Regionalization of Active Labour Market Policy

- an Aggregat Impact Analysis

by

Dieter Vollkommer

Institute for Employment Research, Nuremberg

E-mail: Dieter.Vollkommer@iab.de

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1 Introduction

Since the revision of the law in 1998 the employment offices have had the possibility to respond to particularities of the regional labour markets without external guidelines, and to use an appropriate combination of instruments in the context of active labour market policy. These privileges are created by a total volume of financial resources being made available to the employment offices, which they distribute among the various instruments of active labour market policy according to their own calculations. The overall budget is allocated to the employment offices according to a formula which is essentially based on a labour market indicator.[1]

In order to explain how the resources have been used, the employment offices have to render account each year in the form of the balance of integration. This gives information for example about the average expenditure per participant, about the target-group orientation and about the success of the measures. The success is shown by means of the so-called employment-status rate, which indicates success if a person is not unemployed six months after completing the individual measure. One function of the balance of integration is monitoring, to document continuously the extent to which aims have been met, to provide a basis for decision-making and thus to help to strengthen competition.

To make a comparison possible, an extensive analysis of the effects[2] of labour market policy is necessary. Only when the success determinants of the use of the instrument are known can the different basic conditions of the regional labour markets be taken into account. In the following a matching model is used as a basis to analyse the effects of active labour market policy on the outflow rate from unemployment.

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[1] Cf. Blien (1998), p.674ff.

[2] For the theoretical discussion of possible effects of labour market policy cf. Calmfors (1994).

2 Aggregate impact of active labour market policies

2.1 Effects of labour market policy on the matching efficiency

The heterogeneities both on the part of the suppliers of labour and on the part of those demanding labour compel the market participants to search for a suitable counterpart.[3] If the search is successful, a match between supply and demand occurs. In the following a model is presented which is based on ideas from Pissarides (1986), Haskel/Jackman (1988), Layard/Nickel/Jackman (1991), Schmid/Speckesser/Hilbert (2001) and in particular Bellmann/Jackman (1996).

In this approach the determinants that are decisive on the regional labour markets for the outflow from unemployment are the number of vacancies and the average search effectiveness of the unemployed. The latter is described by all the factors which are decisive for the success of the jobsearch, such as for example work and economic culture or stigmatisation of the unemployed.

It is assumed that the measures of labour market policy help to increase the average search effectiveness so that the relevant search effectiveness c^* is given by

$$c^* = c\ (1+kM).$$

Here c is the average search effectiveness without labour market policy measures, M is a vector that contains the measures used, and k is the respective net effect of the measures on the search effectiveness.

The outflows from unemployment A are a function of the vacancies V and the number of unemployed U weighted with their average search effectiveness:

$$A = f_1\ (V, c^*U)$$

This is an analogue on the Cobb-Douglas production function, which is distinguished by constant returns to scale[4], so that this equation can also be written in the following form:

$$\frac{A}{U} = c^*\ f_2\left(\frac{V}{c^*U}\right).$$

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[3] Cf. Wagner/Jahn (1997), p 64.

[4] Cf. Bellmann/Jackman (1996), p.159, who point out that this relationship is substantiated by empirical studies.

In loglinear form this results in:

$$\ln(\frac{A}{U}) = \ln c^* + b \ln(\frac{V}{c^* U}),$$

where b is a constant coefficient. With the determinants of the relevant search effectiveness the function can be written as:

$$\ln(\frac{A}{U}) = b \ln(\frac{V}{U}) + (1-b) \ln c(1+kM).$$

If it is assumed furthermore that the effectiveness of the measures k is sufficiently small, then $\ln(1+kM) = kM$ is approximately true so that

$$\ln(\frac{A}{U}) = b \ln(\frac{V}{U}) + (1-b) \ln c + (1-b)kM$$

applies.

In the following this basic model must be modified and augmented, and adapted for the empirical estimate. In the next steps it is explained how the variables of the model are operationalised and by which quantities the approach is augmented.

2.2 The employment-status rate as an approximation of the outflow rate from unemployment

The empirical analysis conducted here is based upon the presented model on the effect of labour market policy on the matching efficiency. In analogy to this, the regional employment-status rates are referred to in this analysis. The employment-status rate indicates the proportion of participants who are not registered as unemployed following a measure.[5] Consequently it portrays a rate of outflow from unemployment which, however, focuses solely on the participants in labour market policy measures. In this way biases which would arise if all outflows from unemployment were taken into account are avoided.

