

Informing employees about training subsidies: Results from a randomized field experiment

Gerard J. van den Berg, University of Bristol

Christine Dauth, IAB

Pia Homrighausen, IAB

Gesine Stephan, IAB and FAU

January 30, 2018

Preliminary version – Please do not cite

Abstract: The study analyzes a German labor market program that subsidizes occupational and further training for employed workers in small and medium-sized enterprises to increase participation training. Although the program is quite generous, compared to the number of potentially eligible persons the number of subsidy take-up has always been rather small. In an experimental setup, we mailed 10,000 informational brochures about the program to potentially eligible workers. Using combined survey and register data, we analyze the impact of receiving the information brochure on workers' awareness of the program, training take-up, and several job characteristics. Findings from the survey show that additional information more than doubled workers' awareness of the program but did not increase program take-up. However, the information about the subsidy positively affected participation in unsubsidized training for employees under 45 years. For older workers, there was no measurable change in training participation.

JEL-Codes: J24, J65

Keywords: Subsidized further training, randomized field experiment, information treatment

Acknowledgements: The authors appreciate financial support by the DFG Priority Programme “The German Labour Market in a Globalised World: Challenges through Trade, Technology, and Demographics” (SPP 1764).

1 Introduction

Life-long learning and employability have become focal points in the labor market policies of many advanced economies (see e.g. OECD Employment Outlook 2004). Economies face more turbulent conditions than in the past, and the development of novel production technologies proceeds at a sustained high speed. This requires a flexible and suitably skilled workforce. Human capital adjustments need to be made also especially by the existing stock of workers rather than solely by the inflow of new workers. Access conditions to training, however, differ strongly by employer and by worker characteristics. While large firms usually have specialized human resource managers organizing the training activities of the firm, small and medium sized enterprises (SME) face more difficulties in organizing, structuring and financing training activities. Regarding employees, training participation rates differ in particular by age and qualification. Compared to younger workers, older workers participate less in further training as firms usually want to invest less into older workers due to their short remaining time horizon in the firm and stereotypes about older workers learnability (Klehe et al 2012).

In this study, we use a randomized experiment to evaluate a German program that subsidizes training for workers in small and medium sized enterprises (SME) by covering a substantial share of training costs. The maximum amount of the subsidy differed by age and was even more generous for workers of age 45 and older. Take-up rates of this program have been rather low during recent years. We sent out brochures – an information treatment – about the program to randomly selected eligible workers to inform them about the training subsidy and emphasize the importance of life-long learning. By using firm as well as individual register and survey data, we investigate to what extent the information treatment increases workers’ knowledge and take-up of the program as well as their participation in further training and their labor market outcome.

Our study contributes to the literature in several ways: First, we focus on a very generous training subsidy program that refers to a target group of special interest: small and medium sized enterprises. Second, our approach is based on a randomized controlled trial; the number of such studies conducted on German active labor market policies is still rare.¹ We provide a nudge for randomly chosen employees to develop more interest in further training, and the design of our study allows us to investigate the effects on a number of interesting outcomes. Third, using an information brochure as a “nudge” to alter peoples’ behavior is an innovative and accepted approach to gain results in the context of the gold standard of evaluation methods.

¹ Exceptions are van den Berg et al. (2017a), who evaluate an information treatment about a targeted wage support program for older workers, Görlitz and Tamm (2017) who analyses an information treatment about the “Bildungsprämie” program, van den Berg et al. (2017b) who evaluate the use of integration agreements in placements services, and Krug and Stephan (2016), who compare random assignment into a public and private provision of placement services.

This study is organized as follows: In Section 2 and 3 we will provide a short review of the literature related to (subsidized) further training and give information on the further training subsidy we study. In Section 4 we will refer to the literature on information treatments and introduce the information treatment of our study, followed by a discussion of data and methods. Section 5 presents the results, while Section 6 concludes.

2 Subsidized further training of employees

In recent years, the participation of employed workers in further training has increased (Janssen and Leber 2015). However, not all of the firms and workers are equally represented when it comes to further training. Especially small and medium-sized enterprises invest less in their employees' human capital (Kitching 2008). For Germany, Bellmann and Leber (2008) show for the year 2005 that around 40 percent of small establishments with up to 49 employees offered further training to their employees. Furthermore, 80 percent of establishments with 50 to 249 employees did so, and nearly all establishments with more than 250 employees provided training opportunities. One might think of several reasons for the lower training involvement of SME. First, costs might be higher: Smaller firms will not necessarily have a training department, a department of personnel that is familiar with training, or have a department of personnel at all. Re-organization of work tasks during training absences will be more difficult than in larger firms, and smaller firms may get lower frequency discounts from training providers. Second, benefits of training - or at least the perceived benefits - might be on average lower in smaller firms. Firms that do not pursue strategies to develop their personnel might not even be aware of qualification requirements of their workforce.

