Participation of unemployment benefit recipients in active labor market programs: before and after the German labor market reforms

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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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Contents

Abstract

Between 2005 and 2007 the German government raised a per-capita amount of around 10.000 Euros for each transition out of unemployment benefit receipt into basic social care, to be paid by the unemployment insurance. The so called "Aussteuerungsbetrag" set strong incentives that investments in active labor market programs for unemployment benefit recipients should pay off – in terms of an exit from registered unemployment – before a transition into basic social care for needy jobseekers occurred. This raised considerable public concerns that less programs would be granted, in particular for hard-to-place workers. Our paper analyzes if these concerns were justified. We compare four cohorts, eligible for unemployment benefits at the beginning of their unemployment spell during March of the years 2003 to 2006. We conduct some descriptive analyses and estimate piecewise constant exponential hazard models to investigate the correlation between individual characteristics and transition rates into programs. The results show that transition rates into programs were in fact low across the 2005 cohort, but rather high for the 2006 cohort. The expectation that particular disadvantaged groups of unemployed would participate less in active labor market programs in the post-reform period is not confirmed; their transition rates into programs were significantly higher across the 2006 cohort than in pre-reform cohorts.

JEL classification: J64, J68, J65

Keywords: Participation in active labor market programs, labor market reforms in Germany, financing of active labor market policies, piecewise constant proportional hazard model

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1 Introduction

During the years 2002 and 2003 the German economy was deep in recession; the number of unemployed increased up to 4.4 million persons in 2003. As one consequence, the federal government initiated the "Agenda 2010" to reform the social system and the labor market in Germany. Since 2003 in the course of the so called "Hartz reforms" the German Public Employment Service was renewed, the design of several active labor market programs was modified and a number of new instruments were introduced. At the beginning of 2005 further reform steps were to shorten the duration of unemployment benefits considerably and to merge former unemployment assistance for long-term unemployed persons and former social assistance into a new basic social care for needy jobseekers. As a result of the reforms, many former social assistance recipients had to register as unemployed and to apply for basic social care for needy jobseekers. During the first quarter of 2005 the number of registered unemployed increased to more than 5 millions. Currently the unemployment rate has decreased notably. The boom started in the middle of the year 2006 and the economic situation developed positively at least until 2007, where the number of unemployed decreased to 3.8 million persons.

Our paper is mainly concerned with the transitions of unemployed persons in active labor market programs. Between 2005 and 2007 the German government raised a per-capita amount of around 10.000 Euros for each transition out of (insurance-financed) unemployment benefit receipt into (tax-financed) basic social care, to be paid by the unemployment insurance. This "penalty tax" set economic incentives for the unemployment insurance to invest preferentially in active labor market programs if investments noticeably increased the probability of an unemployment benefits recipient to exit unemployment before a transition to basic social care occurred. Public concerns were expressed that less active labor market programs would be granted for hard-to-place unemployed benefit recipients.

We investigate empirically how program entries and the selectivity into programs have developed in the course of the reforms and if the concerns mentioned above were justified. To get comparable samples of individuals across years, we choose a cohort approach: We analyze entries into unemployment benefit receipt during March of the years 2003 to 2006 and follow these cohorts for the course of one year. We first compute transition rates into programs for each cohort over the observation period of one year. Second, we apply a piecewise-constant proportional hazard model to investigate if transition rates into active labor market programs were correlated with particular individual characteristics and if transition rates decreased for particular hard-to-place unemployed persons.

Section 2 describes in more detail the institutional setting of German labor market policies and some of the changes this system has undergone during recent years (see Konle-Seidl 2008 for a more comprehensive overview). Section 3 develops some hypotheses, while Section 4 sketches data, variables and applied method. Our empirical results are depicted in Section 5. Finally, Section 6 draws some conclusions.

2 Institutional background

2.1 The reform of the German system of unemployment compensation

A major part of the social reform processes initiated in Germany at the beginning of the millennium regarded the system of unemployment compensation. Unemployed persons who had contributed to the German unemployment insurance system are eligible for unemployment benefits ("Arbeitslosengeld I"), which amounts up to 67 percent of the latest net income and is paid for a restricted period of time. Since 2006 the maximum duration of unemployment benefits paid by the unemployment insurance system has been shortened considerably and has only currently been prolonged again for older workers (see Overview 1). The legal basis for the unemployment insurance system is provided by the Social Code III ("Sozialgesetzbuch III"). Traditionally, the German Public Employment Service has been responsible for the administration of the unemployment insurance as well as for the placement of registered unemployed persons.

When unemployment benefits had phased out, until 2005 former unemployment benefit recipients were supported by means-tested and tax-financed unemployment assistance ("Arbeitslosenhilfe"). Its amount was also conditional on former income; its administration was conducted through the Public Employment Service. Needy persons not capable of work and without claims for unemployment insurance or unemployment assistance could apply for means-tested social assistance ("Sozialhilfe"), which was administered by local municipalities. Even if capable of work, many of them were not registered as unemployed at the Public Employment Service. Note that when proving "neediness" the entire household income is taken into account.

Overview 1:
Maximum duration of unemployment benefits in Germany

Up to 2/2006		2/2006-12/2007*		From 1/2008	
Age	Months	Age	Months	Age	Months
Up to 45	12	Up to 55	12	Up to 50	12
45-46	18	55 or older	18	50-54	15
47-51	22			55-57	18
52-56	26			58 or older	24
57 or older	32				

*) While enacted already since 2004, these changes did not take force until February 1, 2006, because of protection of confidence.

With the beginning of 2005 the Social Code II ("Sozialgesetzbuch II") came into force: Former unemployment assistance and social assistance were abolished. Now needy unemployed job seekers are entitled to tax-financed basic social care ("Arbeitslosengeld II"), whose amount does not depend on former income. They mostly have to register as unemployed; only those not capable of working for at least three hours a day – due to illness or disability – may still receive basic social care without having to register as unemployed ("Sozialhilfe neu"). The administration of the new services is mostly conducted by joint consortia ("Arbeitsgemein-

schaften") of the Public Employment Service and local municipalities, where the former is responsible in particular for unemployment compensation, placement services and activation. Accordingly, the German Public Employment Service is now organized in two branches, an insurance-funded branch, based on the Social Code III, and a tax-funded branch, based on the Social Code II. An exception was made for 69 municipalities who opted out of this cooperation and provide all services for needy jobseekers on their own ("optierende Kommunen").

Overview 2 summarizes information on the funding of passive as well as of active labor market programs before and after the reform. We are interested in particular in the shaded areas that describe situations in which active labor market policies were financed mainly by the unemployment insurance system. An interesting construction is that in the pre-reform period most active labor market programs for unemployment assistance recipients has been financed from unemployment insurance funds, while active labor market programs for needy job seekers are now financed by taxes. As a kind of compensation between 2005 and 2007 a per-capita amount of around 10.000 Euro ("Aussteuerungsbetrag") had to be transferred from the unemployment insurance's budget to the government's budget for each transition from unemployment benefits into basic social care for needy job seekers, which took place within three months after unemployment benefits had run out. Note that this per-capita payment has only recently been abolished (January 1, 2008) and been replaced by a lump-sum payment of 5 billion Euros that has to be transferred from the unemployment insurance system to the Federal Government yearly.

Overview 2:
Financing of passive and active labor market policies

	Recipients of ...		
Financing up to 2005	**Unemployment benefits**	**Unemployment assistance**	**Social assistance**
Passive labor market policies	Unemployment insurance	Taxes	Taxes
Active labor market policies	Unemployment insurance		Taxes
Administration	Public Employment Services (only Social Code III branch)		Municipalities

	Recipients of ...	
Financing since 2005	**Unemployment benefits**	**Basic social care for needy jobseekers**
Passive labor market policies	Unemployment insurance	Taxes
Active labor market policies	Unemployment insurance	Taxes
...transition	Per-capita transfer from unemployment insurance to government's budget	
Administration	Public Employment Services (Social Code III branch)	Public Employment Services (Social Code II branch) and/or municipalities

2.2 Active labor market programs in Germany

As has already been mentioned, in the course of the labor market reforms the design of several active labor market programs was modified since 2003 and a number of new instruments was introduced. In the following we will present a brief overview on the main instruments of active labor market policies administered by the German Public Employment Service (see Bernhard et al. 2008 for a comprehensive overview on instruments and evaluation results). Table 1 shows entries and average number of participants in selected programs for the period 2000 to 2006. Since 2005 these numbers include also program entries of basic social care recipients.

Targeted wage subsidies ("Eingliederungszuschüsse" EGZ), paid to employers for a fixed period of time, support a direct integration of unemployed persons in the regular labor market. They gained importance in East Germany following the reunification and there after again in the late nineties, but lost importance until 2005. From 1998 to 2003 three main variants were in place: One required that the employer reasoned special training requirements, one was aimed at hard-to-place unemployed with severe problems of reintegration and one subsidized workers of age 50 and older. The "Hartz" reforms collapsed these into a single wage subsidy for hard-to-place workers, with a looser definition of target groups and less generous financial support. In the discretion of the caseworker, up to 50 percent of wages may be reimbursed for up to 12 months. Until 2004 several similar wage subsidy programs have also been administered by the Public Employment Service (see Jaenichen 2000). Among smaller programs, there are subsidies for hires in newly founded firms, for the support of severely disabled individuals and for the promotion of job rotation.

