in different parts of Northern Ireland between 1999 and 2005. The quasi-experimental results indicate that a total lack of monitoring leads to an important decrease in transitions out of unemployment, mainly explained by a decrease of transitions to employment. Several other studies also find positive effects of activation programmes on transitions to employment (van den Berg et al. 2004, Geerdsen 2006, Boone et al. 2009, Cockx & Dejemeppe 2012).

Another strand of the literature finds that the increase in transitions out of unemployment leads to an increase in transitions to other benefits or non-subsidized unemployment, but not necessarily employment. It is the case of Manning (2009), which evaluates the effect of the JSA in 1996, using a differences-in-differences approach. He finds that the tightening of job search requirements, as imposed at that time, can lead some of the unemployed to lower their search intensity and move out of subsidized unemployment altogether, particularly if their previous search intensity was already low (and when unemployment benefits are relatively

low). Hence, tighter search requirements (or monitoring) would not have an impact on transitions to employment but rather on transitions to non-subsidized unemployment. Indeed, Manning (2009) finds that the JSA reform led to a decrease of around 8% in the number of subsidized unemployed, almost completely explained by the increase in transitions to non-subsidized unemployment. When considering the impact of the JSA introduction not only on transitions out of unemployment but also future earnings and weeks worked, Petrongolo (2009) finds an increase in the former and a decrease in the latter. This last results can be explained by a decrease in reservation wages in the context of a job search model, leading the unemployed to accept lower-quality jobs.

Other studies, as well as some of those mentioned above, find that activation strategies have an effect even before participation takes place (Black et al. 2003, Geerdsen 2006, Hagglund 2011, Boone et al. 2009, Cockx & Dejemeppe 2012). This is known in the literature as a 'threat effect': future participation in a workshop or a programme increases the perceived cost of being unemployed, leading to an increase in transitions out of unemployment even before participation takes place. For example, Cockx & Dejemeppe (2012) evaluate the impact of a notification letter sent to the unemployed in Belgium to inform them of the implementation of a new monitoring policy (without further contacts between the unemployed and the public employment services). They find that there is a positive threat effect of the letter, as transitions to employment increase by nine percentage points. These results on 'threat effects' are also relevant in the context of our study, as we will discuss later. If the unemployed perceives participation in ALMPs as an increased cost of being unemployed, for instance in cases of informal, undeclared work, one would expect an increase in transitions out of unemployment (and also in transitions to employment) soon after the first jobcentre meeting and possibly before participation starts.

One additional important aspect is that all papers above study the impact of activation programmes in countries and time periods when the economy is in normal times. However, the economic climate can interact powerfully with the outcome of the programme. For instance, van den Berg & van der Klaauw (2006) present a job search model with both formal and informal search and show that the impact of activation strategies, namely monitoring, on transitions to employment should be larger the worse the (individual or aggregate) labour market prospects: in the case of a declining labour market, the unemployed will tend to rely

extensively on formal search, which is more sensitive to monitoring than informal search. Using a 1998 natural experiment in the Netherlands, van den Berg & van der Klaauw (2006) find that both the older and the longer-term unemployed benefit more from counselling and monitoring. These results are consistent with the perspective that the effects of activation are stronger the worse the labour market prospects of the unemployed. Another paper that relates programme participation with the economic climate is Lechner & Wunsch (2009), which studies the impact of training in times of high unemployment. They find larger positive long-term effects when unemployment is high. They offer two explanations for this result. One is that the positive effects of increased human capital from participation dominate the negative "'lock-in"' effects. The other is that programme participation during periods of high unemployment avoids unfavorable job matches, that can have negative impacts in future labour outcomes.

The results presented previously generally do not take into account the possible presence of displacement (or substitution) effects, which occur if a positive outcome for participants in a programme is obtained at the expense of a negative outcome for non-participants. In other words, displacement effects may occur if participants take jobs that non-participants would otherwise get, with no or little aggregate effect. However, there are not many studies in the literature that consider displacement effects. One exception is Blundell et al. (2004), who evaluate the impact of the UK New Deal for Young People in terms of transitions to employment. The NDYP was first implemented in pilot areas and afterward rolled-out across the UK. Their treatment group are the unemployed aged 19-24 in pilot areas and the control group are the unemployed of the same age but based in non-pilot areas. After finding positive effects of the programme of around 20%, Blundell et al. (2004) check for displacement effects by comparing transitions to employment between the treatment group and a group of older (25-30 years old), non-eligible, but otherwise very similar unemployed also based in pilot areas. The case for displacement effects is not supported given that the treatment effect obtained under this second analysis is not larger than the first one. The only other study that we know of that considers displacements effects is Crepon et al. (2013) who find positive effects for an assistance programme for college-educated unemployed youth in France. However, these positive results are non-lasting and obtained partly at the expense of non-eligible workers, especially in the case of weak regional labour markets, where there are many unemployed

competing for a relatively small number of job vacancies.

Overall, the literature that evaluates activation programmes tends to find that these have significant effects in terms of unemployment exits and sometimes also in terms of reemployment. These effects can be driven by a threat element, which tends to be associated with informal jobs, especially when unemployment benefits are relatively generous. Moreover, the results on displacements effects from activation measures are very scarce and mixed. As indicated above, all findings so far refer to economic environments characterised by relatively low unemployment rates, an important gap in terms of the external validity of the literature that our paper addresses.

3   The *Convocatórias* programme and its context

3.1   The Portuguese labour market

As indicated above, the *Convocatórias* programme was implemented in Portugal in 2012, a year when the country was immersed in an economic and financial crisis, with heavy consequences in terms of unemployment growth and lack of job creation. In fact, the unemployment rate in Portugal increased steadily since the first quarter of 2008 until the first quarter of 2013, from 7.6% to 17.7%, having since then decreased to 15.3% (fourth quarter of 2013). During the time frame of our study, from February 2012 to February 2013, the quarterly unemployment rate rose from 14.9% to 17.7%. These rates are at least twice as large as the average of the rates prevailing at the times of the other programmes we survey in Section A.1 and at least four percentage points larger than the highest rate over those fourteen studies (8.6% in Australia in 1997-98).

Another important aspect concerns the proportion of long-term unemployed (those unemployed for 12 months or more), which was relatively stable at around 50% during 2011 and the first quarter of 2012, but then increasing to close to 60% in the first quarter of 2013. Moreover, the overall number of UBRs (including also means-tested unemployment assistance, which amounts to about 20% of the total) peaked at 421,000 in April 2013, from a lowest level over the cycle 243,000 in July 2008, reaching 361,000 in March 2012, when *Convocatórias* was launched. A related indicator of the severity of the crisis is the number of job vacancies available in the PES. Although these are only a subset of approximately 10% of actual vacancies, PES vacancies dropped significantly too, by 30% or more from 2011 to 2012, when they

9

reached a figure of approximately 5,000 per month.

In terms of the institutional framework surrounding the labour market, UBs can be characterized as relatively generous in their replacement rates and maximum durations but restrictive in terms of their labour market coverage. First, the general replacement ratio is 65% in gross terms and 75% in net terms, although the latter figure increases to about 100% for low-wage workers. Benefit entitlement periods range between 9 and 38 months, depending on age and prior labour market attachment, excluding the means-tested unemployment assistance provisions, which are available for between half and the same period as UB. Second, coverage is restricted to those that worked at least 15 months over the previous 24 months.

One should also note that in March 2012, shortly after the *Convocatórias* programme was introduced, some changes were made to UBs. However, these changes are applicable only to individuals that become unemployed once the new law came into force, in April 1st. These changes consisted in wider access (from a minimum of 15 to 12 months of work over the previous 24 months), shortened maximum durations (but only for those who had not worked at least 15 months by March 2012), and a 10% cut in the UB amount after six months.

Concerning activation requirements and practices, all UBRs are required to register in their local jobcentre. Registration then implies a number of duties that the UBR must carry out, including availability for any ALMPs indicated by the jobcentre and sending out a given number of job applications every month. UBRs also have to accept to interview for vacancies that the jobcentre deems appropriate (and which pay a salary similar to the one the UBR earned before becoming unemployed). Moreover, UBRs are required to present themselves every fortnight at their local council (or jobcentre) to confirm their status as unemployed. Should the jobcentre consider that the UBR is not complying with its obligations, the jobcentre may deregister the UBR, implying that the UB will be cut entirely. In practice, the extreme severity of the penalty implies that it is rarely applied (OECD 2012). Moreover, the fortnightly attendance check also adds little value in terms of activation as it typically does not involve job search monitoring, at least when conducted at the local council (by far, the most common choice).

As to other relevant labour market institutions, employment protection legislation is also regarded as strict, despite recent reforms in the context of the 2011-2014 economic and financial adjustment programme.[3] Moreover, the minimum wage covers a relatively large share

---

[3] See OECD (2012) for international comparisons in several indicators and Martins (2014) for more infor-

of workers, over 10% in 2012, and amounts to approximately 60% of the median wage. Furthermore, the Portuguese labour law also establishes that base wages cannot be adjusted downward, even in low inflation environments, except in very specific circumstances. On top of that, the extension of virtually all collective bargaining agreements to non-affiliated firms and workers up to mid-2011 created a large number of additional minimum wages for most occupations and job levels across all sectors.

Overall, from an institutional perspective, the employment and social security laws and practices create strict constraints that tend to result in lower hirings and higher levels of long-term unemployment. Moreover, the activation practices conducted by the PES up to the introduction of the *Convocatórias* programme were also relatively superficial, especially as far as the UBRs were concerned, and particularly given the relative generosity of UB, creating considerable scope for the observed typical long spells of unemployment (Portugal & Addison 2008, Addison & Portugal 2008) and their well-known negative impact upon human capital and future employability.

3.2 The *Convocatórias* programme

In March 2012, the Portuguese government launched an action plan aimed at the modernization of the PES.[4] This action plan included a number of measures, most of which directed towards a greater activation of the unemployed.

The programme studied in this paper, *Convocatórias*, is one of such measures. The programme consists in requiring that the Portuguese PES (IEFP, *Instituto do Emprego e Formação Profissional*) calls up all UBRs of specific profiles for meetings with caseworkers in jobcentres.[5] Moreover, the programme allows jobcentres to establish the content of the meeting, subject to the broad guidelines that the PES should take actions that can activate UBRs and increase their rates of transition to employment.

In practical terms, the content of the initial meetings and their follow-up actions were varied, depending on the specific profile of each unemployed individual. In general, the meet-

---

mation on this and other labour market reforms introduced between 2011 and 2013 in Portugal. Fixed-term contracts, unlike their permanent counterparts, are not regarded as restrictive and are also the most common form of outflow from unemployment.

