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Further Training for the Unemployed - What Can We Learn about Dropouts from Administrative Data?

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Abstract: One out of five participants of further training programs in Germany drops out of the program. Studies on the employment effects of these measures usually consider the start of a program as the treatment and do not deal with the question if the program has been completed. By contrast, this paper focuses on the distinction between dropping out and completing a program. It first discusses how to identify dropouts in the German Integrated Employment Biographies Sample, which is possible after having corrected measurement error in the registered end of participation. Second, the occurrence of dropouts is studied - how often and when do people drop out and what makes a dropout more likely. Third, the employment prospects of dropouts are analyzed descriptively.

Keywords: active labor market policies, evaluation, administrative data

JEL: J 68, I 28, C 23

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1 Introduction

One out of five participants of further training programs in Germany drops out of the program before having attended 80% of the planned program duration and does thus not complete the program.² Further training programs are traditionally a very important and expensive part of German active labor market policies. From 2000 to 2002 about 1.5 Million entries are registered.³

There are several recent studies on the employment effects of further training programs in Germany, see for example Biewen et al. (2007), Hujer et al. (2006), Kluve et al. (2007), Lechner and Wunsch (2006a, 2006b, 2008), Rinne et al. (2007) and Schneider and Uhlenborff (2006). But to the best of my knowledge there is no empirical study focussing on dropouts of German active labor market policies. Literature using US data on dropouts of labor market programs in experiments exists, see for example Heckman, Smith and Taber (1998). Furthermore, the threat effect of being assigned to a labor market program but not participating has been studied (see for example Rosholm and Svarer (2004)). The only paper I am aware of on dropouts of labor market measures in a non experimental setting is Lee and Lee (2003). Using Korean data, the authors make an attempt to deal with dropouts in program evaluation by pairwise comparing those who complete the program, drop out or do not participate using matching.

Usually evaluation studies on the employment effects of training programs consider the start of a program as the treatment (possibly with the restriction that it has been attended for some weeks) and do not deal with the actual length of participation or the question if the program has been completed.⁴ The paper of Kluve, Schneider, Uhlenborff, Zhao (2007) is an exception to this, the authors estimate the employment effect of variations in the length of German further training programs taking into account both the planned and the actual duration of the program.⁵ Their main findings are that the treatment effect increases for the first three months of training and then stays constant and possibly even decreases again after 330 days of treatment. By contrast, my focus is on the distinction between dropping out and completing the measure. What can we learn about the occurrence of dropouts

²Own calculation based on the sample of participants presented in section 2.2.

³Bundesagentur für Arbeit 2001, 2002a, 2002b, 2003a, 2003b, 2004, own calculations.

⁴Biewen et al. (2007) for example consider program participation in medium term further training programs if it has lasted for at least four weeks and consider shorter spells as no treatment.

⁵Flores-Lagunes et. al (2007) estimate the effects of the length of enrollments for a US training program.

from administrative data? How do the labor market prospects of dropouts differ from those participants who complete the program? In addition to attending the program for less time - the effect of which is estimated by Kluwe et al. - dropping out might involve missing parts of the curriculum, not obtaining a certificate and a signal to potential employers. Thus there might be a specific effect on employment of dropping out versus completing a program which may be different from the effect of attending programs of different lengths. A particular group of dropouts are those who drop out because they got a job offer and want to accept it. The law encourages these persons to drop out. The general rule of the German employment promotion law is to give priority to placement over active labor market measures. An exception is possible if the measure is necessary for a durable placement (SGB III, § 4, § 5). It would be interesting to answer the question under which circumstances people should be encouraged to continue. But especially those who drop out because they found a job (in addition to possible unobservable differences between dropouts and non-dropouts and between the courses they attend) make a causal analysis difficult. The current results of this paper are only descriptive and should be seen as a first step in opening the black box of dropouts in further training programs.

There are three aims of this study. The first is to see how dropouts can be identified in the German Integrated Employment Biographies Sample (IEBS). This turns out to be possible if one first corrects measurement error in the registered end of participation. The second aim is to gain knowledge on the occurrence of dropouts - how often and when do people drop out, what makes a dropout more likely and how many participants drop out with a job perspective. The final interest is in learning about the employment chances of dropouts. Up to now, only descriptive analysis is used to get a first impression on the employment prospects of dropouts. Comparing employment rates of dropouts and non-dropouts from the start of the program on shows that the head-start of dropouts decreases over time and after three years employment rates of dropouts and non-dropouts intersect. Survival rates indicate that the first employment of dropouts is less durable than the first employment of those who completed the measure.

The remainder of this paper is structured as follows: section two introduces the data, defines the evaluation sample and discusses how dropouts can be identified. Section three analyzes how often and when participants drop out and what influences the probability of dropping out. Section four studies descriptively the employment prospects of dropouts. Section five concludes.

