Is contracting-out intensified placement services more effective than in-house production? Evidence from a randomized field experiment

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Summary: There is a longstanding debate on the advantages of quasi-markets for placement services for the unemployed compared to a public deliverance of such services. In Germany, the insurance-funded branch of the Public Employment Service (PES) usually assigns hard-to-place unemployed persons to private providers of intensified placement services after some months of unemployment. During 2009, a randomized field experiment has been implemented to investigate if such services might more effectively be provided in-house by the PES. For two agencies, we present results from this experiment and show that one year after random assignment, in-house provision resulted in significantly lower (cumulated) days in unemployment. The positive effect arises from exits into employment as well as from withdrawals from the labor market. However, in one agency particular non-benefit recipients of in-house services withdraw more often from unemployment without finding a job.

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1 Introduction

According to the OECD, public employment services (PES) are concerned with three main functions (OECD 2001). The first function is to provide income support to job seekers during the time of unemployment, the second one is concerned with the provision and improvement of skills or employability through labor market or job training programs and the third function is to provide job brokerage or placement services.

In most European welfare states, placement services have typically been provided by public institutions. The state provision of such services has, however, been increasingly criticized for its lack of efficiency. State agencies delivering placement services are not subject to pressure from a competitive market and therefore are presumed to lack incentives to control costs, to provide quality of service and to respond to the consumers` needs (cf. Grout/Stevens 2003). Contracting-out has been proposed as a solution to this problem. In contrast to the in-house production of placement services contracting-out to private providers involves the creation of quasi-markets where several potential providers are competing. The competitive incentive structure of such quasi-markets is expected to lead to better placement services.

In this paper we conduct an empirical comparison between two different programs that provide intensified placement services for hard-to-place unemployed persons. One program is based on the idea of contracting-out while the other one is based on the idea of in-house production of the PES. In both programs, intensified placement services consisted of measures to improve the employability of the unemployed, diminish and overcome their placement deficits, to place them into regular jobs, and to stabilize the newly established employment relationships. Our analysis draws on data from two German local labor market agencies, where a randomized field experiment has been conducted since 2009. Our (preliminary) results provide some evidence that one year after random assignment took place, in-house provision resulted in a significantly lower share in unemployment and significantly fewer cumulated days in unemployment.

The paper is organized as follows: Section 2 compares in-house provision and contracting-out of placement services, whereas Section 2.1 presents some theoretical considerations in favor of contracting-out and in-house production of placement services respectively. Section 2.2 complements these theoretical arguments with empirical findings. Section 3 presents a randomized field experiment implemented by the German Federal Employment Agency as the basis of our analysis. Section 3.1 describes the labor market political background of the experiment and Section 3.2 the design and implementation of the experiment. Section 3.3 sketches data, sample and outcome variables, while Section 3.4 discusses the parameter of interest. The results are presented in Section 4, followed by a discussion of potentially relevant factors that drive these results in Section 5. Section 6 presents some conclusions.

2 In-house provision or contracting-out of placement services

Among OECD countries, Germany established the option of contracting-out placement services relatively late. Only since 1998, the Federal Employment Agency (FEA," Bundesagentur für Arbeit") has been allowed to contract out parts of its placement services – like profiling and case management – to private providers. During 2002, the scope of contracting-out was widened and encompassed the complete placement service. Even though the details of this institutional framework were subject to several changes, it is basically still in place today.

2.1 Theoretical Considerations

Economic theory points out several advantages in contracting-out to private firms providing placement services (cf. Bruttel 2005b). The first advantage is that private providers are often assessed to be more flexible than bureaucratic organizations, both in terms of the services they provide and in terms of personnel policy. Whereas private employment agencies are to a large degree restricted by formal rules and legal requirements this is not so much the case for their private counterparts. For example, the latter can acquire additional services such application training or psychosocial counseling on the market without the extensive tendering processes government agencies are subjected to. Also, private firms are often seen as more innovative than bureaucracies. When it comes to personnel policy, private providers are more flexible in using incentive contracts, for example containing performance payment. Such advantages should result in private providers to be more effective than public employment services.

The second and potentially more important advantage is seen in the competitive environment that contracting-out takes place in and that should not only lead to more effective placement services but also to more efficient ones. However, even if it is private firms delivering placement services, one has to distinguish contracting-out from privatization. While the latter includes the transfer of physical assets from public to private ownership, contracting-out means that a set of economic activities previously not open to competition is now opened for it. Competition through contracting-out usually implies ex-ante competition and thus rather competition for a market in contrast to competition in a market. This market is denoted as a "quasi-market" (Bartlett/Le Grand 1993), because it differs from a conventional market: Whereas on the supply side several (for profit or non-profit) service providers are competing with each other, on the demand side consumer purchasing power is centralized within a single state purchasing agency (a variant we do not discuss further is consumer purchase power in the form of vouchers). In quasi-markets, competition is achieved through contract specifications and a bidding process similar to an auction. The lowest-price tenderer wins the right to supply for a specified period of time (Struyven/Steurs 2004). A state agency specifies the tasks to be performed by the private

providers within contracts. Therefore the state keeps a certain amount of control over the activities of private providers, which would not be the case if placement services were privatized (Domberger/Jensen 1997).

Contracting-out will achieve its goal of enhancing efficiency of service provision as compared to monopolistic state providers only insofar as such a competitive quasi-market has successfully been established (Bartlett/Le Grand 1993). A prerequisite for this is that there should be no barriers to market entry and new providers have the opportunity to enter the market. Likewise providers should run the risk of making losses and consequently must face the danger to exit the market. Also prices in quasi-markets should reflect the interaction of supply and demand, which is usually achieved through negotiations between the state purchasing agency and potential service providers.