[4]This initiative, the 'Public Employment Service Relaunch Programme', was established by the Council of Ministers Resolution 20/2012, of March 9th, available at `http://dre.pt/pdf1sdip/2012/03/05000/0105901061.pdf` (in Portuguese).

[5]See (van den Berg et al. 2012) for evidence of the positive effect of jobcentre meetings with casework in terms of transitions from unemployment to employment in Denmark.

ings were used by the jobcentre to monitor the jobsearch effort exerted by the UBR and to update their records regarding the profile of the UBR. In several occasions, the UBR's personal employment plan, which sets requirements such as a minimum number of monthly job applications to be sent by each person, were also updated. Moreover, depending on the specific profile of each individual, the jobcentre would conduct a number of additional actions. These included jobsearch counselling, job interviews participation requirements, training, self-employment support, and workfare or traineeship placements.

An additional important aspect concerns the UBR profiles targeted by the programme. Only two specific groups were considered, namely UBRs aged 45 or older, and UBRs unemployed for at least six months. These two groups were seen to be of greater interest in terms of a more intense activation work to be delivered by the PES. Moreover, from an operational perspective, the *Convocatórias* programme was implemented gradually, given capacity restrictions across jobcentres, in some cases also involving a greater priority to meetings with UBRs of lower schooling levels. In this paper, we focus exclusively on the second group (subsidised unemployment spells of six or more months), in particular UBRs not older than 44 and with unemployment spells of between 1 and 12 months. The latter restriction ensures that we focus exclusively on the UBRs only subject to the six-month stream of *Convocatórias*.

Another relevant aspect is the introduction of a wage subsidy active labour market measure, also in the context of the PES action plan mentioned above. This wage subsidy, *Estímulo 2012*, was targeted exclusively at those unemployed for at least six months, although both for those entitled or not to unemployment benefits.[6] In any case, this measure reinforced the range of active labour market policies that could be used under *Convocatórias* and therefore increased the scope for additional activation further to the jobcentre meetings.

Overall, the *Convocatórias* programme introduced an important strengthening of the activation efforts delivered by the Portuguese PES towards the UBRs and the long-term unemployed. Moreover, the concurrent introduction of *Convocatórias* and *Estímulo 2012* represented a potentially significant complementary step in terms of the activation efforts of the Portuguese PES. These efforts could be particularly important given the specific time of great

---

[6]This measure was established by the Executive Order 45/2012, of February 13th, available at `http://dre.pt/pdf1sdip/2012/02/03100/0073000732.pdf` (in Portuguese). Before 2012, the range of related job subsidy ALMPs included only an exemption of social security contributions (of 23,75%) for a period of up to three years when employers hired under permanent contracts individuals that were unemployed for more than twelve months or individuals that were looking for their first job. *Estímulo 2012* offered more generous support, of up to 60% of the monthly salary for up to six months, and covered fixed-term contracts, a by far more prevalent contract type in outflows from unemployment.

turmoil in the labour market.

4 Data description

This study draws on two administrative data sets, each one including rich, longitudinal monthly individual information on the population of the unemployed at least once over the first twelve months of the programme. The first data set was drawn from the records of the PES and, in its original version, includes all individuals registered as unemployed in February 2012 plus all newly registered unemployed from March 2012 up to March 2013. Most activities that were conducted by jobcentres over that period are also recorded, such as interviews, job placements, trainng placements, deregistrations, including the specific *Convocatórias* intervention studied in this paper. The data also includes information such as the date of registration in the jobcentre and the date when the unemployed was subject to the intervention, as well as several background variables at the individual level, including gender, age, schooling and marital status.

The second data set was drawn from the records of the social security data agency (II, *Instituto de Informática da Segurança Social*). These data include information on the employment status of each individual in each month over the period under analysis, as well as all earnings, social security contributions and unemployment benefits registered. The two data sets were then merged, creating a new data set that follows individuals as they are unemployed and eventually return to the labour market (as those that are unemployed in February 2012) or are employed, become unemployed and eventually return to employment (as those individuals that are first unemployed in some point from March 2012).

The merged data set contains one observation for each individual in each month from February to December 2012. From this data set, we eliminate some individuals or observations to obtain the final sample which we use to estimate our results. First, given that the *Convocatórias* programme was targeted at subsidized unemployed, we only keep in the sample individuals that have been enrolled in the PES and have received regular UB at least once during the reference period (February 2012 to February 2013). We also exclude individuals whose potential UB duration is shorter than twelve months, because, as UB potential duration influences transitions to employment, they may not be comparable to those with longer potential UB duration.

As mentioned previously, *Convocatórias* has two eligibility criteria: UBRs who are 45 years old or older and UBRs for at least six months. Because we want to focus exclusively on those eligible through UB duration, we exclude from our sample all UBRs that are at least 45 years old (these UBRs would be automatically eligible as soon as the programme is introduced, implying the need for a different identification strategy). Moreover, we wish to focus on UBRs whose maximum UB duration is not smaller neither much larger than the threshold level of six months, given our regression discontinuity approach. We therefore exclude all individuals whose maximum UB duration is greater than twelve months. Finally, given our focus on transitions out of unemployment, namely of those subject to the programme, we consider in our final sample only the observations in which the individual is unemployed, keeping a record of the timing of a possible transition to employment.

As we can see in Table 1, which describes the participants in the programme by month of their intervention, *Convocatórias* started in March 2012, with around 7,500 unemployed having participated in that month. Participation increased to around 16,000 in April and May and then started decreasing, given the decrease in new eligibles to the programme.

The table also indicates the average characteristics of the participants by month of participation. It can be seen that age and marital status are relatively constant, while the percentage of women varies across the period but is always between 40 and 50%. Average schooling years are relatively lower for those that participate in the first two months, while they remain fairly stable in the last months of the period, which is driven by some priority attributed to the low-skilled unemployed. We also find that the distribution of participants by region is very unequal, as expected, given the different sizes of each region: 22,317 in the North, 10,814 in the Centre, 42,693 in Lisbon and Tagus Valley, and 1,802 and 3,214 in Alentejo and Algarve, respectively.

Of the approximately 80,000 unemployed that participate in *Convocatórias*, around 30,000 participate in ALMPs or in collective sessions on job search techniques. In the end, our sample contains 111,588 different individuals and 711,849 (individual-month) observations. Of the 111,588 individuals in the final sample, 27,050 (24%) are treated. The relatively important decrease in the number of participants in the programme, when compared to the 80,000 present in the IEFP data set, is justified by the fact that we only consider those treated due to an UB duration of six months or more and those with an UB duration less than 12 months.

As this programme was targeted initially mostly at the stock of unemployed, most of which have UB durations of twelve months or more, this caused an important decrease in the size of the treatment group.

Our main outcome variable is the transition from (subsidized) unemployment to employment, a dummy equal to one if an UBR becomes employed in the following month. We also consider other related outcome variables, such as the transitions out of subsidized unemployment and the transitions to non-subsidized unemployment. As in the main case, we assess the transition from the perspective of the month when the individual is still in a subsidized unemployment situation and conduct the analysis regarding possible changes in that situation over a one-month time window. A fourth dependent variable concerns the income of the individual over the following month. This variable can increase, for instance when an UBR takes a job that pays a salary higher than the UB, or fall, for instance when an UBR moves into non-subsidized unemployment.

The treatment variable is a dummy indicating if the individual was treated in that month. We also create an eligibility variable, which is a dummy variable indicating whether the unemployed's UB duration is six months or more. This variable will be used as an instrument for the treatment variable, in the spirit of Instrumental Variable framework (see below). The variable on UB duration indicates the number of months the unemployed has received UB, since the beginning of the unemployment spell until the corresponding month. Since the final sample contains one observation for each individual and each month, this means that this variable changes over observations, increasing by one month from one observation to another, for the same individual. For simplicity when interpreting the results, we center this variable around the eligibility threshold.

We use several explanatory variables in the analysis, determined in February 2012: age; gender, a dummy variable indicating whether the unemployed is female; marital status, a dummy variable equal to one if the unemployed is married or cohabitant and zero otherwise; a dummy variable indicating whether the unemployed is a foreigner; and the educational level, captured by a discrete variable indicating the number of years of schooling of the unemployed.

The following two variables are not determined in February 2012 but rather at the moment the individual becomes unemployed, although still determined pre-treatment: the potential UB duration and daily UB amount are variables indicating, respectively, the number of days

of UB and the amount in Euros each unemployed is entitled at the moment he becomes unemployed (based on the legal texts of the UB system).

Table 2 presents descriptive statistics on all the variables mentioned above on all the observations (and not individuals) on the final sample. We can see that, on average, the probability of reemployment in the next month is 4%. Average transitions out of unemployment is 6% and average transitions to non-subsidized unemployment in the next month is 2%. Income increases by 5%.

5   The econometric model

Our analysis of the effects of *Convocatórias* is based on a regression discontinuity (RD) analysis. Identification draws on the treatment discontinuity that occurs at the UB duration of six months. As mentioned before, the unemployed are only eligible when their UB spell hits that threshold.

The forcing variable Z_{it} is UB duration of the individual i at period t. To facilitate the interpretation of results, namely on the coefficients of the interacted variables, we center the forcing variable: $\widetilde{Z}_{it} = Z_{it} - Z_0$, where Z_0 is the discontinuity point ($Z_0 = 6$ in our case). D_{it} accounts for treatment status of individual i in period t, Y_{it} is the outcome variable, X_{it} is the vector of covariates and $S(Z_{it})$ is a polynomial function of the forcing variable.

As *Convocatórias* was implemented gradually, not every UBR participated in the programme as soon as they became eligible. Hence, the probability of being treated is not a deterministic function of UB duration, as in a 'sharp' RD, but rather a function of eligibility E_{it}, defined as $E_{it} = 1[\widetilde{Z}_{it} \geq 0]$. This is known as a 'fuzzy' RD design. This is illustrated in Figure 1, which presents the percentage of the unemployed that are subject to the programme at each UB duration level (dots). The Figure indicates that the probability of being treated is zero up to the threshold and then jumps to about 0.1.

The main assumption of the RD approach is that the forcing variable is continuous around the threshold. This assumption is not directly testable but a graphical analysis is a useful check. Figure 1 also depicts the number of observations for each value of the forcing variable (solid line), which allows us to conclude that the forcing variable is continuous around the threshold.

The fuzzy design can be described by the following two equations:

$$Y_{it} = \alpha + \beta D_{it} + S(\widetilde{Z}_{it}) + \delta X_{it} + \epsilon_{it} \tag{1}$$

$$D_{it} = \gamma + \eta E_{it} + S(\widetilde{Z}_{it}) + \lambda X_{it} + \mu_{it} \tag{2}$$

We estimate these two equations using two-stage least squares (2SLS), using E_{it} as an instrument for D_{it} and the same specification of the polynomial function in both stages.