The program we consider provides subsidies that are more generous to workers of age 45 and older. In general, older workers participate less in further training. From the firm's perspective, employers hesitate to train workers with a comparatively short remaining time horizon of the employment relationship (Roscigno et al. 2007). Furthermore, supervisors and manager often presume that older worker are less willing and able to learn (Posthuma and Campion 2009, Lippmann 2008, Maurer et al. 2008). As Bellmann and Leber (2008) note, there might also be a lack of suitable training offers for older workers, and firms might not be aware of demographic changes in the population and the resulting necessities to retain older workers in their workforce for longer than in earlier years. From an individual's perspective, decreasing time-horizon for a pay-off from training activities might discourage older workers from training, too. Furthermore, their learning attitudes as well as learning behavior might differ from those of younger persons. Bellmann and Leber (2008) also show that the share of older workers participating in training is particularly low in SME.

An important question is who has incentives to finance further training. In a perfect labor market and perfect access of workers to loans, workers should be the ones to finance general training, as the invest-

ment will be risky for firms (Becker 1964). Acemoglu (1997) and Acemoglu and Pischke (1998), however, show that firms can reap some of the benefits of training in a monopsonistic market with a compressed wage structure where workers are paid below their productivity (and thus receive only part of the returns to general training). Monopsony power may arise for several reasons; for instance, if workers have transaction costs when switching jobs or if the current employer has an information advantage concerning the worker (compared to potential other employers).

When should the government (or unemployment insurance) step in and finance in-company training? If firms face imperfect competition and thus have market power, they should be able to provide training without governmental support. In a more competitive market, however, firms may be reluctant to provide training as competitors may benefit from their investments (Stevens 1994). Furthermore, information asymmetries can cause an under-provision of training because firms may not recognize higher productivity due to training investments (Chang and Wang 1996). If firms would not provide training and workers are credit constraint, market failure arises which justifies a government intervention to subsidize training. If a large share of firms would provide training anyway, deadweight losses of general government interventions would, however, be large. Then the government should still support training investments if social returns of training exceed the private returns of training. As has been discussed above, an under-provision of training activities is more likely to occur in SME, while returns from training should not be necessarily lower than in larger firms. This implies that it might be effective to target subsidies on SME.

There is a substantial body of empirical evidence regarding the determinants of in-company training for firms and individuals on the one hand, and on the returns of training on the other hand (for a literature review see Asplund 2004). Returns to training often measured as gains in the workers' productivity, the workers' employment stability or increases in earnings. A comprehensive overview on workplace training in Europe is provided by Bassanini et al. (2005), and on continuous (vocational) education and training in OECD countries by Ok and Tergeist (2003). Only few studies focus, however, on funded in-company training. Training programs (e.g. the American Workforce Investment Act or the Job Corps Program) are often open to a broad range of potential participants and not specifically targeted at employed workers and in-company measures.

The few existing studies on subsidized in-company training are mostly concerned with the European labor market. If a state agency provides governmental funds for in-company training, subsidies are usually targeted at specific types of firms or employees that display below-average training participation rates. Programs such as the British "Train to Gain" or the German WeGebAU target low-skilled workers (Abramovsky et al. 2011) or older workers (Leuven and Oosterbeek 2004; Singer and Toomet 2013), respectively. With respect to the firm side, governments support most commonly specific industries such as manufacturing (Holzer et al. 1993), as well as small and medium sized establishments (Görlitz 2010), in which training incidence is low.