2 Identification of dropouts of further training programs in the IEBS

2.1 The Integrated Employment Biographies Sample

The Integrated Employment Biographies Sample (IEBS) consists of a 2.2% random sample of individuals data drawn from the universe of data records collected in four different administrative processes: the IAB Employment History (*Beschäftigten-Historik*), the IAB Benefit Recipient History (*Leistungsempfänger-Historik*), the Data on Job Search Originating from the Applicants Pool Database (*Bewerberangebot*), and the Participants-in-measures Data (*Massnahme-Teilnehmer-Gesamtdatenbank*).⁶ The data contains detailed daily information on employment subject to social security contributions, receipt of transfer payments during unemployment, job search, and participation in different programs of active labor market policy.

To be specific, this study uses a draw of the administrative data which is called "IEB, Version 4.02".⁷ This version includes some variables which are not in the standard version as described in Zimmermann et al. (2007), p.18. One of these variables is called "success of the program" (*Massnahmeerfolg FbW*) and is supposed to include information on program success or reason of dropout, respectively. Unfortunately, this variable suffers from high measurement error and can thus only be used in a very limited way as discussed in section 2.3. Two further additional variables are used in this study but only in the extremely few cases in which the pieces of information used by default do not suffice: day of deregistration (*FbW Abmeldedatum*) and planned length of course (*Geplante Massnahmedauer*). In addition, there are a few variables not included in the standard version, I use for the generation of the covariates when estimating the dropout probability.⁸

⁶For detailed information on the IEBS see Zimmermann et al. (2005). Information in English can be found on the website of the Research Data Center (FDZ) of the Federal Employment Office (BA) (<http://fdz.iab.de/en>), in particular the documentation "The German Integrated Employment Biographies Sample IEBS" by P. Jacobebbinghaus and S. Seth. The website also describes the conditions under which researchers may use the IEBS and the process to get the permission. The data used here has been supplemented with some additional information compared to the standard version.

⁷The specific version used here is described in IEB Benutzerhandbuch Version V4.02, 16.01.2006 and attendant documents, not published.

⁸These are: Zugangsgrund, Familienstand, Geburtsjahr jüngstes Kind, Gesundheitliche Ein-

The first of the four administrative data sources included in the IEBS, the IAB Employment History, consists of social insurance register data for employees subject to contributions to the public social security system. It covers the time period from 1990 to 2004. The main feature of these data is detailed daily information on the employment status of each recorded individual. In this study this information is used to account for the labor market history of individuals as well as to measure employment outcomes. For each employment spell, in addition to start and end dates, data from the Employment History contains information on personal as well as job and firm characteristics such as wage, industry or occupation.

The IAB Benefit Recipient History, the second data source, includes daily spells of unemployment benefit, unemployment assistance and subsistence allowance payments the individuals received between January 1990 and June 2005. In addition to the sort of the payment and the start and end dates of periods of transfer receipt the spells contain further information like sanctions, periods of disqualification from benefit receipt and personal characteristics. The Benefit Recipient History is important as it provides information on the periods during which individuals were out of employment and therefore not covered by the Employment History.

The third data source included in the IEBS is the so-called Data on Job Search Originating from the Applicants Pool Database, which contains rich information on individuals searching for jobs covering the period January 1997 to June 2005. The spells include detailed information concerning job search, regional information and personal characteristics.

The Participants-in-measures Data, the fourth data source, contains diverse information on participation in public sector sponsored labor market programs for example training programs, job-creation measures, integration subsidies, business start-up allowances covering the period January 2000 to July 2005. Similar to the other sources, information comes in the form of spells indicating the start and end dates at the daily level, the type of the program as well as additional information on the program such as the planned end date or if the program ends with a certificate.

schränkungen - Auswirkung auf Vermittlung, Rehabilitationsmassnahme, Massnahmeziel - Prüfungsart, Massnahmeträger, Massnahme - Lernort und Kapazität Teilnehmer FbW. Not all of these are used for the final specification shown in the appendix

2.2 Evaluation sample and further training programs

The focus of this study is on further training programs attended as the first active labor market program within the first year of an unemployment period. Further training programs are defined in this paper as those measures that train professional skills and last typically several months up to two years. Exactly those programs called "FbW - Förderung berufliche Weiterbildung" in the IEBS and under the legislation are counted as further training programs in this paper. This definition includes long term training programs leading to a new degree within the German apprenticeship system (called "retraining"), whereas some studies define a separate category for retraining programs (see for instance Biewen et al. (2007)) or exclude them (for instance Kluge et al. (2007)). Because further training as defined here subsumes quite different programs, separate results for the categories retraining, practical further training, orientation measures and general professional training are shown where interesting.

The considered unemployment periods are a sample of inflows into unemployment between the beginning of February 2000 and the end of January 2002 after the person has been continuously employed for at least three months. Entering unemployment is defined as quitting regular (not marginal), non-subsidized employment and subsequently being in contact with the labor agency (not necessarily immediately), either through benefit receipt, program participation or a job search spell.⁹ In order to exclude individuals eligible for specific labor market programs for young people and individuals eligible for early retirement schemes, only persons aged between 25 and 53 years at the beginning of their unemployment spell are considered. Men and women living in east and in west Germany are included. To check sensitivity estimations are also pursued using subsamples .