However, as implementing a quasi-market is not trivial, contracting-out schemes have not always been able to deliver on promises. One major reason for this is made explicit by transaction-cost theoretic arguments (cf. Boardman/Hewitt 2004; Williamson 1985). From this perspective, quasi-markets or contracting-out need not always be the most efficient way to provide placement services. Assume bounded rationality, high uncertainty about the future state of the labor market, and high asset specificity. First, as employment services were exclusively provided by public services for a long time, the problem of a low level of ex ante competitiveness may arise: The number of potential providers can be rather small. Second, there might be certain investments that are specific to the transaction at hand (asset specificity). For instance, specialized software might be needed for delivering placement services, caseworkers have to have specific skills to provide the respective placement service, or relationships to potential employers have to be build and fostered. Such transaction specific investments make it costly for providers to change purchasers and vice versa. Also, writing and monitoring the contracts specifying the tasks and remuneration of private providers takes specific skills that have to be acquired or bought by the respective government agency. Given uncertainty of the development of the labor market, contracts that pay the provider on the basis of results might require a risk premium. Because of such transaction costs in some cases it might be more efficient to turn to in-house production than to contract out placement services.

There is also a second reason why efficiency gain from contracting-out might be lower than proponents of quasi-markets suggest. As an alternative to privatization or contracting-out recent reforms of the public employment services in Germany have replaced bureaucratic input-based administrative structures with output oriented performance management (Sol/Westerveld 2005). The PES has introduced management by objectives, where targets are negotiated between the public employment agency headquarters, regional headquarters and operating units. Objectives are instrumented through a number of performance indicators that are provided on a monthly

basis. At the executive level, wage premiums are awarded dependent on the degree of fulfillment of these objectives (Kaltenborn et al. 2010). Thus incentives for effective and efficient services are provided even in the absence of market competition.

Furthermore, a critical aspect is the choice of an adequate incentive design for private providers (Bruttel 2005a). As contracting-out relies on incentive-induced behavior, there are serious consequences if incentives are not designed well. From a theoretical point of view, private providers have an incentive for "creaming", accepting only individuals that have comparatively good labor market prospects. In contrast, "parking" of hard-to-place individuals at private providers might arise, if their integration proves too costly, thus they are not helped at all. While the reward of providers should mirror their net impact of their treatment, this information is generally not available, and gross integration rates are taken as a proxy for net impact. Finn (2007) distinguishes between three pure types of contracts: Pure pay-for-performance contracts, cost-imbursement contracts, and fixed-price contracts. In practice, often hybrid contracts are sought to balance incentives, viability and the delivery of particular services. A further important point is how performance of private providers is monitored and benchmarked (Bruttel 2005a).

2.2 Empirical evidence

On the one hand, the comparative advantage of quasi-markets depends on the quality of its implementation within a given institutional framework. On the other hand, a crucial factor is how in-house production of placement services is organized and how contracts are designed. This makes the issue of effectiveness and efficiency an empirical question. However, empirical analysis comparing contracting-out and in-house production of placement services is scarce. One of the main difficulties is that most countries that implement a system of contracting-out, do so for the entire population of the unemployed (e.g. Australia), for all unemployed with certain characteristics (e.g. the hard-to-place in the Netherlands) or for all unemployed in a certain region (e.g. the 13 regional employment zones in Great Britain). This makes it hard to control for temporal or regional differences in labor market conditions that are also influencing the effectiveness of re-employment services. In the following we report empirical research on effectiveness, because to the best of our knowledge there are no empirical papers on efficiency in the context of placement services.

For unemployment insurance recipients in Germany, the few existing econometric evaluation studies on private placement services for the unemployed use propensity score matching to find a comparison group of similar individuals that received placement services by the Federal Employment Agency. They indicate that private providers might at best be as effective as in-house production of placement services. Winterhager (2006a, 2006b, 2008) uses propensity score

matching and analyses assignments taking place during 2004. He finds significant small and negative short-term effects of private placement services on employment prospects of individuals assigned to a private placement agency. He attributes these results to deficits in contract management, where low prices were coupled with low quality. Similarly, WZB/infas (2006) find no effect on employment four month after assignment for unemployed assigned to private providers in Germany during 2003 and 2005. For recipients of means-tested benefits (unemployment benefit II) who were assigned to a private provider during 2005, the results of Bernhard/Wolff (2008) suggest that such an assignment is generally ineffective and in some subgroups even counterproductive regarding the goal of avoiding unemployment and benefit receipt. Nonetheless, for selected groups of job-seekers who are rather hard to place, they find the assignment to be effective.

In a randomized experiment, Bennmarker et al. (2009) focus on younger unemployed under 25, immigrants and disabled in Sweden. They argue that the Swedish case has many features that are deemed and necessary for effective contracting-out. The authors apply instrumental variable methods, instrumenting private job placement through random assignment, while compliance with assignment was voluntary and amounted to 28 percent. However, they find no effects on employment probability for all three groups combined, even if there is evidence for positive effects on migrants and negative effects on young unemployed. These effects disappear over time, indicating that no long term effects were present. Hägglund (2009) presents experimental evidence on the effects of intensified placement efforts compared to standard services on subsequent employment and earnings of participants for Sweden. Due to small caseloads, he finds mainly insignificant effects. Nevertheless, intensified services seem to reduce unemployment among the treated compared to standard services (no comparison to contracting-out took place in this experiment).

3 The randomized field experiment

3.1 Background

Since 2005, the German PES is organized in two branches, an insurance-funded branch for unemployment benefit recipients as well as job seekers not receiving unemployment benefits or social assistance, and a tax-funded branch for needy job seekers receiving social assistance. Our analysis is concerned with the insurance-funded branch only.

As a standard procedure when individuals register as unemployed, caseworkers conduct a soft profiling of "clients" to identify their need of services. Individuals profiled as "hard-to-place" are expected to have difficulties regarding their abilities as well as their motivation in returning

to the labor market and are therefore supposed to benefit from intensified placement services. [1] Since 2008, the default treatment for this group of unemployed persons encompasses contracted -out services: Caseworkers are advised to assign hard-to-place unemployed to a private provider after four months of unemployment, where they receive intensified placement services. Whether an unemployed is in fact assigned is, however, at the discretion of the individual caseworker.

