# Job Search and Activation Policies in Central and Eastern Europe

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**Abstract:** Aggregate labour demand as well as the demand structure changed during the economic transition in post socialist New Member States, and managing the adjustment continues to pose a challenge to their underdeveloped public administrations. This paper examines the potential role of activation tools, which may contribute to labour market adjustment but have been relatively underresearched in the CEECs. Using the EU Labour Force Survey for 2004-2008, the paper estimates the effect of various activation approaches on selected measures of job search. The results are in line with earlier research in old member states and confirm the effectiveness of a consistently strict approach to activating the non-employed population and also point to synergies between certain policy elements. Results also imply that there is considerable room for improvement in the policies of most NMS. For countries that use a mostly lenient activation approach, extending the coverage of registration with the public employment service or spending on such services may be more effective as a next step than tightening the monitoring of job search.

## 1.    Introduction

The former Socialist countries of Central and East Europe (CEECs) all experienced a marked drop in employment during the transitional recession in the 1990s but showed considerable variation in the recovery of their labour markets. This paper aims to identify and explain some of the shortcomings of policy-making related to employment and welfare in promoting social cohesion in the CEECs. In particular, we examine the impact of the eligibility and entitlement rules of unemployment benefits on activating the non-employed population.

Political changes in the CEECs were followed by dramatic changes in their economies over the 1990s. Output fell by 15-25 per cent and there were large shifts in the ownership structure, in the sectoral composition of GDP, and in firm size distribution. The fall in output was smaller, and recovery started earlier in the Visegrad countries and in Slovenia.[1] Employment fell by between 15-30% points, the decline being largest in the three countries that chose fast privatisation (Estonia, Hungary and Latvia).[2] As Figure 1 below illustrates, the speed of recovery of labour markets has varied considerably across the CEECs and the observed increase in the male employment rate was in most cases accompanied by a relative decline in female employment (when compared to EU15 levels).

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[1] In the gloomiest three years between 1990 and 1993, the cumulative fall in real GDP amounted to 18 per cent in Hungary and in Slovenia, i.e. slightly more than in the Czech Republic (15 %) and in Poland (16 %). Other countries in the region suffered larger declines of 22-25 per cent. Data from EBRD Transition update 2000: Table 1, page 4.

[2] In most of the A8 (the eight post-socialist Member States joining the EU in 2004), the lowest employment levels were observed between 1999 and 2001. The two exceptions are Poland and Hungary, where the nadir was reached in 1993 and 1997 respectively. Employment dropped to around 70% of its pre-transition level in Estonia, Hungary and Latvia, and around 80% in Poland, Lithuania, Slovakia and Slovenia. The Czech Republic suffered the smallest drop to about 87% of the 1989 level. No comparable long term time series is available for the other NMS.

Figure 1. Relative employment rates in post socialist Member States by gender, EU15=1
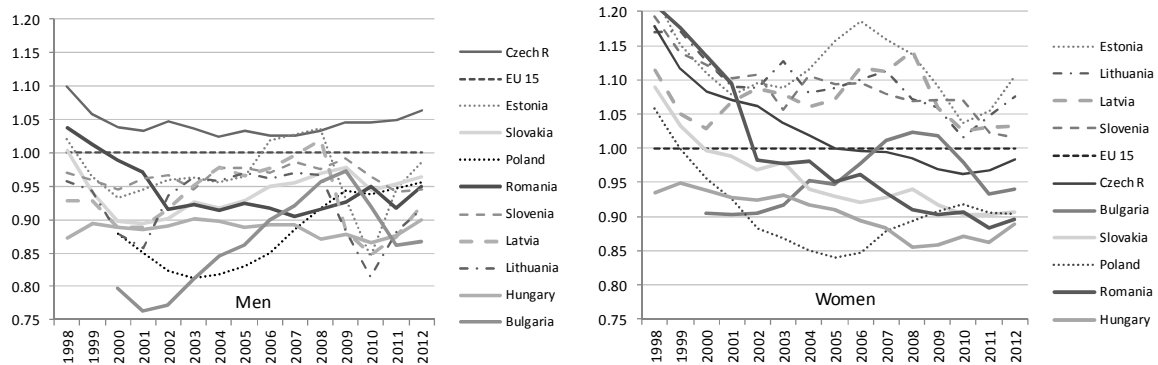


Source: Eurostat online (lfsq_ergaed). Population aged 20-64.

The labour market performance of CEECs has been obviously shaped by initial government strategies (which determined the size and nature of the initial labour market shock), initial conditions (most importantly the level of education) and policy measures during the past twenty years affecting the economy, labour market institutions and the welfare system.

In broad terms, the behavioural conditions of unemployment benefits follow Western European standards in all the CEECs, but there is much variation within the CEECs in the details of activation rules and most probably in the implementation as well.[3] All CEECs require benefit recipients to look for a job and take up an offer of a job or ALMP. Slovakia has taken the strictest approach in most dimensions of activation, while Bulgarian and Hungarian rules appear the most lenient, especially regarding sanctions for refusal to take up a job offer (OECD 2007, Venn 2012).[4]

How successful are alternative strategies of activation? As we show in the next section, both increased registration and increased spending on PES services are positively correlated with a higher proportion of non-employed reporting intensive job search. The focus of the paper is to explore interactions (or synergies) between elements of an activation strategy which may enhance their impact on job search. To what extent can the increased contact with the PES that comes from registration induce a larger group of non-employed to engage in job search? Can extending registration without investing in improving the quality of services provided by the PES be sufficient to achieve greater job search activity? Can the previous strategy work with relatively lenient rules, or only if the obligations of jobseekers are reinforced

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[3] OECD (2007) describes activation measures to cover 1) early intervention by the PES in the unemployment spell and frequent contact with employment counsellors; 2) regular reporting and monitoring of work availability and job-search actions; 3) direct referrals to vacant jobs or ALMPs; 4) individual action plans. These measures can be further refined by detailed rules of implementation, such as describing what constitutes a suitable job, and what sanctions apply for violating any of the rules.