2.3 Identification of dropouts in the data

Dropping out of a program is defined as having started a program but not completing the program but quitting it before the planned end is reached. The IEBS includes a variable for the start of the program, the end of participation and the initially planned end of the program. If the data indicates that a program has been started

⁹Note that this implies that the same individual could appear more than once in the sample, if she had more than one valid unemployment spell both with a further training program. This does not happen in the time period used.

the question is if the program has been attended (almost) as long as initially planned (planned end date) or considerably shorter. The planned length of the program is defined here as the date of the planned end minus the date of the start of the program. It is necessary to set cut off points for the distinction of dropout and completion as well as the distinction of realized attendance and non attendance. In this paper, program attendance is categorized as dropout as opposed to completion if the program has been attended less than 80% of the planned length.¹⁰

If attendance in the data is less than four days (and in the rare cases in which the variable "success of the program" indicates "not attended") this is not counted as program participation for two reasons: first, dropout is understood here as having attended at least a few days and than dropping out and not as having rejected to attend a program from the beginning on. Second, extremely short program spells in the data may indicate in some cases that the program has not been attended at all but the registration was withdrawn too late and this was not corrected in the data. So one might count some cases as dropouts that never attended, if too short spells are counted as participation. As mentioned before to distinguish between dropout and complete attendance, participation of 80% of the planned length is chosen. Choosing a higher limit, one would risk misclassifying participants as dropouts if the whole course ends a bit earlier than planned in the beginning. This may happen especially for two year long programs, particularly if they end with an external examen the date of which is not fixed when the program starts. The data reflects this - at around 90% percent of planned duration the number of finishing attendances rises. Apart from identification issues, one could argue that attending a very high percentage of the planned duration is more like full attendance than like a dropout.

For the identification of dropouts the reliability of the end date of participation as well as the planned end date are of utmost importance. But there is considerable measurement error in the end dates of participation in further training programs in the IEBS, see Waller (2008). This means that it happens that a person quites a program but the end of participation in the data is nevertheless equal to the planned end date. To correctly identify dropouts it is necessary to correct these wrong end dates, otherwise far too few participants would be identified as dropouts. In this study the correction procedure proposed in Waller (2008) is used. It relies mainly on the information on subsistence allowance (a transfer payment payed to

¹⁰Several further training program spells are linked to one participation if the gaps in between are less than 15 days, thus a change from one further training program in another is not counted as a dropout. A gap of three months is allowed, if there is information in the data that the person was ill in between two program spells, but this turned out to be empirically irrelevant.

the participants of further training programs for the time of their participation) of the IAB Benefit Recipient History, which is considered very reliable. In addition the correction procedure in some cases uses certain contradictions with employment spells of the IAB Employment History as well as some further pieces of information of the data.

The planned end date of further training programs seems to be quite reliable in indicating until when program participation was first planned. Only for 0.3% of the relevant programs, it indicates a negative duration. In these cases it is not possible to use the reported planned end date, it is replaced by the end date of participation. For 6% of the relevant programs the planned end date is earlier than the end date of participation. This is not necessarily measurement error, it is possible that a participant attends longer than originally planned. If the difference is only a few days this is very likely to be correct, because the end of the courses can change a bit after program start. For 3% of the programs this difference is more than 7 days. In these cases, it may be that the participant attended considerably longer than planned - in particular if the program is not a group course but an individual program - but there might also be a mistake. Thus in the in sum 3.3% of the programs for which there is a hint that the reported planned end dates might perhaps be wrong, the two addition variables "success of the program" and "duration of the course in months" are in addition used to decide if the program is classified as a dropout or not. These variables have a lot of missings and are error prone but used with a lot of caution and only in addition to the planned end date they can help to decide for part of the 158 programs for which further information seems necessary. In the end only for 42 (less than 1%) of the programs in focus it seems not possible to classify them and these can not be used for the analysis.

The variable "success of the program" (*Massnahmeerfolg*) may indicate not only non-attendance, but also that a program was completed ("participation with success", "failed examen") and that a participant dropped out (three different reasons and a category other reasons are distinguishable). If this variable was reliable enough it might be a better choice to use this information to classify participants into dropouts and non-dropouts instead of the distinction described above. In the data used for this study, this variable is not available for every program spell and it suffers from missings. In sum there is no information available for 14% of the treatments in focus. But also for the remaining programs I do not use this variable as the main classification criterion (but instead the information on planned end and corrected realized end as described above) because of measurement error. As table 1 shows using the variable indicating the success one would classify 46% (418) of

the dropouts as non-dropouts and 3% (108) of the non-dropouts as dropouts. Thus almost half of the dropouts can not be detected when using the variable. Not all classifications that differ are necessarily due to measurement error, they may also be due to different definitions of dropout by the individuals who filled the variable, which are not known. I prefer the classification using the corrected realized end date and the planned end date for three reasons: most importantly, after the corrections I trust the information on the end dates to a high degree while the variable indicating the success seems to suffer from very important measurement error when indicating success of the program and there is no hint if the entry will be wrong and when not. Second I prefer to use a clear and consistent definition of dropout, which one does not have using the variable on program success (at least without further background information). Third, using the variable on success I would need to use a different definition for the 14% of treatments I have no information on. In sum the classification used in this paper seems reliable after the corrections discussed above and it allows a precise definition on what is understood by a dropout.