Further vocational training ("Förderung beruflicher Weiterbildung") encompasses a number of different treatments, which can be broadly classified in qualification programs, training in "practice firms" (that offer practical occupational training without trainees actually working in a real company) and long retraining measures. The duration varies considerably between some months up to two ore three years for retraining programs. Since the year 2003 access to further training programs is granted through vouchers; issuing a training voucher to an unemployed person is in the discretion of the caseworker. Vouchers specify the training target, program duration, the regional scope and the period of validity (up to 3 months). Kruppe (2008) investigates in detail which of those receiving a voucher in fact redeemed it. For a long time further vocational training belonged to the most important programs in Germany. However, during the first half of this decade entries as well as the duration of these measures were shrinking, while – also due the increasing demand for skilled personnel – the number of entries increased again in 2006.

Previously very important programs for job creation in the public sector ("Arbeitsbeschaffungsmaßnahmen und Strukturanpassungsmaßnahmen" ABM and SAM) nearly disappeared until 2004. However, since 2005 a new variant of public job creation for long-term unemployed ("Arbeitsgelegenheiten" AGH) is the most important program for unemployed recipients

of basic social care. This program provides mostly only a modest additional reimbursement for work ("Ein-Euro-Jobs").

Table 1:
Entries and average numbers in selected labor market programs during 2000–2006 (in 1000)

	2000	2001	2002	2003	2004	2005*		2006*	
						II/III	III	II/III	III
Entries into program									
Wage subsidy ("Eingliederungszuschüsse")	152	127	188	183	157	134	*83*	217	*120*
Further vocational training ("Förderung berufl. Weiterbildung")	523	442	455	255	185	132	*66*	247	*144*
Public job creation I ("Arbeitsbeschaffungsmaßnahmen, SAM")	318	246	215	179	161	80	*18*	80	*18*
Public job creation II ("Arbeitsgelegenheiten")	-	-	-	-	-	630	-	742	-
Short-term training ("Trainingsmaßnahmen")	485	551	865	1064	1188	894	*484*	978	*534*
Start-up subsidy I ("Überbrückungsgeld")	93	96	125	159	183	157	*157*	108	*108*
Start-up subsidy II ("Existenzgründungszuschuss")	-	-	-	95	168	91	*91*	43	*43*
Start-up subsidy III ("Gründungszuschuss")	-	-	-	-	-	-	-	34	*34*
Contracting-out to private agencies ("Beauftragung Dritter")**	-	-	-	-	635	426	*153*	301	*153*
Temporary help-firms ("Personal-Service-Agenturen")	-	-	-	45	56	27	*24*	16	*11*
Average number in program									
Wage subsidy ("Eingliederungszuschüsse")	105	118	136	153	110	60	*39*	82	*14*
Further vocational training ("Förderung berufl. Weiterbildung")	343	352	340	260	184	114	*96*	119	*72*
Public job creation I ("Arbeitsbeschaffungsmaßnahmen, SAM")	266	237	193	144	117	61	*49*	50	*43*
Public job creation II ("Arbeitsgelegenheiten")	-	-	-	-	-	201	-	293	-
Short-term training ("Trainingsmaßnahmen")	52	60	74	93	95	69	*35*	70	*35*
Start-up subsidy I ("Überbrückungsgeld")	43	46	56	73	84	83	*83*	63	*63*
Start-up subsidy II ("Existenzgründungszuschuss")	-	-	-	40	151	234	*234*	210	*210*
Start-up subsidy III ("Gründungszuschuss")	-	-	-	-	-	-	-	8	*8*
Contracting-out to private agencies ("Beauftragung Dritter")**	-	-	-	-	95	103	*28*	100	*24*
Temporary help-firms ("Personal-Service-Agenturen")	-	-	-	10	25	13	*12*	6	*4*

Source: Statistics of the German Public Employment Service (Data-Warehouse).
*) II/III = Programs in the realm of the Social Code II (without "optierende Kommunen") and the Social Code III; III = Programs in the realm of the Social Code III.
**) Figures are available since 2004, while different variants started already in 1998 (contracting-out of subtasks) respectively 2002 (contracting-out of entire placement).

Short training programs ("Trainingsmaßnahmen") have been used increasingly over time, in particular during 2003 and 2004. Their durations do in most cases not exceed two months. They are utilized to train qualifications and abilities, to test the availability of the unemployed, to check whether unemployed are suited for further longer-term measures and to provide help in job search through application training. These programs are conducted partly within firms and partly firm-external.

Two programs offering financial support for unemployed persons founding their own businesses were increasingly utilized until 2006: A first variant ("Überbrückungsgeld") encouraged unemployed persons to found a new business by proceeding to pay unemployment benefits as well as a subsidy to social security contributions for six months. The "Hartz" reforms in 2003 additionally introduced a second variant of a start-up subsidy ("Existenzgründungszuschuss"), which provided a fixed, but time-decreasing amount for up to three years and was attractive for unemployed persons who received rather low unemployment benefits. In August 2006 both programs were collapsed in a new variant of a start-up subsidy ("Gründungszuschuss"). Start-up subsidies differ from most other active labor market programs since caseworkers have no

discretion in granting the subsidy – any unemployed person with further benefits entitlements and providing a convincing business plan has a legal entitlement to the subsidy. Furthermore, the period of subsidization does not shorten the duration of further unemployment benefit entitlements.

Contracting-out to private placement services gained importance during the last years in Germany. Unemployed persons may ask for a voucher that entitles them to use the services of a private placement agency or may be assigned to private agencies that compete on a quasi-market ("Beauftragung privater Dritter"). While unemployment benefit recipients have the legal right to demand a voucher after two months of unemployment and to demand assignment to a private placement agency after half a year of unemployment, participation is mostly not the result of such demands. Furthermore, temporary help firms may employ previous unemployed persons while receiving financial reimbursement from the Public Employment Service ("Personal-Service-Agenturen").

An increasing number of evaluation studies investigates the effects of these programs on the labor market prospects of participants, comparing a treatment group with a similar group of unemployed persons that participate never or only later in a program. After a lock-in period generally significant positive effects have been found for wage subsidies (Jaenichen/Stephan 2007) and start-up subsidies (Baumgartner/Caliendo 2007). A considerable number of papers investigates the effectiveness of further vocational training programs (see for instance Biewen et al. 2007, Fitzenberger et al. 2006, Fitzenberger/Völter 2007, Lechner et al. 2005, 2007, Rinne et al. 2007). The results imply that further vocational training programs had in the longer run mostly significant positive effects on the employment prospects of participants. However, since program effects are rather weak, it may take some time until the estimated program effect turns positive. Caliendo et al. (2005a, 2005b, 2006), Hujer/Thomsen (2006) and Hohmeyer/Wolff (2007) showed that participation in a public job creation schemes had in the longer run mostly negative or insignificant effect on the labor market prospects of participants. The picture is mixed for short training programs (Wolff/Jozwiak 2007, Stephan et al. 2006): They seem to improve the labor market prospects of participants considerably if conducted within a firm, while firm-external short training programs exert much lower effects. Regarding contracting-out, Bernhard/Wolff (2008) obtained slightly positive effects of an assignment to private placement agencies, while Winterhager et al. (2006) found positive effects of placement vouchers on employment probabilities.

Finally, the development of program participation has to be seen against the background that during the year 2004 also the German Public Employment Service had been reorganized and renewed. Among other things, caseworkers were challenged to invest funds for active labor market programs effectively and efficiently. Unemployment benefit recipients were – as result of a profiling – clustered into four groups, which were characterized as market customers, customers in need of activation, customers in need of support and welfare customers ("Marktkunden", "Beratungskunden Aktivieren", "Beratungskunden Fördern", "Betreuungskun-

den"). While market customers were supposed to be not in need of further activities than placement advice, customers in need of activation or support were assessed to benefit from further activities of caseworkers – the former lacking in motivation, the latter requiring qualification or subsidization. In contrast, welfare customers were evaluated as very difficult to place in the labor market, thus further spending on active labor market programs would probably be "wasted" on them. Tailor-made programs for the treatment of these groups of customers had been laid down in manuals for caseworkers ("Handlungsprogramme") and came into effect since 2004. Their aim is to provide individual help for those unemployed persons who need it and who are expected to profit from it.

3 Hypotheses

As has already been noted, from 2005 to 2007 a per-capita payment ("Aussteuerungsbetrag") from unemployment insurance funds to the government budget was due for each transition from unemployment benefits to basic social care. This was justified by the German government with the fact that the Social-Code-III branch of the Public Employment Service would now save costs for active labor market programs for former unemployment assistance recipients, which has been financed by unemployment insurance funds before the reforms took place. Furthermore the transfer was meant to set an incentive for the Public Employment Service to get unemployment benefits recipients into employment or at least out of registered unemployment before they became entitled to tax-financed basic social care.

However, since the beginning of 2005 this clearly introduced also an undesired incentive for caseworkers in the realm of the Social Code III. From an economic point of view, an investment into an active labor market program for a recipient of unemployment benefits required that the investment increased his or her probability to leave unemployment to a sufficient amount (see Bender et al., 2006, for a detailed discussion). Furthermore, this exit has to occur – and this is the critical implication of the per-capita transfer – before an entry into basic social care for needy jobseekers occurred. That would be, however, more difficult for unemployed with low qualification and elder workers. Thinking further, caseworkers might have even assigned in particular those individuals into programs, who were – when employed – main earner within the household context. This would be in particular married men. In contrast, married women are comparatively often second-earner within a household and would thus not be entitled to basic social care if their husbands earn a sufficiently high income. Also the effects of programs had to manifest themselves quickly, thus making it less attractive to grant participation in long-term active labor market programs.