Müller and Behringer (2012) provide a summary on government efforts to stimulate employer-provided training in OECD countries. Studies that try to verify this hypothesis therefore usually focus on outcomes at the firm level. This includes predominantly the amount of training investments within a firm, as well as the share of firms investing in training. Overall, there is evidence for moderately positive effects of public funding on the amount of training provided by firms, while results are mixed regarding training effectiveness. Görg and Strobl (2005) investigate training grants for firms in Ireland. They detect a positive effect of the subsidies on training investments for domestically owned plants. However, they do not find any effect on training expenditures for foreign owned plants. In a more recent study, Görlitz (2010) looks at into German training scheme introduced in the year 2006 that provides vouchers for a 50 percent training costs reduction for small and medium sized firms in the state of Northrhine-Westphalia. She reports an increase in the share of firms investing in training by four to six percentage points, but reports zero effects for firms' training intensity and the educational structure of firms receiving training subsidies.

While the above studies look at firm-level outcomes – such as the share of training firms or the training intensity within firms – there is scarce evidence for the effect of training on the individual situation of workers. According to Leuven and Oosterbeek (2004), Dutch tax deductions did not produce any measurable improvement in wages. Abramovsky et al. (2011) investigate the UK government pilot program “Train to Gain”, which aimed to increase the level of training provided by employers, focusing on low-skilled employees. They find, however, no notable increase in the take-up of training activities and conclude that the program was associated with very high levels of deadweight. Heinrich et al. (2009) find positive effects of a job training program (Adult Program of the Workforce Investment Act) on earnings. They do, however, not distinguish between economically disadvantaged employed workers and unemployed individuals. In general, some of the studies with non-German data consider training programs that are rather minor in terms of the time spent in training. For that reason, the effects may be small, but obviously, this does not necessarily generalize to training that is more substantial.

The study most similar to ours evaluates a German training voucher program targeted to low-income low-skilled employees and self-employed persons, the “Bildungsprämie” voucher (Görlitz/Tamm 2017). During the time period investigated, the voucher reduced direct training costs by 50 percent, up to the small amount of 500 Euro. The remainder of the costs had to be borne by the employees themselves. For the study, half of around 5,000 participants in a telephone survey were informed about the voucher as part of the interview. A second survey took place around one year later. The authors find that the intervention significantly increased knowledge about the “Bildungsprämie”, but did not affect voucher take-up or training participation.

3 The WeGebAU program

The German program WeGebAU (“Förderung der Weiterbildung Geringqualifizierter und beschäftigter Älterer in Unternehmen”) was introduced in 2007. Within its scope, the German Federal Employment Agency (FEA) allocates funds for in-company training to specific workers. While the FEA emphasizes

that training is mainly the responsibility of workers and firms, the funding is intended to trigger further firm-related activities to stabilize workers' jobs. The program targets two groups of workers. First, cost reimbursement for training is granted to workers employed in small and medium-sized enterprises (SME) with less than 250 employees irrespective of their qualification. Second, the FEA provides cost reimbursement as well as wage support during training for low-skilled workers. Workers classify as low-skilled if they lack a vocational degree or if they had worked in an unskilled position at least for the previous four years.

Our paper focuses on the first target group. The program subsidizes workers in SME through reimbursements of the further training costs and additional arising costs for transportation, accommodation or childcare. The exact amount of the training cost reimbursement is to the discretion of the responsible caseworker, however, training costs of workers younger than 45 years can be supported by maximum of 50 percent and workers at least 45 years old up to a maximum of 75 percent. On average, the training subsidy amounted to 900 Euros per month. To be subsidized, the training has to meet several conditions: It lasts for at least four weeks, takes place at a verified private provider and must not be not firm specific. Moreover it has to be parallel to a worker's employment and the worker's wage payments have to continue. The actual training programs are substantial, and may involve the acquisition of skills needed for occupations in elderly care, machine operation, transportation, the operation of heavy equipment, IT, and administration.

So far, aspects of the WeGebAU scheme have been evaluated in two non-experimental studies with a focus very different from ours. Dauth and Toomet (2016) use propensity score matching to analyze employment outcomes and earnings of older workers in SME participating in the WeGebAU program during the start-up period 2007 to 2009. They find an increased probability to remain employed particularly for part-time workers, and those participating in measures longer than 60 days. They find small significant effects on earnings for the entire group of participants. Dauth (2017) analyzes the effects of training subsidies for low-skilled employees on individual labor market outcomes in Germany for the period from 2007 to 2012. She exploits cross-regional variation in the conditional policy styles of local employment agencies and estimates local average treatment effects for compliers that participate only in training because of a more generous local policy style. For this group, the subsidies significantly increase cumulative employment duration and earnings.