Table 1: Comparison own classification and variable "success of the program"

"Success of program"	Classified non-dropout	Classified dropout	Sum
Participated with success	2813 (83%)	416 (46%)	3229 (75%)
Failed examen	7 (0.2%)	2 (0.2%)	9 (0.2%)
Dropout (different reasons combined)	108 (3%)	341 (38%)	449 (10%)
Missing or variable not available	478 (14%)	139 (15%)	617 (14%)
Sum	3406 (100%)	898 (100%)	4304 (100%)

3 Occurrence of dropout

3.1 How many participants drop out, when and why?

According to the above definition, 21% of the programs end with a dropout. The share of those who drop out differs with respect to the type of the programs. Table 2 shows, that the share of dropout is lowest for orientation measures, which is the shortest program type. More participants drop out of the longer general professional training and even a bit more out of the very long retraining. The program type practical training is an exception to this, more than 30% of the participants drop

out of these programs, even though practical training programs are relatively short. The upper diagrams in figure 2 show when dropouts quit the program. While for the FT programs without retraining there seems to be no clear trend, except that few people drop out at the very beginning, regarding retraining a major part of dropouts quits the program in the first third of the planned duration.

Table 2: Types of further training programs

Type of program	Participants in sample	Share dropout	Median planned length
Orientation Measure	596	13.09%	2 months
Practical Training	697	30.99%	6 months
General Professional Skills	2289	19.18%	8.2 months
Retraining	722	22.85%	24 months

The variable called "Success of the Program" (*Massnahmeerfolg*) provides also information on why participants drop out. As shown in table 1 possibly (but not necessarily) valid information is available for 38% of the dropouts. For those dropouts with a suitable information, according to what is registered, 55% drop out because they took up a job, 3% because of poor performance, 20% because of absenteeism, 23% because of other reasons (not specified). For those participating in retraining finding a job is a less important reason (20%) but poor performance is more important (7%) than for all FT participants. If this information is missing (or wrong indicating success) for dropouts, this does not seem to be at random, very few of those with no valid information take up employment soon after dropout. Even though this variable does not seem reliable enough to provide information on the individual's reason for a dropout, the overall picture supports the idea, that two sorts of dropouts occur: first participants drop out because they accept a job offer (including those that maybe had the chance to take up employment before but changed their preferences during program participation) and second participants that choose to drop out without a job perspective. For this decision opportunity costs (as black market work or family work), valuation of the program (what participants think how the concrete course will influence their future labor market chances and the present utility or disutility of attending the course) and individual discounting of the future may be relevant. Furthermore it may happen that participants can not continue the program if they do not meet the demands.

For the purpose of the descriptive analysis, I try to differentiate these two cases by using the information if the individual took up a job within one month after dropout or not as a proxy if the dropout occurred with a job perspective or not. The decision

for one month was taken on the one hand regarding until which gap between dropout and employment the variable "success of the program" indicates dropout because of a job for some individuals. On the other hand it seems reasonable that training participants who drop out because they accepted a job offer start the job within one month after quitting the program. Type 1 are those dropouts that start regular (non-subsidized, not marginal) employment due to social security within 31 days after the end of program participation, type 2 are the others. 41% of the dropouts are classified as type 1, 51% as type 2 and for about 7% it is not possible to tell.¹¹ Thus according to this proxy there are more participants dropping out without a job perspective than those that take up a job within the next months. The lower diagrams of figure 2 in the appendix show that both types of dropout occur quite often in the first 40% of the planned program length, but afterwards dropping out with a job perspective seems to increase over the elapsed program duration

3.2 Who drops out?

A probit model is estimated to find out which characteristics of the program and of the participants (according to the information at program begin) are related to a dropout of the program. The first model estimates the probability to drop out of the program, the second to drop out with a job perspective (type 1) and the third to drop out without a job perspective (type 2). The second and third model use only those participants that do not drop out and those dropouts of the respective group. For the specification search variables picturing the following characteristics have been considered: personal characteristics (like gender, age, nationality, occupational qualification, degree of schooling, current health problems, past health problems, disabilities, past incapacities, children), information on the last employment (occupation in last job, last job part-time, last job as a white-collar employee, reason for the end of the last employment, last wage), regional information (labor market situation in the region, west or east Germany), information on the individual labor market history (elapsed length of unemployment period, quarter of begin of unemployment, information on lack of motivation in the past, information on participation in programs with social assistance in the past, penalties in the past, number of days in different labor market status (unemployment benefit, unemploy-

¹¹This uncertainty occurs, because for these cases the reported end date was corrected using the information that a regular employment spell started (see Waller 2008). In these cases the correction is an upper bound and it could well be that the participants dropped out before and stayed in non-employment for more than 31 days.

ment assistance, program participation, out of labor market, employment) in the last three years before the start of unemployment) and information on the program (sort of the FT program, planned length of the program, capacity of the program, information on institution offering the program, the sort of the certificate the program leads to). For the variables on the labor market history the information of the individual's spells in the last three years before the start of unemployment has been used. All the above mentioned variables have been considered, but many of them turned out not to be relevant. Variables that are neither jointly nor alone significant are not included in the final specification, except gender and east/ west Germany which seem economically so important that they should be included anyway.