The approach derived in Section 2.1 is therefore to be modified to the effect that the following applies:

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[5] The employment-status rate thus differs from an integration rate, which provides information about the proportion of the participants that has taken up employment. A detailed definition of the employment-status rate is given in Section 3.1.

$$\ln Q = b \ln(\frac{V}{U}) + (1-b)\ln c + (1-b)kM$$

where Q corresponds to the measure-specific employment-status rate.

Following Bellmann/Jackman (1996) it is first assumed that the regional employment-status rate is determined by the number of vacancies, the average search effectiveness of the unemployed and the effectiveness of the measures.

The activities initiated in the context of labour market policy represent to a certain extent, however, a response to the prevailing situation on the regional labour markets. Consequently in the next step it is necessary to bring out how these mutual dependences are to be taken into account in the statistical model.

2.3 On the endogeneity of labour market policy

The employment offices have at their disposal a budget for labour market policy which they may use on their own authority. The funds are allocated depending on the labour market situation in the employment office area.[6] Consequently employment offices whose areas have a greater labour market imbalance can have a larger budget at their disposal. This suggests that the implementation of labour market policy is dependent on the regional problem situation and is thus endogenous. Simultaneously it is to be assumed that the employment-status rate as a success variable of labour market policy is influenced both by the regional labour market situation and by the intensity of support.

To reduce the problem, an instrumental variable estimation is suggested in literature, which, however, has the problem that there are hardly any suitable instruments available. It would be possible in principle to use the lagged values of the exogenous variable as additional instruments, since a panel dataset is used here, but with an available study period of only three years this does not appear sensible. Here the problem of simultaneity is tackled by controlling for the policy responses by means of the structure and development of regional unemployment.[7] In addition, this problem is countered by giving the model a lag-structure. The assumption here is that the measures of labour market policy and the particular labour market conditions have an effect on

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[6] Cf. Blien (1998), p.675f.

[7] Cf. Schmid/Speckesser/Hilpert, p.102.

the employment-status rate with a delay of one year. In this way possible repercussions, e.g. in the form of a high employment-status rate on the development of employment, are avoided. Thus both the use of instruments and the remaining regional variables are included in the empirical estimate with a time lag.

In order to depict the considerations regarding endogeneity in the model, the approach described above is to be remodelled to the effect that the exogenous variables go into the estimate approach with a lag of one year. The resulting equation is:

$$\ln Q_{rt} = b\ln(\frac{V}{U})_{r(t-1)} + (1-b)\ln c_{r(t-1)} + (1-b)kM_{r(t-1)}.$$

It is explained below how the labour market policy measures, which are represented by $kM_{r(t-1)}$ in the expression above, are integrated into the present approach.

2.4 The operationalisation of labour market policy measures

The regional use of labour market policy is operationalised in the empirical analysis by the accommodation ratio. This puts the participants in a measure in relation to the overall underemployment[8] in a region. By integrating these variables the problem of endogeneity is reduced further as it is not certain *a priori* whether a rise in unemployment leads to an overproportionate or underproportionate increase in the use of the measures.[9] The accommodation ratios of the two measures under examination are integrated as it is to be assumed that the success of one measure also has effects on the other since the people completing the measures are competing on the same market.

In order to portray the implementation of the measures, the information about the composition of participants from the integration balance is used. The control of their composition is necessary as the participants' characteristics have a considerable influence on their subsequent chances of reintegration into the labour market.[10] For this the proportions of long-term unemployed, severely disabled and older workers are brought in. In addition to this, details on the proportion of women in the measure are

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[8] Underemployment results from the number of unemployed + participants in job creation measures, structural adjustment measures and further vocational training + short-time work in the full-time equivalent.

[9] Cf. Calmfors/Skedinger (1995), p.100.

[10] Cf. Blaschke/Nagel (1999), p.188, who refer to further studies which support the hypothesis that a larger proportion of participants from so-called risk groups is associated with lower integration rates.

integrated. The composition of participants does not go into the estimate with a time lag, as the composition of a measure is directly responsible for the success of the measure.