All in all, the WeGebAU program is rather small compared to other instruments of active labor market policy in Germany. During the years 2012-2016, the program had less than 7,000 entries from SME employees. As firms did never fully retrieve the yearly available budget of 280 million Euros (including subsidies for low-skilled workers), the question arises if more information about the program might be successful in increasing take-up rates.

4 Information treatment, data and methods

4.1 The information treatment

Many targeted individuals fail to take up benefits that they are eligible for (Currie 2006). A lack of information, stigma effects of program participation, transaction costs, and complexity are candidates to explain incomplete take-up. In fact, a growing body of evidence suggests that individuals are often not fully informed about transfer policies relevant for economic choices (e.g., Chetty and Saez 2013, Liebman and Luttmer, 2015). The provision of information about available support programs thus can enable individuals to draw on additional resources when making their economic choices, altering these choices. To investigate this topic, a number of researchers have used the amount of information on the program as a treatment. Typically, such information treatments have been applied within randomized trials. The treatment is the receipt of an information brochure or letter, an information event, or a personal or telephone consultation. The main purpose of such studies is to explore whether and what kind of information has an impact on human decisions. Information can be used to balance information deficits, simplify procedures or processes, or push information to the attention of the beholder, for instance by overcoming procurement costs.

The empirical evidence indicates that information often has significant effects on decisions. This includes participation in various (North American) aid or social security programs. Osborne Daponte et al. (1999) examine whether a lack of information can explain the low participation rates of needy households in the US-American Food Stamp program. They find that information on the eligibility to participate in the program increases the take-up of the program. Chetty and Saez (2013) informed eligible individuals about the Earned Income Tax Credit (EITC). While they do not find any effect of additional information about the EITC on average labor supply and earnings for EITC recipients, they uncover heterogeneous treatment effects on self-employment income and earnings. Bhargava and Manoli (2015) informed tax filers about their failure to take up EITC benefits and provided them with a claiming sheet, which led to substantial additional claiming rates. Aizer (2003; 2007) finds similar results for the American Medicaid program, highlighting the role of imperfect information for the decision on participation. In another experiment, Duflo and Saez (2003) sent out letters informing about monetary rewards for attending an information fair about retirement plans. Compared to the control group, the attendance at the fair was more than five times higher for those treated. After the fair, enrollment into the Tax Deferred Account (TDA) was higher for the treatment group. Treatment also increased enrollment of other unemployed from the same departments, a finding that points to peer group effects. Liebman and Luttmer (2015) show that an information treatment on key Social Security provision increased the share of older working US Americans by four percentage points one year after treatment. For Belgium, Huysentryt and Lefevere (2010) study the effects of information (and information presenting formats) on people's payment method for family benefits. They find that information procurement costs affect individual decisions, and that the costs are much smaller if information is easy to access and little complex. Chareyron et al. (2017) investigate for France, in as far a change in information sent to households after

claiming social assistance, had an impact on take-up rates. They show that the information substantially increased take-up rates for certain kinds of benefits.

Although information treatments constitute cheap and low-threshold interventions (that should not evoke moral concerns), they have not yet been used very often in Germany, especially in the context of active labor market programs. Already mentioned exceptions are van den Berg et al (2017a) and Görnitz/Tamm (2017). Our project focuses on individual information deficits about the importance of life-long learning and the possibility of the WeGebAU further training subsidies on the worker's side. Doing so will allow us to create a direct link between receiving an information treatment and particular outcomes on the individual level. Of course, information deficits may lay also on the firms' side, but this is not the focus of our project.

The information treatment of our project consisted of a short cover letter and an information brochure (see the Appendix for a translated version of the brochure): On June 2, 2014, we sent out the information brochure about WeGebAU and its entitlement conditions to approximately 10,000 randomly selected younger and older workers in SME. In this brochure we also pointed out the importance of life-long learning and the benefits of further training. The aim of the information treatment was to increase incentives for training by increasing the awareness of the WeGebAU further training subsidy.

4.2 Data and methods

To gather a sample of workers eligible for receiving the WeGebAU subsidy, we used data of the German Federal Employment Agency (FEA). For workers employed in SME, firm size is important in order to qualify for the WeGebAU program. As the register data of the FEA comprise only information on establishment size, but not enterprise size (and an enterprise might consist of several establishments), we concentrate on workers employed in establishments that participated in the IAB Establishment Panel survey in 2012 (the latest wave available when the field experiment took place). Information from this survey allow us to determine firm size. To identify our target group, we selected all firms with the number of employed workers <250 , after excluding individuals without vocational degree who would (unconditionally on firm size) have been eligible to a more generous subsidy scheme (see section 3).