The acronym for this program is „Ganzil“[2]. To avoid “creaming”, private providers cannot refuse to enroll an unemployed person. Furthermore, assigned unemployed persons participation could reject enrollment at a private provider only for good reason, which would be very difficult to verify, thus non-compliance could result in a cut-off period from benefits. To ensure intensified placement services contracts contain a clause obligating the private providers to guarantee a minimum contact frequency. During the time period under investigation, assigned unemployed persons had a contact frequency of at least every two weeks (according to more recent contracts they had to be present at the provider for at least two days per week). Other than that, private providers are, however, free to choose what kind of placement services they want to provide and how. Usually, contracts between local labor market agencies and private providers encompass a period of two years. Payment for private providers consists of a fixed commencement component per unemployed (700 to 990 Euros) and a performance pay component (300 to 3000 Euros). One part of the performance payment is due after an unemployed has been in a regular job for three month, the other part after six month. The amount of the performance payment as well as a minimum rate of successful re-employment is negotiated between the responsible state agency and the respective provider. Usually the latter lies between 20 to 30 percent. If providers do not reach negotiated employment rates, a fine is imposed. It equals at least 1000 Euros per person, up to 50 percent of the case-wise performance pay component.

During 2008, the German FEA started a pilot project to gain knowledge how the quality of services for hard-to-place unemployed individuals might be improved and how durable re-employment in the labor market might be fostered. More specific, a program was set up to test the effectiveness of an in-house provision of intensified placement services, compared to standard placement procedures including contracting-out. The program acronym is „Pinguin“[3]. Under this program, unemployed “hard-to-place” individuals receiving unemployment benefits or registering for search without benefits are assigned to special teams of the local employment

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1 In German, these unemployed persons are denoted as „Betreuungskunden“ or „Kunden mit komplexen Profillagen“.

2 Ganzil is short for „Ganzheitliche Integrationsleistungen für Arbeitslose mit Aktivierungs- und Unterstützungsbedarf sowie multiplen Vermittlungshemmnissen und geringen Integrationschancen“.

3 Pinguin is short for „Projekt Interne ganzheitliche Unterstützung zur Integration im SGB III“.

agency. To ensure intensified placement services, these "Pinguin" teams are characterized by a comparatively low caseload (1:40), more freedom in their allocation of working time and less restrictions in their placement activities. Furthermore, caseworkers have discretion in utilizing a fixed budget of around 600 Euro per participating person for active labor market programs (as short training programs or longer-term further training). This should set incentives for an efficient use of resources.

As part of this pilot, during 2009 a field experiment was implemented within three local labor agencies.[4] Individuals profiled as hard-to-place were randomly assigned into a treatment group or a control group. In all three agencies, treatment group members were transferred to the internal "Pinguin" teams, which provided intensified placement services. In two agencies, caseworkers were instructed to assign all control group members to a private provider of intensified services ("Ganzil"). We denote this group as the control group for reasons convenience only, as it is receiving a treatment, too. Our empirical analysis restricts itself on these two agencies.[5] At each point of time, each agency had a contract with only one private provider of such services.

3.2 Design and implementation of the experiment

A key feature of the experiment is random assignment of hard-to-place individuals in a control and a treatment group. Random assignment is based on a computer program "EMu"[6] that has been developed by the FEA for evaluation purposes and has been modified by the authors for the present field experiment. Caseworkers are instructed to call the program after unemployed person has been profiled as a hard-to-place person. The electronic device has been available since April 17, 2009.[7]

Originally, participation in the project was restricted to individuals registering as unemployed (with unemployment benefit receipt or searching without benefit receipt), who were not regis-

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4 As a first part of the pilot project, since 2008 in-house intensified placement services for hard-to-place unemployed persons were provided by three local agencies. In these agencies, no target group members were contracted-out to private providers. Thus in an internal review, the FEA compared aggregate labor market results of participating regional agencies with synthetic agencies with similar labor market characteristics. It was noted, however, that this comparison lacked internal validity as even similar labor markets will still inhibit different unobserved features.

5 Within a third agency, control group members received standard services, but assignment to a private provider was not mandatory. In consequence, only 50 percent of control group members actually received contracted-out services.

6 EMu is short for "Elektronischer Muenzwurf".

7 As this part of the pilot project started in March 2009 already, between March and April 17 assignment was based on the year of birth: Individuals born in even years were assigned to the treatment group, while individuals born in odd years were assigned to the control group. As year of birth might, however, have an impact on the profiling result, a manipulation resistant mechanism was required (and found in the computer program). In our analysis, we will take into account only individuals that have been assigned by the computer tool.

tered at the public employment service during the previous six months. Unemployment benefit recipients should have a benefit entitlement length of at least three months. As the inflow in the project was, however, smaller than the FEA had expected, several individuals from the stock of unemployed had to be randomly assigned, too, to meet planned caseloads of caseworkers (1:40). In our analysis, we exclude all persons who entered unemployment before January 1, 2009 from the treatment and control group as "stock unemployed" persons.

The design of the experiment in both agencies differs only with regard to the timing of the intensified placement service. In Agency 1 (located in East Germany), random assignment took place immediately after registering as unemployed, in Agency 2 (located in West Germany), random assignment took place only four months after registering as unemployed. After randomization, caseworkers were instructed to immediately assign unemployed persons to a private placement agency or to internal teams of the agency. Both kinds of intensified placement services were delivered for a period of around eight months. Afterwards, individuals who were still registered as unemployed returned to the local employment agency to receive standard public employment services (i.e. not the intensified one as before).

While the transition into in-house services occurred without frictions, there was usually a time gap between randomization and the first appointment with the private provider of intensified placement services. Several assigned control group members obviously de-registered from unemployment during this period. Furthermore, for several individuals in the control group we do not find information in administrative data that the program started, although they were unemployed for quite some time. For these individuals, we are still acquiring information if they rejected participation in the program or if the program was not offered to them.

3.3 Data, sample and outcome variables

The results from the randomization computer program (EMu) were stored in a central database. We use the EMu data base to identify members of the control and of the treatment group. We match administrative information from the so called TrEffeR-data base (Stephan et al. 2006), which has been constructed for monitoring purposes of the FEA. The current version merges data flows from computer based operative systems of the Public Employment Service on periods of registered job search, registered unemployment, participation in labor market programs and employment that is subject to social security contributions. The version we use relies on information available in administrative systems on September 15, 2011. We utilize data until the end of February 2011 as in particular employment information arrives partly delayed.

