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Differential pricing and private provider performance

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Articles on labour market issues

Differential pricing and private provider performance

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Differential pricing and private provider performance

Pia Homrighausen (IAB)

Mit der Reihe „IAB-Discussion Paper“ will das Forschungsinstitut der Bundesagentur für Arbeit den Dialog mit der externen Wissenschaft intensivieren. Durch die rasche Verbreitung von Forschungsergebnissen über das Internet soll noch vor Drucklegung Kritik angeregt und Qualität gesichert werden.

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Abstract

In many countries, employment services are contracted out to private providers. However, there is little evidence on the contract design as well as on the effects of differential pricing on private provider performance. This paper contributes to the literature by presenting detailed information on the contract design and compensation of German private employment service providers in 2009 and 2010. Using a comprehensive and unique data set, I estimate average marginal effects of different compensation components on labor market integration in the short and longer run. The estimation results indicate that high performance-independent upfront payments can decrease the reemployment probability of unemployed workers depending on subgroups of clients and characteristics of the private provider (market). High performance-based payments, however, on average have positive effects on private provider performance in the short and longer run. High malus payments on average have no effects on private provider performance.

Zusammenfassung

In vielen Ländern werden Vermittlungsdienstleistungen an private Dienstleister sogenannte private „Dritte“ übertragen. Bislang gibt es jedoch wenig Evidenz darüber, wie die Verträge mit privaten Dritten ausgestaltet sind und wie deren Vergütungsstruktur auf ihren Eingliederungserfolg wirkt. Diese Studie lieferte einen Beitrag zur bisherigen Literatur indem Sie detaillierte Informationen über die Vertragsausgestaltung und die Vergütung von privaten Dritten aus den Jahren 2009 bis 2010 präsentiert. Basierend auf umfangreichen und neuartigen Daten, schätze ich durchschnittliche marginale Effekte unterschiedlicher Vergütungskomponenten auf den Integrationserfolg privater Dritter in kurzer und längerer Frist. Die Schätzergebnisse weisen darauf hin, dass hohe erfolgsunabhängige Aufwandspauschalen die Wiederbeschäftigungschancen von Arbeitslosen senken können. Dies hängt davon ab, welche Gruppe von Arbeitslosen man betrachtet und den Charakteristika der Vermittlungsdienstleister(märkte). Hohe erfolgsabhängige Vergütungen haben im Durchschnitt jedoch positive Effekte auf den Erfolg des privaten Dritten in kurzer und längerer Frist. Hohe Malus Zahlungen haben im Mittel keinen Effekt auf die Vermittlungsdienstleistung.

JEL classification: D44 D47 J68 L24

Keywords: Employment services, contracting out, private provider compensation

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1 Introduction

Employment services are fundamental components of active labor market policy. Unemployed workers are educated, motivated and supported to find a new job. In many countries, employment services are contracted out to private providers. For-profit as well as non-profit private employment agencies compete to provide the service in a so-called quasi-market.¹ The competition between private providers is supposed to increase effectiveness and efficiency. However, to gain an efficient quasi-market, free market entries, free pricing and an adequate number of motivated competitors have to be guaranteed. In addition, transaction costs, information asymmetries and incentives to discriminate between the users of the service should be minimized (Lagrand/Barlett, 1993; Kaps/Schütz, 2007).

Indeed, the public employment agencies are only the purchasers and not the users of the employment services program. Therefore, they cannot monitor the actions of the private providers, completely. If information asymmetries between the public employment agency (principal) and the private provider (agent) exist, opportunistic behavior is likely. Consequently, private providers face incentives to maximize their outcome even at the expense of service quality. In this context, the conditions of an efficient quasi-market are violated (Jensen/Meckling, 1976; Williamson, 1985; Lagrand/Barlett, 1993; Finn, 2009).

The contract design between a public employment agency and a private provider should aim to avoid these unintended incentives. Output-related performance measurement may give incentives to reject the unemployed with low reemployment probabilities (cream skimming of more job-ready participants) and provide less service to more disadvantaged unemployed (parking). Furthermore, differential pricing of the service may provide incentives to depart from the negotiated level of service effort. To guarantee a fair treatment of the unemployed, it is very important to minimize such gaming activities (Finn, 2009; Bernhard et al., 2009; Koning/Heinrich, 2013).

To what extent are different compensation schemes able to challenge the opportunistic behavior of private employment service providers? Countries such as Sweden, the Netherlands and France have implemented multi-tier compensation systems (Behaghel/ Crépon/Gurgand, 2012). This mixture is supposed to maximize positive and minimize negative incentives of fixed upfront and performance-based payments (Bruttel, 2005a). Performance-independent upfront payments should guarantee service quality and a high number of potential private providers, whereas high performance-based payments should encourage private providers to perform well (Heinrich/Marschke, 2010). Whether private providers perform better than public providers has been analysed by several studies. So far, the evaluation results are rather ambiguous. Empirical research taking into account the effects of differential pricing on the services, however, remains quite rare.

This paper contributes to the small body of literature on differential pricing of private employment services and provides new evidence on private provider behavior. I analyse the contract design of a private employment service program for hard-to-place unemployed in

¹ See Lagrand/Barlett (1993) for a more detailed definition of a quasi-market.

Germany. This program has a multi-tier compensation scheme, consisting of three main components, a fixed upfront payment, a performance-based payment and a malus payment. I estimate average marginal effects of the payment components on the short- and longer-term integration success of a private provider with regard to intended and unintended effects of differential pricing. To my knowledge, this paper is the first to use rich administrative data on the contract design of private providers. Furthermore, I am able to control for the number of private providers applying for a service program and several private provider characteristics. While existing literature has to deal with cream-skimming by private providers, the German institutional setting prevents selection of more job-ready unemployed workers by private providers as well as self-selection by program participants. At this point, my research results give new insights into the incentives implied by different contract designs and thus indirectly suggestions for (cost-)effective institutional settings.

The paper is organized as follows: I begin with a short literature review and continue with important features of the private employment service program. Taking into account theoretical considerations and the compensation scheme of the employment service, I derive some hypotheses. After a description of the applied method, the variables and the data set, I present the results and conclude.

2 Literature review

The contract design of an employment service program might cause several unintended effects. A lot of research on the unintended effects of performance standards on provider behavior is conducted using data on a large U.S. public employment and training program (former JTPA). Courty/Heinrich/Marschke (2011) explain theoretically why providers concentrate their service on more job-ready clients by cream skimming and parking to increase their performance outcomes. Whereas, there is only modest evidence of cream skimming in the context of JTPA (Barnow/Smith, 2004), the results of Courty/Marschke (1996, 1997, 2004) find so-called deadline effects. To gain more awards, providers delay the timing of employment and program status of their program participants. Courty/Kim/Marschke (2011) show that program participants are not prevented from being parked if private providers receive allowances dependent of the employability of an unemployed worker.

Research focusing on unintended effects of differential pricing is quite rare. As exceptions, Heinrich (2007) investigates the incentives of high performance bonuses in the Workforce Investment Act (WIA), an employment and training program, on provider performance. She concludes that bonuses not necessarily give incentives to public providers to improve their performance. Koning/Heinrich (2013) investigate incentives for the opportunistic behavior of private providers in a natural experiment. From 2002 to 2005, the compensation scheme of Dutch private providers changed from guaranteed minimum pay (No Cure less Pay) to full performance-based payment (No Cure No Pay). Using a differences-in-differences approach, their results suggest that a pure performance-based compensation of private employment services is more likely to induce post-program opportunistic behavior of the

providers. Finn (2009, 2010) provides an overview of differential pricing of employment services in general.