To identify workers from the pre-selected firms, we used individual level register data from the Integrated Employment Biographies (IEB). The IEB contain the employment histories of all employed workers liable to social security contributions in Germany. Furthermore, it comprises information on workers' unemployment spells, periods of unemployment insurance or welfare benefit receipt, and periods of participation in a program of active labor market policy such as WeGebAU. As all this information is process-generated, start and end dates of the different spells have daily precision, and the information is highly reliable (for more information, see Jacobebbinghaus and Seth 2007, or Dorner et al. 2010). The IEB data are updated yearly. The selection of the sample for the experiment is based on the IEB version V11 from 2013.

Based on information in the IEB, we restricted the sample to workers aged 25 to 60 who started fulltime employment liable to social security contributions before Jan 1, 2012 and remained in this firm until the end of 2013, the latest moment observable in the most updated register data at that time. Our intention was to focus on workers with permanent employment contracts. This implies that they should have been employed at least two years in the same firm when the information treatment took place. In Germany, contracts can only be time-fixed for a maximum period of two years. This sample of approximately 20,000 workers was stratified into workers below age 45 and older. For our experiment, we randomly selected about 10,000 workers for our treatment groups, i.e., 5,000 workers younger than 45 years old as well as 5,000 workers of at least 45 years.

Part of the workers in our selected sample took up work at a different employer between the end of 2013 (latest observable data when drawing the sample) and June 2014 (when our information treatment took place). In consequence, not all of these workers had in fact a permanent contract or worked in a SME when we sent out the brochure. However, this affected the treatment and the control group in the same way and should thus not have an impact on our results.

For the further empirical analysis, we combine register and survey data. The register data analysis is based on the updated IEB data set V12, containing information until the end of 2015 for all workers in our initial sample. The survey data comprise information from computer-assisted telephone interviews that were questioned between November 2014 and February 2015 (from six to eight months after treatment). In the survey, we asked approximately 2000 workers from the SME sample questions on the awareness of the WeGebAU program, participation in (unsubsidized) training, reasons for (not) participating in further training, and e.g. windfall.

Table 1 Selected characteristics (register data):
Means for treatment group T and control group C, and difference D

	Up to age 45			45 and older		
	T	C	D	T	C	D
Age	34	34	0	51	51	0
Male	0.53	0.51	0.02	0.46	0.47	-0.01
Non-German citizen	0.06	0.07	0.00	0.04	0.03	0.00
Lower oder medium secondary schooling degree	0.60	0.60	0.01	0.73	0.74	-0.01
High school degree	0.37	0.38	-0.01	0.24	0.23	0.01
School information missing	0.02	0.02	0.00	0.03	0.03	0.00
Part-time employment	0.25	0.25	0.00	0.30	0.29	0.01
Permanent contract	0.77	0.77	0.00	0.86	0.86	-0.01
Daily gross wage	87	87	0	88	90	-1
Cumulated days of employment in past 5 years	4.27	4.25	0.02	4.56	4.57	-0.02
Cumulated days of tenure in past 5 years	2.40	2.41	-0.01	3.07	3.14	-0.07
Number of establishments in past 5 years	2.13	2.13	0.00	1.78	1.74	0.04
Number of observations	4281	5240		4465	5158	

Source: IEB V12, own calculations. *) $\alpha = 0.05$, **) $\alpha = 0.01$.

Table 1 shows average sample statistics of the treatment and control group. As should be expected, due to random assignment we find no significant differences between the treatment and the control group. In average, workers in the younger sample are 34 years old, while mean age among the older group is 51. The majority of workers have a lower or medium secondary degree; the share with a high school degree is larger in the younger age group. Around a quarter of workers are working part-time, and around 80 percent have a permanent contract. The mean wage rate is nearly 90 Euro day. In average, workers in the sample have been working most of the five years before the treatment took place, but not necessarily for the same employer.

Let us now briefly describe our empirical approach. The sequence considered in the experiment is as follows: Potential WeGebAU participants do or do not ...

- 1) get an information brochure on the program,
- 2) gain knowledge about the program,
- 3) find and take up an adequate training program,
- 4) receive WeGebAU funding.
- 5) realize particular labor market outcomes.