Since, in the fuzzy design, the probability of being treated is no longer a deterministic function of the forcing variable, the discontinuity in the outcome variable at the threshold cannot be interpreted as an average treatment effect. Nevertheless, Hahn et al. (2001) show that it is possible to recover the treatment effect by dividing the jump in the outcome variable at the threshold by the jump in the probability of treatment, also at the threshold. The latter jump is the fraction of individuals induced to be treated, the so-called compliers (they would not be treated in a world without treatment and are treated in a world with treatment). This treatment effect is a weighted local average treatment effect (weighted LATE), where the weights are the ex-ante likelihood that the individual's Z_{it} is near the threshold.

6   Results

6.1   Main results

Given the important graphical dimension of regression discontinuity analysis, we start this section by presenting graphical evidence of the effects of the *Convocatórias* programme on a number of variables. Specifically, Figures 2, 3, 4 and 5 describe, respectively, the average transitions to employment, transitions out of unemployment, transitions to non-subsidized unemployment, and income levels at different UB duration levels. All figures also include solid lines on either side of the threshold obtained from linear splines estimated, respectively, within the (centered) UB duration intervals [-4;0[and [0;5].

Figure 2 presents a downward trend in reemployment probabilities (average transitions to employment) as UB duration increases, consistent with negative duration dependence observed in studies of unemployment duration. However, at the threshold UB duration, we find graphical evidence of a (discontinuous) increase in the reemployment probability, after which

17

it resumes its downward trend, although at a flatter rate. Moreover, the gap between the predicted reemployment probability and the actual value at the threshold is sizable, of about 1 p.p. In the context of our regression discontinuity approach, we can interpret this discontinuous increase as the treatment effect, especially after adjusting for the fact that many eligible were not treated. A very similar pattern can be observed in Figure 3, on transitions out of unemployment.

On the other hand, Figure 4 shows that transitions to non-subsidized unemployment increase steadily with UB duration, although at a lower probability than transitions to employment. More important, we find virtually no discontinuity at the six-month threshold, neither any sizeable change in the slopes of the best-fit lines. Finally, figure 5 similarly exhibits no evidence of a discontinuous decrease in income levels at the threshold UB duration.

We now test the robustness of the graphical evidence above estimating the models described in Section 5. In particular, we estimate 2SLS models with a linear spline, $S(\widetilde{Z}_{it}) = \pi_0 \widetilde{Z}_{it} + \pi_1 \widetilde{Z}_{it} D_{it}$, inserted in the first stage (Equation 2 above), after replacing the treatment variable D_{it} by the instrument used, the eligibility variable E_{it}. We then estimate the first stage equation and use the predicted values $\hat{D}_{it}$ in estimating the following second stage equation:

$$Y_{it} = \alpha + \beta \hat{D}_{it} + \varphi_0 \widetilde{Z}_{it} + \varphi_1 \widetilde{Z}_{it} \hat{D}_{it} + \delta X_{it} + \epsilon_{it} \tag{3}$$

The key dependent variables, Y_{it}, are, in turn, the transitions to employment (reemployment probability), out of unemployment, to non-subsidized unemployment, and the income level in the following period. The remaining terms of the equation are the same as explained above. The coefficients on the treatment effects are the β's for each equation, according to the outcome variable.

Our results following the estimation of the model above are presented in Table 3. We also present there the results from different spline specifications (across rows) and the first-stage estimates (last column). (The latter are the same for all outcome variables.) Each coefficient and standard error pair across the first four columns corresponds to a separate estimation of a different model in terms of the polynomial function of the outcome variable.

Considering the first column, which focuses on our key dependent variable (transitions to employment), the results across polynomials confirm the graphical evidence in Figure 2. We find in all models significantly positive effects of participation in the *Convocatórias* programme

18

in terms of reemployment probabilities. The magnitude of the coefficients varies from 2% (linear polynomial) to 9% (quadratic spline). These coefficients represent an increase in reemployment probabilities from 50% to 225%, taking into account the outcome mean of 4% (see the one but last row in the table).

In terms of the remaining dependent variables, we find that the results on the transitions out of unemployment are very similar to those on the equivalent specification in terms of transitions to employment, with coefficients also ranging between 2% and 9%. Consequently, the transitions to non-subsidised unemployment are found not to be affected by the programme, with virtually all results insignificant. Similarly, no effects are found in terms of income levels (the sum of UB and employment earnings).

It is also important to note that the first stage coefficients on eligibility (the instrument) are always significantly positive, at around 12%, with little variability across polynomial functions. This latter results confirms the relevance of the eligibility status as established in the programme in terms of actual participation in *Convocatórias*, namely through a call-up of the UBR to a jobcentre meeting.

Overall, our findings on reemployment effects can be regarded as larger than those commonly found in the literature. One explanation may be related to the relatively light activation efforts that had been conducted, in general, by the Public Employment Service up until the introduction of *Convocatórias*, especially following the large increase in the number of the unemployed over the previous years. This situation may give rise to higher than average marginal benefits even if from relatively moderate levels of activation, such as the involvement in interviews for available vacancies or one-day jobsearch training.

Another related explanation concerns the 'threat' effect (Black et al. 2003). As the *Convocatórias* programme consists of a meeting with a caseworker, generally followed by referrals to ALMPs, some UBR may perceive participation as an increased cost of being unemployed. Those UBR may therefore increase job search and or decrease their reservation wage even before participation or soon after it begins, leading to the documented increase in transitions out of unemployment. Moreover, the programme may have prompted some targeted UBRs that were employed informally to stop collecting UB and to register their jobs with social security given the impending likelihood that they would be required to participate in training or workfare, for instance. On the other hand, it is important to underline that, unlike Manning

(2009) and Petrongolo (2009), we find that our results on transitions out of unemployment are exclusively driven by an increase in reemployment probabilities and not by an increase in transitions to non-subsidized unemployment.

A final explanation for our large positive effects is based on the theoretical discussion in van den Berg & van der Klaauw (2006). In times of macroeconomic downturns, the effects of activation programmes on transitions to employment can be larger than in times of positive and stable macroeconomic environments, under the assumption that the unemployed rely heavily on formal job search. In this case, activation programmes lead to an increase in formal search (irrespective of what happens to informal search) and, as such, can have a larger impact at those times, as we find in our analysis.

6.2   Robustness checks

Following on the main results documented above, here we present our robustness checks. First, we examine whether our results are affected by the exclusion of all explanatory variables, except the polynomial function on the forcing variable. This exercise can shed light on the internal validity of the RD approach (Lee & Lemieux 2010), as individuals are assumed to be assigned to treatment and control groups irrespective of their background characteristics. Hence, if the RD approach is valid, the results should be approximately the same, whether we control for background variables or not. This is indeed what we find in our case: the coefficients on the treatment variable, across the same specifications presented in our main table, are only slightly different when we estimate Equation 3 without including covariates (results available upon request).

We also estimate our model for different subpopulations of interest, in terms of a number of observable variables (gender, age, schooling, UB potential maximum duration and UB daily amount). We consider the linear spline specification and focus on the key outcome variable, the reemployment probability. The results, presented in Table 4, indicate the same qualitative findings as before: the coefficients range between 3% and 10%, with above average effects for women, those older than the median age of 34, and those with more than the median schooling of nine years. Moreover, we find below average effects for those entitled to more than the median UB duration of 570 days and more than the median UB daily amount of €13.97, with coefficients of 3.1% and 3.6%, respectively. The latter two results are consistent

with the theoretical effects of activation on job search: the greater the generosity of the UB, the less likely that activation will prompt a transition to employment.

Furthermore, we estimate the linear spline model for those jobcentres that are more constrained in terms of their general workloads. Specifically, we define a constrained jobcentre as one where the flow of newly-registered unemployed from March 2012 represent over 70% of the stock of unemployed in February 2012 (the median value across all jobcentres). We find below average effects in constrained jobcentres, which can be explained both by the greater workload of case workers and the more challenging local labour markets. In any case, even in this subgroup, we find significant effects, of 2%.

When analysing graphically the effects on a month-by-month basis, we also find similar discontinuities at the threshold month. This is shown in Figures 6 and 7, which present the results separately for each month since April 2012 until November 2012, decomposing the aggregate results from Figure 2. We also examine the means of several background, predetermined variables across the different UB durations, to check for jumps that may coincide with the actual threshold UB level. Such jumps could challenge the causal interpretation of our results even if the nature of our data, where the same individuals are observed over different values of UB duration, would be biased against that case. In any case, the results in Figure 8, concerning age, UB level, UB start date and UB maximum duration, do not support the case for jumps.

Another robustness check is based on Lee & Card (2008), which discuss extensively RD in the context of a discrete forcing variable and suggest clustering standard errors on the values of the forcing variable when estimating Equation 3. We reestimate the treatment coefficient on reemployment probability, for all specifications of the polynomial function. We find that standard errors are always higher, causing the coefficients for some specifications to become non significant, namely the linear specification, the linear spline and the quadratic spline. However, for the quadratic and cubic specification, the results (available upon request) are still significant, even at the 1% significance level.

Finally, we also conduct an important falsification test, based on a different social security data set covering the year of 2011. This data set, also provided by II, includes longitudinal information on a sample of about 100,000 individuals over every month in 2011, covering both earnings and UB information. We use this data set to reconstruct as closely as possible the

information we use in our main analysis, namely in terms of the transitions to employment at different unemployment spell durations. The results, drawing on a similar methodology as before, are presented in Figure 9. We find that, in clear contrast to the findings in Figure 2, there is no 'jump' in the transitions to employment at the UB duration of six months. On the other hand, the downward pattern in such transitions is particularly similar to the one obtained for 2012 results. We interpret this contrast between 2011 (when the programme was not in operation) and 2012 (when it was), as supportive evidence of a causal impact of the programme in terms of transitions to employment.

6.3   Cost-benefit analysis

After establishing the significance of the programme from both economic and statistical perspectives, it is also relevant to analyse its financial impact. We conduct a simple, back-of-the-envelope cost-benefit exercise, taking the estimates above at face value and making a number of additional assumptions. First, we consider that the doubling of the transition rate into employment documented prompts a decrease by half of the remaining (on average twelve) months of subsidized unemployment. Second, we consider an average monthly UB of €500. Third, we base our estimation on a target number of 80,000 individuals subject to the intervention in 2012 alone.