[4] Other CEECs tend to be stricter than most EU15 in requirements concerning geographical mobility, proof of job search and justified reasons for refusing to take up a job offer, and sanctions for refusal. By contrast, most CEECs do not require benefit recipients to continue job search and accept job offers while they are on an ALMP (as is done in most old MS), and are more generous in their requirements concerning occupational mobility.

through strict monitoring? If more non-employed are compelled to cooperate with the PES and search for a job, will this 'crowd out' their independent job search effort?

The structure of the paper is the following: section 2 reviews the existing literature on activation and job search, section 3 describes the data we used, and section 4 describes the main elements of activation strategies. Sections 5 and 6 present estimation results and outline some alternative estimation strategies and section 7 concludes.


## 2.     Activation policies: theory and evidence in the European literature

In the past fifteen years, a sizeable European literature on the effects of the compulsory and supportive elements of activation policies have emerged.[5] The empirical results show that closer monitoring of unemployed persons' search activity (and the associated sanctions) are an effective way of getting people off the dole. However, while most studies show that compulsory policies increase the speed of transitions to employment, it is less clear whether it leads to stable jobs and whether it might also incite unemployed to move to alternative welfare programs. The empirical results on counselling elements of activation policies are more mixed: in general they show that one the one hand relatively intensive programs lead to substantial improvements in unemployed persons' outcomes; on the other hand, low-cost programs are rarely effective.

Before providing a brief summary of the empirical studies mentioned above, let us shortly review the theory behind the possible effects of activation policies, which builds on standard search models that allow for endogenous search intensity – in possibly two different types of search channels formal/informal (see for example: van den Berg – van der Klauuw (2006)).

The enquiries into the effects of monitoring of job search activity (and the associated sanctions[6]) builds on canonical models of job search, where the non-employed person through a comparison of the discounted value of staying unemployed versus obtaining a job determines the payoff to job search activity when deciding on her optimal search intensity. This analysis is somewhat complicated by the fact that one has to distinguish between the (a) ex ante and ex post effects, (b) the mandatory level of job search, (c) effectiveness of monitoring, (d) the severity of potential sanctions and (e) the availability of alternative forms of welfare provisions. The ex post effect of monitoring, meaning the imposition of sanctions on unemployed who "misbehave" will clearly lead to an increase in these persons' job search effort (and hence job finding rate) through the decrease in income in the unemployment state. Monitoring also has so-called threat (or ex ante) effects, since it (i) increases the required level of search which is costly to the unemployed and hence makes unemployment less attractive relative to working, and (ii) decreases the expected income of the unemployed through the possibility of receiving a sanction.

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[5] Evidence from the CEECs is scarce. One of the few exceptions is Micklewright and Nagy (2004) who measure the effect of tightening behavioural conditions on the probability of exit to a job or an active labour market programme and find a small but significant effect for women aged over 30 years.
[6] Sanctions typically involve a temporary reduction or suspension of benefit payments.

This leads to the unemployed increasing their search efforts and hence to a higher job finding rate. This effect is obviously more pronounced the higher is the required level of job search, the tighter the monitoring, the more severe the sanctions and the less alternative forms of welfare benefits are available.

There are however two qualifications of the findings above. First of all, if the search requirements are so high that the value of staying unemployed fall below that of dropping out of the labour force, then, while the search effort of those who continue to stay registered increases, the aggregate search activity of the non-employed might decrease due to a high proportion of former unemployed switching to alternative forms of welfare. Clearly, this perverse effect of imposing job search requirements will be present if alternative ways of claiming welfare payments (e.g. disability benefits) are easily accessible and do not lead to a large drop in income. Second, monitoring only affects formal(isable) types of job search, which might lead to a decrease in the effort devoted to informal search, partially offsetting the positive effect of monitoring on the job finding rate.

The empirical literature on the effects of job search monitoring relies either on social experiments or on difference-in-difference/regression discontinuity strategies. Social experiments are highly useful not only because of the "clean" source of identification, but also because they allow authors to disentangle the separate effects of elements of activation strategies (counselling vs. job search monitoring) that are often implemented simultaneously. However, experiments are less suited to study how the non-employed might try to substitute across alternative forms of welfare benefits in response to changes in search requirements, which is important for studying the costs and benefits of policy changes.

The most clear-cut finding in recent empirical work - based on data from Denmark (Svarer 2012), the Netherlands (van den Berg et. al. 2004) and Switzerland (Lalive et. al. 2005) is that not only sanctions, but also warnings that a person is not fulfilling job search requirements has a strong incentive effect on the unemployed, and the job finding rate can increase by up to 50% in response. A few of these studies were able to show that - in line with the theory - the higher the expected sanctions (either due to an increase in the sanctioning rate or due to an increase in the severity of sanctions), the stronger was the reaction to 'reminders' about job search requirements. A number of studies, which have also attempted to disentangle the *ex ante* effect of stricter monitoring of job search requirements, were less conclusive, and have found a small to moderate increase in the outflow to employment (Cockx – Dejemeppe 2012, Dahlberg et. al. 2009, Graversen –van Ours 2011). A more detailed reading of the literature suggests that monitoring seems to work for more disadvantaged groups[7], and under relatively favourable labor market conditions.