Further studies about private employment services ask whether private providers perform better than public providers. The evaluation results are rather ambiguous. For example, in Sweden and France, Bennmarker/Grönqvist/Öckert (2013) and Behaghel/ Crépon/Gurgand (2012) analyse the effectiveness of private employment agencies in a randomized trial. A total of 12 months after the random assignment, Bennmarker/Grönqvist/Öckert (2013) find no significant differences between the probability of employment of hard-to-place job seekers taking part in a private and public employment service program. In contrast, the results of Behaghel/ Crépon/Gurgand (2012) show that public employment services perform better than private providers. After 6 months, the integration rate of the public employment service is twice as high as the integration rate of the private employment agencies. For Germany, Krug/Stephan (2013) analysed a randomized trial to compare the labor market status of unemployed in intensified in-house and private employment service programs. They find no significant differences in the labor market status of the unemployed 18 months after assignment. However, those studies on private employment services do not directly pay attention to the incentives emanating from different contract designs and the pricing of the service.

3 Private employment services for hard-to-place unemployed

3.1 Institutional settings

In Germany, public employment agencies have been able to contract out subtasks of employment services since 1998. From 2002 onwards, the law allows contracting out the entire employment service to a private provider (Gülker/Kaps, 2006). This paper focuses on an employment service program for hard-to-place unemployed contracted out in 2008 and 2009 (Bundesagentur für Arbeit, 2008). Participants in this program are defined as hard-to-place unemployed because they face several difficulties in reentering the labor market. Usually, they are low-qualified, have a lack of motivation to be employed and are not professionally mobile. In general, the rapid labor market integration of these unemployed is hardly conceivable. The unemployed taking part in this program are thus the most disadvantaged unemployed of a local employment agency. The local employment agencies specify the content of the program. In this context, the private provider has to activate, educate and support the participants of the program in finding a new job.

The employment service is contracted out in a competitive tender. If a local employment agency expects to have a large pool of hard-to-place unemployed in the upcoming fiscal period, they assign the Regional Purchasing Centers (REZ) of the Federal Employment Agency (FEA) to call for bids. The tendering procedure may last for over 6 months. The local employment agencies must make decisions about various elements of the contract management before the tender. That contains, for example, the number of participants in the program, the required integration rate, and the payment structure (see the following

section for more details). Local employment agencies try to consider future labor market situations and the potential characteristics of the participants in their contract design. However, due to long periods between the call for bids and the beginning of the individual program duration, the local agency cannot control for future random shocks. Furthermore, as the private provider determines the price of the service in the context of the bidding and is encouraged to raise the required integration rate, some contract features are the results of the tendering process.

In the tendering, the private providers have to describe their integration strategy in detail. After all quotes are provided in a hidden auction, the most economic offer (regarding the dimensions integration strategy, price of the service and minimal integration rate) wins the single-stage bidding process, taking into account standards of quality. Usually, each local employment agency has only one private employment program to provide services to hard-to-place unemployed. The providers of the programs are mainly for-profit organisations. The local employment agency assigns unemployed workers continuously into the program. Depending on the characteristics of each unemployed worker, employment agencies determine the program duration of each participant. Notably, private providers are not allowed to reject participants. Likewise, assigned participants are only able to reject the assignment for good reason. In this way, cream-skimming by private providers and self-selection by unemployed workers are minimized. To prevent more disadvantaged participants from being parked, local employment agencies aim to send only hard-to-place unemployed with similar characteristics into a program. The local employment agency ensures the effectiveness of the service with several quality checks. Private providers must reveal their integration success during the new contract term. However, low integration rates due to regional circumstances during the contract term are usually accepted as an excuse for low integration rates and more in-depth quality checks are not conducted.

3.2 Private provider compensation and hypotheses

To gain successful employment services, private providers need incentives to provide the negotiated level of performance. Referring to the agency theory, in a private provider market of mainly for-profit organisations, these incentives are typically monetary. This means, compensation is closely tied to a level of service effort. But due to hidden information on the level of private provider performance, the public employment agencies determine the level of performance measured in successful integrations. Because public employment agencies cannot monitor the service effort, profit-maximizing private providers face incentives to increase their output and decrease their service costs even at the expense of service quality (Struyven/Steurs, 2005; Heinrich, 2007; Heinrich/Marschke, 2010).

There are pros and cons of input- and output-related pay either way. Random labor market shocks might render the reemployment of the unemployed workers impossible. Thus, input-related pay distributes the share of risks between the public employment agency and the private provider. However, if private providers are compensated independent of their integration success, they can maximize their profits by reducing their performance level. By contrast, output-related pay should give incentives to work hard to aim a large number

of successful labor market integrations. Nevertheless, output-related pay might give incentives to them to raise their profits by several gaming activities such as cream skimming and parking (Bruttel, 2005a; Struyven/Steurs, 2005; Heinrich/Marschke, 2010).

The compensation of the German private employment service program has a multi-tier structure. Before the tendering, the local employment agency decides which compensation components are part of the private provider compensation. If a fixed upfront payment is paid, it is determined by the public employment agency. The fixed upfront payment will be paid for each unemployed person placed into the program within the contract duration. It is supposed to cover all costs of the program depending on the needs and employment probability of the unemployed. Of course, however, costs of the service can be higher than expected, for example due to high travel costs of the unemployed. Usually, a performance-based payment is paid in two equal rates. One rate is paid after a participant is placed into an eligible job or apprenticeship continuously for at least 3 months, with a second rate paid after 6 months. The performance-based payment is a bonus for successful integrations. The level of the full performance-based payments corresponds to the price of the service and is offered by the private provider in the bidding process.

In the bidding process a minimal integration rate is also defined. The minimal integration rate determines the number of unemployed who must be integrated into the labor market for at least 3 months. If the minimal integration rate is not achieved, the private provider might have to pay a malus payment per unemployed who is not, but should have been, integrated. Furthermore, a private provider can receive a balancing of risk premium instead of the performance-based payment. The public employment agency grants a balancing of risk premium (usually less than half percentage points of the performance-based payment) to the private provider if a participant withdraws from the program after over 4 months but is neither verifiably employed with the help of the private provider nor subsequently registered as unemployed for at least 3 months. However, these program participants do not count as successfully integrated.

Focusing on the main compensation components, the incentives of this multi-tier compensation scheme can be formalized in a very simple static model: Consider a profit maximizing private provider who has to provide employment services to a homogenous group of unemployed workers. For every unemployed worker he earns a fixed upfront payment F_j . After having received F_j , the private provider has to decide whether to provide service to the unemployed workers or to park (some of) them. Providing service at costs c_j increases the reemployment chances of each unemployed worker from 0 to λ_j . The private provider receives a performance-based payment P_j if he is able to integrate an unemployed worker back into the labor market. However, if he fails, he has to pay a malus M_j .

Given these assumptions, a profit maximizing private provider will only provide service to an unemployed worker if the following condition holds:

$$\begin{aligned}\pi_{j1} &> \pi_{j0} \\ F_j - c_j + P_j * \lambda_j - M_j * (1 - \lambda_j) &> F_j - M_j \\ P_j &> \frac{c_j}{\lambda_j} - M_j\end{aligned}$$

with index $j = 1...n$ denoting the unemployed workers in the employment service program. π_{j1} is the expected profit if the private provider provides service to an unemployed worker and π_{j0} otherwise. Focusing on compensation, in this simple model only high performance-based compensation components will have a positive effect on the decision of a private provider to provide employment services to an unemployed worker.

Considering the institutional setting of the German private employment service program and previous theoretical suggestions, I derive my main hypotheses: (i) High upfront payments should have no effects on private provider performance. However, they allow for intensive care and training of the unemployed to reach the required minimal integration rate. Thus, they can increase the integration probability of the unemployed workers, especially if a good reputation is also important. But yet, high upfront payments might encourage even less cost effective and productive providers to launch a bid. Even controlling for a good integration strategy of the private providers in the bidding process might not prevent local employment agencies for selecting worse providers resulting in lower integration rates. In contrast, (ii) high performance-based payments should have positive effects on private provider performance. They encourage private providers to integrate as many participants as possible into eligible jobs. However, if the unemployed are placed into a job as soon as possible to increase the actual integration rate without good job matching quality, they might have negative effects in the longer run. Performance-based payments also involve the danger of cream-skimming or parking but these gaming activities should be minimized through the institutional settings. (iii) Malus payments are counterparts of performance-based payments but independent of a longer employment duration. Therefore, high malus payments should have positive effects on the performance of a private provider at least in the short run. They might have negative effects in the longer run as do performance-based payments if they give incentives to place unemployed into a job as soon as possible and no effects if the minimal integration rate is already achieved. (iv) Because the balancing of risk premiums may be accomplished without labor market integrations, they should have no effects. Nevertheless, high balancing of risk premiums might provide incentives to crowd out registered unemployed. Doing so would imply negative effects on private provider performance.