It is therefore not surprising that the implementation of the per-capita-payment raised considerable concerns. Adamy (2005) noted that the new financial architecture reduced funds available for the integration of unemployment benefits recipients. He predicted that less and cheaper active labor programs would be put into action. In particular, further vocational training programs might be substituted by short training programs. Also program participation was supposed to concentrate on those unemployed benefit recipients with rather good prospects of

re-integration in the labor market (Bender et al. 2006). The left-wing political party "Die LINKE" stated the per-capita payment contributed to increase labor market segregation (Deutscher Bundestag 2007).

Due to public concerns and the initiative of its supervisory board ("Verwaltungsrat") the Public Employment Service counter-steered since 2006, devoting considerable additional funds to active labor market programs – despite the incentive structure implemented by the government. Also, particular programs were launched to promote less qualified and older unemployment benefits recipients in the realm of the Social Code III ("Sonderprogramm zur Stärkung der Qualifikation der Personengruppe der Geringqualifizierten und Älteren, WeGebAU", "Sonderprogramm Integrationsfortschritte für Betreuungskunden, IfB"). Both groups face particular placement difficulties in the labor market.

Against this background, we compare four cohorts of persons who became eligible for unemployment benefits during March 2003 to 2006. We want to test the following hypotheses, which are all related to the fact that investments in active labor market programs for unemployment benefit seemed in particular worthwhile if they contributed to an exit out of unemployment before an entry into basic social care took place:

- First, transition rates into active labor market programs in the realm of the Social Code III have been lower for the 2005 than for former cohorts. However, because of active counter-steering of the Public Employment Service this will not necessarily be the case for the 2006 cohort.
- Second, less programs of long duration could have been granted for unemployment benefit recipients of the post-reform periods. On the one hand programs of longer duration might have generally been substituted through comparatively cheap short training programs. On the other hand average program durations – in particular of wage subsidies and further vocational training – might have decreased.
- Third, one could suppose that program participations of unemployment benefit recipients have in average started earlier during an unemployment spell after the per-capita transfer has been introduced.
- Fourth, investment in active labor market programs may have seemed in particular risky for low-qualified and elder worker (in our empirical analysis workers older than 50) as well as for married women, but more worthwhile for married men. Transition rates into programs might thus have decreased in post-reform years for the former groups and increased for the latter.

These hypotheses cannot be analyzed using data from the Statistics of the Public Employment Service (see Table 1), since we need samples that are in fact comparable across years; this requires the use of micro-data.

However, a confirmation of the hypotheses stated above does not provide direct evidence on undesired effects of the per-capita transfer, since we cannot disentangle its impact from ef-

fects of the organizational changes within the Public Employment Service and of reforms of the system of unemployment compensation. A confirmation might rather be interpreted as indirect evidence that the concern stated above were justified.

4 Data and applied method

4.1 Data and variables

We utilize data from the TrEffeR database of the German Public Employment Service. For monitoring purposes, TrEffeR (Treatment Effects and Prediction) provides – on a very detailed level – on-going evaluation results for active labor market programs (Stephan et al. 2006). The current version merges data flows from the distinct computer based operative systems of the Public Employment Service on periods of registered job search, registered unemployment and participation in labor market programs for the period 2000 to the middle of 2007. It's also possible to add information on employment spells to these data; this has, however, not been done for the analysis at hand.

Table 2 shows that the data set contains fewer entries in unemployment than published by the Statistics of the Public Employment Services (Panel I and II): In particular re-entries into registered unemployment following program participation are not interpreted as new entries into unemployment. For instance, short gaps between unemployment spells (up to seven days), as well as gaps arising from sickness periods (up to 6 weeks) are bridged. Overall entries into labor market programs will be slightly under-registered in the data, since not all programs are integrated in the computer based systems of the Public Employment Service. In particular, different variants of contracting-out to private placement agencies started already in the year 1998 (contracting-out of sub-tasks) respectively 2002 (contracting-out of entire placement tasks). Information on participation, however, has been included in the data prior to 2004. Receipt of a placement voucher is not covered by the data at all.

We apply several additional restrictions to the data. Our data set consists first of all individuals entering registered unemployment during March of the years 2003 to 2006. We follow the labor market history of these individuals over the course of one year. Second, we include only individuals into our analysis, who were of age 25 to 54 at the inflow date in our sample. This selection excludes on the one hand individuals eligible for specific programs for youth unemployed. On the other hand unemployed persons older than 58 do not have to register as searching anymore and often withdraw from the labor market. Also since February 2006 the duration of unemployment benefits was shortened to 12 months for all individuals up to 55. Third, only entries of unemployment benefit recipients were investigated. Note that up to the beginning of 2005 these persons may run out of claims during their unemployment spell and receive unemployment assistance or no funding at all, while still eligible to active labor market programs financed by the unemployment insurance. Fourth, only individuals who have been out of unemployment for at least three months are included. Fifth, since 2005 the data of the Public Employment Service are partly incomplete as a consequence of the already mentioned last "Hartz" labor market reform, which reallocated responsibilities for long-term unemployed

persons between the Public Employment Service and municipalities. Data flows from those 69 municipalities opting out of the co-operation with the Public Employment Service ("optierende Kommunen") have not been entirely integrated yet. For individuals from these municipalities we cannot distinguish between times of unemployment, times in programs and times out of registered unemployment. To get comparable data sets across years, we decided to drop all individuals from local offices ("Geschäftsstellen") of the Public Employment Service, whose clients may have switched into the responsibility of one of these municipalities since 2005. Individuals, for whom no information on the local offices was available, were dropped from the data set if they were registered in 64 of 180 local labor market areas ("Agenturbezirke") that include at least one of these municipalities. Fifth, the participation in start-up subsidy programs is not comparable to participation in other programs since unemployed with further benefit entitlements have also a legal entitlement to participate in the program (see Section 2.2). Thus we exclude all individuals taking up subsidized self-employment during the analyzed period from further analysis.

Table 2:
Number of observations

	2003	2004	2005	2006
I. Statistics of the German Public Employment Service				
Entry into registered unemployment during March	605070	639262	591370	587751
II. TrEffeR data and steps of selection				
1) Entry into registered unemployment during March	437758	424383	412236	510735
2) Age between 25 and 54	301832	291670	278885	314200
3) Receipt unemployment benefits at beginning of spell	148325	134616	127354	109010
4) At least 90 days not registered	127307	105622	102082	84539
5) Excluding areas with incomplete data since 2005	103528	85288	82107	68273
6) Excluding persons taking-up a start-up subsidy	97286	79893	77502	64075
III. Transitions				
A. Program in realm of the Social Code III	25539	22372	14698	15794
B1. Program with duration of less than 100 days	19170	19251	13060	13437
B2. Program with duration of 100 days and longer	8999	5038	2614	3970
C1. Wage subsidy program	2953	1446	1215	1851
C2. Further vocational training	4058	2852	1500	3108
C3. Public job creation scheme	2365	602	140	145
C4. Short training program	16767	13444	9664	9655
D. Basic social care for needy jobseekers	-	8564	9635	5878
E. Not registered as unemployment and not in program	63008	54045	57748	50243

Source: Statistics of the German Public Employment Service (Data-Warehouse)
and TrEffeR data set of the German Public Employment Service (own calculations).
Only program entries while in the realm of the Social Code III; transitions into start-up subsidy programs are excluded. Individuals may enter more than one program variant during their unemployment spell.

Table 2 displays step by step (Panel II) how many observations remain in our sample due to these restrictions: In each of the four years investigated our dataset contained around 400,000 to 500,000 persons that registered as unemployed during March of the respective year. Around three quarter of these belonged to the age group investigated, between 25 and 54. Only one third (2006) to one half (2003) of these received unemployment benefits at the beginning of

their unemployment episode. Around 50,000 of those remaining had been less than 90 days out of registered unemployment at the beginning of their spell, were from local labor markets where municipalities opted out of the cooperation with the Public Employment Service or participated in a start-up subsidy program. As a consequence, the analyzed dataset contains for each of the years investigated between 65,000 and 100,000 observations.

We will first investigate the overall risk to enter any active labor market program while in the realm of the Social Code III (excepting start-up subsidies, as has been explained above), thus treating all programs as one. Second, we distinguish between "short" and "long" programs, setting the border somewhat arbitrarily at 100 days of program participation. Third we separately analyze entries into the main "traditional" program variants (not necessarily the first program entry during the spell): These are wage subsidies, further vocational training programs, public job creation schemes as well as short training programs. In particular subsidization by wage subsidies and further vocational training programs may still vary considerably in length within these categories. In the second and third step we take into account that a person may enter different program variants while in the realm of the Social Code III. Fourth, we have also a look at competing risks, which are in particular a transfer into basic social care or an exit out of unemployment.

For the sample investigated, Panel III of Table 2 shows also the number of transitions into programs, into basic social care for needy job seekers and out of unemployment for each of the years investigated. Short program participations are obviously much more common that longer participations of more than 100 days. In line with this, short training programs are the most commonly utilized program variant. In contrast, only few cohort members participated in public job creation schemes.

As explaining variables we include in our multivariate analysis first the region (East Germany versus West Germany). Second, we control for socio-demographic characteristics, measured at the start of an unemployment spell, in particular sex and marital status (also interacted), nationality, health problems, degree of disablement, education and age group. Third, several variables describe the unemployment-history in the both years preceding the analyzed unemployment spell, measured at the start of this spell, are included. These are times of unemployment, participation in labor market programs, sanctions and periods of illness. Fourth, to test our final hypotheses – that access to programs has changed over time in particular for married men, married women, unemployed with low qualification and elder workers (those between age of 50 and 54) – we also include interactions of these variables with the year of unemployment entry into our estimates.