According to the parameters above, we find that the programme has had a financial impact €240 million in savings over its first year in operation alone. This estimate, which ignores the increased social security revenues that follow from more employment spells, but also assumes that displacement effects are negligible, corresponds to over 10% of the annual unemployment insurance budget. Of course, this result does not take into account the positive human capital, psychological and other difficult to measure effects from a speedier return to employment, particularly for the long-term unemployed.

7   Conclusions

The high levels of unemployment currently observed in many countries following the 2008 financial crisis raise considerable interest on the relative merits and potential of activation measures. In fact, measures such as counselling, training, workfare, monitoring, or sanctions can play an important role not only in addressing moral hazard problems that may follow

from generous unemployment benefits as provided in many countries - these measures may also promote an effective lifelong learning strategy that ensures that unemployment can become a springboard towards better jobs.

Although several earlier studies have evaluated activation programmes, this paper is, to the best of our knowledge, the first that examines an intervention of this type that was implemented during a period of high unemployment. In fact, the unemployment rate in our case is about twice as large as the average of the rates prevailing at the times of the other programmes we survey. We believe that, for instance from a policy perspective, it is particularly important to know what are the prospects of activation procedures implemented at such times: although they may be potentially most important during economic crises (van den Berg & van der Klaauw 2006), those periods may also be when the impact of activation efforts will be at their weakest, given the depressed levels of labour demand and greater competition for jobs (Crepon et al. 2013).

In this paper, we analyzed a large activation programme implemented in Portugal in early 2012, when unemployment reached unprecedented high levels. The programme we evaluate, *Convocatórias*, was based on requiring that certain groups of unemployed benefit recipients participated in monitoring and counselling meetings in jobcentres, subsequently potentially followed by an involvement of each individual in one or more active labour market measures of a more intensive nature. Exploring the marked gaps in eligibility to participation in the programme built into its structure, we implemented a fuzzy regression discontinuity analysis based on a rich, merged longitudinal administrative data sets.

Our results indicate that the increased activation efforts delivered by the programme were successful in many ways, despite the poor macroeconomic and labour market conditions at the time (and the relatively short time span of the analysis). Indeed, the estimates imply a more than doubling of the probability of reemployment for those unemployed subject to the intervention. The effects estimated are typically of at least 4%, a figure that exceeds the average monthly reemployment probability over the relevant unemployment duration range.

The main findings are also found to be robust to a large number of checks, including alternative polynomial and spline structures, and the analysis of different subsamples of unemployed individuals. In an important falsification test, when replicating our main analysis but using instead equivalent data for the year before the programme was introduced, we find

no evidence of jumps in the reemployment probability at the relevant threshold unemployment duration. We also find no effects in terms of transitions to non-subsidised unemployment or in terms of subsequent income levels, suggesting that the programme does not have negative effects in terms of loss of social protection or poor job match quality (Acemoglu & Shimer 2000, Petrongolo 2009). Consequently, a simple cost-benefit analysis also indicates major positive impacts in terms of the social security balance in the case of negligible displacement effects.

References

Acemoglu, D. & Shimer, R. (2000), 'Productivity gains from unemployment insurance', *European Economic Review* **44**(7), 1195–1224.

Addison, J. T. & Portugal, P. (2008), 'How do different entitlements to unemployment benefits affect the transitions from unemployment into employment?', *Economics Letters* **101**(3), 206–209.

Black, D. A., Smith, J. A., Berger, M. C. & Noel, B. J. (2003), 'Is the threat of reemployment services more effective than the services themselves? Evidence from random assignment in the UI system', *American Economic Review* **93**(4), 1313–1327.

Blundell, R., Dias, M. C., Meghir, C. & Reenen, J. V. (2004), 'Evaluating the employment impact of a mandatory job search program', *Journal of the European Economic Association* **2**(4), 569–606.

Boone, J., Sadrieh, A. & van Ours, J. C. (2009), 'Experiments on unemployment benefit sanctions and job search behavior', *European Economic Review* **53**(8), 937–951.

Borland, J. & Tseng, Y.-P. (2007), 'Does a minimum job search requirement reduce time on unemployment payments? Evidence from the jobseeker diary in Australia', *Industrial and Labor Relations Review* **60**(3), 357–378.

Cockx, B. & Dejemeppe, M. (2012), 'Monitoring job search effort: An evaluation based on a regression discontinuity design', *Labour Economics* **19**(5), 729–737.

Cockx, B., Ghirelli, C. & van der Linden, B. (2014), 'Is it socially efficient to impose job search

requirements on unemployed benefit claimants with hyperbolic preferences?', *Journal of Public Economics* **113**, 80–95.

Crepon, B., Duflo, E., Gurgand, M., Rathelot, R. & Zamora, P. (2013), 'Do labor market policies have displacement effects? Evidence from a clustered randomized experiment', *Quarterly Journal of Economics* **128**(2), 531–580.

Dolton, P. & O'Neill, D. (2002), 'The long-run effects of unemployment monitoring and work-search programs: Experimental evidence from the United Kingdom', *Journal of Labor Economics* **20**(2), 381–403.

European Union (2013), 'Council recommendation 2013/c 120/01 of 22 april 2013 on establishing a youth guarantee', Official Journal of the European Union.

Geerdsen, L. P. (2006), 'Is there a threat effect of labour market programmes? A study of ALMP in the Danish UI system', *Economic Journal* **116**(513), 738–750.

Graversen, B. & van Ours, J. (2008), 'How to help unemployed find jobs quickly: Experimental evidence from a mandatory activation program', *Journal of Public Economics* **92**(10-11), 2020–2035.

Hagglund, P. (2011), 'Are there pre-programme effects of active placement efforts? Evidence from a social experiment', *Economics Letters* **112**(1), 91–93.

Hahn, J., Todd, P. & Van der Klaauw, W. (2001), 'Identification and estimation of treatment effects with a regression-discontinuity design', *Econometrica* **69**(1), 201–209.

Klepinger, D. H., Johnson, T. R. & Joesch, J. M. (2002), 'Effects of unemployment insurance work-search requirements: The Maryland experiment', *Industrial and Labor Relations Review* **56**(1), 3–22.

Lechner, M. & Wunsch, C. (2009), 'Are training programs more effective when unemployment is high?', *Journal of Labor Economics* **27**(4), 653–692.

Lee, D. & Card, D. (2008), 'Regression discontinuity inference with specification error', *Journal of Econometrics* **142**(2), 655–674.

Lee, D. & Lemieux, T. (2010), 'Regression discontinuity designs in economics', *Journal of Economic Literature* **48**(2), 281–355.

Manning, A. (2009), 'You can't always get what you want: The impact of the UK jobseeker's allowance', *Labour Economics* **16**(3), 239–250.

Martins, P. S. (2014), Labour market reforms in Portugal, 2011-2013: An inside perspective, Working paper, Queen Mary, University of London.

McVicar, D. (2008), 'Job search monitoring intensity, unemployment exit and job entry: Quasi-experimental evidence from the UK', *Labour Economics* **15**(6), 1451–1468.

OECD (2007), Activating the unemployed: what countries do, *in* 'OCDE Employment Outlook', Organisation for Economic Cooperation and Development, pp. 207–242.

OECD (2012), OECD economic surveys: Portugal 2012, Report, Organisation for Economic Cooperation and Development.

OECD (2013), Activating jobseekers: Lessons from seven OECD countries, OECD employment outlook, Organisation for Economic Cooperation and Development.

Petrongolo, B. (2009), 'The long-term effects of job search requirements: Evidence from the UK JSA reform', *Journal of Public Economics* **93**(11-12), 1234–1253.

Portugal, P. & Addison, J. T. (2008), 'Six Ways To Leave Unemployment', *Scottish Journal of Political Economy* **55**(4), 393–419.

van den Berg, G. J., Kjaersgaard, L. & Rosholm, M. (2012), To meet or not to meet (your case worker) that is the question, IZA Discussion Paper 6476.

van den Berg, G. J. & van der Klaauw, B. (2006), 'Counseling and monitoring of unemployed workers: Theory and evidence from a controlled social experiment', *International Economic Review* **47**(3), 895–936.

van den Berg, G. J., van der Klaauw, B. & van Ours, J. C. (2004), 'Punitive sanctions and the transition rate from welfare to work', *Journal of Labor Economics* **22**(1), 211–241.

Figure 1: **Probability of treatment and number of observations by (centered) unemployment benefit duration**
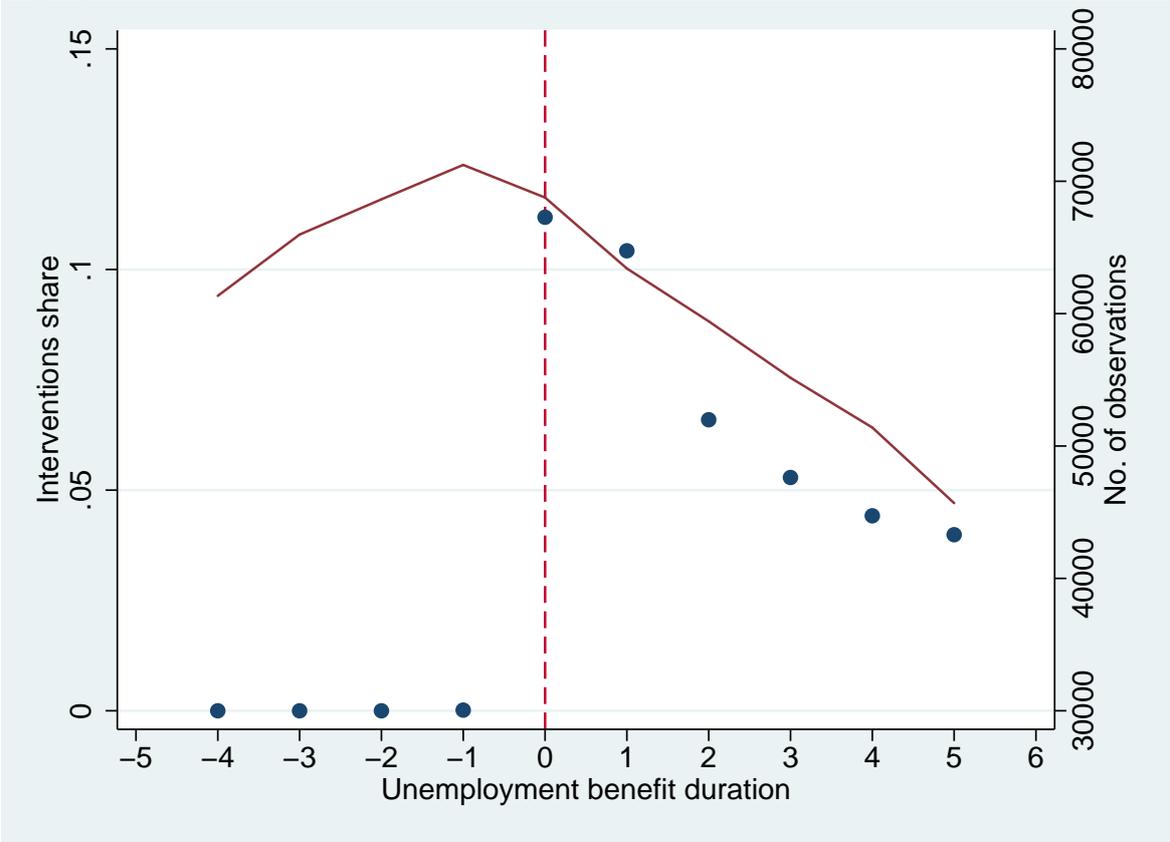
Notes: The horizontal axis indicates the (centered) values of UB duration (for instance, zero corresponds to six months of UB and six corresponds to twelve months of UB). The left vertical axis (and the blue dots) indicate the percentage of observations that are subject to a *Convocatórias* intervention. The right vertical axis (and the red line) indicate the total number of observations used in the pooled cross-section analysis at each specific level of the centered UB duration distribution.