4 Applied method, variables and data

4.1 Empirical approach

To analyse the incentives of different compensation schemes on private provider performance, given they won the bidding, I estimate probit models of the compensation scheme on the integration success of a private provider. The performance-based payment rates are paid after 3 and 6 months of successful labor market integration, thus, I analyse the probability to stay in employment for at least 3 and 6 months, respectively. The following specification is used, adjusting standard errors for clustering by private providers.

$$Integration_i = \beta_1 FixedPayment_i + \beta_2 PerformancePayment_i + \beta_3 BalancingPremium_i + \beta_4 MalusPayment_i + \gamma X_i + \varepsilon_i,$$

with index $i = 1 \dots n$ denoting the participants of each program. The dependent variable takes a value of 1 if a program participant is placed into an eligible apprenticeship or job continuously for at least 3 (6) months and takes 0 otherwise. β_1 to β_4 measure the marginal effects of fixed upfront payments, performance-based payments, balancing of risk premium rates and malus payments on the probability of employment. ε_i is an error term. To achieve unbiased estimators based on the unconfoundedness assumption (Heckman/Lalonde/Smith, 1999; Imbens/Wooldridge, 2009), X contains relevant control variables that affect the integration success of a private provider and the compensation scheme itself:

- Contract features: Especially the minimal integration rate, the number of program participants and the contract duration might affect private provider behavior. For example, high required minimal integration rates that should be achieved within a large pool of clients in a short contract duration might give incentives to private providers to exert more effort.
- Individual (program) characteristics: High fixed upfront payments may indicate a target group that is particularly difficult to integrate. Although I am unable to control for unobservable characteristics of the participants, comprehensive information on socio-demographic characteristics is available. Furthermore, the planned individual program duration and a comprehensive modeling of the labor market history might indirectly reflect the work motivation and performance of the unemployed (Caliendo/Malstehdt/Mitnik, 2014).

I also control for the timing of individual program start and the timing within contract terms. Private providers might condition their level of effort during contract terms on their achieved integration rates. Thus, private providers may have fewer (more) incentives to provide effective service to a participant at the end (beginning) of contract terms if the minimal integration rate is already (not yet) achieved. In this sense, private providers might also focus on less disadvantaged participants if their integration success has been very low. Therefore, I also control for the mean characteristics of all participants served by one provider agency at the same time. Doing so, I also take into account if private providers serve a relatively disadvantaged pool of participants.

- Regional characteristics: Because regional characteristics also influence several contract features, the integration success of a private provider and indirectly his service costs, they also must be considered. In addition, the number of competitors applying for a program in a tender also influences the behavior of a provider, at least in the tendering. High competition between private providers decreases the level of performance-based payments on the one hand but increases the need for integration success with regard to future tendering on the other hand. A time dummy controls for economic changes.

4.2 Data and descriptive statistics

To estimate the model, register data collected and provided by the FEA, particularly the Participation-in-Measures History (MTH) file P46 V06.02.00-201204 is used. The MTH data in general contain information on participation in German active labor market programs. Since the end of 2011, the MTH data P46 provide information not only on private employment service programs but also on contract designs of the (former) programs (IAB, 2012). For the research project, the sample is restricted to contracted out employment service programs in 2008 and 2009. This sample contains 32,290 entrants into the service program from September 2009 to August 2010 covered by 405 private employment service contracts.

Table 1 describes the contract design and pricing of the service. Usually, contracts between public and private providers last for 19.1 months, with a contract duration of 9.8 to 23.3 months. The observed employment service programs have on average less than 200 participants. However, there are private providers who do service up to 1,700 unemployed, indicating large companies. On average, unemployed are placed into the program for more than 6 months. The minimal integration rate is 0 to 40 percentage, with a mean integration rate of 22 percentage.

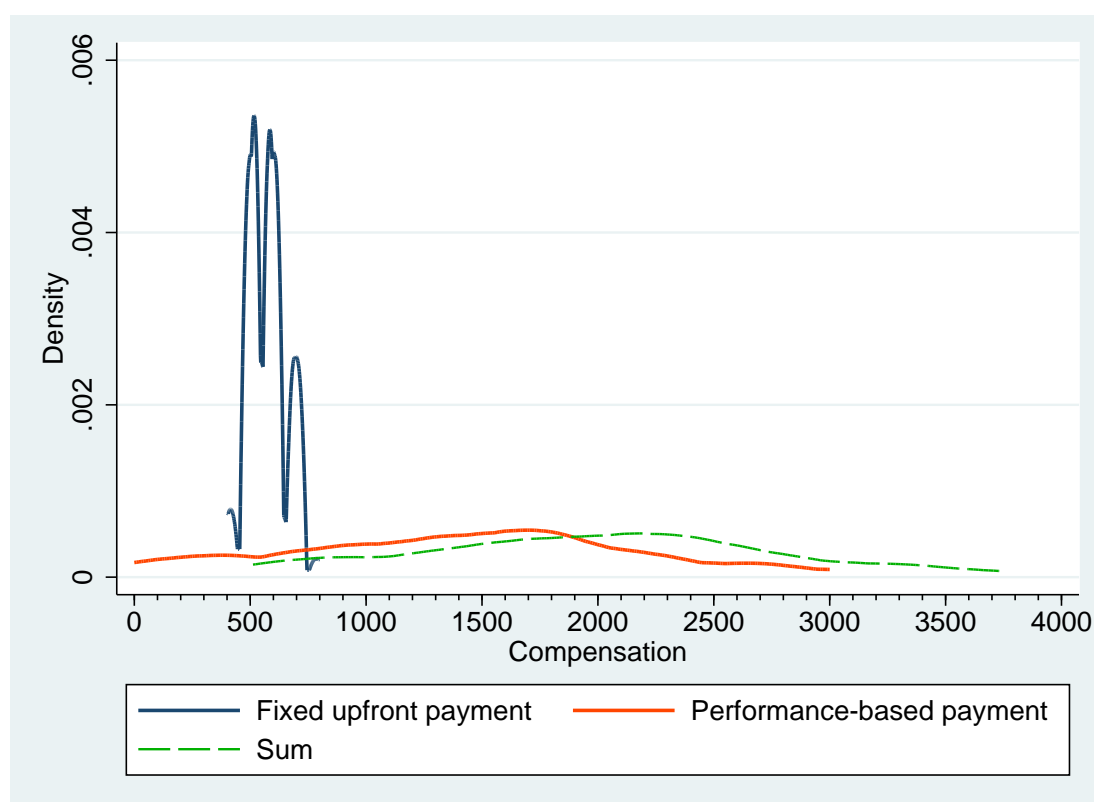
Table 1: Sample statistics of the employment service contracts

Variable Names	mean	sd	min	max
Contract duration (in months)	19.06	1.86	9.80	23.30
Number of participants	187.80	162.23	3.00	1700.00
Average program duration (in months)	6.44	1.10	2.93	9.10
Minimal integration rate	21.96	5.62	0.00	40.00
Fixed upfront payment (in EUR)	572.07	83.28	400.00	800.00
Performance-based payment (in EUR)	1416.46	760.63	0.00	3000.00
Malus payment (in EUR)	554.54	154.89	0.00	1250.00
Balancing of risk premium (in EUR)	561.07	316.87	0.00	1250.00
Competitors applying for a contract	2.89	1.87	1.00	11.00

N=405

On average, private providers receive fixed upfront payments between 500 EUR and 600 EUR for each participant, but also up to 800 EUR to cover their service costs (see also figure 1.). Almost every provider receives a fixed upfront and a performance-based payment. Compared the fixed upfront payments, the variance of performance-based payments is very high due to competition. Successful longer term integrations are worth up to 3,000 EUR. Looking at the sum of fixed upfront and performance-based payments, providers might earn from 500 to 3,800 EUR for one successful integration (figure 1). In most cases, the balancing of risk premium and the malus payment are part of the compensation scheme and reach a maximum of 1250 EUR. On average, 3 providers apply for a program, with a maximum of 11 competitors. However, some providers were unrivaled (table 1).