Table 3 in the appendix shows the final specifications. Separate specifications for men and women or for east and west Germany showed no interesting differences. A longer planned duration of the program makes it more probable to drop out, especially to dropout without a job perspective. Even controlling for the length, compared to general professional training, dropout is relatively low in orientation measures and high in practical measures (the marginal effect for the first specifications are -9.90% for the orientation measure and 8.56% for practical measures). Participants of retraining have a reduced dropout probability (marginal effect -3.21%), controlling for the length. Programs for which the information that no certificate is offered is registered in the data, are less likely to be completed.

Living in east Germany seems to be related to a reduced probability to drop out, but this is not significant for dropout without a job perspective. Younger participants (25 to 30 years old and in addition 30 to 35 years old for the third specification) have a higher probability to drop out, the marginal effect is 6.04% for the first model. Holding no schooling degree is related to a very high dropout probability (the marginal effect is 10,74%) and also a lower secondary schooling degree as opposed to a higher secondary degree increases dropout probability (marginal effect 3.76%) - except to drop out with a job perspective, where the information on schooling has no significant effect. Having a child reduces the probability to drop out in the first and the third model, separate estimations for both gender have shown, that this is the case for men and women. Current health problems seem make it a bit more likely to drop out, but those who had health problems which were considered to be relevant for placement in the past drop out much less (8.99% percent marginal effect for first specification). Those who worked in their last job as craftsmen or related occupations, as a technician or as a manager or a very qualified specialist are less likely to drop out.

A longer elapsed duration of unemployment reduces the probability to drop out with a job perspective and rises the probability to drop out without a job perspective. Those who had a penalty before (marginal effect for the first specification: 17.33%) or showed lack of motivation (marginal effect for the first specification: 11.73%) seem to have a higher probability to drop out. The dummy "penalty" is set to one, if in the last three years before program start there is a spell in the data which ended because the person lost his claim on benefits due to behavior not in line with the benefit recipients duties (*Abgangsgrund: Sperrzeit oder Säumniszeit*). The dummy "lack of motivation" is set to one if there is at least one hint in the data, that the individual showed a lack of motivation in the last three years before program begin¹². Thus this variable is weaker than the variable penalty. A higher dropout probability is also observed for those who already attended a training program in a former unemployment period of the last three years and those who received unemployment benefit, at least in the first model. Participants who have not always been employed due to social security or registered unemployed show a higher probability to drop out without a job perspective.

4 Descriptive analysis of employment prospects of dropouts

Figure 1 gives a first impression on the labor market prospects of dropouts as compared to non-dropouts. The upper left diagram shows the employment rate of non-dropouts (in black) and dropouts (in grey) for the fourteen quarters following the program start. Quarter one is the calendar quarter in which the participant starts program attendance.¹³ Not surprisingly, in the beginning the employment rate of dropouts is much higher than the employment rate of non-dropouts. Dropouts leave the program earlier and in many cases because they have a job perspective. About

¹²i.e. the variables *Abgangsgrund* or *Zugangsgrund* take the numbers for *Nichterscheinen zur Meldung, fehlende Verfügbarkeit, fehlende Mitwirkung, 3 Monate nicht Kriterien aus SGB erfüllt, Meldeversäumnis, Statuswechsel wegen, nach mangelnder Verfügbarkeit; wegen, nach wiederholter Arbeitsablehnung, erneute Meldung nach Meldeversäumnis oder mangelnder Verfügbarkeit* or similar.

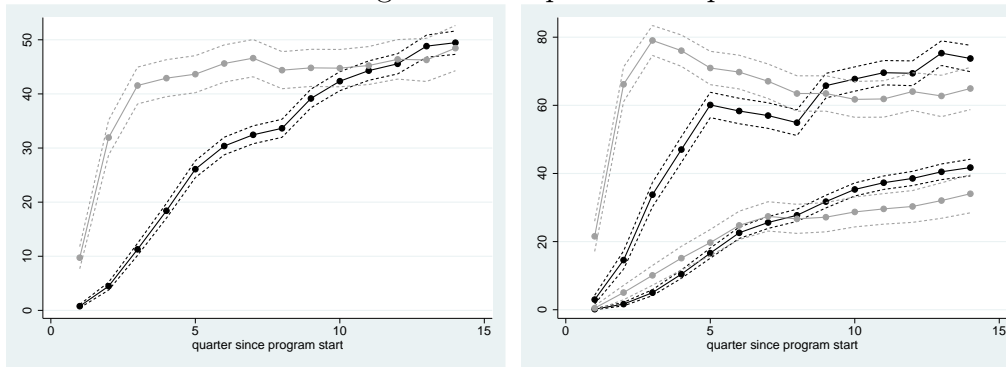
¹³A person is counted as employed in the respective quarter if he or she is employed for at least half of the quarter. The quarter an employment period ends in is in addition counted as a quarter in employment if the sum of the days in employment in the respective quarter and in the first quarter of the employment period is larger than the number of days in a quarter.