The papers above (primarily due to their reliance on social experiments) are tacit about one important aspect of increasing job search requirements: they are unable to consider whether such policy changes lead to a flow of the unemployed to alternative forms of welfare benefit. A number of studies have shown that this is an important issue to consider, since the aggregate effect of increased strictness is

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[7] The rationale for this is that these unemployed have little room to substitute increased job search in formal channels with a decrease in search effort in informal channels, and hence their total search effort goes up substantially.

much mitigated for groups that can have access to disability/sickness/early retirement benefits (Cockx – Dejemeppe 2012, Lammers et. al. 2012) A noteworthy example is the 1996 introduction of the Jobseekers' Allowance in the UK: Manning (2009) and Petrongolo (2009) estimated that while job search intensity increased among those who stayed on unemployment benefits, the total job search effort of the non-employed hardly changed as a large number of former claimants substituted disability benefits for UB.

The recent empirical literature on the effects of job search requirements has raised another important issue. As stricter job search requirements lead to a decrease in non-employed persons' reservation wage (since the value of staying unemployed decreases), they might be compelled to accept lower quality job matches that are ultimately short-lived. In such a scenario, although the non-employed find a job more quickly, the long-run consequences of stricter rules might not be beneficial due to a higher recurrence of unemployment or lower wages. There is a small number of empirical studies on this issue (Arni et. al. 2013, Cockx – Dejemeppe 2012, Petrongolo 2009), mostly suggesting that stricter monitoring does indeed lead to a small reduction in the expected income of the unemployed (around 5% over a two-year period).

In contrast to the literature on monitoring, both the theoretical analysis and the empirical studies on job search counselling point to a positive effect on both unemployed person's job finding rate and expected income. In formal models, counselling - through making (formal) job search more effective - increases unemployed persons' job finding rate under relatively weak conditions.[8] While empirically identifying the separate effect of job search counselling is complicated by the fact that in activation programs counselling and monitoring elements are often bundled together, most studies agree that regular individualized counselling sessions with caseworkers have a largely beneficial effect, while group sessions on search strategies have negligible positive effects (Pedersen et. al. 2012). It seems that even though more intensive programs are costly, they can yield a positive payoff through the increased job finding rate and lower recurrence of unemployment spells.


## 3.     Data, sample, and key variables

The dataset we rely on is the harmonized EU Labour Force Surveys, as the only source of comparable labour market data for the CEECs that contains information on labour force status, search methods, and registration at the PES, as well as a host of background variables over several years.[9]

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[8] There are two effect of counseling: it increases the job offer arrival rate, which increases the job finding rate; but an increase in the arrival rate also increases the reservation wage, decreasing the probability that a job offer is accepted.

[9] Data from twenty countries were included in our final dataset. From the EU15, our data cover Austria, Belgium, Denmark, Finland, France, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the United Kingdom, while for „new" member states we have data from Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

The sample we use covers all non-employed individuals between age 25 and 59, whose last employment spell terminated no more than eight years ago, and whose education level is no higher than upper secondary. Let us briefly discuss why we used a limited sample. First of all, we discarded all young (below age 25) and older (above age 59) individuals, because the labour force status of these individuals depends to a large extent on the structure of tertiary education and on the rules governing old age pensions, which is not the direct focus of our study. Second, we did not include in our sample those with tertiary education, since the non-employment rate of the highly educated is rather low in CEE countries, and it would have been hence difficult to obtain reliable estimates for this group due to small sample sizes (especially for smaller countries)[10]. Third, the harmonized EU Labour Force Surveys do not contain direct information on non-unemployment related welfare benefits, so the only way of identifying who potentially receives disability or early retirement benefits came from the variable "Main reason for leaving last job". This last question was not asked of those who have not been employed for more than 8 years, hence our restriction of the sample.

The key variables we used from the Labour Force Surveys (LFS) were based on questions on job search activity, registration at the public employment service and disability/early retirement status (besides the demographic, household background variables, and length of non-employment[11]). Our key outcome variables were the following. To count those individuals who search for a job intensively, we opted to use those who have used *at least three* of twelve search methods mentioned in the LFS questionnaire. To represent the *direct usage of PES*, we formed a dummy variable for those who sought a job through a public employment office or were 'awaiting a call from the public employment office'. We consider as undertaking *independent job search* all individuals who reported the usage of at least one of the job search methods not involving the public employment office. We recorded if an individual was registered at the public employment office to gauge whom the activation services of PES could affect directly, as well as whether the person received welfare benefits (UB or UA).[12]

We also assembled data on spending on different elements of PES' expenditures, the total number of registered unemployed persons, the total active-age population at the country level from EUROSTAT/OECD for the period 2001-2010. We record the spending on three distinct categories of expenditures: active labour market programs, welfare support payments and services of the PES (this last category includes solely expenditure on search-related programs and overhead costs of public employment offices), relative to the countries' GDP.[13] In order to account for the fact that countries with

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[10] Persons on maternity leave are not a major concern, since in the LFS, they are coded as employed, who are 'away from their job'.

[11] These included: gender, age group in 5 year cohorts, education level (3 levels), time elapsed since the last employment spell (0-5 months, 6-11 months, 12-23 months, 24 months or more), number of employed individuals in the household.

[12] In all of the analysis (unless noted otherwise) we used sampling weights provided by Eurostat.