Means of the descriptive variables – all specified as dummy variables – can be found in Table 3. The sample analyzed is rather similar across cohorts regarding individual characteristics. We add some information on the already mentioned "customer classification" of the Public Employment Service. However, the share of unemployed persons, for whom no classification was

available, is very high across earlier cohorts. Thus we do not include this variable in our further analysis.

Table 3:
Means of descriptive variables

		2003	2004	2005	2006
Individual characteristics	East Germany	0.27	0.24	0.26	0.23
	Unmarried man	0.29	0.29	0.31	0.31
	Unmarried woman	0.19	0.20	0.18	0.19
	Married man	0.30	0.28	0.31	0.29
	Married woman	0.23	0.23	0.20	0.21
	Foreigner	0.11	0.11	0.11	0.11
	Slightly disabled	0.02	0.02	0.02	0.02
	Severly disabled	0.03	0.03	0.03	0.03
	Health problems	0.08	0.08	0.06	0.07
	Without school leaving certificate	0.09	0.09	0.08	0.08
	Lower secondary degree (Hauptschule)	0.41	0.41	0.41	0.39
	Intermediate secondary degree (Realschule)	0.35	0.34	0.35	0.35
	Higher secondary degree (Gymnasium)	0.15	0.16	0.16	0.17
	Without vocational training	0.24	0.24	0.22	0.21
	Vocational training	0.69	0.68	0.71	0.70
	University degree	0.07	0.07	0.08	0.08
	Age 25-29	0.17	0.19	0.19	0.20
	Age 30-34	0.18	0.18	0.17	0.17
	Age 35-39	0.19	0.19	0.18	0.18
	Age 40-44	0.17	0.17	0.18	0.18
	Age 45-49	0.15	0.14	0.15	0.15
	Age 50-54	0.11	0.10	0.10	0.10
2-years-history	Labor market program(s)	0.19	0.15	0.15	0.15
	Period(s) of sickness	0.07	0.07	0.06	0.06
	Sanction(s)	0.01	0.01	0.01	0.00
	Unemployed up to 1 month	0.62	0.63	0.63	0.62
	Unemployed 1-6 months	0.20	0.22	0.23	0.24
	Unemployed 7-12 months	0.13	0.12	0.12	0.13
	Unemployed 13-18 months	0.05	0.02	0.02	0.01
	Unemployed 19-24 months	0.01	0.00	0.00	0.00
Classification	Market custumer	0.00	0.01	0.27	0.34
	Customer in need of activation	0.01	0.03	0.25	0.29
	Customer in need of program	0.01	0.03	0.14	0.16
	Welfare customer	0.01	0.04	0.11	0.17
	No classification available	0.97	0.89	0.24	0.04
	Observations	97286	79893	77502	64075

Source: TrEffeR data set of the German Public Employment Service (own calculations).

4.2 Applied method

Our data are organized as episodes. We will first present some descriptive evidence on flows and stocks for the cohorts investigated. Second, we apply event history analysis (see for instance Lancaster 1990, or for an overview Wooldridge 2002, Chapter 20) to investigate the risk

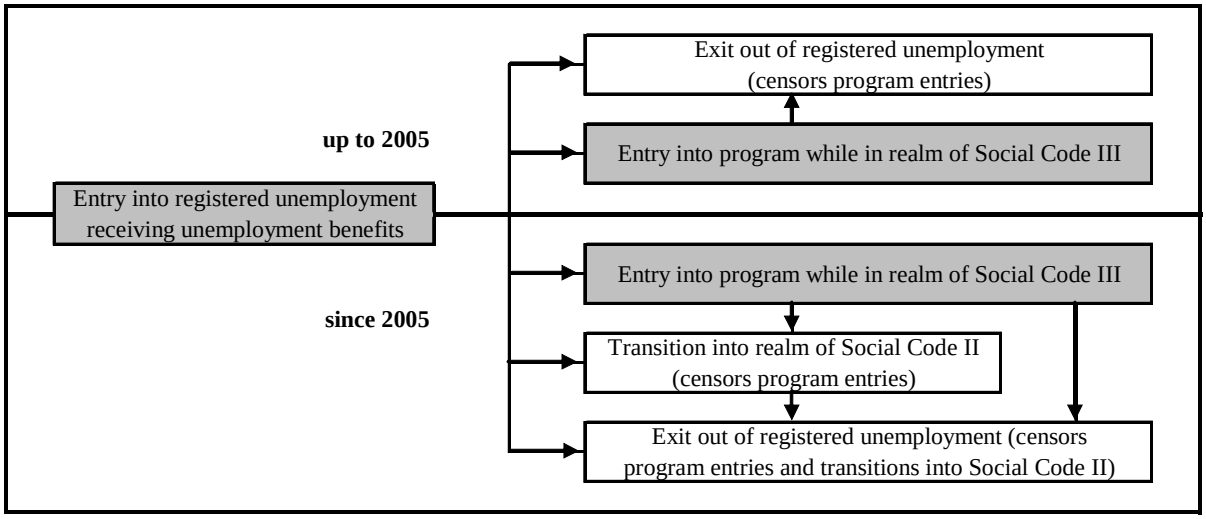
of entering an active labor market program and to explore the relationship between selectivity into programs and individual characteristics.

Overview 3 displays the basic classification of transitions underlying our analysis. We are mainly interested in the transitions of unemployed persons into active labor market programs while in the realm of the Social Code III. Let T be the duration of unemployment until a program entry occurs. The transition rate respectively hazard rate $\lambda(t)$ to enter a program at time t is determined by the probability P to take up the program during a time interval h following t, conditional until being still unemployed in t. It is formally given by

$$(1) \qquad \lambda(t) = \lim_{h \to 0} P(t \leq T < t + h \mid T \geq t) / h$$

For a descriptive inspection of transition we will first present figures of smoothed hazard rates, with a bandwidth of 30 days. The smoothed value at a given time is given by the weighted average of all values in the neighborhood of that time point, where weights are determined by choice of a kernel function. Since graphs commonly encounter bias when estimating near the boundaries of the observation period, we apply an Epanechnikov kernel adjusted at the boundary regions.

Overview 3:
Classification of transitions



As can be seen also from Overview 3, several competing risks are present in our analysis. In particular, individuals may register out of unemployment or change into basic social care for needy jobseekers (the latter since the beginning of 2005), before they have entered a program in the realm of the Social Code III. These observations are then treated as censored at time of the respective transition, since they are dropping out of the risk set. However, we cannot assume independence between the event and the censoring distribution: On the one hand individuals with good labor market prospects will exit unemployment with a higher probability than the average person, on the other hand in particular hard-to-place individuals will enter basic social care for needy individuals before taking up a program in the realm of the Social

Code III. That implies that those individuals remaining in the risk-set over time are not representative for the censored individuals. We thus compute also an unconditional representation of labor market flows, the cumulative incidence of transitions until the end of each quarter. Furthermore, we present the stock of individuals at the end of each quarter.

Turning to the multivariate estimates, we are mainly interested in the question what has happened to those who remained in the risk set, independently from consequences of censoring. We expect that this hazard rate will be correlated with individual characteristics – summarized in the vector x – as well as with the elapsed duration of unemployment at each point of time. We estimate a piecewise-constant exponential hazard model, which allows a very flexible parameterization of the hazard rate. This model belongs to the class of proportional hazard models that may be very generally written as

$$(2) \qquad \lambda(t;x) = \kappa(x)\, \lambda_0(t),$$

where $\lambda_0(t) > 0$ is the so-called baseline hazard rate. The underlying assumption is that all covariates included into the model shift the baseline hazard rate proportionally. In other words, the impact of covariates is assumed not to vary over time already spent in the unemployment episode. Using an exponential transition rate approach, we parameterize $\kappa(x)$ as $\exp(x\beta)$, with β as a vector of parameters to be estimated. Furthermore, in the piecewise-constant proportional hazard model $\lambda_0(t)$ is assumed to differ over specified time intervals $a_{m-1} \leq t \leq a_m$ and may thus be written as $\lambda_m(a_{m-1} \leq t \leq a_m)$. In our analysis we will estimate separate risks for each quarter of unemployment duration. Taking logs we obtain

$$(3) \qquad \log \lambda(t;x) = x\beta + \alpha_m(a_{m+1} \leq t \leq a_m),$$

with $\alpha_m = \log \lambda_m$. For each variable x_j from x the parameter β_j can be interpreted as the semi-elasticity of the hazard with respect to x_j. This model can be estimated using maximum likelihood methods.