The experiment provides random variation in 1). This can be used to estimate average reduced form effects of receiving information on the program on outcomes of all further stages. As treatment and control group were randomly chosen and characteristics of both groups are well balanced, a comparison of means is sufficient.

Two further planned steps of our analysis relied on a sufficiently high number of entries into the training program in our sample, and on finding significant effects in the reduced form estimates. On the one hand, 1) could also be used as an instrument to estimate the effects of 2) on further outcomes in the sequence sketched. This analysis would answer the question, how large the effects of additional program knowledge are among the group of compliers – individuals who only knew about the program because they received our brochure. Thus, two-sample instrumental variables (2SIV) methods (see e.g. van den Berg et al 2016) could be used to estimate local average treatment effects (LATE) of program knowledge and training participation (which are available only in the survey data) on labor market outcomes (available for the entire groups from the register data). On the other hand, for surveyed individuals of the treatment and the control group we had planned to investigate how much unsubsidized training or unsubsidized employment has been replaced by subsidized training (WeGebAU) because of the additional information. However, as we find only very few entries into training at all and accordingly negligible reduced form effects of 2) on further outcomes, both exercises seem futile in our specific context.

5 Results

5.1 Survey data

As described above, the survey took place 6 to 8 months after sending out the brochure. For the information treatment to work, the treated persons of course had to read the brochure. Thus, we asked each treated participating in the survey “Have you read the brochure about WeGebAU?”. Around half of the treated answered that they did in fact read the brochure (Panel I of Table 2). The remaining shares say to rather equal parts they did either not read the brochure or do not remember receiving a brochure. Workers who declined to have read the brochure were asked for the reasons not to do so. As main reasons, around a quarter of all surveyed workers answered that they had already participated in any kind of formal or informal training. Nearly 20 percent said that they are not interested in training at all, or that their employer offers enough training. Interestingly, also nearly 30 percent do not want to be supported by the Federal Employment Agency. These workers might fear stigma effects if their training is subsidized as the FEA usually supports unemployed workers.

As outlined below, we can estimate reduced form effects of the information treatment by simple comparing means from the treatment and the control group. Data from our survey provide information on program knowledge and the take-up of training in the short run (6 to 8 months after the treatment). The register data are more reliable than survey data regarding participation in the support program - workers may fail to recognize that their training is subsidized, or they might think that their employer receives subsidization while he does in fact not. Thus the actual program participation will be investigated in section 6.2.

Table 2 Brochure receipt, survey data outcomes, and training features:
Means for treatment group T and control group C, and difference D

	Up to age 45			45 and older		
	T	C	D	T	C	D
I Brochure receipt						
Did read WeGebAU flyer	0.51	-		0.50	-	
Aquired information about training after brochure receipt	0.12	-		0.12	-	
Did not read WeGebAU flyer	0.26	-		0.24	-	
Did not receive WeGebAU flyer	0.23	-		0.26	-	
Did not read brochure because...						
...employer offers enough training	0,15	-		0,14	-	
...participated in training already	0,16	-		0,17	-	
...don't want support by FEA	0,09	-		0,30	-	
...not interested in further training	0,11	-		0,11	-	
...generally not interested in brochures	0,17	-		0,16	-	
II Program awareness, training participation, and initiative						
Aware of the WeGebAU program	0.59	0.20	0.39**	0.65	0.26	0.39**
Participation in further training	0.50	0.43	0.07*	0.49	0.49	0.00
Initiative for training came from worker	0.20	0.14	0.06**	0.18	0.15	0.03
III Training features (only those participating in training since June 2014)						
Training took place in leisure time	0.14	0.11	0.03	0.11	0.11	0.00

Training took place during working hours	0.74	0.74	0.00	0.75	0.78	-0.03
Training took place during leisure and working hours	0.12	0.15	-0.03	0.15	0.11	0.03
Worker covered training costs (mostly)	0.08	0.06	0.03	0.03	0.03	-0.01
Firm covered training costs (mostly)	0.86	0.84	0.01	0.91	0.89	0.02
Someone else covered training costs (mostly)	0.06	0.10	-0.04	0.06	0.07	-0.02
Number of observations						
Panel I-II	481	498		510	488	
Panel III	242	216		252	241	

Source: Survey data, own calculations. *) $\alpha = 0.05$, **) $\alpha = 0.01$.