[13] For new member states, spending on active labour market programmes financed from the European Structural Funds are non-neglible, as shown in Váradi (2013). While there is large cross-country variation in the weight of ESF financing of ALMPs, Váradi (2013) also shows that the ranking of countries (in terms of spending on ALMP relative to GDP) does not change substanitaly when adjusting for ESF spending. There are two further issues: (1) that only planned amounts, not actual amount disbursed are available, and (2) that spending from ESF cannot be

a higher unemployment rate tend to spend more on the PES, we also adjusted these variables, by 'deflating' them using total registered employment over total active-age population.[14] Our analysis will focus on the expenditures on the services of the PES, which we use to measure the quality of job-search counselling as well as of the enforcement of job-search requirements.

Finally, we used the 'strictness of job search monitoring' indicator from Venn (2012) to describe the qualitative aspect of PES activities: the effort devoted to checking whether the unemployed person undertakes independent job search. We considered those countries as "strict" where the unemployed person is required to regularly provide information on her search activity (meaning a score of 4 or 5 in Venn 2012). There are two potential limitations to using this indicator. First, this data pertains to 2011 which is outside our sample period, however Venn (2012, pp.26) documents that there were no major changes in the strictness of monitoring between 2004 and 2011. Second, the indicator measures only one aspect of the job search monitoring process, and while Venn (2012, pp.29) suggests avenues for enriching the indicator, she also reports a relatively high correlation coefficient between the simple and the more complex indicator. We opted not to use Venn's 'revised indicator' of job search monitoring, since it is only available for a handful of CEE countries.

## 4.    Job-search and activation: cross-country differences

Policymakers in Central and Eastern European countries have taken varied approaches to the activation of non-employed persons, and while there has been a move towards stricter eligibility criteria and a larger emphasis on jobseekers' obligations since the year 2000, large differences in policies persist. In this section, we will empirically document how CEEC differ in the usage of extensive and intensive activation measures, and contrast this with the policy mix in the EU-15.

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obtained on a year-by-year basis, only as total for planning periods. Neertheless, we plan to perform robustness analysis of our results in the future by trying to take ESF spending into account.

[14] In fact, this is equivalent to dividing the expenditure per unemployed person by the GDP per active age population.

Figure 2: Registration rates and proportion of the non-employed who left their job due to disability or early retirement
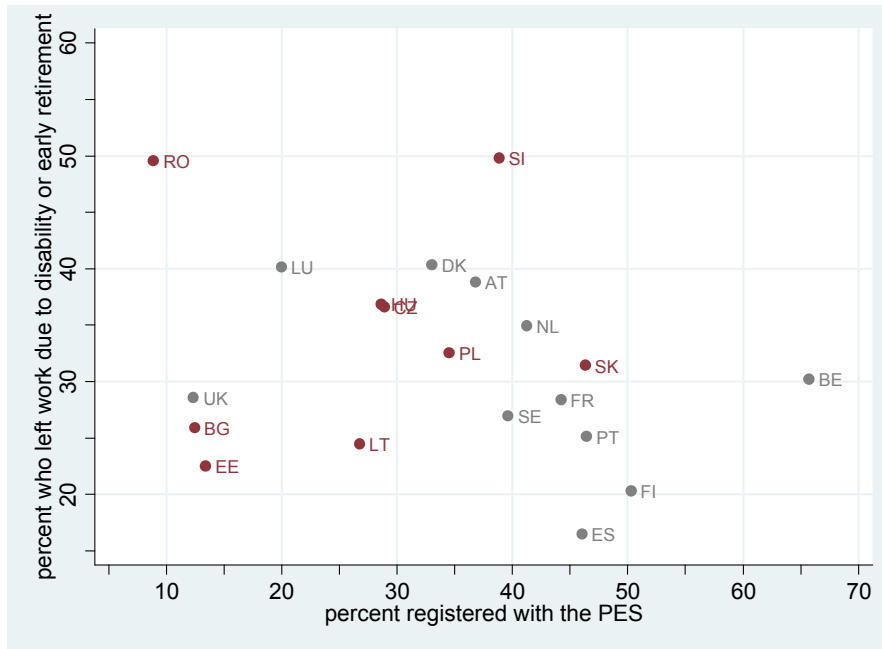


Let us first discuss to what extent the non-employed are registered at the PES, the extensive activation policy which can be relatively easily influenced by legislation, and which can serve as a precondition for being targeted by more intensive activation measures. We will simultaneously look at the prevalence of the use of disability and early retirement benefits, both of which generally grant access to welfare benefits without job search requirements, and are hence the two most often used ways of withdrawal from the labour force, especially among older workers.[15]

We can first notice from Figure 2 that in CEE countries there is pronounced variation in terms of registration rates, which ranged from below 9 percent in Romania to above 46 percent in Slovakia. What is however more remarkable is that registration of non-employed tends to be at a lower level in CEE countries, where the median registration rate was 29 percent, than in EU15 countries, where the same figure was 44 percent.[16] There also appears to be a moderate negative correlation between the registration rate and the proportion of non-employed on disability/early retirement benefits in EU15 countries, and this negative association lends empirical support to the assumption that those on disability/early retirement benefits are usually not targeted by activation policies. In CEE countries no pronounced relationship between these two variables can be observed, or in other words, in CEE

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[15] Note that the following analysis is based on country-level averages of the variables over the years 2000-2010. Averages are calulated using sampling weights, hence we implicitly adjust for country size.

[16] It is likely that this has to do not only with the differences registration policies, but also with the fact that the generosity of benefits is lower in CEE, and the eligibility conditions are slightly stricter.

countries a relatively large proportion of those who have not retreated from the labour force via disability/early retirement benefits are not in contact with PES.