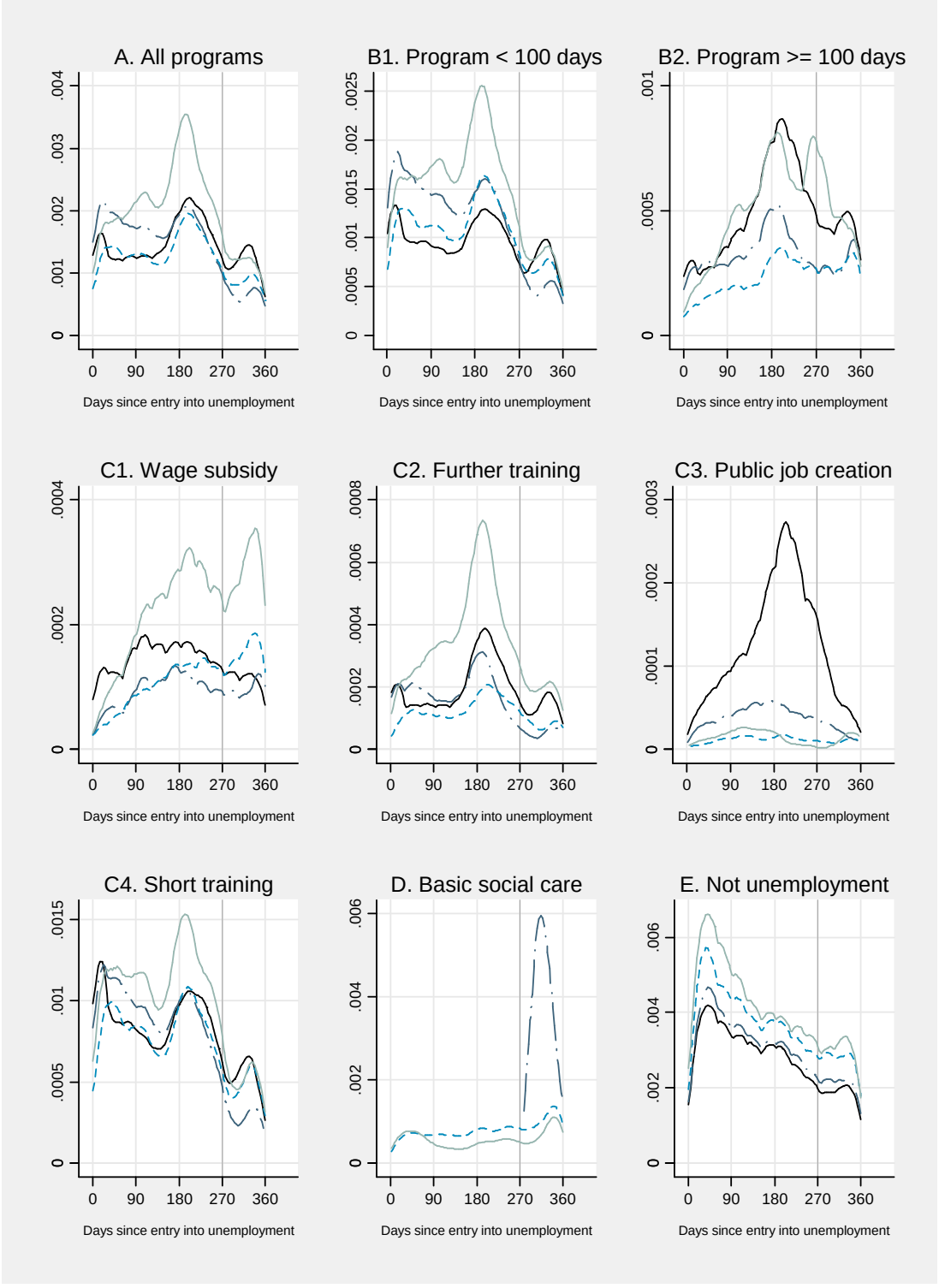
If one is interested rather in representative estimates for all individuals – not only those remaining in the risk-set – introducing unobserved heterogeneity might alleviate the consequences of censoring mentioned above. In the majority of the literature this is done by assuming that unobserved heterogeneity is captured by an unobserved constant, which is identically gamma-distributed for all individuals, not correlated with observed covariates and enters the hazard rate multiplicatively (mixed model).

Table 4:
Cumulative incidence of transitions and share within each state during one year after entry into unemployment benefit receipt (cohorts March 2003-2006, in percent)

	March cohort of year	I Cumulated incidence* of transitions up to end of ... quarter				II Share at the end of ... quarter				III Mean duration
		1	2	3	4	1	2	3	4	
A. Program in the realm of the Social Code III	2003	11	18	24	26	5	8	10	10	96
	2004	15	22	27	28	7	8	9	6	62
	2005	9	14	18	19	4	4	5	4	52
	2006	12	19	24	25	6	7	8	6	55
B1. Program with duration of less than 100 days	2003	9.1	13.6	17.6	19.7	2.6	2.4	2.6	2.2	32
	2004	12.9	18.9	23.1	24.1	3.7	3.1	2.9	1.2	31
	2005	8.4	12.5	15.8	16.9	2.5	2.0	2.3	1.2	33
	2006	10.6	16.3	20.0	21.0	3.6	3.3	2.7	1.5	32
B2. Program with duration of 100 days and longer	2003	2.4	5.1	7.9	9.3	2.5	5.0	7.1	6.4	299
	2004	2.2	4.0	5.5	6.3	2.8	4.2	4.5	3.6	282
	2005	1.0	1.9	2.8	3.4	1.2	1.8	1.9	1.6	227
	2006	1.6	3.7	5.3	6.2	1.6	3.3	3.6	2.8	203
C1. Wage subsidy program	2003	1.0	2.0	2.6	3.0	0.9	1.5	1.6	1.5	203
	2004	0.4	1.1	1.5	1.8	0.4	0.9	0.9	0.7	145
	2005	0.4	0.8	1.2	1.6	0.4	0.6	0.7	0.7	129
	2006	0.6	1.6	2.3	2.9	0.6	1.3	1.5	1.4	140
C2. Further vocational training program	2003	1.5	2.5	3.7	4.2	1.0	1.7	2.6	2.3	299
	2004	1.7	2.6	3.4	3.6	1.1	1.5	1.7	1.1	235
	2005	0.8	1.2	1.8	1.9	0.6	0.7	0.9	0.7	155
	2006	1.7	3.2	4.5	4.9	1.4	1.9	2.0	1.3	119
C3. Public job creation scheme	2003	0.5	1.2	2.2	2.4	0.4	1.2	2.0	1.5	211
	2004	0.2	0.5	0.7	0.8	0.2	0.5	0.5	0.4	191
	2005	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	199
	2006	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	180
C4. Short training program	2003	8.4	12.3	15.7	17.2	2.0	1.6	1.9	1.2	27
	2004	8.9	13.1	16.1	16.8	1.9	1.4	1.3	0.4	23
	2005	6.3	9.3	11.6	12.5	1.4	0.8	0.9	0.6	23
	2006	7.8	11.6	14.3	15.1	1.7	1.1	0.9	0.5	21
D. Basic social care for needy job seekers	2003	-	-	-	-	-	-	-	-	-
	2004	-	-	-	11	-	-	-	13	-
	2005	5	8	10	12	3	5	7	10	-
	2006	5	6	8	9	4	3	4	4	-
E. Not registered as unemployed and not in program**	2003	28	46	58	65	26	39	45	46	-
	2004	30	48	60	68	27	40	47	47	-
	2005	35	55	67	75	32	47	55	54	-
	2006	41	60	71	78	37	53	61	63	-

Source: TrEffeR data set of the German Public Employment Service (own calculations).
Only program entries while in the realm of the Social Code III; transitions into start-up subsidy programs are excluded. Individuals may enter more than one program variant during their unemployment spell.
*) First entry out of the unemployment spell into the particular category has occurred until between unemployment entry and end of the quarter. Duration until program entry is censored at unemployment exit and at exit into realm of Social Code II.
**) In realm neither of Social code III nor of Social Code II.

Figure 1:
Transition rates during one year after entry into unemployment benefit receipt (cohorts March 2003-2006)



Source: TrEffeR data set of the German Public Employment Service (own calculations).
Only program entries while in the realm of the Social Code III; transitions into start-up subsidy programs are excluded. Individuals may enter more than one program variant during their unemployment spell.

5 Empirical results

5.1 Transitions into programs

We observe four cohorts taking up unemployment benefits during March 2003 to 2006 for a period of one year after their unemployment entry. We will begin with a brief description of transitions and shares on the labor market, before turning to the multivariate analysis. Figure 1 shows smoothed hazard rates – the probabilities of an event occurring at each point of time, conditional until still being in registered unemployed – for the transitions of interest. Since entries into unemployment occurred during March, the end of a calendar year is reached around 270 to 300 days after unemployment entry. Note for an interpretation of the results that ordinate scales are not uniform.

While the hazard rates are computed conditional on being still in the risk set, the cumulative incidence rate is an unconditional representation of transitions. Results are displayed in Panel I of Table 4 and measured in percent of all cohort members. For instance a cumulative incidence of 18 for transitions into programs up to the end of 2nd quarter implies, that 6 month after unemployment entry 18 percent of all members of the cohort have taken up at least one active labor market program (while they were in the realm of the Social Code III and excluding persons who founded a subsidized business). The incidence of transitions into program variants does not sum up to the overall incidence of program entry, since one person may participate in more than one program. Information on shares of individuals at the end of each quarter, also measured in percent of cohort members, can be found in Panel II of Table 4. Finally, Panel III documents mean duration of the programs investigated.

A first result is that participation in active labor market programs – measured as percent of all analyzed entries into unemployment – in the realm of the Social Code III have decreased after 2004 (Table 4, Panel I-A): While more than 26 percent of all unemployment benefit recipients entering unemployment in March 2003 and March 2004 took part in at least one program (excluding start-up subsidies) during the first year of their spell, only 19 percent did so in 2005. However, shares increased again to 25 percent in 2006. Thus in particular the 2005 cohort stands out as a group with low program participation. This is displayed also in the average share in programs (Table 4, Panel II-A). In contrast, if we condition on being still in the risk set, the transition rate into programs seems to be overall highest in 2006 (Figure 1-A). These results are in line with our first hypotheses stated in Section 3 – while incentives set by the per-capita transfer were influential for the 2005 cohort, the Public Employment Service counter-steered during 2006. However, another possible reason will be depicted below – exits out of unemployment were in particular high across the 2006 cohort, thus fewer individuals remained in the risk set, which also increased their participation prospects.