The result is:

$$\ln Q_{rt} = b\ln(\frac{V}{U})_{r(t-1)} + (1-b)\ln c_{r(t-1)} + (1-b)\sum \beta_i T_{ir(t-1)} + (1-b)\sum \beta_i M_{irt},$$

where $T_{ir(t-1)}$ is a vector which describes the participation rates in the measure i, that is job creation measures or further vocational training, in region r at point in time t-1 and M_{irt} is a vector depicting the participant composition of the particular labour market policy measure at point in time t in region r.

2.5 The operationalisation of the search effectiveness

Following the described approach the outflows from unemployment are determined among other things by means of the unemployed weighted with their search effectiveness. Here the search effectiveness describes the effectiveness of the search efforts of the average unemployed person.[11] The effectiveness of the search efforts is composed of the unemployed people's search efforts and the willingness to accept a job. Therefore cU gives the figure of the "effective unemployed". As the search effectiveness and its change over time is not observable at macro-level, it is necessary to use a substitute.

Layard, Nickell and Jackman suggest instrumenting the search effectiveness with the wage-replacement rate, which results as a quotient of unemployment assistance and the wage. However, the average wage-replacement rate at regional level is not known. Furthermore, the average future wage that unemployed people can expect on taking up employment would be decisive. Especially in the case of the so-called problem groups of the labour market, such as the long-term unemployed, the future obtainable wage is likely to be low, with the result that wage-replacement rates with values close to 1 or above can arise.[12]

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[11] Cf. Layard/Nickell/Jackman (1991), p.34ff.

[12] Cf. Layard/Nickell/Jackman (1991), p.27ff. The assumption that future obtainable wages are reduced as a result of unemployment is confirmed by Arulampalam (2001). In a study for Great Britain he comes to the result that the first period of unemployment has the strongest stigmatising effect and that wage concessions of about 6% have to be expected on re-employment.

In this analysis the search effectiveness is operationalised to the effect that the outflows from unemployment (A^{Out}) are put in relation to underemployment.[13] The indicator thus provides a suitable measure for depicting the effectiveness of the search efforts in a region. Moreover in this way it is possible to take into account the consideration that the people completing a measure are competing with the other unemployed.

Therefore c is defined in the described model as

$$c_{r(t-1)} = \frac{A^{Out}_{r(t-1)}}{U_{r(t-1)}}$$

The search effectiveness also goes into the estimate with a time lag of one year, as it is to be assumed that the success of labour market policy and the regional search effectiveness are connected with each other via two different channels: treatment effect vs. locking-in effect. Whereas the first one becomes effective after participation in a measure, the second effect influences the probability of leaving unemployment during but also before the measure.[14] In order to be able to depict in the empirical study which of these effects predominates at macro-level, the participation rate and the regional search effectiveness are incorporated in the estimate with the same time reference.

2.6 On the control of the regional labour market situation

The regional employment-status rate so far results from the number of vacancies, the search efficiency and the use and implementation of labour market policy measures. It is to be assumed, however, that a multitude of other factors affect the success of the instrument use. It is not possible, however, to integrate into the empirical analysis all the variables that are relevant for the functioning of labour markets, as not all data are available or it would require an unjustifiable amount of effort and expense to collect the data for the entire area concerned. Possible examples to cite are factors outside of the

[13] It would be desirable to correct the outflows from unemployment to the effect that the inflows into labour market policy measures are not included. The data situation does not permit this for the entire period under observation, however, so here all outflows from unemployment are recorded. This restriction does not have any persistent consequences for the multivariate analysis since there is a very close relationship between these two indicators, which is expressed in a correlation coefficient of 0.857 for 1998 (1999: 0.820). In addition the use of labour market policy measures is taken into account in the underemployment indicator.

[14] Cf. Ashenfelter (1978).

economy, such as the regional work culture or the climate of cooperation between the institutions.[15]

A first important indication of which variables are to be used for describing regional labour markets is provided by Hirschenauer (1999). She classifies employment office areas on the basis of six indicators: underemployment rate, duration of unemployment, recruitment rate, development of employment, population density and proportion of workers in the tertiary sector. The significance of these variables for the success of labour market policy has already been proven in various studies.[16] In order to gain more far-reaching insights into the functioning of the labour markets, however, these variables are supplemented by the adjusted regional wage and the proportion of women among the unemployed. Finally a quotient of the number of unemployed and the number of employees in the placing service is integrated. This variable reflects the different workloads in the employment offices and thus provides an indication of the regional differences in looking after the unemployed.