Figure 1: Private provider compensation: The main compensation components (in EUR)



The integration rates of the 32,320 observed hard-to-place job seekers are described in table 2. In the context of the contract features, 9.7 percentage of the participants have been successfully integrated for at least 3 months. However, only 7 percentage have been integrated for at least 6 months.

Table 2: Private provider performance: Actual shares of integrations into the labor market

Months in employment/ apprenticeship	number of individuals	share
3 months	3,132	9.69
6 months	2,238	6.92

N=32,290

The data of each program participant are merged with information on their socio-demographic characteristics, program participation, employment and unemployment histories from the Integrated Employment Biographies V10.00.00-121012 (IEB). The IEB is a rich data set containing individuals in Germany who at least once have been employed subject to social security contributions and/or have received unemployment benefits since 1975 (Oberschachtsiek et al., 2009). Data of the Federal Institute for Research on Building, Urban Affairs and Spatial Development and of the Statistic Service of the FEA provide information on the (labor market) environment of each participant. In particular, the unemployment rate of the local employment agency district and the urbanization level. Information on the number of providers applying in a tender is provided by the REZ. Table A.1 contains comprehensive information on all observed individuals. Without going into detail, a typical program participant is in his fifties and has an employment history of at least 4 years. Nearly one third of the sample is low-qualified. Health impairments might also be a reason for being considered as hard-to-place unemployed. At the beginning of the program, more than one half of the sample has been unemployed for less than 6 months. However, 30 percentage of the unemployed have no claim on unemployment benefits (left).

I also have the unique opportunity to include several private provider characteristics. Characteristics of all private providers who won a bidding are stored in data sets of the Data Warehouse (DWH) and the IT process CoSachNT of the FEA. Private providers who won a bidding should have a good integration strategy. However, private provider behavior and performance might also differ with their characteristics. The mean values of private provider characteristics are shown in table A.2. As expected, they are usually for-profit organisations. The 405 private employment service contracts analysed were implemented by 181 private employment service agencies.

5 Results

5.1 Multivariate results and robustness checks

Table 3² presents average marginal effects of probit estimates on the probability of labor market integration for at least 3 months. Columns (1) and (2) show estimation results of the main model without controlling for private provider characteristics. The results indicate that high fixed upfront payments have no significant effects on the labor market integration of the unemployed in the short and longer run. However, the sign of the effects tend to be negative. In contrast, high performance-based payments increase the average marginal probability of labor market integrations significantly and in both observation periods. High balancing of risk premium rates and high malus payments have on average no significant effect on the labor market success of a program participant. Regarding these results, only high performance-based payments do have any effects on private provider performance.

The (opportunistic) behavior and performance of a private provider might depend on his characteristics. The stewardship and public-service motivation theory describe the intrinsic motivations of non-providers to perform well: Private providers might focus on social

² Estimates of the full model (table A.3) and all further results are attached in the appendix.

goals rather than economic considerations (Heinrich, 2007). Compared to non-profit organisations, companies with limited liability should face greater incentives for opportunistic behavior but also be more efficient and effective (Hefetz/Mildred, 2004). Smaller providers, however, should have a greater need to save costs resulting in lower service effort compared to big private provider companies who gain economies of scale and scope. In addition, in smaller firms opportunistic incentives don't get lost in long chains of commands. Private providers who belong to a group of affiliated agencies also benefit from learning effects, especially in the bidding process.

Testing whether these characteristics modify the estimated impact of the compensation components will give first insights in the importance of private provider characteristics for their performance level. Controlling for private provider characteristics does not change the main results substantially in the short run (table 3, column (3)). However, table 3, column (4) shows that private provider characteristics change the effect of high fixed upfront payments in the longer run. Since, the reference group are small for-profit private providers who do not belong to an affiliated agency, the negative effect of high fixed upfront payments supports the hypotheses that high fixed upfront payments can cause a negative private provider selection.

Table 3: Average marginal effects on the probability of a 3- or 6-month integration (probit analysis)

	(1) 3 months	(2) 6 months	(3) 3 months	(4) 6 months
Fixed upfront payment (in 1,000 EUR)	-0.025 (0.032)	-0.039 (0.027)	-0.033 (0.032)	-0.054** (0.027)
Performance-based payment (in 1,000 EUR)	0.014** (0.007)	0.013** (0.006)	0.014** (0.006)	0.014*** (0.005)
Balancing of risk premium rate (in 10 percentage points)	0.004 (0.005)	0.002 (0.004)	0.004 (0.005)	0.003 (0.004)
Malus payment (in 100 EUR)	-0.003 (0.003)	-0.003 (0.002)	-0.003 (0.003)	-0.003 (0.002)
Minimal integration rate (in 5 percentage points)	0.001 (0.002)	0.004* (0.002)	0.001 (0.003)	0.004* (0.002)
Number of participants (in 100)	-0.002 (0.001)	-0.002** (0.001)	-0.002* (0.001)	-0.002** (0.001)
Contract duration (in 3 months)	-0.002 (0.009)	-0.001 (0.007)	-0.002 (0.009)	-0.000 (0.007)
<i>Private provider characteristics</i>				
Less than 10 employees (Ref.)				
10 to 49 employees			0.010 (0.009)	0.007 (0.007)
50 to 99 employees			0.008 (0.011)	0.002 (0.009)
More than 100 employees			0.006 (0.010)	-0.000 (0.008)
Missing in the number of employees			0.008 (0.010)	0.012 (0.009)
Non-profit organization with limited liability (Ref.)				
Company with limited liability			0.000 (0.007)	0.005 (0.007)
Registered association			-0.010 (0.011)	-0.007 (0.010)
Others or not specified			0.006 (0.012)	0.011 (0.011)
No affiliated agency according to the data (Ref.)				
Affiliated agency			0.009* (0.006)	0.008 (0.005)
Further control variables	Yes	Yes	Yes	Yes
Observations	32,290	32,290	32,290	32,290

Notes: Variables of the contract design: Fixed upfront and performance-based payment, balancing of risk premium rate, malus payment, minimal integration rate, number of participants, contract duration.

The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise. Individual program start, elapsed contract duration at the beginning of individual program start, planned individual program duration, gender, age, education, family status, (small) children, health, immigration, unemployment and benefit entitlement, employment history of 5 years (last wage, number of employers, employment duration), active labor market program (ALMP) history of 5 years (time elapsed since last ALMP, duration in ALMPs), intended occupation and working time and regional characteristics (unemployment rate of the local public employment agency district, urbanization level, number of competitors applying in the tender) are further control variables. Mean characteristics of other participants at the same provider at program start and time dummies are included.

Standard errors are clustered by private agency (in parentheses). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Estimation results of the full model are attached in the appendix (see table A.3).

As a robustness check, I also conduct estimates of the main model with categorized compensation components (table A.4). In line with the hypotheses, fixed upfront payments above 600 EUR now have on average significant negative effects on the integration success compared to fixed upfront payments less than 500 EUR. Equal to the main model, especially high performance-based payments have significant positive effects on private provider performance. Furthermore, malus payments above 600 EUR have now negative effects in the longer run compared to malus payments less than 500 EUR.

In addition, to test whether the incentives of the compensation components depend on the level of each other, I restrict the sample to private providers who earn less than 500 EUR fixed upfront payment per unemployed worker.³ Notably, the performance-based payment now has high significant positive effects only in the short run. If the balancing of risk premium rate increases by 10 percentage points, the integration probability decreases in the short and longer run. These results indicate on the one hand that low upfront payments don't guarantee a good service quality. On the other hand private providers have a high risk to incur losses if upfront payments are low. Thus, private providers might have the incentive to at least make their participants not register as unemployed again to earn the balancing of risk premium. High malus payments, however, increase the probability of successful labor market integrations if fixed upfront payments are low (table A.5).