We find some support for our second hypothesis that less long programs has been granted for the 2005 cohort (Figure 1-B2). Looking at particular programs, Figure 1 (C1-C4) confirms that transition rates into wages subsidy and further vocational training programs were comparatively low during the years 2004 and 2005. However, the risk to enter one of these programs

was even higher for the 2006 cohort than for the 2003 cohort. In contrast, public job creation schemes were less and less utilized in the realm of the Social Code III over years. We find thus no general evidence that longer and more expensive measures as wage subsidies and further vocational training programs has been substituted through cheap short training programs, as has been stated also in our second hypothesis. However, Figure 1 shows also that high transition rates into active labor market programs for the 2006 cohort mentioned above are mostly a result of high transition rates into short programs (Figure 1-B1). As can be seen also from Table 4 (Panels III-C1 and III-C2) the average duration of wage subsidies and further vocational training programs has decreased over time – for the latter from 299 days for the 2003 cohort to 119 days for the 2006 cohort.

Our third hypothesis stated that programs might have started earlier during an unemployment spell for the 2005 and 2006 cohort. This is not confirmed by the empirical evidence: The incidence of program entries is generally highest during the first quarter of unemployment in the cohorts investigated (Table 4, Panel I-A), while the transition rate – conditional on still being unemployed – is highest during the third quarter after unemployment entry (Figure 1-A). This might, however, be different for cohorts entering unemployment during another month than March.

Finally, we will also have a look at entries into the realm of the Social Code II and exits out of unemployment and program participation. While around 13 percent of the 2004 cohort – the first cohort that might enter the realm of the Social Code II during our observation window – was registered as unemployed needy jobseekers at the end of the observation period, this was the case only for around 4 percent of the 2006 cohort (Table 4, Panel II-D). The sharp difference is probably partly due to an introductory effect and partly due to increasing exits from unemployment.

Then at the same time exits out of unemployment gained importance: The cumulated percent of those exiting registered unemployment at least once up to the end of the year amounted to 65 percent across the 2003 cohort and increased up to 78 percent across the 2006 cohort (Table 4, Panel I-E). The development over time is reflected also in the shares: The percent of those no longer registered as unemployed one year after unemployment entry increased remarkably from 46 percent in the 2003 cohort to 63 percent in the 2006 cohort (Table 4, Panel II-E). The increase in exits from unemployment occurred mainly already during the first quarter after unemployment entry (see also Figure 1-E). It is ambiguous at the current state of knowledge, in as far the labor market reforms or rather international business cycle effects have contributed to this development.

Note that the figures above are slightly larger than those obtained by Rothe (2007) for all individuals who were unemployed at the beginning of 2004. He estimated that the probability to leave unemployment within the year 2004 amounted to 61 percent for West Germany respectively 54 percent for East Germany for those who were unemployed at the beginning of

the year. This is, however, not surprising, since our analysis covers only persons during the first year of an unemployment spell.

5.2 Multivariate analysis

Since now we have only examined the timing of entries into programs. In the following we will investigate how the transition rate into programs is correlated with individual characteristics, to test the fourth hypothesis formulated in Section 3. Table 5 shows estimates of a piecewise-constant exponential hazard model. Estimates are again performed for all programs, separately by program duration and program variant as well as for transitions into basic social care and out of unemployment.

Estimated time effects (reference is the first quarter after unemployment entry for the 2003 cohort) mirror those from Figure 1. The overall hazard rate of program entry is typically highest during the third quarter – at the end of the calendar year – after start of the unemployment episode. The 2006 cohort is outstanding in as far as the transition rate is in particular high during the first three quarters after unemployment entry.

Turning to the socio-demographic characteristics, the overall transition rate into programs is slightly higher in East Germany. In particular hazard rates to participate in a "longer" program, to take-up subsidized regular employment or to join a job creation scheme were higher, while those of participating in a further vocational training program were lower. Foreigners as well as persons with disablements and health problems had lower hazard rates to enter any labor market program. The only exceptions are public job creation schemes, where persons with disablements and health problems have comparatively high prospects of participation.

Compared to the reference group of unmarried men, we find that in fact married men had significantly higher transition rates into programs, while those of married women are significantly lower. The differences are especially noticeable for longer programs, in and in particular for participation in wage subsidy and further vocational training programs. We wanted to test the hypothesis, if married men received more and married women less programs after the reforms took place. However, we do not find evidence of such shifts in overall transition probabilities.

Unemployed persons without a school leaving certificate and/or without vocational training have significant lower transition rates into active labor market programs than those with at least a low secondary degree ("Hauptschule") and/or vocational training. But contrary to our expectations, their overall participation prospects in "longer" programs have improved in 2005 and 2006. In particular further training was granted for those without a school leaving certificate, while wage subsidies were utilized to support those without vocational training. Note furthermore that persons with an intermediate secondary degree ("Realschule") or higher secondary degree ("Gymnasium") have even better prospects of program participation than those with a low secondary degree.

Table 5:

Piecewise-constant exponential hazard model for transitions during one year after entry into unemployment benefit receipt (cohorts March 2003-2006)

Reference: 1st quarter 2003, West Germany, unmarried man, German, not disabled, Lower secondary degree ("Hauptschule"), vocational training, age 25-29, during 2-years- history no participation in active labor market programs, no periods of sickness, no sanctions and up to 1 month unemployed.

		A. Any program	B1. Program <100 days	B2. Program ≥100 days	C1. Wage subsidy	C2. Further training	C3. Public job creation	C4. Short training	D. Basic social care	E. Not unemployed	F. Mixed model A.
Time after entry into unemployment	1st quarter * cohort 2004	0.30 **	0.35 **	-0.03	-0.69 **	0.14 **	-0.62 **	0.04 *	-	0.07 **	0.34 **
	1st quarter * cohort 2005	-0.18 **	-0.07 **	-0.80 **	-0.81 **	-0.58 **	-2.05 **	-0.27 **	-	0.24 **	-0.26 **
	1st quarter * cohort 2006	0.09 **	0.18 **	-0.37 **	-0.29 **	0.20 **	-1.65 **	-0.03	0.05	0.42 **	0.02
	2nd quarter * cohort 2003	0.01 **	-0.30 **	0.48 **	0.34 **	-0.08 **	0.84 **	-0.38 **	-	-0.09 **	0.01 **
	2nd quarter * cohort 2004	0.08 **	0.06 **	0.19 **	0.07	-0.05	-0.02	-0.25 **	-	-0.04 **	0.53 **
	2nd quarter * cohort 2005	-0.28 **	-0.23 **	-0.42 **	0.00	-0.55 **	-1.60 **	-0.47 **	0.08 **	0.12 **	-0.09 **
	2nd quarter * cohort 2006	0.31 **	0.26 **	0.54 **	0.77 **	0.69 **	-0.73 **	-0.09 **	-0.53 **	0.20 **	0.67 **
	3rd quarter * cohort 2003	0.28 **	-0.02	0.90 **	0.24 **	0.51 **	1.36 **	-0.12 **	-	-0.26 **	0.93 **
	3rd quarter * cohort 2004	0.15 **	0.10 **	0.35 **	0.01	0.14 *	-0.12	-0.25 **	-	-0.18 **	0.97 **
	3rd quarter * cohort 2005	0.06 *	0.09 **	0.04	0.29 **	-0.02	-1.40 **	-0.21 **	0.43 **	-0.01	0.58 **
	3rd quarter * cohort 2006	0.54 **	0.41 **	0.78 **	1.01 **	0.97 **	-2.07 **	0.06 *	-0.05	0.04 **	1.45 **
	4th quarter * cohort 2003	-0.19 **	-0.41 **	0.47 **	0.00	-0.24 **	0.25 **	-0.70 **	-	-0.53 **	0.78 **
	4th quarter * cohort 2004	-0.76 **	-0.87 **	0.12 *	0.04	-1.22 **	-0.69 **	-1.32 **	-	-0.40 **	0.32 **
	4th quarter * cohort 2005	-0.57 **	-0.61 **	0.00	0.49 **	-0.72 **	-1.77 **	-0.86 **	0.80 **	-0.12 **	0.21 **
	4th quarter * cohort 2006	-0.31 **	-0.48 **	0.60 **	1.09 **	0.04	-1.57 **	-0.79 **	0.40 **	-0.06 **	1.03 **
Individual characteristics	East Germany	0.03 **	-0.10 **	0.40 **	0.72 **	-0.26 **	1.71 **	-0.14 **	0.19 **	-0.01 *	-0.04 **
	Foreigner	-0.14 **	-0.12 **	-0.19 **	-0.55 **	-0.31 **	-0.39 **	-0.17 **	0.29 **	-0.10 **	-0.17 **
	Slightly disabled	-0.18 **	-0.23 **	-0.05	-0.31 **	-0.25 **	0.48 **	-0.21 **	-0.10	-0.14 **	-0.23 **
	Severly disabled	-0.17 **	-0.33 **	0.20 **	-1.14 **	-0.13	1.23 **	-0.26 **	0.04	-0.07 **	-0.21 **
	Health problems	-0.45 **	-0.42 **	-0.46 **	-0.62 **	-0.56 **	-0.06	-0.39 **	0.15 **	-0.23 **	-0.60 **
	Unmarried woman	0.04 **	0.03 **	-0.02	-0.10 **	0.00	-0.05	0.04 **	0.19 **	-0.22 **	0.06 **
	Married man	0.06 **	0.00	0.20 **	0.44 **	0.16 **	0.03	-0.02	-0.15 **	0.07 **	0.08 **
	* cohort 2004	0.00	0.05	-0.03	-0.04	0.00	-0.14	0.04	-	0.04 **	-0.01
	* cohort 2005	-0.02	0.03	-0.07	-0.23 **	-0.08	-0.14	0.05	-	0.07 **	-0.02
	* cohort 2006	0.03	0.08 **	-0.02	-0.05	-0.07	-0.15	0.07 *	0.00	0.08 **	0.05
	Married woman	-0.14 **	-0.15 **	-0.14 **	-0.20 **	-0.16 **	-0.09	-0.10 **	-0.70 **	-0.30 **	-0.18 **
	* cohort 2004	0.02	0.05	-0.09 *	-0.16	-0.08	-0.08	0.01	-	-0.06 **	0.05
	* cohort 2005	0.05	0.08 **	-0.16 **	-0.38 **	-0.07	0.17	0.04	-	-0.19 **	0.11 **
	* cohort 2006	0.08 **	0.10 **	0.00	-0.20 *	-0.03	-0.42	0.07 *	-0.11 *	-0.17 **	0.15 **