Furthermore, fixed regional effects are estimated in the panel-econometric analyses. In this way the endogeneity problem is reduced further since the unobserved region-specific heterogeneity is controlled.

If the variables for controlling the regional labour market situation are integrated into the model, the result is the complete approach to explain the employment-status rate:

$$\ln Q_{rt} = b\ln(\frac{V}{U})_{r(t-1)} + (1-b)\ln c_{r(t-1)} + (1-b)\sum \beta_i T_{ir(t-1)} + (1-b)\sum \beta_i M_{irt} + \sum \beta_i a_{ir(t-1)} + \mu_r + \varepsilon_{rt}$$

Where $a_{ir(t-1)}$ represents a vector describing the regional variable i in region r at point in time t-1 and μ_r gives the fixed effect in region r.

Now that the analytical framework for the study has been developed, the next section presents the dataset which was used to test the model empirically.

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15 Cf. for example Camagni (1994), Blien et.al. (2001).

16 Cf. Blaschke/Nagel (1999); Vollkommer (2000).

3 The dataset

3.1 The employment-status rate as endogenous variable

In the basic model the rate of outflow from unemployment acted as an endogenous variable. In this analysis, however, the employment-status rate is used, which represents a rate of outflow from unemployment of participants in measures. It is defined as

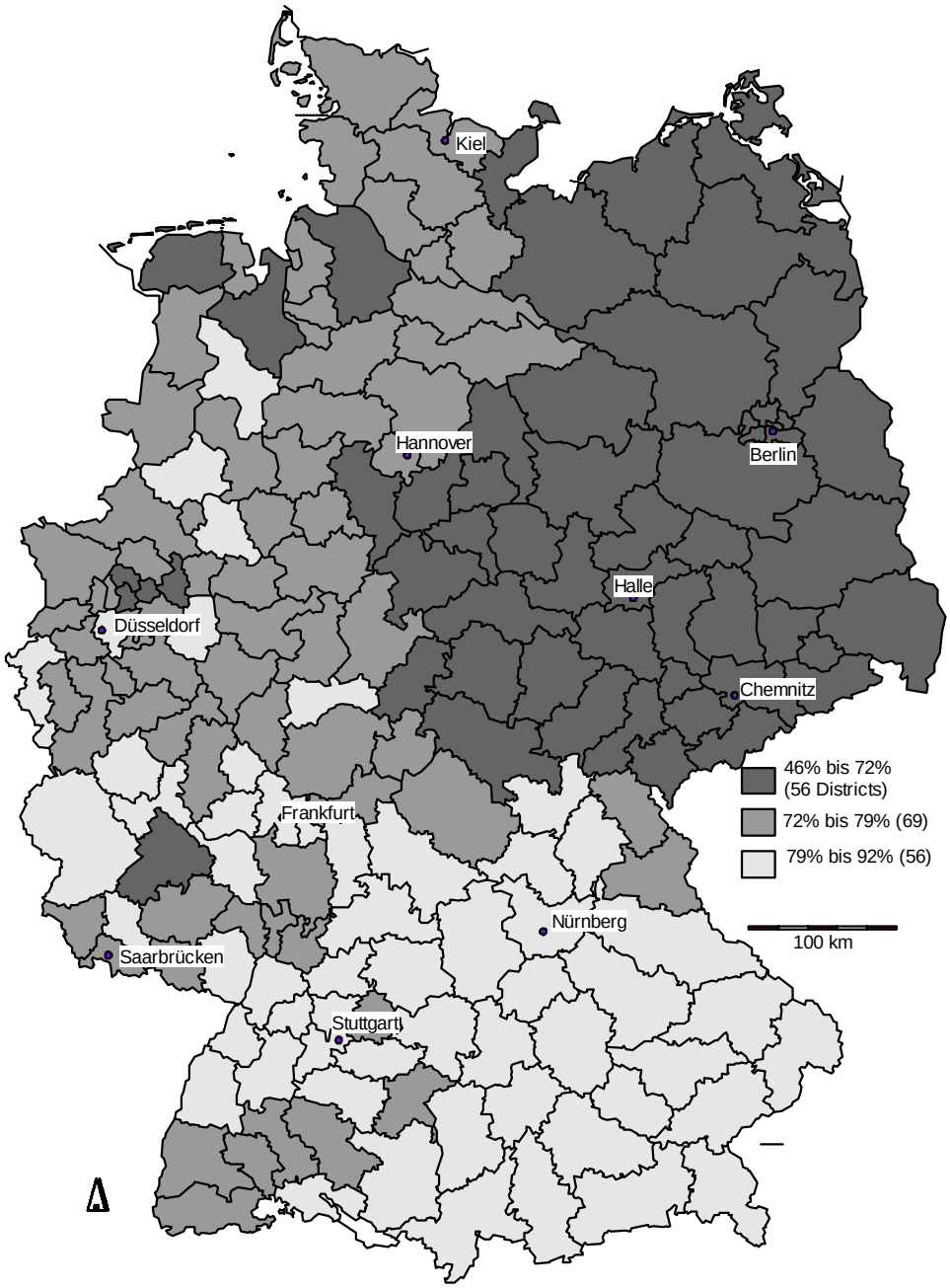
$$\frac{\text{People who are not registered as unemployed six months after completing the scheme} * 100}{\text{Total number of people completing the scheme}}$$