Figure 2: **Reemployment probabilities by (centered) UB duration**
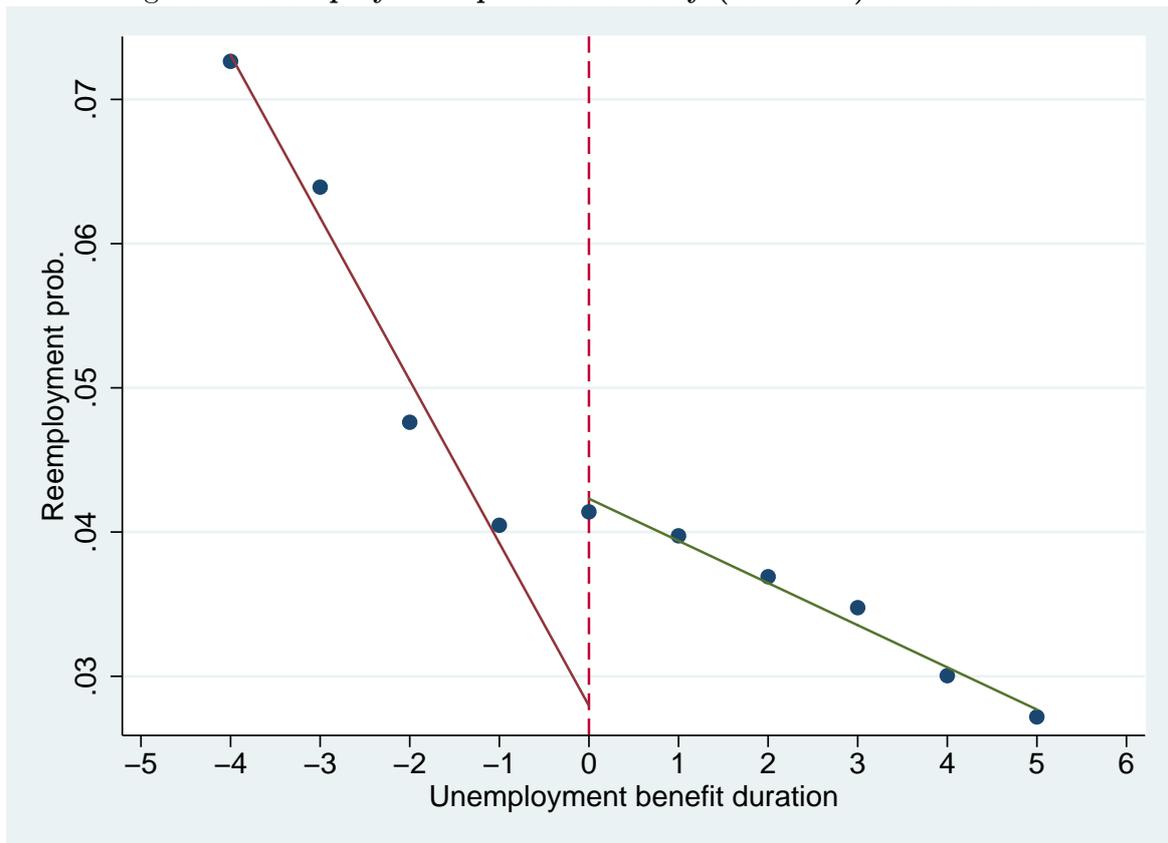
Notes: The horizontal axis indicates the (centered) values of UB duration. The vertical axis indicates the probability of reemployment in the subsequent month. The red and green lines correspond to fitted linear equations over the four and five observations at the left and right of threshold UB duration, respectively. The left line was extended towards the threshold value by computing its predicted value at that level of UB duration.

Figure 3: **Unemployment exit probabilities by (centered) UB duration**
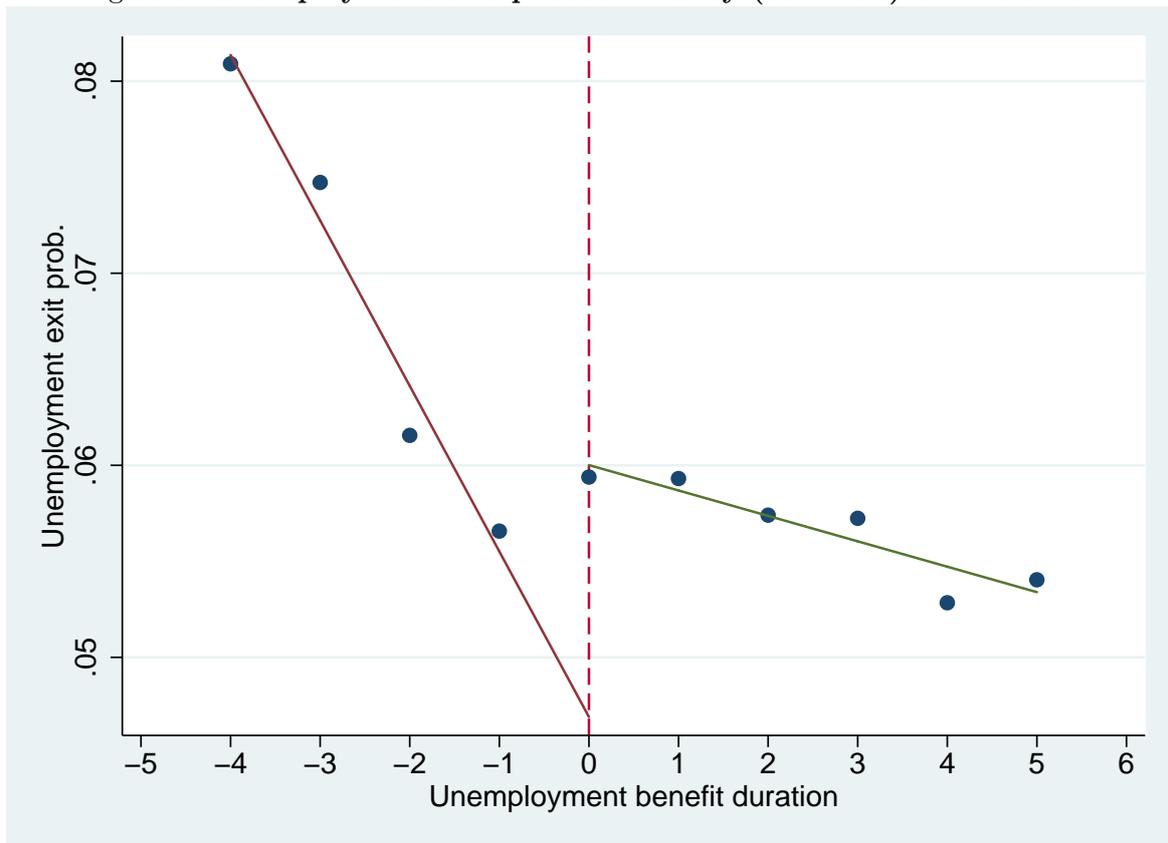
Notes: The horizontal axis indicates the (centered) values of UB duration. The vertical axis indicates the probability of unemployment exit in the subsequent month. The red and green lines correspond to fitted linear equations over the four and five observations at the left and right of threshold UB duration, respectively. The left line was extended towards the threshold value by computing its predicted value at that level of UB duration.

Figure 4: **Transitions to non-subsidized unemployment by (centered) UB duration**
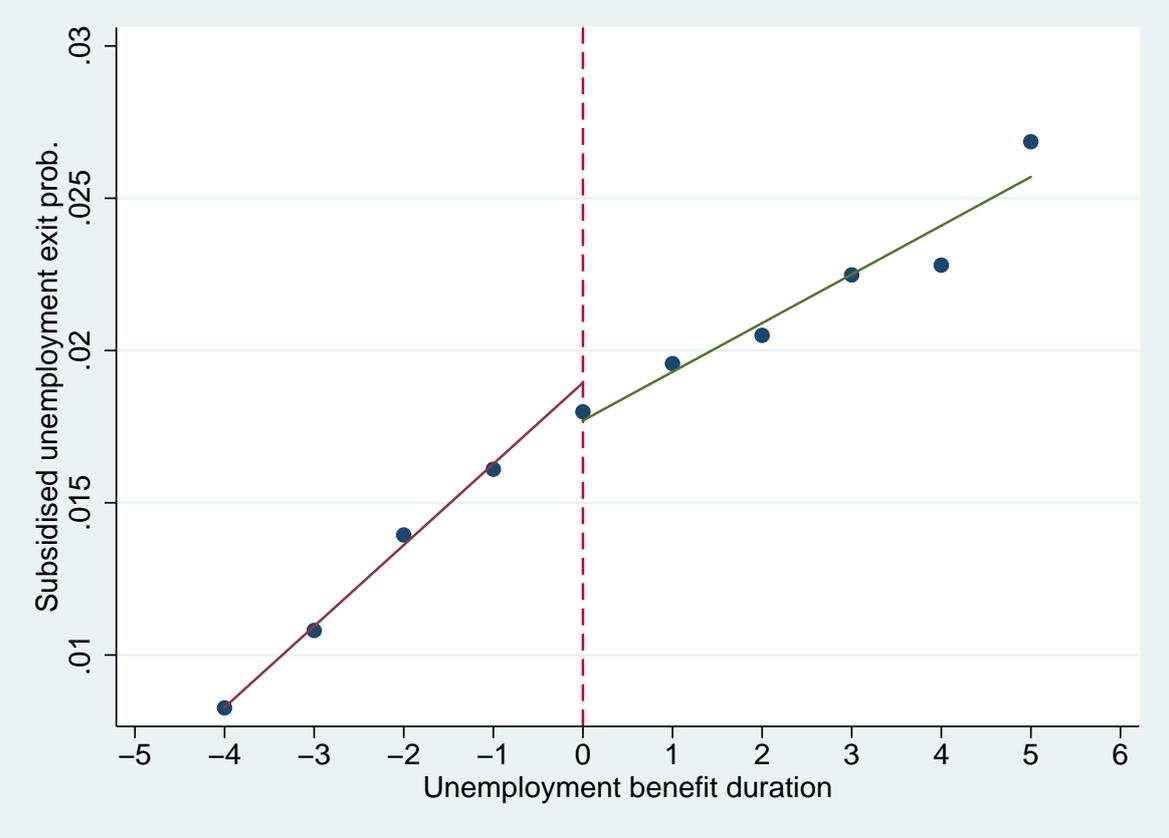
Notes: The horizontal axis indicates the (centered) values of UB duration. The vertical axis indicates the probability of transitions to non-subsidized unemployment in the subsequent month. The red and green lines correspond to fitted linear equations over the four and five observations at the left and right of threshold UB duration, respectively. The left line was extended towards the threshold value by computing its predicted value at that level of UB duration.