	Table 5 continued	A. Any program	B1. Program <100 days	B2. Program ≥100 days	C1. Wage subsidy	C2. Further training	C3. Public job creation	C4. Short training	D. Basic social care	E. Not unemployed	F. Mixed model A.
Individual characteristics	Without schooling certificate	-0.20 **	-0.15 **	-0.23 **	-0.31 **	-0.62 **	0.16	-0.13 **	0.10 **	-0.09 **	-0.30 **
	* cohort 2004	0.05	0.04	-0.06	0.14	-0.04	-0.12	0.02	-	-0.03	0.08
	* cohort 2005	0.10 *	0.01	0.18	-0.04	0.60 **	0.60	-0.09	-	0.02	0.16 **
	* cohort 2006	0.15 **	0.07	0.26 **	-0.03	0.57 **	0.44	0.00	0.03	-0.01	0.24 **
	Intermediate secondary degree	0.11 **	0.07 **	0.25 **	0.14 **	0.44 **	0.16 **	0.06 **	-0.21 **	-0.01	0.15 **
	Higher secondary degree	0.10 **	0.03 *	0.41 **	0.08	0.58 **	0.12	0.01	-0.33 **	0.00	0.16 **
	Without vocational training	-0.16 **	-0.10 **	-0.21 **	-0.59 **	0.05	-0.01	-0.08 **	0.54 **	-0.20 **	-0.18 **
	* cohort 2004	0.03	-0.07 *	0.17 **	-0.03	-0.03	0.13	-0.10 **	-	-0.07 **	0.02
	* cohort 2005	0.07 **	-0.03	0.32 **	0.27 *	-0.37 **	-0.03	-0.13 **	-	-0.11 **	0.08 *
	* cohort 2006	0.10 **	0.00	0.20 **	0.34 **	-0.19 **	0.15	-0.11 **	0.03	-0.05 **	0.12 **
	University degree	-0.15 **	-0.18 **	0.01	-0.39 **	-0.02	0.09	-0.16 **	-0.33 **	0.02	-0.20 **
	Age 30-34	0.01	0.02	-0.02	-0.17 **	0.07 *	-0.11	0.03	0.05 *	-0.04 **	0.01
	Age 35-39	0.04 **	0.05 **	0.02	-0.26 **	0.17 **	-0.02	0.04 *	-0.02	-0.09 **	0.05 **
	Age 40-44	0.01	0.03 *	-0.01	-0.25 **	0.14 **	0.03	0.00	-0.09 **	-0.10 **	0.01
	Age 45-49	-0.05 **	-0.02	-0.15 **	-0.32 **	-0.03	0.15 *	-0.06 **	-0.37 **	-0.22 **	-0.07 **
	Age 50-54	-0.13 **	-0.30 **	0.12 **	0.28 **	-0.56 **	0.33 **	-0.32 **	-0.75 **	-0.47 **	-0.16 **
	* cohort 2004	-0.11 **	0.07	-0.40 **	-0.22 *	-0.01	0.01	0.02	-	0.03	-0.18 **
	* cohort 2005	-0.04	0.10 *	-0.09	-0.08	0.30 **	0.34	0.06	-	0.07 **	-0.03
	* cohort 2006	0.12 **	0.20 **	0.12 *	-0.02	0.49 **	0.74 **	0.15 **	0.24 **	0.17 **	0.14 **
2-years-history	Labor market program(s)	0.14 **	0.12 **	0.15 **	0.29 **	0.07 *	0.08	0.10 **	0.41 **	-0.24 **	0.24 **
	Period(s) of sickness	-0.06 **	-0.07 **	-0.08 *	-0.03	-0.02	-0.02	-0.08 **	-0.03	-0.07 **	-0.07 **
	Sanction(s)	-0.18 **	-0.15 *	-0.24 *	-0.71 **	-0.37 *	0.13	-0.18 *	0.46 **	-0.24 **	-0.18 *
	Unemployed 1-6 months	-0.19 **	-0.19 **	-0.08 **	-0.03	-0.14 **	0.09	-0.18 **	0.44 **	0.31 **	-0.33 **
	Unemployed 7-12 months	-0.32 **	-0.35 **	-0.17 **	-0.04	-0.41 **	0.10	-0.35 **	1.06 **	0.15 **	-0.47 **
	Unemployed 13-18 months	-0.52 **	-0.58 **	-0.33 **	-0.27 **	-0.50 **	-0.34 **	-0.61 **	1.31 **	-0.23 **	-0.70 **
	Unemployed 19-24 months	-0.36 **	-0.70 **	0.05	-0.43 *	0.70 **	-0.36	-0.84 **	1.68 **	-0.45 **	-0.22 *
	Constant	-6.31 **	-6.44 **	-8.23 **	-9.05 **	-8.61 **	-10.76 **	-6.51 **	-7.66 **	-5.34 **	-6.06 **
Log Likelihood Model		-250809	-224890	-85061	-36509	-57704	-16261	-186896	-53671	-477623	-250346
Log Likelihood restricted model		-255611	-229558	-88452	-39035	-59957	-19254	-190436	-58736	-495887	-255213
Number of persons		318756	318756	318756	318756	318756	318756	318756	141577	318756	318756
Number of events		78403	64918	20621	7465	11518	3252	49530	15513	225044	78403

Source: TrEffeR data set of the German Public Employment Service (own calculations).
Only program entries while in the realm of the Social Code III; transitions into start-up subsidy programs are excluded. Individuals may enter more than one program variant during their unemployment spell. Duration until program entry is censored at unemployment exit and at exit into realm of Social Code II. *) $\alpha = 0.05$, **) $\alpha = 0.01$.

Our reference age group is those of age 25 to 29. It is obvious that hazard rates to enter a program decrease for those older than 45 – an exception are public job creation schemes. The interaction terms show, however, that for older workers between 50 and 54 chances of overall program participation were also highest across the 2006 cohort.

Exploring the relationship between program participation and labor market history of individuals, it becomes obvious that participation induces participation – overall transition rates into programs are significantly higher for those who had already participated earlier. This is the case in particular for those taking up subsidized job. Those who have in the past experienced periods of sickness or sanctions are less likely to enter a treatment. Furthermore, hazard rates of program entry are shrinking with increasing unemployment experiences during the last years before unemployment entry.

Summing up, transition rates into programs are generally lower for hard-to-place individuals. We find, however, no support for our fourth hypothesis stated in Section 3, that participation prospects were in particular worse for the 2005 cohort. Overall participation chances have even improved for hard-to-place persons within the post-reform cohorts compared to the pre-reform cohorts.

Additional estimates investigate the risk to enter the realm of the Social Code II (starting with the 2005 cohort) or to exit unemployment during the observation period. Not surprisingly, the risk to change into basic social care receipt is highest during the last quarter of the one-year-period analyzed. Transition rates are particularly low for married women and particularly high for those without vocational training; they decrease strongly with age.

Regarding exits from unemployment, the estimates confirm again that the transition rate out of unemployment is highest during the first quarter after unemployment entry and has increased considerably in 2005 and 2006. Compared to unmarried men, a lower transition rate out of registered unemployment is found for married – but also unmarried – women, while unemployment exits occur in fact more often across married men. Furthermore, persons without school leaving certificate and/or without vocational training as well as "older" age groups leave unemployment less often.

Finally, some caveats are in order: We have made the simplifying assumption that the analyzed hazards are constant over quarters after unemployment entry and that all individual characteristics considered in the estimates shift the hazard rate proportionally constant over time. Furthermore, competing risks are present in our analysis (see the discussion in Section 4). In particular individuals might register out of unemployment or – since 2005 – pass over into basic social care before entering a program in the realm of the Social Code III. Estimates of a mixed model (Table 5, Panel F), taking into account unobserved heterogeneity following a gamma-distribution, converged only for transitions into overall program participation, but – probably due to a comparatively low number of events – not for single program variants. Regarding transitions into all programs, estimated coefficients for individual characteristics were

similar to the estimates discussed above. Estimates of time effects, however, were generally higher taking into account unobserved heterogeneity. Since we observe much more exits from unemployment than entries into basic social care, this can be taken as a hint that in fact those with a-priori higher probabilities of program entry are also those who leave registered unemployment rather early.