Panel II of Table 2 shows the reduced form impact estimates for the survey data. The aim of the treatment was to increase knowledge about WeGebAU to increase participation in further training with the help of the training subsidy. 20 percent of surveyed younger workers and 26 percent of surveyed older workers employed in SME were aware of the program in the control groups. This share increases remarkably by around 40 percentage points in the treatment groups. This implies that our treatment was insofar successful as it reduced information deficits by more than 150 percent. Furthermore, even though we cannot find any effect on the take-up of the training subsidy, our results show that the information treatment did indeed increase the share of surveyed workers up to age 45 participating in training by 7 percentage points, from 43 percent of the controls to almost 50 percent of the treated. Furthermore (and as one might have expected), – the additional training resulted from the workers’ initiative. While only 14 percent of those in the control group of younger workers initiated their training participation, 20 percent of those in the treatment group did. This result indicates that the brochure nudged part of the younger worker group to become interested in training, to explore training possibilities with their employer and participate in an adequate training program. However, they did not take up the subsidy. We find no such effect for the group of workers of age 45 and older.

Around 50 to 60 percent participated in further training during the months since we sent out the information treatment. To get an impression of the kind of training taking place, we also asked for several features of the training programs undertaken. Panel III of Table 2 displays the results (which are not causal as they relate only to those who actually participated in training during the time period since sending out the brochure). Around 75 percent of further trainings took entirely place during working hours, and for around 90 percent of survey participants, the firm covered the entire training costs.

Those who declined that they did participate in training were asked “Why do you not participate in further training?”, where several answers could be chosen. The answers indicate that there is no single dominating reason: Around 50 percent answered that they do not have time for training. More than 40 percent each also say that there is no suitable training, that their employer does not support training, or that they did just recently participate in training. Interestingly, around 50 percent of those that did not take part in training answered that they do not need training indicating, that they might not be aware of the importance of life-long learning.

5.2 Register data

One aim of our project was to investigate in as far additional information increases the take-up of the WeGebAU subsidy to increase participation in further training and to investigate in as far this had an impact on further labor market outcomes. While the survey data contain only a subset of the treatment and control groups, the register data encompass a much larger number of individuals. Furthermore, the register data allow us to cover a longer time span than the survey data (around 19 months after the treatment).

Table 3 Program participation and further labor market outcomes:
Means for treatment group T and control group C, and difference D

From treatment until end of 2015	Up to age 45			45 and older		
	T	C	D	T	C	D
WeGebAU participation	0,003	0,002	0,001	0,001	0,001	0,000
Cumulative days of employment	511,18	507,73	3,45	525,58	526,69	-1,11
Cumulative days of job-seeking	18,77	18,69	0,08	23,69	23,21	0,48
Cumulative days of UI benefit receipt	15,51	15,43	0,09	19,51	19,53	-0,02
Cumulative days of welfare benefit receipt	7,70	7,77	-0,07	4,94	5,17	-0,23
Worker continuously employed	0,69	0,68	0,01	0,75	0,75	0,00
Change of employer	0,12	0,12	0,00	0,08	0,07	0,01
Period of registered job search	0,12	0,12	0,00	0,13	0,12	0,00
Number of observations	4281	5240		4465	5158	

Source: IEB V12, own calculations. *) $\alpha = 0.05$, **) $\alpha = 0.01$.

Table 3 shows that an extremely small share (less than 1 percent) of the treatment and the control group actually participated in the WeGebAU-program. In the end, even more than one and a half year after the treatment, we find no significant difference between treatment and control groups. In absolute terms, 15 persons from the treatment groups and 15 persons from the control groups took up subsidized training.

As might have been expected after this first result, we also find no significant differences in labor market outcomes of brochure recipients and the control groups. Until the end of the year 2015, around 19 months after sending out the information leaflets, workers in our sample spent in average around 17 months in employment. In average, they received unemployment benefits for half a month and were on welfare benefits for a week. Around 70 percent were continuously employed, and around 10 percent changed their employer and/or had a period of registered job search.

5.3 A note on windfall

One aim of our project was to have a closer look at windfall. However, as has been noted above, due to the small number of actual participants in the further training program and zero additional participants, due to the information treatment it was impossible to determine if additional subsidized training simply substituted unsubsidized training.

Nonetheless, although we cannot present causal evidence, there are at least some hints that windfall effects occur. We were able to put some questions on the WeGebAU program into the 2014 wave of the IAB establishment panel. Those firms that answered that they took part in the program, we asked „Would you (your worker) have participated in training if the training had not been subsidized through WeGebAU?”. Around one third of these firms answered this question with “yes”.