The sample analyzed in this paper covers entries into the project since April 17, 2009, when the randomization computer program was implemented, until the end of February 2010. In Agency

2, entries into the projects started not until June 2009. As has already been mentioned, the analysis restricts itself on new entries into unemployment. Currently, we observe these individuals for a period of 12 months. Our sample covers 866 observations in Agency 1 and 565 observations in Agency 2.

The success of placement services can be measured in various ways. Until further information is available (e.g. on wages) we distinguish three outcome variables, capturing different aspects of successful placement. The first outcome variable is registered unemployment. This outcome variable is particularly important for the public employment agencies as every registered unemployed incurs costs at least through placement services. Reduction of unemployment therefore is an indicator for the cost reduction. The second outcome variable is regular employment (covered by social security; thus excluding marginal employment). The third outcome variable is not being registered as unemployed or employed, which in most cases results from labor market withdrawal. In fact, if caseworkers are pessimistic to find a suitable job for the respective unemployed, they have an incentive to convince him or her to deregister from unemployment, as this will improve monitoring results of his or her agency. This goes especially for unemployed without unemployment benefit receipt. We consider for each outcome variable the shares of persons in a given labor market status, as well as cumulated days in each of these labor market statuses at the end of our observation period. Suppose that we are interested in program effects on days in employment at the end of an observation period of several months. Then cumulated program effects are affected by lock-in effects of programs (the more, the longer the program and the shorter the observation period is). In contrast, program effects on shares at the end of the observation period indicate how cumulative effects may evolve further. Shares do not necessarily sum up to one, as individuals might at the same time be part-time employed and unemployed.

We measure outcome variables since the day the random assignment took place. If the unemployment spell started after random assignment, outcome variables are computed since the day of unemployment entry.

3.4 Parameter of interest

For a formal representation of the experiment, assume that $Z_i = 0$ indicates that individual i is randomly assigned to standard services, mostly including assignment to a private provider, while $Z_i = 1$ indicates an immediate assignment to the internal "Pinguin" teams. Accordingly, Y_0 and Y_1 are labor market results of individuals receiving standard treatment or the new services. Because of random assignment, $E[Y_i(0) \mid Z=1] - E[Y_i(0) \mid Z=0]$ should equal zero, the difference $E[Y_i \mid Z=1] - E[Y_i \mid Z=0]$ measures the causal effect of Z on Y (see for instance Duflo et al. 2008). This effect does, however, not mirror the effect of in-house production versus con-

tracting-out, as $Z_i = 0$ does not equal factual receipt of services of a private placement provider. As we will see, compliance reached 100 percent for in-house services, while nearly 80 percent of those assigned to a private provider actually started the program. But Z at least has a strong influence on the kind of services received, thus the difference displays the effect of an in-house treatment versus a likely assignment to a private provider.[8]

We start with a simple representation of this effect, the difference in means in outcome variables between groups. To test for the similarity between those receiving standard services or intensified in-house services, the mean standardized bias (MSB) (Rosenbaum/Rubin 1983) is computed across a number of individual characteristics, variables describing the employment history and the calendar month of assignment. The standardized bias of a covariate is defined as the difference of means in the treated and matched comparison sample, divided by the square root of the average sample variance. For comparison using statistical matching techniques, Caliendo/Hujer (2006) summarize that most studies assess a MSB of 3 or 5 percent as acceptable.

Even in randomized experiments some covariate imbalance can remain, especially at the start of a project, where the number of participants is still rather low. Thus we conduct an additional statistical matching analysis. In detail, we perform a radius matching (Dehejia/Wahba 2002) with a caliper of 0.05, which matches participants with "synthetic comparison persons", composed of a weighted equivalent of all persons falling within the radius of their propensity score. Radius matching reduces the variance of estimated treatment effects by using information from several potential comparison persons to construct the counterfactual for each participant, while setting a caliper – a maximum distance of propensity scores between treated and comparison persons – avoids the risk of bad matches (Caliendo/Kopeinig 2008). For matching, we consider only individuals that are in common support. For these individuals the data indicate a positive probability of participating in standard services as well as in intensified in-house services.

4 Results

Table 1 displays the distribution of characteristics for both groups under consideration. First, it should be noted that we find rather few significant differences across both randomly assigned groups. There are a few exceptions in Agency 1: In particular, individuals receiving in-house services are less often more than 60 years old and do less often have a university degree. The mean standardized bias between both groups takes values of 7.3 and 6.6, respectively. Figure 1

[8] Note that we cannot apply instrumental variable methods as Bennmarker et al. (2010) did, as we have in fact not two, but three treatments. Those individuals not receiving private services do not take part in intensified in-house services (where compliance is 100 percent) instead, but receive standard services of the PES.

shows the distribution of propensity scores, estimated probabilities to be assigned to treatment, which in consequence differs mostly in Agency 1. Thus we will additionally present results from a statistical matching analysis.

[Figure 1 about here]

[Table 1 about here]

Regarding individual characteristics, both agencies obviously differ. In the East-German Agency 1, the share of hard-to-place individuals without unemployment benefit receipt amounts to around 30 percent, while it is only around 10 percent in the West-German Agency 2. Furthermore, in particular in the East German agency, women constitute more than 60 percent of hard-to-place unemployment entries. The share of individuals looking for part-time work, the share of foreign nationality as well as the share without secondary schooling degree or vocational training is much lower in the East German agency than in the West German agency. In both agencies, individuals of age 50-59 constitute around 40 to 50 percent of project participants.

Table 2 informs about the share of individuals participating in active labor market programs during the year after the assignment took place. Most interestingly is the share of individuals in the control group in fact receiving placement services by a private provider ("Ganzil"). The share amounts to nearly 80 percent of the control group. Thus not all control group members actually received private placement services, even if they were considered to do so. We will return to this point in Section 5.