Since, high fixed upfront payments guarantee good service quality, they do have positive effects if the sample consists of contracts with performance-based payments less than 500 EUR (table A.6). Low performance-based payments indicate high competitive pressure. Thus, a good performance is even more important to stay competitive. Complementary, table A.7 shows that the other compensation components do not have any effects if performance-based payments are above 2,000 EUR.⁴

5.2 Further results

I also use different subsamples of my data to test for the sensitivity of my results. To determine whether private providers face greater incentives for opportunistic behavior depending on the residual contract duration, I restrict the sample to unemployed who are assigned to the program during the second half the contract duration (table A.8). Compared to the results of the main model, high fixed upfront payments have significant negative effects on the integration success in the longer run. Consequently, program entrees at the end of the contract duration have a higher probability of short term integration success indicating lower service quality. Homogenous groups of program participants are ideal to prevent unemployed from being parked. However, if there are nevertheless differences between the unemployed, private providers might focus their service effort on participants with a higher employability. Restricting the sample to participants who are over 50 years old and thus have lower chances to find a new job compared to younger participants results into a negative effect of high fixed upfront payments (table A.9).

³ I also restricted the sample to private providers who more than 700 EUR fixed upfront payment per person, but the results do not differ substantially to the main model. Tables are available on request.

⁴ The sum of the main compensation components and their relation does not have any (strong) effects on private provider behavior. Tables are available on request.

Because competition between private providers should aim for good service quality at low costs, less competition might yield to high service prices and less integration success (Lagrand/Barlett, 1993). Certainly, restricting the sample to providers who faced no competition in the bidding process (table A.10) yields to a significant negative effect of high fixed upfront payments on the integration success of a private provider in the short on longer run. Thus, in a less competitive private provider market high fixed upfront payments might encourage inefficient private providers to launch a bit. Alternatively, private providers face higher incentives to park their unemployed if fixed upfront payments are high and competition is low. In this context a good screening of the unemployed helps to decide whom to focus their service effort on and whom to drop out of the labor market. This would explain the significant positive effect of high balancing of risk premiums in the short and longer run.

Most of the private providers did not provide similar programs before the year 2008. If I restrict the sample to private providers who provide more than one employment service program the effects of compensation components do not vary substantially to the main model but the negative effect of high fixed upfront payments is now significant in the longer run. These results might imply that private providers who provide more than one employment service program are able to distribute the risks of subsequent consequences due to low performance between their contracts and thus face greater incentives to park their program participants.

6 Conclusion

In many countries, employment service programs are contracted out to private providers to gain (cost) efficiency in providing the service. Private providers are supposed to be more flexible and innovative and have lower transaction costs compared to public employment agencies. Furthermore, competitive pressure would lead them to provide good service quality at little costs (Walwei, 1993; Bruttel, 2005b). However, since public employment agencies cannot monitor the service of their private providers completely, the latter have incentives to raise their profits by opportunistic behavior (Finn, 2009). In this context, differential pricing might influence private provider performance in output-related pay.

The ideal evaluation context for measuring incentives emanating from differential pricing on private provider performance would be a randomized trial. Private providers would receive a randomly assigned pricing of the service. However, to my knowledge, there have been no randomized trials in the context of private employment services addressing different compensation structures. Whereas, it is difficult to offset the lack of missing randomization, this study comes closer to the ideal setup of a randomized trial by using comprehensive data and the advantages of the German institutional setting which prevents selection by unemployed workers and private providers. I estimate average marginal effects of different compensation components on the labor market integration success of private providers, given they won the bidding, in the short and longer run.

The results of this study indicate that high performance-independent upfront payments can increase the probability of negative private provider selection and opportunistic behavior.

High performance-based payments, however, increase the integration success of a private provider in the short and longer run. On average, malus payments have no effects on private provider performance, but effects are ambiguous.

The results of this study are in line with the recent developments of private provider compensation schemes. Several countries moved to full performance-based payment (Heckman/Heinrich/Smith, 2011). However, by implementing full performance-based payment, meeting the other conditions of an efficient quasi-market is more important on the one hand but more difficult on the other hand. From the perspective of a private provider, full performance-based payments carry high risks of losses, especially if more disadvantaged unemployed workers are contracted out and competitive pressure comes to low performance-based payments. Consequently, less private providers are motivated to launch a bid and a free market entree is elusive. To determine a fixed upfront payment high enough to guarantee a competitive private provider market but small enough to avoid negative private provider selection is very difficult. At least, to avoid bad private provider selection and opportunistic behavior among private providers, public employment agencies should improve the monitoring of private providers before and after the tendering and place more emphasis on the quality of the service in the bidding process. According to my results, local private provider market characteristics should also be considered in the contract design before the tender, as private provider characteristics affect their (opportunistic) behavior and performance.

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A Appendix: Further tables

Table A.1: Sample statistics of the program participants at the beginning of the program

Variable names	mean
female	0.54
male	0.46
<i>Age in years</i>	
Up to 25	0.05
26 to 30	0.04
31 to 35	0.04
36 to 40	0.05
41 to 45	0.08
46 to 50	0.11
51 to 54	0.19
55 to 60	0.32
61 to 64	0.13
<i>Education</i>	
No qualification	0.27
Vocational qualification	0.58
A-level, vocational qualification or college	0.15
<i>Household context, health and background</i>	
Single	0.27
Married or partnership	0.73
No children	0.82
Children, no child younger than seven years	0.11
Children younger than seven years	0.07
No impairment of health or disabled	0.73
Impairment of health or disabled	0.27
Without migration background	0.88
With migration background	0.12
<i>Last daily gross wage</i>	
Up to 20 EUR per day	0.07
20.01 to 40 EUR per day	0.19
40.01 to 60 EUR per day	0.22
60.01 to 80 EUR per day	0.16
80.01 to 100 EUR per day	0.09
More than 100 EUR per day	0.10
No wage received	0.17
<i>5-year-history: Accumulated duration of employment</i>	
Up to 12 months	0.09
12 months to 24 months	0.10
24 months to 36 months	0.12
36 months to 48 months	0.19
48 months to 50 months	0.33
Not employed	0.17
<i>5-year-history: Number of employers</i>	
1 employer	0.40
2 employers	0.23
3 employers	0.11
More than 3 employers	0.09
Not employed	0.17
<i>Accumulated duration in unemployment, ALG I receipt</i>	

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... table A.1 continued

Variable names	mean
Up to 1 month	0.16
1 months to 6 months	0.41
6 months to 12 months	0.22
More than 12 months	0.21
No unemployment benefit recipient	0.30
Unemployment benefit recipient	0.70
<i>5-year-history: Accumulated duration of participation in ALMPP</i>	
Up to 3 months	0.18
3 months to 6 months	0.08
6 months to 9 months	0.10
9 months to 12 months	0.04
12 months to 15 months	0.03
15 months to 18 months	0.02
18 months to 24 months	0.02
More than 24 months	0.02
No participation	0.52
<i>Participation in the private employment service program</i>	
Individual program start Sept 2009	0.23
Individual program start Oct-Dec 2009	0.59
Individual program start Jan-March 2010	0.18
Individual program start April-June 2010	0.00
Individual program start July 2010	0.00
Planned program duration (in months)	6.55
<i>Intended occupation</i>	
Military	0.02
Agriculture, forestry and animal agriculture and gardening	0.19
Raw materials production, production and fabrication	0.07
Construction business, architecture, measurement and building technology	0.02
Natural science, geography and computer science	0.24
Transport, logistic, protection and security	0.16
Commercial services, trade, sale, hotel and tourism	0.16
Business organization, accountancy, law and administration	0.07
Health, social work, teaching and education	0.03
Linguistics, literary studies, humanities, social and economic sciences, media, etc.	0.03
<i>Intended working time</i>	
Full-time employed	0.40
Part-time employed	0.27
Full-time or part-time	0.16
Not specified	0.17
<i>Local (labor) market</i>	
Metropolitan region	0.44
Urban region	0.32
Rural region	0.24
Unemployment rate in the local employment agency district	8.38
N=32,290	
Employment history in regard to employment subject to social insurance contribution	
Unemployment benefit (ALG I), Active labor market policy programs (ALMPP)	