[Empirical analysis to be continued]

6 Conclusions

We conducted a randomized field experiment where we sent a brochure to workers employed in SME that informed them about a generous program supporting training. The subsidy could cover up to 50 percent of training costs for worker up to the age of 45, and up to 75 percent for older employees. The program supported only general training of a duration of at least 4 weeks.

We find that receiving a brochure with program information substantially increased the share of individuals who know about the program substantially by more than 150 percent. The treatment did not increase participation in the training support program. However, survey data collected approximately 6 months after the treatment showed that receiving the brochure significantly increased the participation in unsubsidized training for younger workers below age 45. At that time, participation in unsubsidized training of older workers was not affected. Furthermore, more than one and a half year later using register data we do not find any effects of the treatment on program take-up and further labor market outcomes. Even though, our information treatment did not increase participation in further training due to additional take-up of a training subsidy, the treatment was successful in the sense that it (partly) increased participation in unsubsidized training.

Why did the information treatment not increase the share of program participants? We can only speculate about the reasons: According to the survey data, stigma effects might play a role since workers answered that they do not want to be subsidized by the FEA. Workers stating that they don't need training might indicate that they are still not aware of the importance of life-long learning. Finally, transaction costs might play a big role. Workers need to talk to their employer and talk to the employment office about suitable training programs and find an eligible private training provider. Due to this effort they have to expense, workers and firms might prefer to (be) train(ed) otherwise. Moreover, due to the high transaction costs our observation window might be too short to measure any effect of our treatment on program take-up.

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Appendix

Translated version of the brochure

Further training subsidies for employees Lifelong learning is worthwhile – Join in!

What are the benefits of further training?

Taking up further training in the profession or obtaining a professional degree has many benefits:

- Additional qualifications increase professional competence and help to stay professionally up-to-date.
- Professional training can not only increase productivity, but also increase job satisfaction.
- New professional knowledge promotes career advancement and thus the earning potential.
- With improved professional skills you can take up new challenges with increased self-confidence.

Who is funded and to what extent?

The employment agency supports professional training of employees by a special program called WEGEBAU. The funding is aimed at two target groups.

- Target group 1: Employees who are seeking a (new) professional qualification
- Target group 2: Employees in small and medium-sized enterprises

Within the framework of the special program considerable parts of the further education costs can be reimbursed; remaining costs are usually paid by the employer. The exact conditions are described below.

Target group 1: Promotion of employees without appropriate professional qualification

You think that a (new) professional qualification would be helpful for your professional advancement?

The employment agency promotes the acquirement of a recognized professional qualification for

- employees without a professional qualification.
- employees with a professional qualification, who no longer practice their learned profession for at least four years and have a semi-skilled or unskilled job.

Any incurred training costs can be reimbursed in full. Additional costs for accommodation, travelling or childcare can be subsidized. In addition, your employer can apply for a subsidy to your wage for the time, in which you can't work due to the further education.

Target group 2: Promotion in small and medium-sized enterprises

You are working in a small or medium sized company that is maybe not so active in further education?

For employees in small and medium-sized enterprises with less than 250 employees the employment agency promotes the course costs partially: For persons under 45 years 50 percent of the costs will be reimbursed, for people over 45 years even up to 75 percent of the costs will be reimbursed. Additional costs for accommodation, travelling or childcare can be subsidized. Subsidized training should not only be company-specific and are more than work-related short-term refresher trainings.

How do you get the funding?

It is important that you talk to your employer about your plans for further education. Your employment agency advises you and your employer if you have questions about the application process. You have two options:

- First talk to your employer about your plans for further education. Your employer receives further information from the employer service of the employment agency (free hotline: 0800 45555-20) *.
- Or directly make an appointment with your employment agency (free hotline: 0800 45555-00) * before you talk to your employer about a possible further education.

Ask for "WEGEBAU".

What conditions exist for getting subsidization?

Training costs can be covered by the employment agency for approved further education classes and educational institutions. The employment agency can advise you on this.

Where can you find more information?

Further information - also for your employer – can be found at www.iab.de/wegebau. There you will also find a link to KURSNET, the portal for professional education and training from the employment agency. KURSNET offers information about many approved training and qualification opportunities.

First page brochure