Figure 5: **Income level in following month by (centered) UB duration**
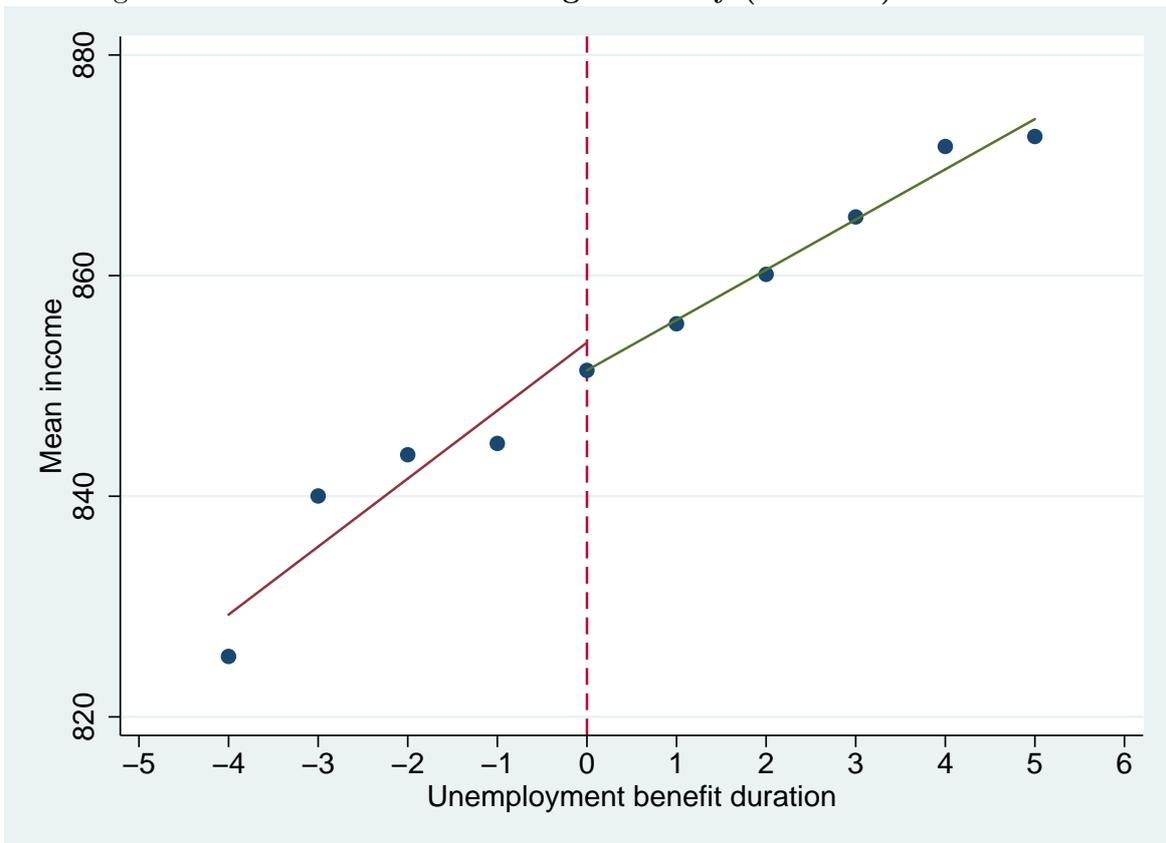
Notes: The horizontal axis indicates the (centered) values of UB duration. The vertical axis indicates the mean income percentual variation (unemployment benefits or wages) in the next month. The red and green lines correspond to fitted linear equations over the four and five observations at the left and right of threshold UB duration, respectively. The left line was extended towards the threshold value by computing its predicted value at that level of UB duration.

Figure 6: **Reemployment probabilities by (centered) UB duration and month (April to July 2012)**
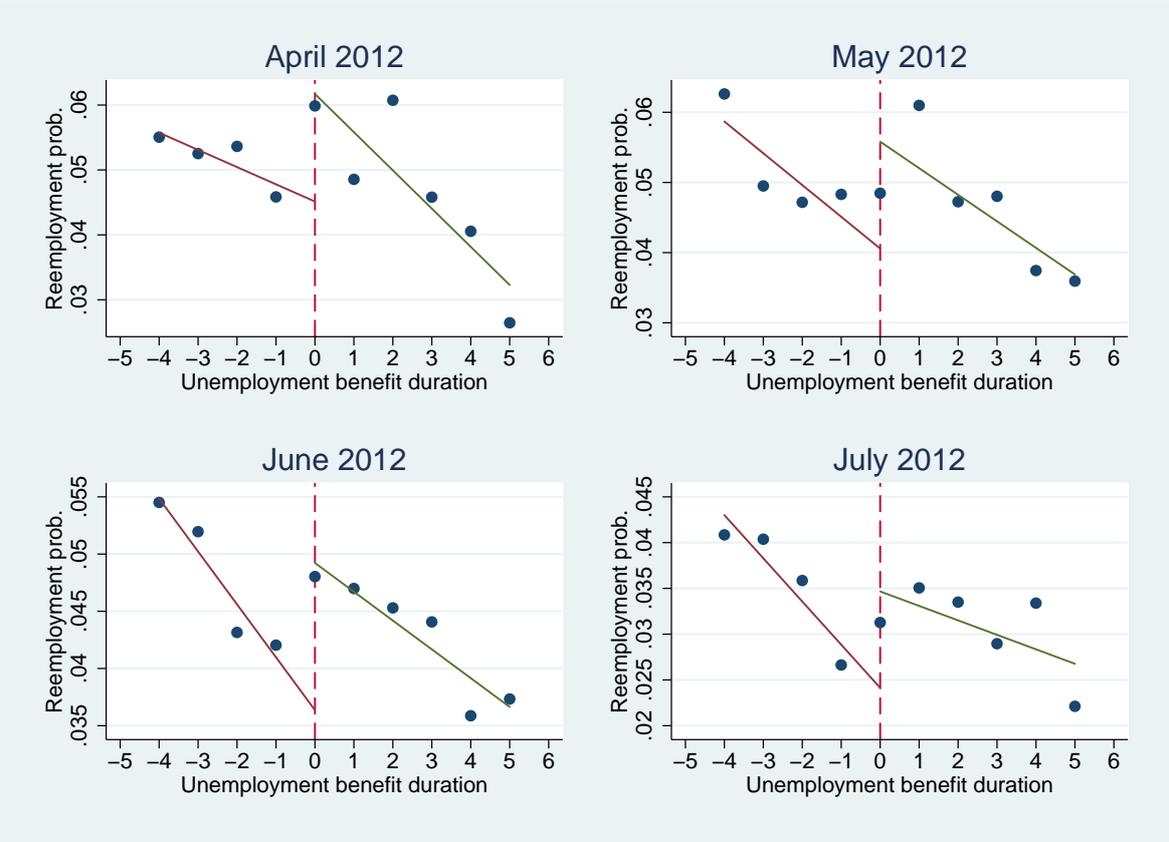
Notes: Each graph depicts results for a subsample observed only in a specific month of the period covered, from April to July 2012, respectively. The horizontal axis of each individual graph indicates the (centered) values of UB duration. The vertical axis indicates the probability of reemployment in the subsequent month. The red and green lines correspond to fitted linear equations over the four and five observations at the left and right of threshold UB duration, respectively. The left line was extended towards the threshold value by computing its predicted value at that level of UB duration.

Figure 7: **Reemployment probabilities by (centered) UB duration and month (August to November 2012)**
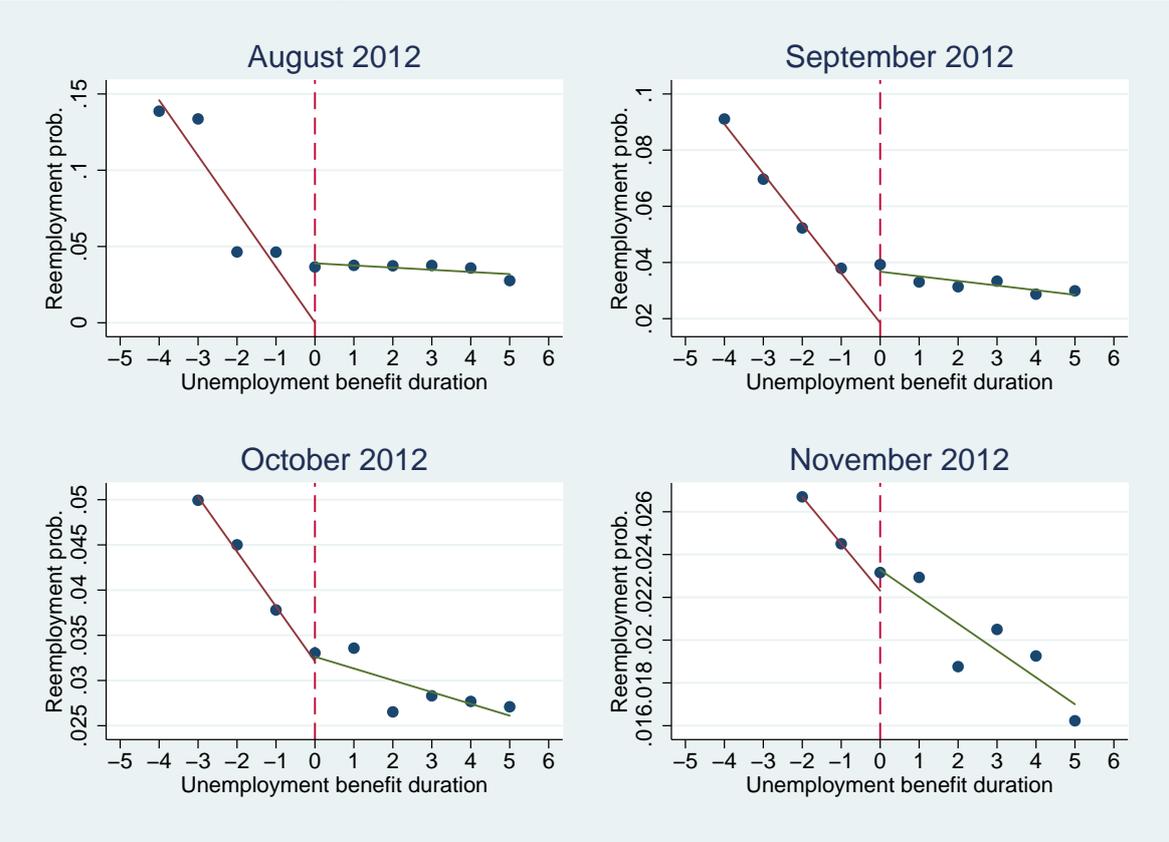
Notes: Each graph depicts results for a subsample observed only in a specific month of the period covered, from August to November 2012, respectively. The horizontal axis of each individual graph indicates the (centered) values of UB duration. The vertical axis indicates the probability of reemployment in the subsequent month. The red and green lines correspond to fitted linear equations over the four and five observations at the left and right of threshold UB duration, respectively. The left line was extended towards the threshold value by computing its predicted value at that level of UB duration.