Table 1: Registration rates and expenditure on PES, by strictness of job search monitoring and region

| | Lenient job search monitoring | | | | Strict job search monitoring | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Percent registered with the PES | S.D. | Expenditure on PES services (% of GDP) | S.D. | Percent registered with the PES | S.D. | Expenditure on PES services (% of GDP) | S.D. | Percent registered with the PES | S.D. | Expenditure on PES services (% of GDP) | S.D. |
| EU15 | 42.46 | 15.61 | 0.13 | 0.06 | 36.22 | 13.82 | 0.23 | 0.10 | 39.62 | 14.45 | 0.18 | 0.09 |
| NMS | 26.13 | 9.51 | 0.09 | 0.03 | 26.85 | 16.02 | 0.07 | 0.04 | 26.53 | 12.74 | 0.08 | 0.04 |
| Total | 35.93 | 35.93 | 0.12 | 0.12 | 31.53 | 31.53 | 0.15 | 0.15 | 33.73 | 14.93 | 0.13 | 0.09 |

Next, we look at our two measures of the intensity of activation: the expenditure on PES, and the strictness of job-search monitoring. Table 1 shows that CEE countries tend to spend on PES services less than half of what EU15 countries do. It also appears that while those EU15 countries that enacted stricter job search monitoring rules tend to spend more on PES services than those with relatively lenient rules, we find no similar pattern in CEE countries. It is also worth noting that, while quite naturally countries with higher registration rates tend to spend more on PES services, this does not apply to stricter EU15 countries.[17]

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[17] The Netherlands and the UK spend more than 0.3 percent of their GDP on PES services, while the registration rate according to our data was 41 and 11 percent, respectively.

Figure 3: The proportion of non-employed search for a job through the PES and the proportion conducting independent job search
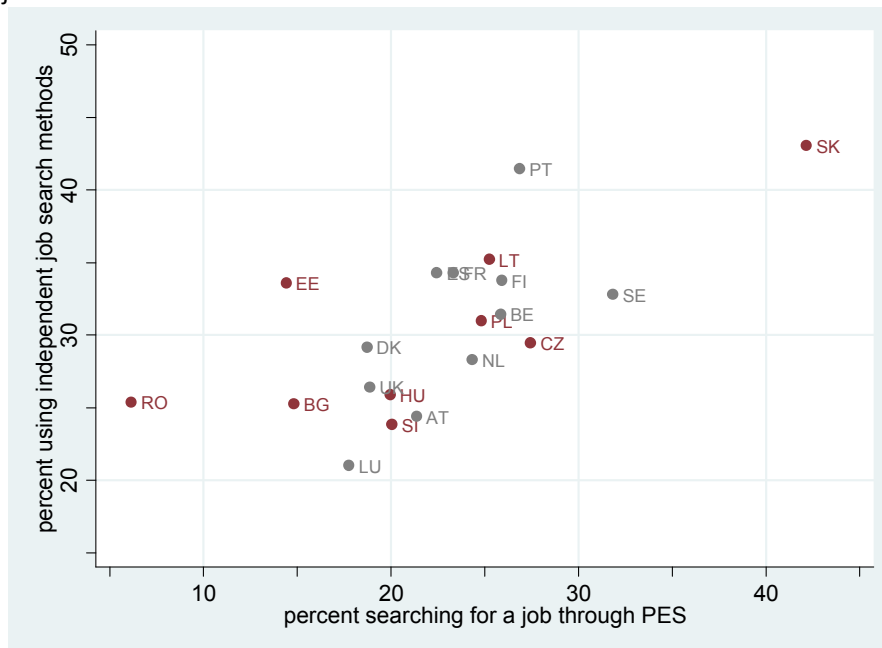


Finally, we look at the proportion of unemployed searching for a job using different methods in Figures 3 and 4. First, we can observe that there is substantial variation across countries in the proportion of non-employed using both the services of PES[18] and the proportion conducting independent job search, and that these two proportions mirror each other relatively closely (corr. coeff. of 0.68). Second, only a minority of non-employed were searching for a job intensively, as the proportion reporting using three or more job search methods was in the range of 17 to 27 percent.[19] Finally, looking at the association between intensive job search and our measures of extensive and intensive activation, we find that job search effort seems to increase with registration (corr. coeff. 0.38, significant at the 10% level), while the co-movement of the spending of PES services and search effort is much weaker (corr. coeff. 0.24, not significant).

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[18] The range between the first and the ninth decile is 15-30 percent for the usage of PES as a search method, while it is 24-38 percent for proportion of non-employed using other search methods,

[19] There were no significant differences in the proportion reporting using three or more job search methods between CEE and EU15 countries, nor across countries stricter or more lenient monitoring rules.

Figure 4: The relationship between intensive job search and (a) registration rates, (b) expenditure on PES



(a)                                                    (b)
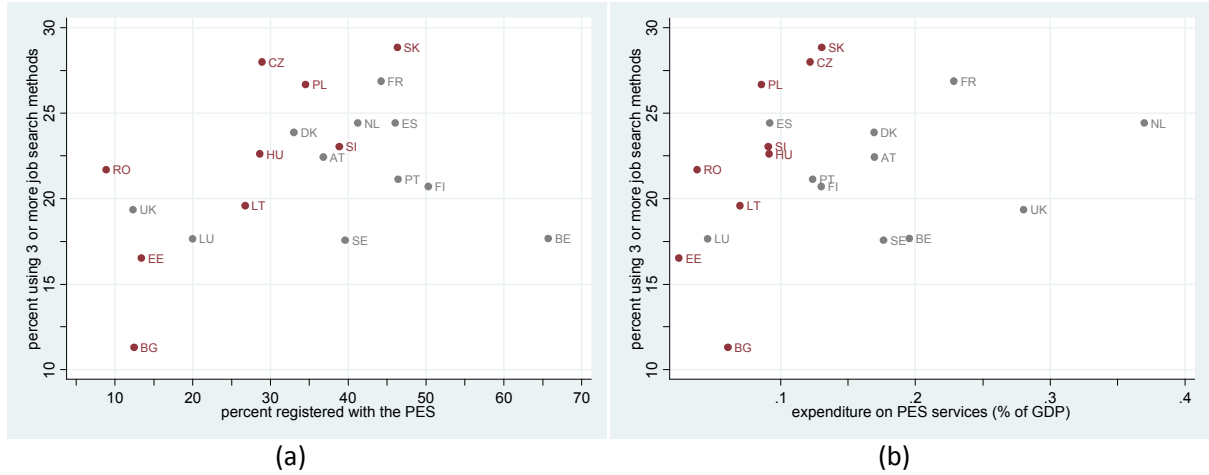
## 5.    Estimating the determinants of search activity