[Table 2 about here]

Table 3 contains the main results of our analysis, which are presented as the results from an ordinary least squares estimate (OLS). As the only explaining variable is assignment to intensified in-house services, this representation is identical to a descriptive analysis. The constant indicates mean values for unemployed persons that were assigned to contracted-out services, while the estimated coefficient for intensified in-house services shows the differential effect of internal services. Additionally, Figure 2 and 3 show how shares and cumulated days as well as the average treatment effects evolve over time.

[Table 3 about here]

[Figure 2 about here]

[Figure 3 about here]

For both agencies and one year after assignment, we find that shares and cumulated days in unemployment are lower across those receiving in-house produced services, while shares and cumulated days in employment and in another status (withdrawal from the labor market) are higher. Effects are, however, only partly significant.

As Figures 1 and 2 shows, confidence bands are rather wide. Regarding the shares in a particular status after 360 days, estimated effects are only significant for the share in unemployment and in another status in Agency 1: There estimated effects are significant 13 percentage points less in unemployment for those assigned to the internal "Pinguin" teams, and significant 9 percentage points more withdrawals from the labor market. However, as can be seen from Figure 2, all effects were significantly in favor of in-house services for at least some times during the observation period.

As a result, assignment to an in-house team has significant negative effects on cumulative days in unemployment and significant positive effects on cumulative days in employment and another status in both agencies. Furthermore, effects are larger for each outcome variable in Agency 1 compared to Agency 2. In Agency 1, unemployed persons receiving in-house services spent 49 days less in unemployment, 17 days more in regular employment and were 33 days more in another status. In Agency 2, effects amounted to 34, 13 and 21 days, respectively.

As the distribution of characteristics differs partly between our control and treatment group, we additionally conduct a statistical matching analysis (see Section 3). As can be seen from the lowermost row in Table 1, balancing considerably improves through matching. After matching, we do not find any significant differences between the means of individual characteristics across both groups. The main results after matching are displayed in Table 4. Again, we conduct OLS estimates, but now weights are provided by the previously conducted matching analysis. For both agencies, estimated effects are slightly smaller in size, but otherwise very similar to those obtained before balancing the covariates.

5 Discussion

As our randomized experiment has shown, both public employment offices were more successful in delivering placement services than their private counterparts. Even given the theoretical considerations above, these results are a surprisingly strong argument for the in-house production of intensified placement services. In this section, drawing partly on extensive research conducted by SOFI (2010)[9], we want to present several considerations that will shed some light on why this notable effect arises. The study provides some important insights on important differences concerning the constraints framework contracted-out and in-house produced placement services operate under. These different constraints might in part drive the positive performance of public placement services as compared to their private counterparts.

[9] SOFI is short for „Soziologisches Forschungsinstitut Göttingen".

[Table 5 about here]

A first point worth noting is that incentives to especially push non-benefit recipients to de-register from unemployment differ between public and private employment agencies. For private providers of placement services, it makes no difference whether an unemployed is receiving benefits or not. In each case, they receive a success premium if they find a (stable) employment opportunity for the individual assigned to them. In contrast, caseworkers within public employment agencies have a strong incentive to encourage non-benefit recipients to de-register from unemployment, because their performance indicators are mostly based on (registered) unemployment duration or status. To empirically test this argument, Table 5 interacts a dummy variable for "no benefit receipt" with the treatment dummy "intensified in-house services". For Agency 1 at least, we find the expected tendency that effects on unemployment and on another status are much stronger for non-benefit recipients. This gives some weight to the assumption that part of the favorable results of this agency, which is the one with the stronger treatment effects, seems to stem from successfully pushing of non-benefit recipients out of registered unemployment rather than re-employing them.

A second point explaining the success of in-hours produced placement services is that public providers face several transaction costs that are absent in the case of in-house provision. Private providers do in fact have the opportunity to access data – for instance on the employment history and qualification of unemployed persons – that has been gathered by the public employment service. The in-house version of intensified placement services, however, follows immediately after randomization, because unemployed only have to be "transferred" from the regular caseworkers to the new intensified-placement teams in the same public employment agency. In contrast, there is often a considerable time gap for those who are randomized into the control status, during which the depreciation of the unemployed person`s human capital continues, making it harder to provide them with suitable job offers. Such a time gap could of course be shortened if the transition is better organized, but transaction costs are difficult to avoid altogether. Furthermore, as is usual in the German system of unemployment insurance, placement teams in public employment agencies are specialized at the supply side of the labor market. Nonetheless, they can contact the local employer service for support, which is a department of the public agency responsible for the demand side, e.g. for the acquisition of vacancies. In contrast public providers are not served by the employer service, so that individual caseworkers in private agencies have to concern themselves with the supply as well as the demand side.

A third point is concerned with the use of active labor market programs such as wage subsidies and training programs. As can be seen in Table 2, nearly 30 percent of the unemployed assigned to the "Pinguin" teams (the treatment group) participated in a short activation measure, for instance application trainings or short measures providing skills. In contrast only 4 to 7 percent of

the unemployed in the control groups took part in such a measure. Furthermore, participants in in-house services more often participated in a qualification program. A major reason is that during the time period under investigation, private providers obtained the performance pay component for individuals that were re-integrated into employment without the help of subsidies or other labor market programs. This might have been a clear disadvantage of private providers compared to the public employment service. However, also the internal "Pinguin"-teams had to finance participation in such programs from the fixed budget that was available per unemployed person, which clearly made the use of such programs less attractive.

A fourth point is the issue of effectiveness. A major argument supporting the implementation of quasi-markets, however, is that they improve cost-efficiency of placement services. To analyze this question we are currently trying to collect the necessary data. Only if the higher re-employment chances induced by in-house placement services are cost-effective is there a strong case for intensified in-house placement services. If in contrast in-house placement services raise re-employment chances but come with higher costs (e.g. because of additional caseworkers to guarantee the caseload of 1:40), the case is not as clear. Therefore, efficiency is a matter worth investigating further.