Figure 8: **Mean values of background variables, by (centered) UB duration**
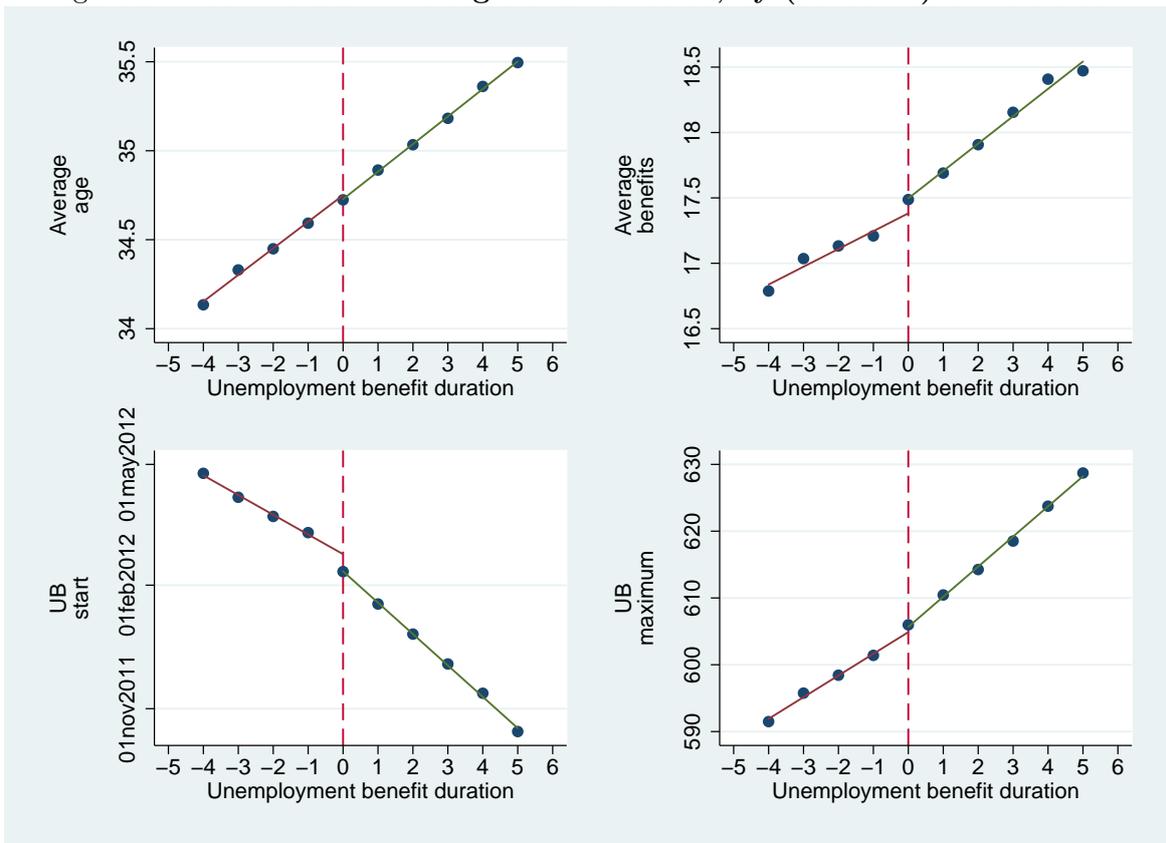
Notes: Each graph depicts results for a specific background, pre-determined variable. The horizontal axis of each individual graph indicates the (centered) values of UB duration. The red and green lines correspond to fitted linear equations over the four and five observations at the left and right of threshold UB elapsed, respectively. The left line was extended towards the threshold value by computing its predicted value at that level of UB duration.

Figure 9: **Falsification test: reemployment probabilities, by (centered) UB duration, 2011**
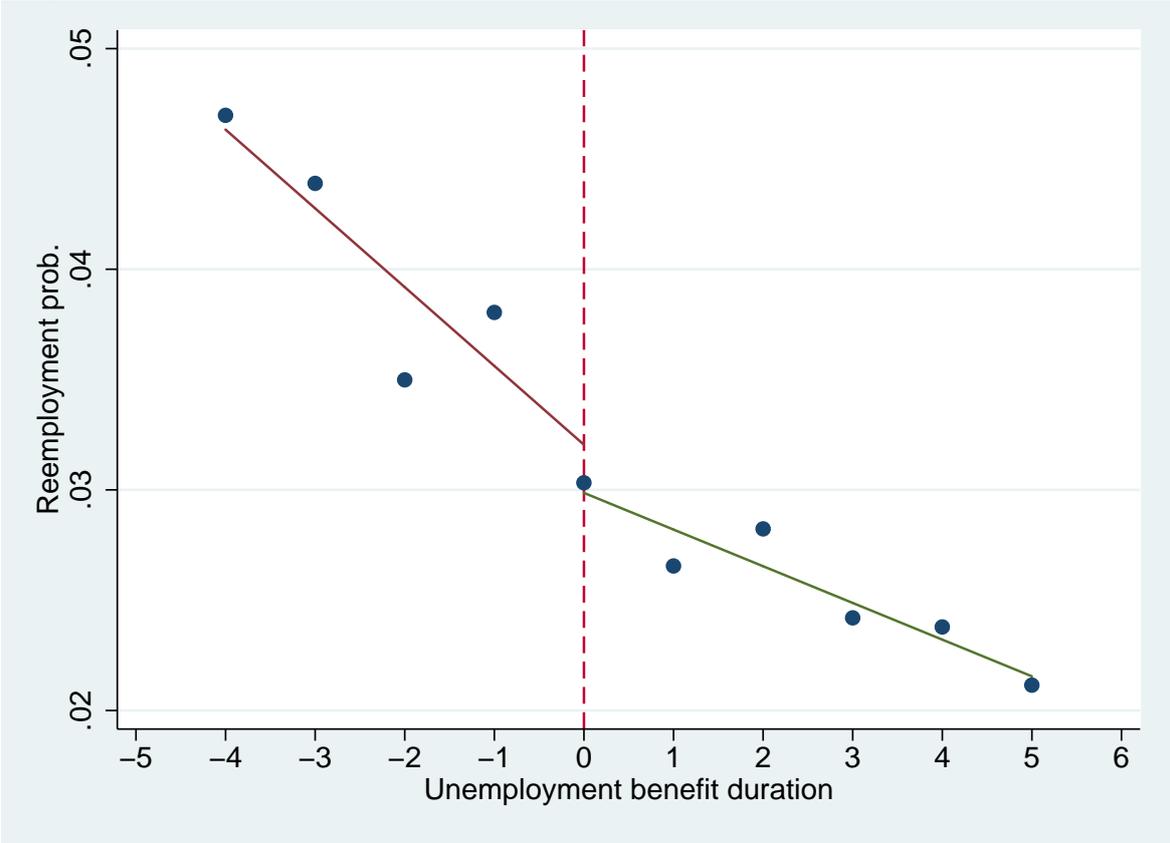
Notes: The horizontal axis indicates the (centered) values of UB duration. The vertical axis indicates the probability of reemployment in the subsequent month in 2011, the year before the *Convocatórias* programme. The red and green lines correspond to linear equations over the four and five observations at the left and right of threshold UB duration, respectively. The left line was extended towards the threshold value by computing its predicted value at that level of UB duration. The results are based on a different data than the one used for the main results.

Table 1: Characteristics of the unemployed, by month of participation

| Participation | | | | | | |
Year	Month	Age	Female	Schooling	Married	Obs
2012	Mar	36.27	.44	7.30	.47	7588
		(5.99)	(.50)	(3.49)	(.50)	
	Apr	35.87	.45	7.68	.49	16931
		(6.21)	(.50)	(3.05)	(.50)	
	May	34.34	.50	10.28	.45	16492
		(6.29)	(.50)	(3.02)	(.50)	
	Jun	34.41	.56	11.78	.42	12657
		(5.98)	(.50)	(3.47)	(.49)	
	Jul	34.32	.53	10.63	.42	6696
		(6.17)	(.50)	(3.97)	(.49)	
	Aug	34.15	.50	9.70	.42	4921
		(6.22)	(.50)	(3.22)	(.49)	
	Sep	34.02	.49	9.75	.42	4781
		(6.62)	(.50)	(3.74)	(.49)	
	Oct	34.54	.51	9.76	.43	4649
		(6.22)	(.50)	(3.76)	(.50)	
	Nov	34.16	.51	10.33	.40	2294
		(6.28)	(.50)	(3.82)	(.49)	
	Dec	34.71	.50	9.67	.44	419
		(5.96)	(.50)	(3.97)	(.50)	
2013	Jan	34.83	.52	9.98	.51	1364
		(5.88)	(.50)	(4.46)	(.50)	
	Feb	35.15	.54	10.29	.49	1273
		(5.88)	(.50)	(3.80)	(.50)	
	Mar	34.30	.55	11.20	.47	775
		(5.78)	(.50)	(4.00)	(.50)	
Total		34.85	.50	9.62	.45	80840
		(6.23)	(.50)	(3.72)	(.50)	

Notes: Statistics refer to the month when the unemployed participated in the programme and their characteristics in February 2012. Schooling measured in years.