Table A.2: Sample statistics of private employment agencies

Variable names	mean	missing (mean)
Number of employees	105.06	0.20
Affiliated private agency	0.49	0.00
<i>Legal form</i>		0.00
Non-profit organizations	0.24	
Companies with limited liability	0.50	
Registered association	0.15	
Others	0.10	
N=181		

Table A.3: Average marginal effects on the probability of a 3- or 6-month integration
(probit analysis) - Main model

	(1) 3 months	(2) 3 months	(3) 6 months	(4) 6 months
Fixed upfront payment (in 1000 EUR)	-0.025 (0.032)	-0.039 (0.027)	-0.033 (0.032)	-0.054** (0.027)
Performance-based payment (in 1000 EUR)	0.014** (0.007)	0.013** (0.006)	0.014** (0.006)	0.014*** (0.005)
Balancing of risk payment rate (in 10 percentage points)	0.004 (0.005)	0.002 (0.004)	0.004 (0.005)	0.003 (0.004)
Malus payment (in 100 EUR)	-0.003 (0.003)	-0.003 (0.002)	-0.003 (0.003)	-0.003 (0.002)
Minimal integration rate (in 5 percentage points)	0.001 (0.002)	0.004* (0.002)	0.001 (0.003)	0.004* (0.002)
Number of participants (in 100)	-0.002 (0.001)	-0.002** (0.001)	-0.002* (0.001)	-0.002** (0.001)
Contract duration (in 3 months)	-0.002 (0.009)	-0.001 (0.007)	-0.002 (0.009)	-0.000 (0.007)
Planned program duration (in months)	0.010*** (0.001)	0.007*** (0.001)	0.010*** (0.001)	0.007*** (0.001)
Individual program start within the contract duration (days)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Individual program start (Sept 2009 Ref.)				
Individual program start (Oct-Dec 2009)	0.006 (0.005)	0.005 (0.005)	0.006 (0.005)	0.005 (0.005)
Individual program start (Jan-March 2010)	0.022** (0.011)	0.017* (0.009)	0.022** (0.011)	0.018* (0.009)
Individual program start (April-July 2010)	-0.000 (0.020)	0.030 (0.019)	-0.000 (0.019)	0.028* (0.017)
Woman (Ref.)				
Man	0.002 (0.005)	-0.000 (0.004)	0.002 (0.005)	-0.000 (0.004)
Age: Up to 25 (Ref.)				
Age: 26 to 30	-0.023* (0.014)	-0.027** (0.012)	-0.023* (0.014)	-0.027** (0.012)
Age: 31 to 35	-0.015 (0.011)	-0.027** (0.012)	-0.014 (0.011)	-0.027** (0.012)
Age: 36 to 40	-0.009 (0.012)	-0.018 (0.011)	-0.008 (0.012)	-0.018 (0.011)
Age: 41 to 45	-0.021* (0.011)	-0.024** (0.011)	-0.020* (0.011)	-0.024** (0.011)
Age: 46 to 50	-0.031*** (0.012)	-0.029** (0.011)	-0.031*** (0.012)	-0.029** (0.011)
Age: 51 to 55	-0.045*** (0.011)	-0.041*** (0.011)	-0.045*** (0.011)	-0.041*** (0.011)
Age: 56 to 60	-0.085*** (0.011)	-0.069*** (0.011)	-0.085*** (0.011)	-0.069*** (0.011)

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... table A.3 continued

	(1)	(2)	(3)	(4)
	3 months	6 months	3 months	6 months
Age: 61 to 64	-0.130*** (0.011)	-0.101*** (0.011)	-0.130*** (0.011)	-0.101*** (0.011)
No qualification (Ref.)				
Vocational qualification	0.017*** (0.004)	0.011*** (0.003)	0.017*** (0.004)	0.011*** (0.003)
A-level, vocational qualification or college	0.022*** (0.006)	0.013*** (0.005)	0.022*** (0.006)	0.013*** (0.005)
Single (Ref.)				
Married or partnership	0.010** (0.004)	0.008** (0.003)	0.010** (0.004)	0.008** (0.003)
Children younger than seven years (Ref.)	0.000 (0.006)	-0.004 (0.006)	0.000 (0.006)	-0.004 (0.006)
Children, no child younger than seven years	0.020*** (0.007)	0.014** (0.007)	0.020*** (0.007)	0.014** (0.007)
No children				
No impairment of health or disabled (Ref.)				
Impairment of health or disabled	-0.034*** (0.003)	-0.021*** (0.003)	-0.034*** (0.003)	-0.021*** (0.003)
Without migration background (Ref.)				
With migration background	0.011* (0.006)	0.005 (0.005)	0.011* (0.006)	0.005 (0.005)
Unemployment duration	-0.001*** (0.000)	-0.000*** (0.000)	-0.001*** (0.000)	-0.000*** (0.000)
No unemployment benefit recipient (Ref.)				
Unemployment benefit recipient	0.010** (0.005)	0.004 (0.004)	0.010** (0.005)	0.004 (0.004)
5-year-history:				
Last wage: Up to 20 EUR per day (Ref.)				
Last wage: 20,01 to 40 EUR per day	0.017** (0.006)	0.016*** (0.006)	0.017*** (0.006)	0.016*** (0.006)
Last wage: 40,01 to 60 EUR per day	0.011* (0.006)	0.010* (0.006)	0.010* (0.006)	0.010* (0.006)
Last wage: 60,01 to 80 EUR per day	0.014* (0.007)	0.009 (0.006)	0.014* (0.007)	0.009 (0.006)
Last wage: 80,01 to 100 EUR per day	-0.009 (0.008)	0.001 (0.007)	-0.009 (0.008)	0.001 (0.007)
Last wage: More than 100 EUR per day	-0.040*** (0.007)	-0.025*** (0.007)	-0.040*** (0.007)	-0.025*** (0.007)
Missing in last wage	0.035*** (0.010)	0.028*** (0.009)	0.035*** (0.010)	0.028*** (0.008)

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... table A.3 continued

	(1)	(2)	(3)	(4)
	3 months	6 months	3 months	6 months
Accumulated duration of employment (in months)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Number of employers	0.025*** (0.002)	0.018*** (0.001)	0.025*** (0.002)	0.018*** (0.001)
Accumulated duration of participation in ALMPP (in months)	0.000 (0.000)	0.000* (0.000)	0.000 (0.000)	0.000* (0.000)
Intended occupation:				
Military (Ref.)				
Agriculture, forestry and animal agriculture etc.	0.009 (0.011)	0.012 (0.010)	0.009 (0.011)	0.013 (0.009)
Raw materials production, production and fabrication	0.012 (0.014)	0.014 (0.012)	0.012 (0.014)	0.015 (0.012)
Construction business, architecture, etc.	0.019 (0.020)	0.013 (0.016)	0.019 (0.020)	0.013 (0.016)
Natural science, geography and computer science	-0.006 (0.011)	0.001 (0.009)	-0.005 (0.011)	0.002 (0.009)
Transport, logistic, protection and security	0.005 (0.013)	0.010 (0.010)	0.006 (0.013)	0.011 (0.010)
Commercial services, trade, sale, hotel and tourism	-0.008 (0.011)	0.000 (0.009)	-0.007 (0.011)	0.001 (0.009)
Business organisation, accountancy, etc.	0.025* (0.013)	0.025** (0.011)	0.025** (0.013)	0.026** (0.011)
Health, social work , teaching and education	0.023* (0.014)	0.025** (0.012)	0.024* (0.014)	0.026** (0.012)
Linguistics, literary studies, humanities, etc.	0.016 (0.014)	0.022* (0.012)	0.016 (0.014)	0.022* (0.012)
Intended working time: Full-time employed (Ref.)				
Intended working time: Part-time employed	-0.031*** (0.005)	-0.022*** (0.004)	-0.031*** (0.005)	-0.022*** (0.004)
Intended working time: Full-time or part-time	-0.005 (0.005)	-0.003 (0.005)	-0.005 (0.005)	-0.003 (0.005)
Intended working time: Not specified	-0.019*** (0.005)	-0.014*** (0.005)	-0.019*** (0.005)	-0.014*** (0.005)
Rate of unemployment of the local employment agency district	-0.003* (0.002)	-0.004*** (0.001)	-0.004* (0.002)	-0.004** (0.002)
Metropolitan region (Ref.)				
Urban region	-0.005 (0.008)	-0.005 (0.007)	-0.005 (0.008)	-0.001 (0.007)
Rural region	0.002 (0.008)	0.002 (0.008)	0.001 (0.008)	0.002 (0.008)
2008 (Ref.)				
2009	0.013 (0.013)	0.009 (0.021)	0.012 (0.014)	0.008 (0.022)

Continued on next page...