Finally, up to now our analysis consider all individuals assigned to the treatment or the control group. We do not investigate the fact that around 20 percent of individuals assigned to standard services did in fact not receive services of a private provider, as they dropped out of registered unemployment before the planned program date or were not enrolled in such services at all. Consider three possible interpretations why these persons did not receive services from a private provider: First, dropout may be a result of selection, where those individuals with the best labor market prospects drop out of unemployment in the aforementioned time gap between randomization and the first appointment with the private provider Second, participating in a program provided by a private provider might have a "threat effect" on individuals assigned to such a program, inducing them to de-register from unemployment. In both cases the conclusion remains that in-house production is more effective. Third, caseworkers may – despite instructions provided – have refused to enroll particular hard-to-place unemployed persons into the "Ganzil" program. The effect on our estimates is not clear as we do not know if these individuals are a particular selection that would have fared better or worse receiving private placement services. As our current data does contain only data on program participation, but not on planned program participation, we are currently gathering additional information on planned program starts (regardless from the fact that the program took place in fact). In a next step we are going to conduct some survival time analysis to gain some deeper understanding of these processes.

6 Conclusions

In this paper, we investigated whether in-house production is more effective than contracting of intensified placement services. We started out with some theoretical considerations about conditions for contracting-out to be an effective and efficient strategy. What is considered most important is the creation of quasi-markets, where several potential providers of placement services are competing with each through contract specifications in a bidding process. In-house production, however, can also have some advantages, especially when high transaction costs are involved.

Analyzing data from a randomized field experiment in two German cities we estimated treatment effects indicating higher re-employment chances and shorter unemployment durations for unemployed subjected to in-house placement services. This relative success of public employment offices is due to several important differences that are only in part inherent aspects of in-house production and contracting-out. Such differences include different incentive structures, for example the treatment of non-benefit recipients or the usage of active labor market programs to activate and/or train the unemployed. They also entail frictions in the transfer of unemployed from the public employment agencies, where they have to register as unemployed, to the private counterparts. Finally, they comprise transaction specific investments for private providers regarding the collection of information on the unemployment and on vacancies in the local labor market.

Taken together, the results of our analysis and the observed differences regarding the implementation of in-house and contracted-out placement services let us conclude that intensified public placement services can be more effective than private ones. However, their comparative advantage depends in part on several factors restricting the effectiveness of private providers. If those factors were to be eliminated, the relative performance of private placement services might improve. Finally, our experimental design ensures internal validity of the results, in other words, our estimates are not biased by unobserved characteristics of the unemployed or their caseworkers. However, we cannot claim external validity of our results, as we investigate only two agencies and two associated private providers of placement services.

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Tables and Figures

Table 1 Means of characteristics (0 = no, 1 = yes) for those assigned to contracted-out services (C), intensified in-house services (I) as well as difference in means (D)

	Agency 1			Agency 2		
	C	I	D	C	I	D
Individual characteristics						
No benefit receipt	0.26	0.32	0.06	0.10	0.12	0.02
Women	0.63	0.64	0.01	0.46	0.50	0.04
Married	0.74	0.66	-0.08**	0.71	0.68	-0.03
Married women	0.47	0.44	-0.03	0.34	0.34	0.00
Searching part-time work	0.17	0.16	-0.01	0.21	0.26	0.05
Foreign nationality	0.05	0.04	-0.01	0.23	0.23	0.00
Age >40	0.14	0.17	0.02	0.17	0.17	0.00
Age 40-49	0.13	0.14	0.02	0.13	0.19	0.06
Age 50-59	0.46	0.48	0.02	0.45	0.39	-0.06
Age 60 and older	0.27	0.21	-0.06*	0.25	0.25	0.00
No secondary degree	0.03	0.06	0.02	0.22	0.22	0.00
Secondary degree (Hauptschule)	0.25	0.26	0.01	0.48	0.49	0.01
Secondary degree (Realschule)	0.52	0.53	0.01	0.13	0.17	0.04
Secondary degree (Gymnasium)	0.20	0.15	-0.05	0.17	0.12	-0.05
No vocational training	0.10	0.12	0.01	0.57	0.49	-0.07
Vocational training	0.74	0.79	0.05	0.38	0.45	0.07
University degree	0.16	0.09	-0.07**	0.06	0.05	0.00
24 months before unemployment entry						
Unemployment <1 month	0.60	0.56	-0.04	0.78	0.81	0.03
Unemployment 1-12 months	0.25	0.31	0.06	0.20	0.18	-0.02
Unemployment 13-24 months	0.14	0.13	-0.02	0.03	0.02	-0.01
Employment <1 month	0.28	0.32	0.04	0.15	0.20	0.04
Employment 1-12 months	0.14	0.17	0.03	0.09	0.09	0.00
Employment 13-24 months	0.58	0.51	-0.08*	0.76	0.71	-0.04
Participation in program	0.21	0.24	0.03	0.16	0.16	0.00
Period of sickness	0.14	0.13	-0.01	0.08	0.04	-0.04
Sanction	0.12	0.11	-0.01	0.04	0.05	0.01
Months of assignment (or unemployment entry)						
April	0.04	0.01	-0.03**			
May	0.17	0.18	0.02			
June	0.08	0.09	0.01	0.16	0.16	0.00
July	0.08	0.08	0.01	0.13	0.14	0.01
August	0.04	0.03	-0.01	0.12	0.09	-0.03
September	0.07	0.05	-0.02	0.12	0.11	-0.01
October	0.07	0.07	0.00	0.13	0.14	0.01
November	0.14	0.15	0.01	0.10	0.10	0.00
December	0.06	0.07	0.01	0.06	0.08	0.02
January	0.20	0.20	0.00	0.12	0.10	-0.02
February	0.07	0.06	-0.01	0.06	0.08	0.03
Number of observations	435	431		267	298	
MSB before matching	6.9			6.4		
MSB after matching	1.1			1.5		

*) $\alpha = 0.05$, **) $\alpha = 0.01$.

Table 2 Participation in active labor market programs (in shares) after assignment for those assigned to contracted-out services (C), intensified in-house services (I) as well as difference in means (D)

	Agency 1			Agency 2		
	C	I	D	C	I	D
"Ganzil"	0.82	0.00	-0.81**	0.78	0.00	-0.78**
Self employment program	0.01	0.02	0.01	0.01	0.01	0.00
Wage subsidy	0.04	0.05	0.01	0.03	0.05	0.02
Qualification program	0.02	0.06	0.04**	0.00	0.02	0.02*
Activation measure	0.04	0.26	0.22**	0.07	0.28	0.21**
Public employment	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.01	0.00	-0.01
Number of observations	435	431		267	298	

*) $\alpha = 0.05$, **) $\alpha = 0.01$.