The approach we take is to regress three alternative measures of search activity - the proportion of non-employed looking for a job through the PES, through other channels, and the proportion of jobseekers using at least three different search methods - on the variables representing activation policies: the registration with the PES captures the extensive margin, while spending on PES represents the intensive margin. We also control for disability/early retirement status, spending on other elements of labour market programs, as well as a set of background characteristics. We used grouped data to perform these regressions, where a group represents a gender/age group/education level/length of non-employment spell combination in a given country and year. Our motivation for using grouped (quasi-panel) data instead of performing an individual-level analysis is because our regressors of interest do not vary at the individual level.[20] In such cases, one would seriously under-estimate standard errors if they were calculated as if the independent variables were individual-level (this is the so-called "Moulton-problem"). Estimating group-level regressions, applying group sizes as weights is a simple way of overcoming this issue.

Our baseline specification is:

$$S_{gct} = \beta_1 REG_{gct} + \beta_2 DIS_{gct} + \beta_3 SERV_{ct} + \beta_4 ALMP_{ct} + \beta_5 SUPP_{ct} + \alpha_g + \gamma_c + \delta_t + \varepsilon_{gct} \qquad (1)$$

where: S stands for search activity, REG represents registration rate at the public employment service, DIS is disability/early retirement rate, while SERV, ALMP and SUPP are the expenditure on PES services,

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[20] More precisely, the spending figures vary at the country and year level, while registration rules also depend on demographic charactersitics (typically gender and age).

on ALMPs and on welfare support for the unemployed in turn. The g, c, and t indexes stand for group, country and year. We estimate the regression equation with a set of group, country and year fixed effects. Hence, the influence of registration and disability is identified from both across-country and across-time variation, while the impact of expenditures is estimated based on changes across years within countries. In essence, we assume that the structure of labour demand across all EU states is similar, and that variation in registration rates (and search intensity) comes from how rules governing benefit eligibility of specific groups differ across countries. The main threat to estimating the effect of higher registration rate on search effort comes precisely from the violation of the above-mentioned conditions, hence as a robustness check, we will also estimate our regression model with country-group specific fixed effects.

If, for example, there is (permanently) low labour demand for a specific type of labour in a country, and regulations are such that the non-employed in this group cannot withdraw from the labour market through disability/early retirement, then a large proportion of this group will rely on unemployment benefits and register at the PES. If at the same time a long-term negative labour demand shock also leads to a high rate of discouragement among the non-employed in this group, then search activity will be lower. In this specific example, the estimated impact of the registration rate on search intensity will be downward biased due to the presence of unobserved group-specific labour demand shocks.

Table 2: PES strategies and expected outcomes

| Registration | PES spending | Search monitoring | Examples | Expected outcomes |
|---|---|---|---|---|
| Low | Low | Lenient | BG, CZ* Hu, PL* | Low search activity |
| Low | Low | Strict | RO, EE, LT | Low search activity |
| Low | High | Lenient | DK | Low search activity, counselling |
| Low | High | Strict | AT, UK | Search intensity increases |
| High | Low | Lenient | BE, FI | Search via PES increases Independent search might decrease |
| High | Low | Strict | SI, SK | Search via both PES and independent methods increase, no increase in search intensity |
| High | High | Strict | NL | Search via both PES and independent methods increase, higher search intensity |

*The Czech and Polish activation approach is not lenient in some aspects, so their grouping depends on the choice and weighting of indicators of activation rules.

We were also interested in two alternative specifications. In the first of these, we formed the interaction between the registration rate with the PES service expenditure variable. The idea behind this was to test whether an increase in the quality of PES services is particularly conducive to higher search activity if it is coupled with a high proportion of non-employed being in contact with the PES. In our second modification of the baseline specification, we interacted our measures of extensive and intensive activation with the indicator of the strictness of jobs search monitoring. Our rationale for this modified specification is twofold. On the one hand, the goal was to examine whether the impact of expanding registration depends on the strictness of job search rules. On the other hand, as it is not a priori clear whether increasing expenditure on PES services represents the growing intensity of monitoring job

search activity or rather more resources devoted to counselling type of services, we considered using the strictness indicator one possible way of distinguishing between these alternatives.