... table A.3 continued

	(1)	(2)	(3)	(4)
	3 months	6 months	3 months	6 months
Number of competitors: 1 (Ref.)				
Number of competitors: 2	0.021*** (0.007)	0.016*** (0.006)	0.020*** (0.007)	0.016*** (0.006)
Number of competitors: 3	0.012 (0.010)	0.012 (0.008)	0.013 (0.009)	0.013* (0.007)
Number of competitors: 4	0.025*** (0.009)	0.027*** (0.008)	0.026*** (0.009)	0.027*** (0.008)
Number of competitors: 5	-0.003 (0.009)	0.002 (0.009)	-0.002 (0.009)	0.004 (0.008)
Number of competitors: More than 5	0.030** (0.012)	0.022* (0.009)	0.035*** (0.012)	0.027*** (0.009)
Missing in the number of competitors	0.031*** (0.012)	0.032*** (0.010)	0.027** (0.014)	0.028** (0.013)
Private provider characteristics:				
Less than 10 employees (Ref.)				
10 employees to 49 employees			0.010 (0.009)	0.007 (0.007)
50 employees to 99 employees			0.008 (0.011)	0.002 (0.009)
More than 100 employees			0.006 (0.010)	-0.000 (0.008)
Missing in the number of employees			0.008 (0.010)	0.012 (0.009)
Non-profit organization with limited liability (Ref.)				
Company with limited liability			0.000 (0.007)	0.005 (0.007)
Registered association			-0.010 (0.011)	-0.007 (0.010)
Others or not specified			0.006 (0.012)	0.011 (0.011)
No affiliated agency according to the data (Ref.)				
Affiliated agency			0.009* (0.006)	0.008 (0.005)
Mean characteristics of other program participants:				
Sex	-0.037 (0.051)	-0.015 (0.044)	-0.045 (0.051)	-0.008 (0.042)
Age	0.002 (0.002)	0.001 (0.002)	0.002 (0.002)	0.002 (0.002)
No qualification (Ref.)				
Vocational qualification	-0.016 (0.052)	-0.021 (0.046)	-0.024 (0.051)	-0.028 (0.045)

Continued on next page...

... table A.3 continued

	(1)	(2)	(3)	(4)
	3 months	6 months	3 months	6 months
A-level, vocational qualification or college	0.029 (0.041)	0.005 (0.036)	0.027 (0.041)	0.010 (0.034)
Single (Ref.)				
Married or partnership	-0.010 (0.048)	0.004 (0.043)	-0.008 (0.045)	0.004 (0.040)
Children younger than seven years (Ref.)				
Children, no child younger than seven years	-0.029 (0.074)	-0.018 (0.063)	-0.032 (0.075)	-0.025 (0.064)
No children	0.050 (0.075)	0.036 (0.065)	0.046 (0.071)	0.054 (0.062)
No impairment of health or disabled (Ref.)				
Impairment of health or disabled	0.007 (0.034)	0.006 (0.029)	0.001 (0.034)	0.002 (0.028)
Without migration background (Ref.)				
With migration background	0.022 (0.058)	-0.029 (0.052)	0.028 (0.056)	-0.019 (0.050)
Unemployment duration	-0.002 (0.001)	-0.002* (0.001)	-0.002* (0.001)	-0.002* (0.001)
No unemployment benefit recipient (Ref.)				
Unemployment benefit recipient	-0.020 (0.053)	-0.030 (0.049)	-0.024 (0.050)	-0.038 (0.046)
5-year-history:				
Last wage	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Accumulated duration of employment (in months)	-0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Number of employers	0.025* (0.013)	0.016 (0.012)	0.023* (0.013)	0.016 (0.013)
Accumulated duration of participation in ALMPP (in months)	0.000 (0.002)	-0.002 (0.002)	0.001 (0.002)	-0.002 (0.002)
Intended occupation:				
Military (Ref.)				
Agriculture, forestry and animal agriculture etc.	0.208 (0.178)	0.144 (0.163)	0.213 (0.173)	0.142 (0.158)
Raw materials production, production and fabrication	0.192* (0.116)	0.138 (0.103)	0.184 (0.120)	0.133 (0.107)
Construction business, architecture, etc.	0.168 (0.148)	0.125 (0.132)	0.159 (0.153)	0.109 (0.135)
Natural science, geography and computer science	-0.123 (0.192)	-0.040 (0.167)	-0.116 (0.194)	-0.044 (0.169)

Continued on next page...

... table A.3 continued

	(1)	(2)	(3)	(4)
	3 months	6 months	3 months	6 months
Transport, logistic, protection and security	0.060 (0.117)	0.024 (0.108)	0.050 (0.119)	0.015 (0.110)
Commercial services, trade, sale, hotel and tourism	0.169 (0.130)	0.114 (0.113)	0.164 (0.131)	0.114 (0.114)
Business organisation, accountancy, etc.	0.082 (0.118)	0.064 (0.109)	0.073 (0.122)	0.063 (0.113)
Health, social work , teaching and education	0.068 (0.134)	0.037 (0.117)	0.071 (0.138)	0.032 (0.120)
Linguistics, literary studies, humanities, etc.	0.092 (0.160)	0.012 (0.151)	0.087 (0.162)	-0.011 (0.150)
Intended working time: Full-time employed (Ref.)				
Intended working time: Part-time employed	0.001 (0.032)	-0.001 (0.028)	-0.002 (0.034)	-0.000 (0.030)
Intended working time: Full-time or part-time	0.009 (0.027)	-0.003 (0.026)	0.001 (0.028)	0.000 (0.027)
Intended working time: Not specified	-0.045 (0.037)	-0.041 (0.033)	-0.053 (0.037)	-0.045 (0.032)
Observations	32,290	32,290	32,290	32,290

Notes: The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise.

Active labor market policy programs (ALMPP).

Standard errors are clustered by private agency (in parentheses).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.4: Average marginal effects on the probability of a 3- or 6-month integration (probit analysis): Categorized compensation variables

	(1) 3 months	(2) 6 months
Fixed upfront payment: 0-500 EUR (Ref.)		
Fixed upfront payment: 501-600 EUR	-0.002 (0.006)	-0.001 (0.005)
Fixed upfront payment: >600 EUR	-0.016* (0.008)	-0.016** (0.006)
Performance-based payment: 0-500 EUR (Ref.)		
Performance-based payment: 501-1,000 EUR	0.018** (0.009)	0.011 (0.008)
Performance-based payment: 1,001-1,500 EUR	0.011 (0.010)	0.012 (0.009)
Performance-based payment: 1,501-2,000 EUR	0.020* (0.011)	0.016* (0.009)
Performance-based payment: >2,000 EUR	0.044* (0.024)	0.072*** (0.026)
Balancing of risk premium rate: 0-39 percentage points(Ref.)		
Balancing of risk premium rate: >=40 percentage points	-0.007 (0.012)	-0.008 (0.009)
Malus payment: 0-500 EUR (Ref.)		
Malus payment: 501-600 EUR	-0.009 (0.010)	-0.010 (0.008)
Malus payment: >600 EUR	-0.013 (0.017)	-0.030** (0.012)
Further contract components	Yes	Yes
Further control variables	Yes	Yes
Observations	32290	32290

Notes: Further contract variables: Minimal integration rate, number of participants and contract duration

The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise. Additional control variables as in table 3.