Table 3 Treatment effects, 360 days after assignment

	Share			Cumulated days		
	Unem-ployed	Employed	Other	Unem-ployed	Employed	Other
Agency 1						
Constant	0.61**	0.17**	0.23**	283**	33**	45**
Intensified in-house	-0.13**	0.04	0.09**	-49**	17**	33**
Observations			866			
R2	0.017	0.003	0.010	0.042	0.009	0.026
Agency 2						
Constant	0.56**	0.15**	0.30**	277**	27**	56**
Intensified in-house	-0.07	0.03	0.04	-34**	13*	21*
Observations			565			
R2	0.004	0.001	0.002	0.022	0.007	0.011

*) $\alpha = 0.05$, **) $\alpha = 0.01$.
Note: OLS estimates; reference persons are those assigned to contracted-out services.

Table 4 Treatment effects after matching, 360 days after assignment

	Share			Cumulated days		
	Unem-ployed	Employed	Other	Unem-ployed	Employed	Other
Agency 1						
Constant	0.60**	0.17**	0.24**	277**	34**	50**
Intensified in-house	-0.12**	0.04	0.08**	-41**	14*	27**
Observations			836			
R2	0.014	0.002	0.009	0.029	0.007	0.017
Agency 2						
Constant	0.54**	0.15**	0.31**	275**	28**	58**
Intensified in-house	-0.04	0.02	0.02	-28**	11	17*
Observations			583			
R2	0.002	0.001	0.000	0.015	0.005	0.007

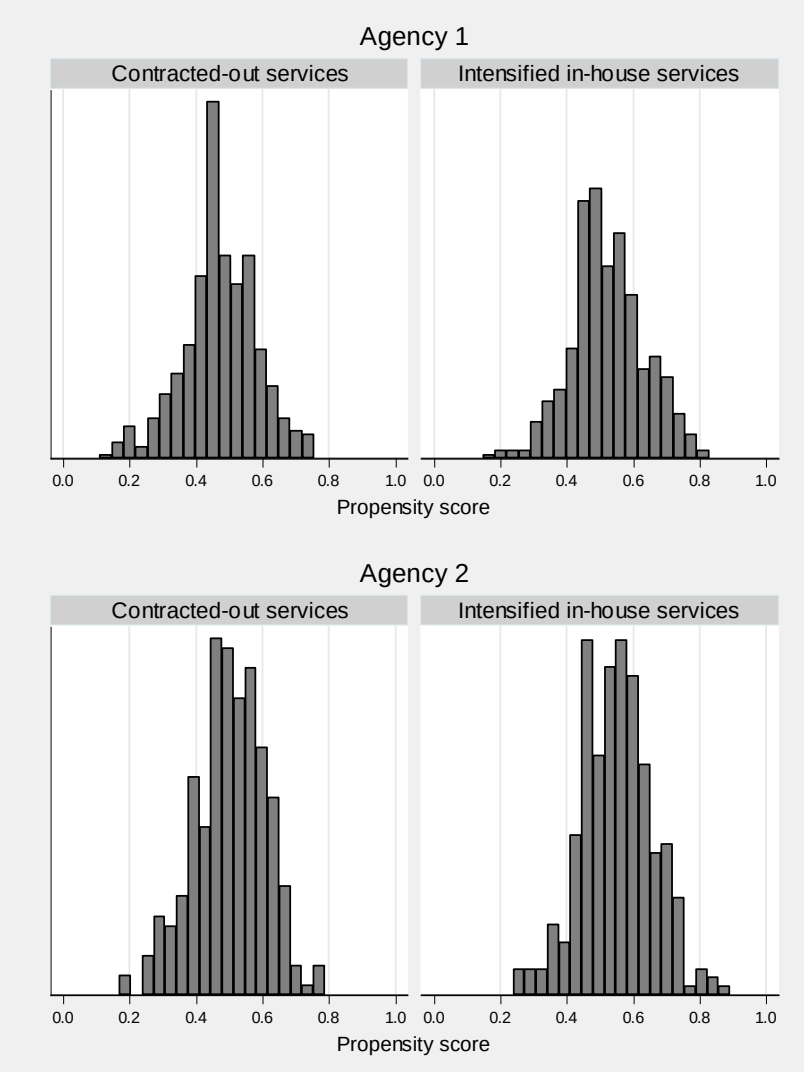
*) $\alpha = 0.05$, **) $\alpha = 0.01$.
Note: OLS estimates after radius matching with a caliper of 0.05; reference persons are those assigned to contracted-out services.

Table 5 Treatment effects by benefit receipt, 360 days after assignment

	Share			Cumulated days		
	Unem-ployed	Employed	Other	Unem-ployed	Employed	Other
Agency 1						
Constant	0.64**	0.18**	0.18**	295**	35**	30**
No benefit receipt	-0.14**	-0.02	0.16**	-49**	-7	58**
Intensified in-house	-0.10*	0.04	0.06	-31**	13	18*
Interaction term	-0.07	0.02	0.06	-47**	15	34*
Observations	866					
R2	0.045	0.003	0.050	0.128	0.011	0.145
Agency 2						
Constant	0.58**	0.16**	0.27**	283**	29**	48**
No benefit receipt	-0.19	-0.12	0.31**	-63**	-18	82**
Intensified in-house	-0.06	0.02	0.04	-28**	10	19*
Interaction term	-0.02	0.11	-0.09	-31	30	-1
Observations	565					
R2	0.021	0.006	0.033	0.073	0.011	0.075