Conclusions

The allocation of unemployed persons into active labor market programs is a complex issue. While the legal framework and the institutional setting are the result of political decisions, the internal governance of the Public Employment Service has a lot of discretion regarding the implementation of programs. Our research was motivated by the fact that the introduction of a per-capita transfer from the unemployment insurance to the government's budget – due for transitions from insurance-funded unemployment benefits to tax-funded basic social care – raised several concerns: It was blamed to set perverse incentives for the Social Code III branch of the Public Employment Service when allocating unemployed benefit recipients into active labor market programs. Since an incentive was set to grant program participation if the investment could be supposed to pay out in terms of an avoidance of the pay-capita transfer, programs might have been in particular less accessible for in particular married women, unemployed persons with low qualification and older individuals. While introduced in the course of the German labor market reforms in 2005, the per-capita payment has only recently been abolished.

We investigate empirically what happened to four cohorts of individuals entering registered unemployment during March 2003 to 2006 and receiving unemployment benefits at the beginning of their unemployment spell. Our primary interest was to analyze entries of these cohorts into active labor market programs, while financing responsibilities for these programs lay in the realm of the unemployment insurance. The observation period is restricted to one year after unemployment entry.

Summing up, we find some evidence for the first and second hypotheses stated in Section 3. First, transition rates of unemployment benefit recipients into programs have been low in 2005, but increased again considerably in 2006. On the one hand the 2006 cohort experienced comparatively high exit rates out of unemployment, what then increased participation prospects of those remaining unemployed. On the other hand an important reason is certainly the active counter-steering of the Social Code III branch of the Public Employment Service during the year 2006, which devoted additional funds to active labor market programs and put several additional programs for hard-to-place individuals into action (see Section 3). Second, the decrease in transition rates observed for the 2005 cohort resulted mainly from fewer entries into programs of long duration. It should be also noted that high transition rates into programs across the 2006 cohort went hand in hand with in average shorter program durations – in particular for further vocational training programs – compared to previous years. Taken together this may be taken as a hint that the per-capita transfer – that was due for each tran-

sition from unemployment benefits into basic social care – has in fact contributed to reduce participation in active labor market programs for the 2005 cohort of unemployment benefit recipients, while the 2006 cohort experienced no reduced transition rates (but still shortened program durations).

We find, however, no support for the third and fourth hypotheses. Third, our findings do not confirm that program entries have occurred generally earlier during an unemployment-spell in the post-reform cohorts. Fourth, the results of our event history analysis indicate that groups with placement difficulties – these are in particular foreign, disabled, less qualified and older unemployed persons, but also married women – had rather lower transition rates into programs during the entire observation period. Exceptions are transitions into public job creation schemes, which are observed comparatively often for several groups of hard-to-place individuals. However, overall participation prospects of low-qualified persons, of older persons between 50 and 54 and slightly also of married women even increased for the post-reform cohorts compared to the pre-reform cohorts.

As a caveat it should be taken in mind that findings might be different for those groups that were not included in our analysis. These are in particular unemployed persons up to 25 or older than 55, unemployed persons from local labor market areas with municipalities opting out of the cooperation with the Public Employment Service as well as persons entering unemployment during another month than March.

Our topic was the transition rate of unemployed persons in active labor market programs in a specific institutional setting. But in a broader context, selectivity into programs must be assessed hand in hand with questions of program effectiveness and efficiency. The most important goal of these programs is certainly to improve employment prospects of participants, or at least their employability. Thus program allocation should be based strongly on effectiveness considerations. In fact, empirical studies observe a strong heterogeneity of estimated treatment effects across program variants as well as across particular groups of unemployed persons.

The German government argued that financial arrangements that were in place in Germany during the years 2005 to 2007 – investments into an active labor market program had to pay off before a transfer from unemployment benefits to basic social care occurred – would set an incentive for effective program allocation. In fact these arrangements fostered short-term considerations and did not take effectiveness issues seriously. Any serious attempt to implement effectiveness considerations into program allocation requires estimates of a counterfactual situation – what would have happened to participants if they had not or only later taken-up a program. As a consequence, with TrEffeR an on-going monitoring tool for a comprehensive evaluation of program effectiveness has recently been developed by the German Public Employment Service.

References

Adamy, W. (2005), Nach Hartz IV: Gespaltene Haushalte für die Arbeitsmarktpolitik, Soziale Sicherheit 1/2005, 2-12.

Baumgartner, H., Caliendo, M. (2007), Turning Unemployment into Self-Employment, Effectiveness and Efficiency of Two Start-Up Programmes, DIW Discussion Paper 671.

Bender, B., Bieber, D., Hielscher, V., Marschall, J., Ochs, P, Vaut, S. (2006), Organisatorischer Umbau der Bundesagentur für Arbeit, Evaluation der Maßnahmen zur Umsetzung der Vorschläge der Hartz-Kommission, Arbeitspaket 2, Evaluationsbericht 2006 im Auftrag des Bundesministeriums für Arbeit und Soziales (BMAS), Berlin.

Bernhard, S., Hohmeyer, K., Jozwiak, E., Koch, S., Kruppe, T., Stephan, G., Wolff, J. (2008), Aktive Arbeitsmarktpolitik in Deutschland und ihre Wirkungen, IAB-Forschungsbericht 2/2008.

Bernhard, S., Wolff, J. (2008), Contracting out placement services in Germany. Is assignment to private providers effective for needy job-seekers?, IAB-Discussion-Paper 5/2008.

Biewen, M., Fitzenberger, B., Osikominu, A., Waller, M. (2007), Which Program for Whom? Evidence on the Comparative Effectiveness of Public Sponsored Training Programs in Germany, IZA Discussion Paper 2885, Bonn.

Caliendo, M., Hujer, R., Thomsen, S. (2005a), The Employment Effect of Job Creation Schemes in Germany, A Microeconometric Evaluation, IZA Discussion Paper 1512, forthcoming in: Advances in Econometrics.

Caliendo, M., Hujer, R., Thomsen, S. (2005b), Identifying Effect Heterogeneity to Improve the Efficiency of Job Creation Schemes in Germany, IAB Discussion Paper No. 8/05, forthcoming in: Applied Economics.

Caliendo, M., Hujer, R. and Thomsen, S. (2006), Sectoral Heterogeneity in the Employment Effects of Job Creation Schemes in Germany, Jahrbücher für Nationalökonomie und Statistik 226, 139-179.

Deutscher Bundestag (2007), Antrag der Abgeordneten Kornelia Möller, Volker Schneider (Saarbrücken), Dr. Barbara Höll, Dr. Petra Sitte, Werner Dreibus, Cornelia Hirsch, Ulla Lötzer, Dr. Herbert Schui, Dr. Axel Troost, Sabine Zimmermann und der Fraktion DIE LINKE: Der beruflichen Weiterbildung den notwendigen Stellenwert einräumen, Drucksache 16/7527, 12.12.2007.

Fitzenberger, B., Osikominu, A., Völter, R. (2006), Get training or wait? Long-run employment effects of training programs for the unemployed in West Germany, IAB Discussion Paper 17/2006.

Fitzenberger, B., Völter, R. (2007), Long-run effects of training programs for the unemployed in East Germany, Labour Economics 14, 370-755.

Hohmeyer, K., Wolff, J. (2007), A fistful of Euros, Does One-Euro-Job participation lead means-tested benefit recipients into regular jobs and out of unemployment benefit II receipt?, IAB-Discussion Paper 32/2007.

Hujer, R., Thomsen, S. (2006), How Do Employment Effects of Job Creation Schemes Differ with Respect to the Foregoing Unemployment Duration, ZEW Discussion Paper 06-047.

Jaenichen, U. (2000), Selektivität beim Zugang in Förderung durch betriebliche Einstellungshilfen, Mitteilungen aus der Arbeitsmarkt- und Berufsforschung 33, 445-461.

Jaenichen, U., Stephan, G. (2007), The Effectiveness of Targeted Wage Subsidies for Hard-to-Place Workers, IAB Discussion Paper 16/2007.

Konle-Seidl, R. (2008), Changes in the governance of employment servides in Germany since 2003, IAB Discussion Paper 10/2008.

Kruppe, T. (2008), Selektivität bei der Einlösung von Bildungsgutscheinen, mimeo.

Lancaster, Tony (1990), The Econometric Analysis of Transition Data, Cambridge.

Lechner, M., Miquel, R., Wunsch, C. (2005), Long-Run Effects of Public Sector Sponsored Training in West Germany, IAB Discussion Paper 03/2005.

Lechner, M., Miquel, R., Wunsch, C. (2007), The Curse and Blessing of Training the Unemployed in a Changing Economy: The Case of East Germany after Unification, German Economic Review 8, 468-509.

Rinne, U., Schneider, M., Uhlendorff, A. (2007), Too Bad to Benefit? Effect Heterogeneity of Public Training Programs, IZA Discussion Paper 3240.

Rothe, T. (2007), Wege aus der Arbeitslosigkeit – Wege in die Beschäftigung, Sozialer Fortschritt 7-8/2007, 187-193.

Stephan, G., Rässler, S., Schewe, T. (2006), Das TrEffeR-Projekt der Bundesagentur für Arbeit. Die Wirkung von Maßnahmen aktiver Arbeitsmarktpolitik, Zeitschrift für Arbeitsmarktforschung 39, 447-466.

Winterhager, H., Heinze, A., Spermann, A. (2006), Deregulatin job placement in Europe: A microecnometric evaluation of an innovative voucher scheme in Germany, Labour Economics 13, 505-517.

Wolff, J., Jozwiak, E. (2007), Does short-term training activate means-tested unemployment benefit recipients in Germany?, IAB Discussion Paper 29/2007.

Wooldridge, J.M. (2002), Econometric Analysis of Cross Section and Panel Data, Cambridge (MA) / London.

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