Standard errors are clustered by private agency (in parentheses).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Estimation results of the full model are available on request.

Table A.5: Average marginal effects on the probability of a 3- or 6-month integration (probit analysis): Contracts with less than 500 EUR fixed upfront payment

	(1) 3 months	(2) 6 months
Performance-based payment	0.185* (0.106)	0.044 (0.080)
Balancing of risk payment rate	-0.042** (0.020)	-0.091*** (0.015)
Malus payment	-0.001 (0.026)	0.048** (0.021)
Minimal integration rate	0.031 (0.024)	0.012 (0.026)
Number of participants	-0.034 (0.025)	-0.096*** (0.022)
Contract duration	-0.156 (0.108)	-0.207** (0.092)
Further control variables	Yes	Yes
Observations	2,611	2,611

Notes: Fixed upfront payment <500 EUR. Other variables of the contract design: Performance-based payment (1,000 EUR), balancing of risk premium rate (10 percentage points), malus payment (100 EUR), minimal integration rate (5 percentage points), number of participants (100), contract duration (3 months). The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise.

Additional control variables as in table 3. Standard errors are clustered by private agency (in parentheses).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results for further control variables are available on request.

Table A.6: Average marginal effects on the probability of a 3- or 6-month integration (probit analysis): Contracts with less than 500 EUR performance-based payment

	(1) 3 months	(2) 6 months
Fixed upfront payment	0.208** (0.089)	0.125* (0.071)
Balancing of risk payment rate	0.000 (0.003)	-0.002 (0.002)
Malus payment	-0.004 (0.020)	0.028 (0.021)
Minimal integration rate	-0.002 (0.005)	0.002 (0.003)
Number of participants	0.001** (0.001)	0.000 (0.001)
Contract duration	0.010 (0.016)	0.004 (0.008)
Further control variables	Yes	Yes
Observations	8,233	8,233

Notes: Performance-based payment<500 EUR. Other variables of the contract design: Fixed upfront payment (1,000 EUR), balancing of risk premium rate (10 percentage points), malus payment (100 EUR), minimal integration rate (5 percentage points), number of participants (100), contract duration (3 months). The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise. Additional control variables as in table 3. Standard errors are clustered by private agency (in parentheses).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results for further control variables are available on request.

Table A.7: Average marginal effects on the probability of a 3- or 6-month integration (probit analysis): Contracts with more than 2,000 EUR performance-based payment

	(1) 3 months	(2) 6 months
Fixed upfront payment	0.032 (0.098)	-0.079 (0.094)
Balancing of risk payment rate	-0.018 (0.017)	0.014 (0.018)
Malus payment	0.006 (0.006)	-0.001 (0.006)
Minimal integration rate	0.013 (0.010)	0.015 (0.010)
Number of participants	0.029*** (0.010)	0.019* (0.011)
Contract duration	-0.034* (0.018)	-0.031* (0.016)
Further control variables	Yes	Yes
Observations	3,445	3,445

Notes: Performance-based payment >2,000 EUR. Other variables of the contract design: Fixed upfront payment (1,000 EUR), balancing of risk premium rate (10 percentage points), malus payment (100 EUR), minimal integration rate (5 percentage points), number of participants (100), contract duration (3 months). The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise. Additional control variables as in table 3. Standard errors are clustered by private agency (in parentheses).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results for further control variables are available on request.

Table A.8: Average marginal effects on the probability of a 3- or 6-month integration (probit analysis): Unemployed who were assigned to the program within the last half of the contract duration

	(1) 3 months	(2) 6 months
Fixed upfront payment	-0.058 (0.041)	-0.070** (0.032)
Performance-based payment	0.011 (0.010)	0.012 (0.008)
Balancing of risk payment rate	0.003 (0.007)	0.001 (0.005)
Malus payment	-0.002 (0.004)	-0.002 (0.003)
Minimal integration rate	0.001 (0.003)	0.004 (0.002)
Number of participants	-0.001 (0.001)	-0.001 (0.001)
Contract duration	0.003 (0.010)	0.001 (0.008)
Further control variables	Yes	Yes
Observations	8,383	8,383

Notes: Variables of the contract design: Fixed upfront payment and performance-based payment (1,000 EUR), balancing of risk premium rate (10 percentage points), malus payment (100 EUR), minimal integration rate (5 percentage points), number of participants (100), contract duration (3 months). The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise. Additional control variables as in table 3. Standard errors are clustered by private agency (in parentheses).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results for further control variables are available on request.

Table A.9: Average marginal effects on the probability of a 3- or 6-month integration (probit analysis): Unemployed age 50 and older

	(1) 3 months	(2) 6 months
Fixed upfront payment	-0.058** (0.025)	-0.064*** (0.022)
Performance-based payment	0.016*** (0.005)	0.013*** (0.004)
Balancing of risk payment rate	0.002 (0.004)	0.002 (0.003)
Malus payment	-0.002 (0.002)	-0.002 (0.002)
Minimal integration rate	0.002 (0.002)	0.005** (0.002)
Number of participants	-0.001 (0.001)	-0.001 (0.001)
Contract duration	-0.004 (0.008)	0.003 (0.007)
Further control variables	Yes	Yes
Observations	21,117	21,117

Notes: Variables of the contract design: Fixed upfront payment and performance-based payment (1,000 EUR), balancing of risk premium rate (10 percentage points), malus payment (100 EUR), minimal integration rate (5 percentage points), number of participants (100), contract duration (3 months). The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise. Additional control variables as in table 3. Standard errors are clustered by private agency (in parentheses).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results for further control variables are available on request.

Table A.10: Average marginal effects on the probability of a 3- or 6-month integration (probit analysis): No competition

	(1) 3 months	(2) 6 months
Fixed upfront payment	-0.141*** (0.052)	-0.204*** (0.057)
Performance-based payment	0.014 (0.012)	0.019** (0.009)
Balancing of risk payment rate	0.022** (0.009)	0.013* (0.008)
Malus payment	0.002 (0.003)	-0.002 (0.003)
Minimal integration rate	0.012** (0.005)	0.008** (0.004)
Number of participants	0.002 (0.007)	-0.004 (0.006)
Contract duration	-0.024* (0.013)	-0.008 (0.012)
Further control variables	Yes	Yes
Observations	5,603	5,603

Notes: Variables of the contract design: Fixed upfront payment and performance-based payment (1,000 EUR), balancing of risk premium rate (10 percentage points), malus payment (100 EUR), minimal integration rate (5 percentage points), number of participants (100), contract duration (3 months). The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise. Additional control variables as in table 3. Standard errors are clustered by private agency (in parentheses).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results for further control variables are available on request.

Table A.11: Average marginal effects on the probability of a 3- or 6-month integration (probit analysis): Private agencies providing more than one employment service program

	(1) 3 months	(2) 6 months
Fixed upfront payment	-0.050 (0.041)	-0.065** (0.032)
Performance-based payment	0.019** (0.009)	0.017** (0.007)
Balancing of risk payment rate	0.001 (0.006)	0.001 (0.004)
Malus payment	-0.003 (0.004)	-0.003 (0.003)
Minimal integration rate	0.001 (0.003)	0.003 (0.003)
Number of participants	-0.001 (0.002)	-0.001 (0.001)
Contract duration	0.000 (0.011)	-0.002 (0.007)
Further control variables	Yes	Yes
Observations	22,372	22,372

Notes: Variables of the contract design: Fixed upfront payment and performance-based payment (1,000 EUR), balancing of risk premium rate (10 percentage points), malus payment (100 EUR), minimal integration rate (5 percentage points), number of participants (100), contract duration (3 months). The dependent variable takes a value of 1 if a program participant is integrated in the labor market for at least 3 (6) months and 0 otherwise. Additional control variables as in table 3. Standard errors are clustered by private agency (in parentheses).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Results for further control variables are available on request.

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