three years after program start the employment rates of dropouts and non-dropouts intersect. Unfortunately, after 14 quarters too few persons are still observed to see if the employment rate of non-dropouts stays above the employment rate of dropouts or not. In the upper right diagram the employment rates of the dropouts are calculated separately for those who drop out with a job perspective (type 1) and those without a job perspective (type 2). As a comparison also the non-dropouts are separated into those that take up a job within one month after they finish their program (type 1) and those who do not (type 2, about 77% of the non-dropouts). It is of course a different thing to drop out with a job perspective or to find a job immediately after having completed the program, this is just depicted for an additional comparison. The two upper lines are the lines for the first types. For those who take up a job within one month, by definition dropouts enter a job earlier, but after 9 quarters the employment rates intersect. After this non dropouts have a higher employment rate. From this one can not conclude that their employment is more stable, it could well be that the curve is just shifted to the right and employment will decline after the end of the observation period. Dropouts who leave without a job perspective are only a bit more often employed than those who complete their program and after two years those who complete the program but do not enter employment within one month after the end of the program (type 2, lower black line) are more often employed. Needless to say that none of the differences shown in figure 1 may be interpreted as an effect of dropping out.

The lower left diagram shows the rate of those that have not left the unemployment period in focus in the respective quarter. Non-dropouts survive longer in unemployment, the difference decreases over time but does not vanish completely. This difference to the upper left picture might be a hint that employment of dropouts is less stable. The lower right figure shows the rate of those individuals that are still in their first employment period in the respective quarter (based on those individuals that start employment during the observation period). Quarter one is the first quarter the individual is employed in, irrespective of when he or she left the program. After two years 60% of those who completed a program and then took up a job within one month have not been non-employed again (highest line). Of those who finished and did not take up employment within one month (but started employment eventually) 55% are still employed without interruption (second highest line). For the dropouts of type 1 this rate is 53% and for those of type 2 48%. Without distinction into types the rates are 57% and 50% respectively, thus employment of non-dropouts is a bit more stable.

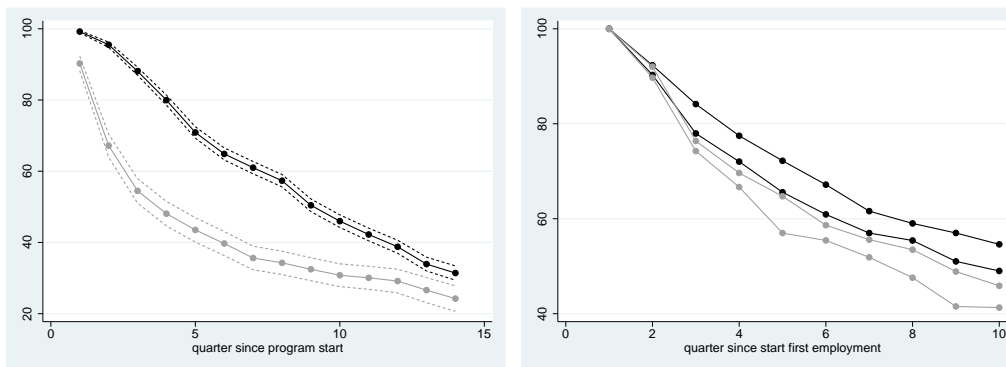
In sum, figure 1 gives the impression that dropouts enter employment earlier but

Figure 1: Prospects of dropouts



Employment rates

Employment rates



Rates of survivors in unemployment period Rate of survivors in first employment

Note: Dropouts in grey, non-dropouts in black. The dashed lines are 95% confidence intervals. Upper black and grey lines for type 1.

non-dropouts catch up after some time and that employment of non-dropouts is slightly more stable. This result is based on a simple comparison of dropout and non-dropouts. It does not yet allow to learn on the effect of dropping out instead of continuing. The next step is going to be to get deeper into the employment prospects of dropouts by jointly estimating the decision to drop out and the later outcome.

5 Conclusion and Outlook

One out of five participants of further training programs in Germany drops out of the program before having attended 80% of the planned program duration. Evaluation studies on the employment effects of these measures usually consider the start of a program as the treatment and do not deal with the length of participation or the question if the program has been completed. The paper of Kluve, Schneider,

Uhlendorff, Zhao (2007) is an exception to this; the authors estimate the employment effect of variations in the length of the programs taking into account both the planned and the actual duration of the program. By contrast, my focus is on the distinction between dropping out and completing the measure.