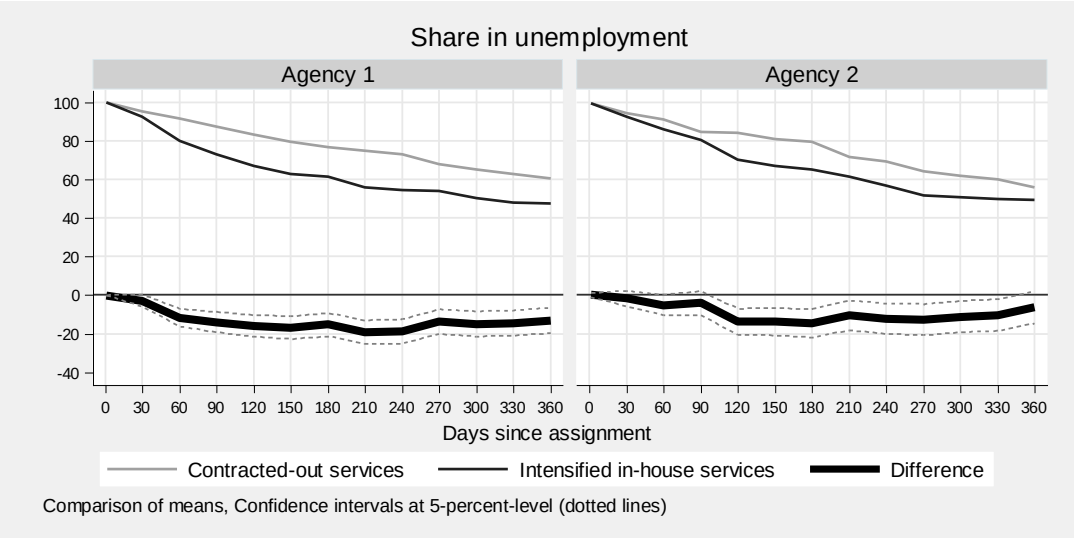
*) $\alpha = 0.05$, **) $\alpha = 0.01$.
Note: OLS estimates; reference persons are those with unemployment benefit receipt assigned to to contracted-out services.

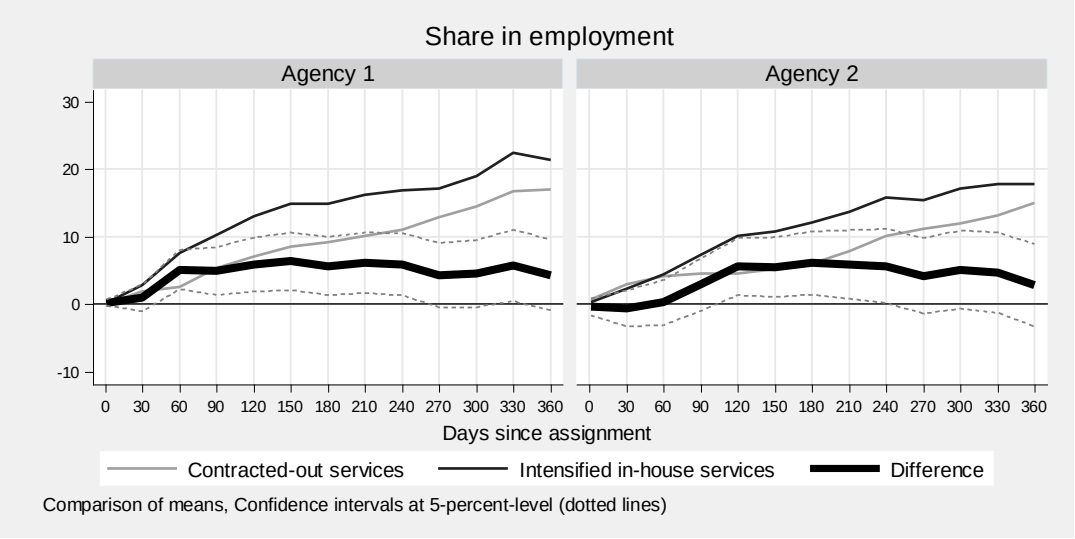
Figure 1 Distribution of propensity scores for assignment into intensified in-house services



Note: Propensity scores are computed from a probit regression of the random assignment result on the variables described in Table 1.

Figure 2 Shares in unemployment, employment or other status (withdrawal from the labor market) over time





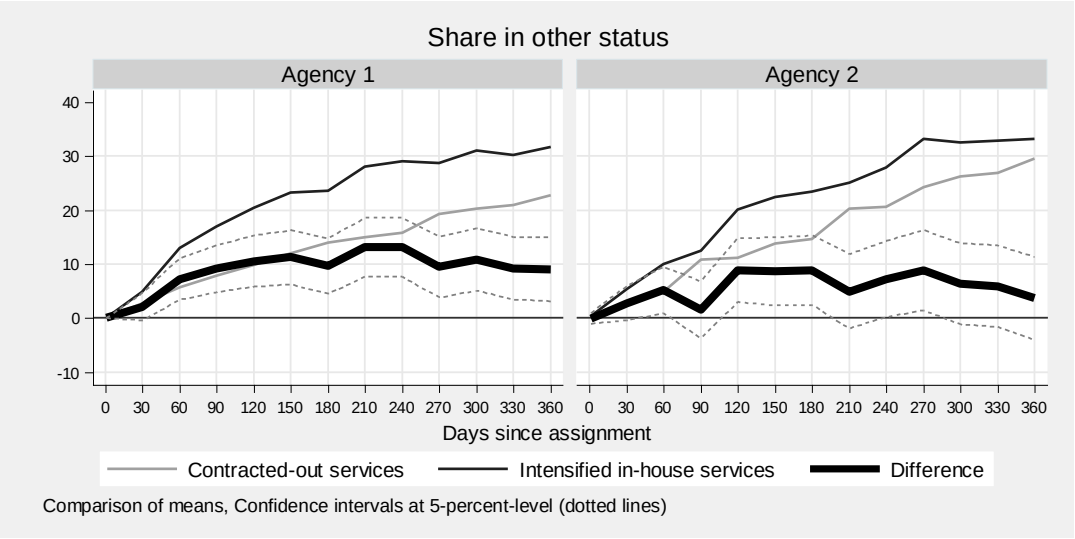


Figure 3 Cumulated days in unemployment, employment or other status (withdrawal from the labor market) over time