Table 3: Proportion searching for a job – baseline specification

| | Contacted public employment office to find work | Use informal and formal methods to find work | Use at least 3 methods to find work |
|---|---|---|---|
| proportion of registered with the PES | 0.389*** | 0.336*** | 0.285*** |
| | (15.571) | (15.582) | (11.919) |
| expenditure on PES services (% of GDP) | -0.073*** | -0.066*** | -0.012 |
| | (8.11) | (6.056) | (1.236) |
| percent who left work due to disability or early retirement | -0.088*** | -0.22*** | -0.174*** |
| | (4.627) | (9.688) | (8.214) |
| Constant term | 0.139*** | 0.388*** | 0.111** |
| | (4.632) | (7.8) | (2.562) |
| $R^2$ | 0.815 | 0.846 | 0.803 |

The first set of estimation results shows that an increase in the registration rate tends to increase both the proportion searching for a job through the PES, and the proportion using other methods, but unsurprisingly, the effect is much more pronounced for the former than the latter methods (the elasticities are 0.63 and 0.38, respectively). Registration at the PES also seems to induce a larger proportion of the non-employed to search for a job intensively, which is the first sign that enforcing contact with the PES might lead to an increase in search effort. The conclusion that an increase in the proportion of persons on disability/early retirement benefits decreases search effort is in line with our expectations, since earlier research has shown that these non-employed have a low attachment to the labour force. The fact that increasing the spending on PES services does not lead to more intensive job search is of some surprise.[21]

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[21] One can note that increased counseling does not necessarily lead to an increase in job search, it might lead to a higher arrival rate of job offers or to better matches.

Table 4: Proportion searching for a job – interaction between registration and spending on PES

| | Contacted public employment office to find work | Use informal and formal methods to find work | Use at least 3 methods to find work |
|---|---|---|---|
| Proportion of registered with the PES | 0.324*** | 0.292*** | 0.237*** |
| | (12.625) | (12.647) | (9.225) |
| registration * expenditure on PES services | 0.334*** | 0.227*** | 0.248*** |
| | (11.75) | (5.167) | (6.605) |
| expenditure on PES services (% of GDP) | -0.092*** | -0.079*** | -0.026** |
| | (9.509) | (6.639) | (2.606) |
| percent who left work due to disability or early retirement | -0.096*** | -0.225*** | -0.18*** |
| | (5.073) | (9.775) | (8.293) |
| Cons | 0.145*** | 0.392*** | 0.116** |
| | (4.686) | (7.844) | (2.624) |
| $R^2$ | 0.828 | 0.85 | 0.81 |

When we take into account that increasing the spending on PES services can differ across groups depending on the frequency of contact with the PES, we can come to the conclusion that the higher the proportion of non-employed who are registered, the larger is the increase in search activity. An important aspect of this phenomenon is that increasing the 'quality' of PES services has a negligible influence on search with the use of the PES, and it has a very small effect on job search via other channels. Our results seem to indicate that increasing spending on PES services can only induce a small increase in the search intensity of those non-employed who are attached to the labour market, in particular if registration at the PES is widespread.[22]

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[22] More precisely: while increasing spending on PES services does not seem to influence the probability of starting job search, it is positively correlated with the proportion of non-employed who search for a job intensively. The elasticity of intensive job search at the median registration rate (35%) is about 0.07, while at a high registration rate (50%), the elasticity is about 0.12.

Table 5: Proportion searching for a job – countries with strict versus lenient job search monitoring

| | Contacted public employment office to find work | Use informal and formal methods to find work | Use at least 3 methods to find work |
|---|---|---|---|
| proportion of registered with the PES | 0.345*** | 0.295*** | 0.242*** |
| | (12.41) | (12.619) | (8.929) |
| registration * strictness of job search monitoring | 0.132*** | 0.121*** | 0.13*** |
| | (5.112) | (4.504) | (4.929) |
| expenditure on PES services (% of GDP) | -0.161** | -0.188** | -0.156** |
| | (3.094) | (2.716) | (2.432) |
| expenditure on PES services * strictness of job search monitoring | 0.097* | 0.13* | 0.153** |
| | (1.831) | (1.871) | (2.409) |
| percent who left work due to disability or early retirement | -0.077*** | -0.21*** | -0.164*** |
| | (4.212) | (9.428) | (7.854) |
| Cons | 0.208*** | 0.327*** | 0.115*** |
| | (11.893) | (11.97) | (4.482) |
| $R^2$ | 0.82 | 0.849 | 0.808 |

The empirical findings also indicate that the strictness of job search monitoring matters: increasing registration of the non-employed has an even larger impact on the propensity to search than in more lenient PES. Furthermore, our results lend more support to the idea that to promote more intensive job search among a wider group of non-employed, increasing spending on PES needs to be coupled with stricter job search monitoring.

To sum up, our results indicate that extending registration to larger groups of the non-employed is conducive to more search activity. While contact with the PES does mean that a larger group of non-employed claim to be searching for a job through the public employment offices, we find no evidence that this is 'crowding out' independent job search. More wide-spread registration along with an increase in spending on PES leads to an increase in search activity on the intensive margin (more non-employed start using more search methods). Our finding that extending registration as well as increased spending has more pronounced effects when it is coupled with stricter job search monitoring is indication that countries reinforcing the 'mutual obligations' elements of the welfare system are able to keep a larger group of non-employed away from disengagement with the labour market.

## 6.      Alternative identification strategies

The regression analysis of the previous section is admittedly tainted by a few problems. The most important of these is that we cannot be certain that the variation in our explanatory variables (the registration rate, for example) is exogenous. Let us be more specific: part of the changes in registration rate might be due to policy changes, and while they might also be due to temporary shocks (and some of these might be labor demand shocks). As for policy changes, the obvious questions is whether policy changes are implemented in response to labor market conditions or the search behavior of a certain

group of non-employed. The issue with using temporary (demand) shocks is that they might alter the composition of non-employed, and hence part of the relationship we see between (say) registration with the PES and search intensity might be driven by changes in the (unobserved) labor force attachment. The second type of problem is that our key independent variables measure the concepts at hand in a somewhat rough-and-ready way. For example, we would like to know whether in countries that enacted 'stricter' job search monitoring procedures, non-employed visit public employment offices more often than in countries with more 'lenient' rules. Finally, one may wonder whether (or under what conditions) the tacit assumption that more intensive job search leads to a higher transition rate to jobs holds empirically. Unfortunately, with the data at hand the issues listed above can hardly be resolved, so in this section we would like to outline a few empirical strategies that we deem more fruitful, but which require additional data collection.