The first objective of this paper was to discuss identification of dropouts in the IEBS. It turned out, that it is possible to distinguish participants that attend at least 80% of the program from those who drop out, when taking into account some particularities and sensitivities of the data. The second aim was gain knowledge on the occurrence of dropouts - how often and when do people drop out and what makes a dropout more likely. Results of a probit model estimating the probability to drop out indicate that especially a higher degree of schooling, being older than 35 years, having suffered from health problems in the past and having children reduces the probability to drop out. Participants for whom signs of lack of motivation in the past can be identified from the data face an increased probability to drop out. Regarding program types, participants of practical training have the highest and participants of orientation measures the lowest probability to drop out, even controlling for the planned program duration. Less than half of the dropouts take up employment within one month.

A first attempt is made to study the employment prospects of dropouts using purely descriptive analysis. Comparing employment rates of dropouts and non-dropouts from the start of the program on shows that the head-start of the dropouts decreases over time and after three years employment rates of dropouts and non-dropouts intersect. Survivor rates indicate that the first employment of dropouts is a bit less durable than the first employment of those who completed the measure. It would be interesting to estimate the causal effect of dropping out of a program on future employment. This is not straightforward, as the decision to drop out must be regarded as endogenous. On the one hand, those who are lucky to receive a job offer might be dropping out because of this job offer and then be employed in the near future. On the other hand, those who are unlucky to be assigned to a less effective course might be more likely to quite the course, but might at the same time be less likely to benefit from continuing. In addition, personal characteristics that influence the employment chances may of course also influence the decision to drop out. The next step will be to jointly estimate the decision to drop out and the probability of employment with the objective to learn something on the causal effect of dropping out.

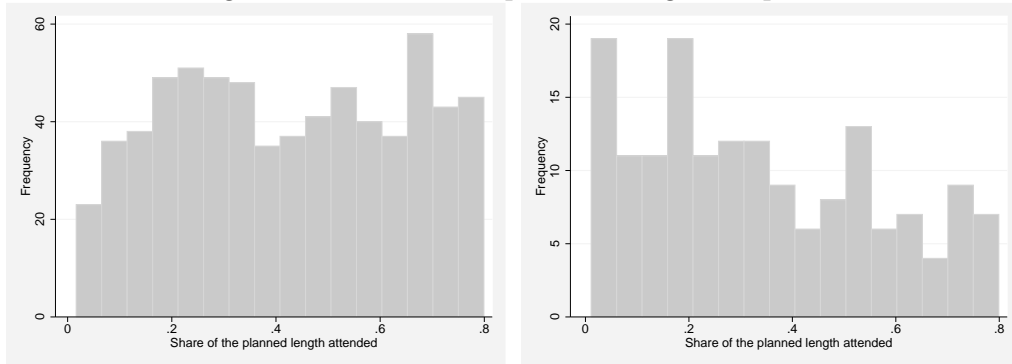
References

- Biewen, M., B. Fitzenberger, A. Osikominu, M. Waller (2007), Which program for whom? Evidence on the comparative effectiveness of public sponsored training programs in Germany, IZA Discussion Paper No. 2885.
- Bundesagentur für Arbeit (2001, 2002a, 2003a). *Daten zu den Eingliederungsbilanzen 2000, 2001, 2002*, Nürnberg (various issues).
- Bundesagentur für Arbeit (2002b, 2003b, 2004). *Arbeitsmarkt 2001, 2002, 2003*, Nürnberg (various issues).
- Flores-Lagunes, A., A. Gonzalez and T. Neumann (2007), Estimating the Effects of Length of Exposure to a Training Program: The Case of Job Corps, IZA Discussion Paper No. 2846.
- Heckman, J., J. Smith and C. Taber (1998), Accounting for Dropouts in Evaluations of Social Programs, *The Review of Economics and Statistics*, 80, 1, 1-14.
- Hujer, R., S. Thomsen, C. Zeiss (2006), The Effects of Vocational Training Programmes on the Duration of Unemployment in Eastern Germany, *Allgemeines Statistisches Archiv* 90, 299-321.
- Kluve, J., H. Schneider, A. Uhlendorff and Z. Zhao (2007), Evaluation Continuous Training Programs Using the Generalized Propensity Score, IZA Discussion Paper No. 3255.
- Lechner, M. and C. Wunsch (2006a), Active Labour Market Policy in East Germany: Waiting for the Economy to Take Off, IZA Discussion Paper No. 2363.
- Lechner, M. and C. Wunsch (2006b), Are Training Programs More Effective When Unemployment Is High?, IZA Discussion Paper No. 2355.
- Lechner, M. and C. Wunsch (2008), The Curse and Blessing of Training the Unemployed in a Changing Economy: The Case of East Germany after Unification. *German Economic Review* (forthcoming).
- Lee, M. and S. Lee (2003), Analysing Effects of Job-Trainings Suffering Dropouts with an Optimal Multiple Matching, Singapore Management University.
- Rinne, U., M. Schneider and A. Uhlendorff (2007), Too Bad to Benefit? Effect Heterogeneity of Public Training Programs, IZA Discussion Paper No. 3240.