Table 2: Participant descriptive statistics, pooled data

	Means	S.D.
Transition to employment	0.04	(0.20)
Transition out of unemployment	0.06	(0.24)
Transition to non-subsidized unemployment	0.02	(0.13)
Income percentual variation	0.05	(1.06)
Treatment variable	0.04	(0.19)
Eligibility	0.55	(0.50)
UB elapsed duration	6.17	(3.26)
Age	34.70	(5.64)
Female	0.50	(0.50)
Married	0.52	(0.50)
Foreigner	0.06	(0.24)
Schooling	10.04	(3.87)
Initial UB duration	588.83	(142.15)
UB daily amount	17.57	(6.79)
Observations	711,849	

Notes: Statistics based on pooled monthly data, from February 2012 to February 2013. Transitions measured in terms of following month. Eligibility is dummy variable equal to one if UB duration of six months or more. Schooling measured in years. Initial UB duration denotes maximum number of days of unemployment subsidy at beginning of spell. UB daily amount denotes euros per day of unemployment subsidy, at beginning of spell.

Table 3: *Convocatórias* programme effects, different dependent variables and polynomials

		Treatment effect on:			1st stage
	Reemploym't	Transitions...		Income	results -
Polynomial	probability	out of	to non-subsidy	level	eligibility
function		unemploym't	unemploym't		effect
Linear	0.021***	0.024***	0.003	0.007	0.130***
	(0.007)	(0.008)	(0.004)	(0.021)	(0.001)
Quadratic	0.083***	0.078***	-0.003	-0.012	0.114***
	(0.009)	(0.008)	(0.004)	(0.026)	(0.001)
Cubic	0.039***	0.046***	0.007*	0.017	0.133***
	(0.009)	(0.010)	(0.004)	(0.027)	(0.002)
Linear	0.041***	0.042***	0.001	0.002	0.106***
spline	(0.009)	(0.009)	(0.004)	(0.022)	(0.001)
Quadratic	0.092***	0.094**	0.002	0.225**	0.110***
spline	(0.040)	(0.041)	(0.012)	(0.107)	(0.001)
Outcome mean	0.04	0.06	0.02	0.05	–
Obs.	615,089	615,089	615,089	604,390	–

Notes: Each coefficient and standard error pair is obtained from a separate 2SLS regression under a specific spline structure (indicated in the left column) and dependent variable (indicated in the top row). The last column presents the results for the first-stage results on programme eligibility term without interactions), under each polynomial function. All specifications include a large set of control variables (see main text). Standard errors in parentheses; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 4: *Convocatórias* programme reemployment effects, different subsamples

Subsample	Coefficient	S.E.
Women	0.064***	(0.013)
Over 34 years old	0.083***	(0.017)
Over 9 years of schooling	0.101***	(0.016)
Over 570 days UB potential duration	0.031***	(0.008)
Over €13.97 UB daily amount	0.036***	(0.011)
Constrained Jobcentres	0.020**	(0.008)

Notes: Each coefficient and standard error pair is obtained from a separate 2SLS regression. Threshold levels correspond to sample medians. Constrained jobcentres are jobcentres where the proportion of newly-registered unemployed is higher than 70% of the stock of unemployed in the respective centre. Standard errors in parentheses; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A.1: Literature summary

Paper	Country	Year	UR	Intervention	Outcome(s)	Meth.	Results
Dolton & O'Neill (2002)	UK	89	7.1	Job search counselling interview (*Restart*)	Unemployment rate	RE	⇓ by 5 p.p.
Klepinger et al. (2002)	US	94	6.1	Job search monitoring or workshop	UB paid and number of weeks on UB	RE	⇓ by $115 and one week
van den Berg et al. (2004)	Netherl.	94	6.2	Sanctions (temporary benefit reduction)	Welfare to work transition	Dur	⇑ by more than 140%
Black et al. (2003)	US	94-96	5.7	Mandatory employment and training services	UB paid, number of weeks on UB and subsequent earnings	RE	⇓ by $143, 2.2 weeks and ⇑ by $1050, respectively
Geerdsen (2006)	Denmark	95-97	6.1	Compulsory labour market programmes	Employment transitions	QE	⇑ by 145%
Manning (2009)	UK	96	7.9	Increase in job search requirements and administrative hurdle (*Jobseeker's Allowance*)	Transitions out of unemployment, to employment and to non-subsidized unemployment	DID	⇑ by 6%, no effect and ⇑ by 6.7%, respectively
Petrongolo (2009)	UK	96	7.9	Increase in job search requirements and administrative hurdle (*JSA*)	Likelihood of a spell on incapacity benefits and of positive earnings	DID	⇑ by 2.5-3% and ⇓ by 4-5%, respectively
Borland & Tseng (2007)	Australia	97-98	8.6	Work-search monitoring (JobSeeker Diary)	Out of unemployment transitions and UB duration	Ma	⇑ by 5.1 p.p and ⇓ by 6%, respectively
Blundell et al. (2004)	UK	98	6.1	Job assistance and wage subsidies (*New Deal for Young People*)	Employment transitions	DID	⇑ by 5 p.p.
McVicar (2008)	N. Ireland	99-05	4.5	Suspension of monitoring	Transitions out of unemployment, to employment and other benefits	QE	⇓ by 17%, 26% and 8%, respectively
Hagglund (2011)	Sweden	04	7.4	Active placement efforts	Transitions out of unemployment, to employment and other exits	RE	⇑ by 51%, 43% and 54%, respectively
Cockx & Dejemeppe (2012)	Belgium	04-05	8.5	Monitoring of job search efforts	Transitions to employment, training and out of labour force	RDD	⇑ by 9 p.p., no effect and no effect, respectively
Graversen & van Ours (2008)	Denmark	05-06	4.4	Mandatory activation programme	Transitions to employment	RE	⇑ by 30%
Crepon et al. (2013)	France	07-08	8	Job placement assistance	Transitions to stable employment and displacement effects	RE	⇑ by 11% but at expense of eligible non-treated individuals
Boone et al. (2009)	Netherlands	–		Benefit sanction	Job acceptance probability	RE	⇑ from 1.4 p.p. to 50 p.p., depending on benefit structure and wage offers

Notes: This is a non-exhaustive summary of some of the main papers that seek to evaluate causally activation programmes. Column 3 presents the unemployment rate for the respective country and year. If the study spans multiple years, the rate is an average of the period. The unemployment data is from the Eurostat, except for Australia (Australian Bureau of Statistics). The methods are random experiment (RE), difference-in-differences (DID), quasi-experiment (QE), matching (Ma) and regression discontinuity design (RDD).

Table A.2: The diversity of activation strategies - examples from eight countries (1)

	Belgium	Denmark	Germany	Netherlands
Registration and benefit entitlement				
Entitlement to benefits	Before registration	Simultaneously with registration	Simultaneously with registration	Before registration, retroactive to date of loss of work
Placement efforts at initial registration	Referrals to vacancies	None	Referrals to vacancies	Assessment of work readiness+referrals
Detailed registration interview	Yes, at first contact	Yes, within a month	Yes, within a fortnight	Yes, at first contact+profiling
Confirmation of status	Declarations (monthly)	Declarations (monthly)	Declaration of relevant changes	Declarations (monthly)
Job search requirements				
Frequency of reporting	Depends on age and on results of previous interviews	Intensive interview once every 3 months	Intensive interview 6 times a year	Monthly (no face-to-face contact)
Number of actions to be reported	Not specified	Not specified	Not specified	4
Services provided by the Public Employment Service				
Use of direct referrals	1 to 3/year/unemployed	1 to 3/year/unemployed	No estimate	No estimate
Reports on application outcomes	Employers & unemployed	Employers & unemployed	Employers & unemployed	Employers
Frequency of intensive interviews	Monthly after 2 to 9M unemployed	Once every 3 months	6 per year	Depends on counsellor assessment, unemployed attributes or profiling
Voluntary interviews	20% of interview time	No information	No information	Not significant
Collective information sessions	Mandatory participation (early in spell)	No information	No information	No information
Individual action plans	2 to 9M	Within 9M/6M for adults/youth	Within 1 week to 1M after registration	1M for hard to place clients
Participation in ALMPs				
Compulsory or voluntary entry	Compulsory only if referred	Compulsory at 9M for 30-60 and 6M for others	Voluntary	Compulsory
Job-search verification during participation	Yes	No	No	No

Source: Authors' analysis based on OECD (2007).

Table A.3: The diversity of activation strategies - examples from eight countries (2)

	Portugal	Switzerland	United Kingdom	United States
Registration and benefit entitlement				
Entitlement to benefits	Simultaneously with registration	Before registration (waiting period: 5 days)	Simultaneously with registration	Before registration (waiting period: 7 days)
Placement efforts at initial registration	Referrals to vacancies	Referrals to vacancies	Referrals to vacancies	Referrals to vacancies
Detailed registration interview	Yes, at first contact	Yes, within a fortnight	Yes, within a week	Yes, within 3 weeks (targeted)
Confirmation of status	In-person attendance (fortnightly)	In-person attendance (monthly)	In-person attendance (fortnightly)	Declarations (fortnightly)
Job search requirements				
Frequency of reporting	Variable	In-person counselling interview (monthly)	In-person counselling interview (fortnightly)	Fortnightly (no face-to-face contact)
Number of actions to be reported	Not specified	Between 4 to 10	10	10
Services provided by the Public Employment Service				
Use of direct referrals	1 to 3/year/unemployed	6 to 8/year/unemployed	6 to 8/year/unemployed	No estimate
Reports on application	Unemployed	Employers & unemployed	Unemployed	Unemployed
Frequency of intensive interviews	Depends on counsellor assessment, unemployed attributes or profiling category	Monthly	Fortnightly	Depends on counsellor assessment, unemployed attributes or profiling category
Voluntary interviews	No information	No information	Some	No information
Collective information sessions	Mandatory participation (early in spell)	Mandatory participation (early in spell)	Non existent	Targeted to unemployed likely to exhaust benefits
Individual action plans	Within 6M/3M for adults/youth	Within the first 3M	Within 1 week to 1M after registration	Rare
Participation in ALMPs				
Compulsory or voluntary entry	Compulsory only if referred	Compulsory only if referred	Compulsory at 10M for youth and 22M for 25-49	Voluntary
Job-search verification during participation	No	Yes	No	Yes

Source: Authors' analysis based on OECD (2007).