The strategy we propose is a discontinuity/difference-in-difference design that concentrates on older non-employed workers in the Czech Republic and Slovakia countries. In both of these countries there were substantial changes activation policies in the period 2003-2005, with the introduction of stricter job search requirements, Individual Action Plans and more monitoring of these activities. However, in both countries there were some exceptions, specifically for older non-employed persons. Therefore, we can consider these differentiated policy changes and as a consequence estimate the impact of the policy changes by comparing the evolution (from before the policy change to after it) of the job search behavior (and job finding rates) of the affected group and non-affected group.[23]

We believe that the strategy outlined above can be improved upon in several respects by using the national Labor Force Surveys rather than their harmonised version. First, these include information of the month of birth, which allows a precise definition of treatment and control groups who were just above or just below the cutoff age at the time of the implementation of the policy change, and who ought to be closely comparable. Second, rather than using repeated cross-sections as we did here, we could follow individuals over time, which would permit us not only to observe the individual-level changes in search behavior, but also to estimate the impact on job finding probabilities. Furthermore, we could also control for changes in the composition of non-employed in terms of unobserved labor force attachment.[24]

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[23] To cite a specific example: in the Czech Republic, the Act of Assistance in Material Need (passed in 2006 and implemented in 2007) specified that only those non-employed were eligible for a higher level of social assistance (the so-called Living Minimum) who met the job search requirements specified in their Activation Plans, but persons above age 55 were exempted from this regulation. Hence, we will compare the change in job search behavior of those (long-term) unemployed who were affected by this regulation (below age 55), with the change in the behavior of those who were not (age 55-59).

[24] In fact, we did experiment with this strategy using the harmonized European Labor Force Surveys, but our estimates were very imprecise.

## 7.    Conclusions

The above analysis of EU LFS data appears to confirm the expectation that a combination of high spending on PES and strict monitoring of job search yield a high search intensity, irrespective of the coverage of registration requirements. This is an effective strategy to the extent that high search intensity yields high reemployment rates. At the other extreme, limited registration requirements and low spending on PES yield low search activity, even if job search monitoring is strict. In-between activation approaches appear to yield mixed results.

While these results go little beyond confirming expectations, they have some less trivial implications for policy making in CEECs. In countries that opted for no/or lenient activation (Bg, Cz, Hu, Pl), the first step towards activation should be an increase in the coverage of registration, rather than a tightening of job search monitoring or increased spending on PES services. For those countries that combine low spending on PES with limited registration coverage and strict monitoring, an increase in PES spending may be effective, especially if they are able to prevent outflows into other welfare benefits. Expanding the coverage of registration without increasing PES spending would take them to the Slovak and Slovene strategy, which we found to yield mixed results. For Slovenia and Slovakia, the obvious choice is to increase PES spending, but it would take further research to evaluate the cost effectiveness of this choice. Most importantly, we would need to have some empirical evidence on the effect of the Slovak and Slovene approach on reemployment probabilities.

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# Appendix

Table A1. Selected indicators of the labour market shock and recovery in CEECs

| | privatisation | initial choice of ALMP vs. benefits[+] | LM shock and expected speed of recovery | worst year of transitional recession | employment loss* | % of uneducated labour force in early 1990s | change in the employment of uneducated labour force** |
|---|---|---|---|---|---|---|---|
| Bulgaria | slow | ALMP | small - fast | | | 32.30[x] | |
| Czech R. | slow | ALMP | small - fast | 2000 | 13 | 27.99 | 2 |
| Estonia | fast | ALMP | large - fast | 2000 | 30 | 37.07 | -16 |
| Hungary | fast | benefits | large – slow | 1997 | 29 | 33.57 | -2 |
| Latvia | fast | ALMP | large - fast | 2000 | 30 | 21.20 | -12 |
| Lithuania | slow | ALMP | small - fast | 2001 | 18 | 16.44 | -4 |
| Poland | slow | benefits | medium – slow | 2003 | 16 | 40.61 | -1 |
| Romania | slow | benefits | medium - slow | | | 35.80[x] | 19 |
| Slovakia | slow | ALMP | small - fast | 2000 | 21 | 27.39 | 5 |
| Slovenia | slow | Benefits | medium - slow | 1999 | 23 | 18.30 | -2 |

* percentage point difference in employment between 1989 level and worst year of crisis

** between worst year of the transitional recession and 2007, measured as the %point change in the relative employment rate of the uneducated compared to the educated. [+]In Bulgaria and Romania, spending on benefits and ALMP were both rather low compared to other CEECs; their grouping reflects the relative size of spending on benefits vs ALMP. Voucher type privatisation where shares were distributed to the population had little effect on firms' budget constraints and is therefore not considered as privatisation (even when it was used early on). The grouping by level of active labour market policy spending (ALMP) is based on OECD.stat public expenditure and participant stocks on LMP, Spasova Beleva (2005) for Bulgaria. Expected speed of recovery is based on the logic of Balla et al 2006. [x] 1992 for Bulgaria,1995 for Romania (World Bank online) and 1990 for all other countries (Barro-Lee database www.barrolee.com).