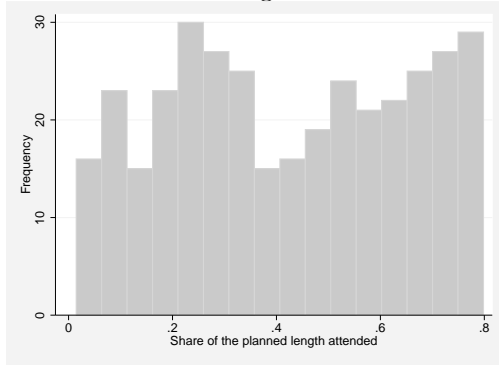
- Rosholm, M. and M. Svarer (2004), Estimating the Threat Effect of Active Labour Market Programmes, IZA Discussion Paper No. 1300.
- Schneider, H. and A. Uhlendorff (2006), Die Wirkung der Hartz-Reform im Bereich der beruflichen Weiterbildung, Journal for Labor Market Research 39, 477-490.
- Waller, M. (2008), On the Importance of Correcting Reported End Dates of Labor Market Programs, Schmollers Jahrbuch 128, 213-236.
- Zimmermann, R., S. Kaimer, D. Oberschachtsiek (2007), Dokumentation des "Scientific Use Files der Integrierten Erwerbsbiographien" (IEBS-SUF V1) Version 1.0, FDZ Datenreport 1/2007, Institut für Arbeitsmarkt- und Berufsforschung (IAB), Nürnberg.

Appendix

Figure 2: Share of the planned length dropouts attend

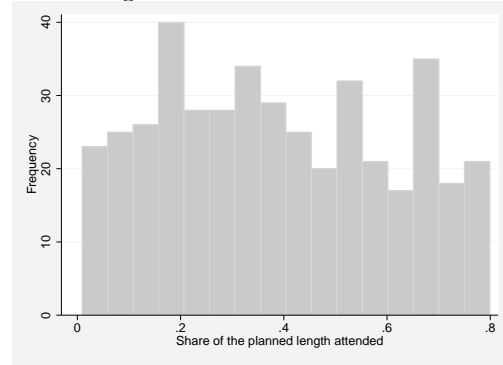


FT without Retraining



Type 1 (all FT)

Retraining



Type 2 (all FT)

Table 3: Probit estimation (coefficients)

	Dropout	Dropout type1	Dropout type2
planned length in months	0.016 (0.004)***	0 (0.005)	0.024 (0.004)***
orientation measure	-0.408 (0.077)***	-0.570 (0.107)***	-0.293 (0.093)***
practical training	0.285 (0.063)***	0.280 (0.077)***	0.264 (0.080)***
retraining	-0.178 (0.089)**	-0.407 (0.129)***	-0.190 (0.108)*
no certificate	0.150 (0.053)***	0.209 (0.066)***	0.122 (0.067)*
living in east Germany	-0.111 (0.053)**	-0.105 (0.063)*	-0.048 (0.065)
female	-0.069 (0.049)	-0.031 (0.063)	-0.074 (0.060)
25 to 30 years old	0.205 (0.060)***	0.231 (0.080)***	0.154 (0.077)**
30 to 35 years old			0.168 (0.068)**
no schooling degree	0.344 (0.096)***		0.452 (0.113)***
lower secondary	0.133 (0.051)***		0.202 (0.062)***
at least one child	-0.084 (0.047)*		-0.191 (0.058)***
minor health problems	0.181 (0.091)**	0.218 (0.116)*	
major health problems	0.166 (0.116)	0.104 (0.156)	
major health problems in past	-0.382 (0.166)**	-0.568 (0.247)**	
last occupation craftsmen	-0.165 (0.055)***	-0.097 (0.072)	-0.189 (0.066)***
... technician	-0.210 (0.079)***	-0.021 (0.095)	-0.336 (0.103)***
... manager or specialist	0.086 (0.083)	0.245 (0.105)**	-0.076 (0.105)
months unempl. until program	-0.006 (0.007)	-0.037 (0.009)***	0.019 (0.008)**
lack of motivation in past	0.369 (0.154)**		0.363 (0.173)**
penalty in past	0.521 (0.240)**	0.505 (0.312)	0.565 (0.270)**
training program before	0.187 (0.087)**		0.278 (0.098)***
unemployment benefit before	0.098 (0.049)**	0.180 (0.061)***	
out of labor force before			0.112 (0.056)**
_cons	-1.008 (0.079)***	-1.195 (0.097)***	-1.619 (0.103)***
N	4304	3777	3866

Note: "Before" is defined as in the three years before the current unemployment period.

*** = statistically significant at 1 %, ** = at 5 %, * = at 10 %.

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