It becomes clear that this indicator has the disadvantage of not reflecting conclusively the taking up of employment. There is a multitude of other reasons for not being unemployed six months after the measure. These include for example sickness, retirement, hidden labour force or participation in another labour market policy measure. These limitations must be accepted, as an integration rate for participants in measures is not yet reported by the Federal Employment Service.

The regional distribution of the employment-status rates for 2000 for measures of further vocational training can be seen from Map 3-1.

It emerges that looking at the employment-status rate in isolation does not give much insight. The general situation on the labour market determines the success of labour market policy. This can be seen from the constantly low employment-status rates in eastern Germany, where a high level of underemployment makes the reintegration of unemployed people more difficult. In contrast, in southern Germany it has been possible to achieve higher employment-status rates of up to more than 90%. This can be attributed to a considerable extent to the favourable labour market situation in this region. Accordingly the regional basic conditions must be taken into account in the econometric analysis.

Map 3-1 Employment-status rates for participants in further vocational training in 2000 (as %)



Source: own diagram.

3.2 The basic conditions of the regional labour markets

To describe the labour markets a large number of regional indicators are integrated into the empirical analysis. The majority of the variables have already been named and justified in the course of the derivation of the estimation model. Table 3-1 gives an

overview and at the same time provides some statistical quantities on the variables considered.

Table 3-1 Descriptive statistics for the basic conditions of regional labour markets 1997 to 1999

Variable	minimum	maximum	arithmetic mean	standard deviation
ln (V/U)	0.271	3.846	2.157	0.645
ln c	-0.059	1.113	0.453	0.214
Development of employment (%)	-7.710	4.397	-0.455	1.755
Recruitment rate	14.021	57.418	27.177	7.381
Duration of unemployment (weeks)	16.287	50.671	2.306	5.215
Workload	97.631	279.911	169.217	29.020
Proportion of women in unemp. (%)	36.026	60.642	46.607	5.526
Daily income (DM)	95.210	179.604	138.102	16.903
Adjusted daily income	-0.041	0.034	0	0.011
Population density	52.199	3882.543	420.812	589.436
Degree of tertiarisation (%)	36.760	79.768	56.750	8.730
Underemployment rate (%)[17]	4.248	32.966	14.095	6.607

Source: own calculations

If one looks at the range of the integrated variables, it rapidly becomes clear that a regionalised study is necessary. Both the differences between the employment offices as well as those over time are considerable. It is shown for instance that in Goslar employment decreased by 7.7% within one year (1997), whilst at the same time in Bochum it fell by only 2.2%. However, Bochum was the leader in the whole of Germany in 1999 with an employment gain of 4.4%, when Goslar lost another 1% of employment. With the underemployment rate, an indicator showing the deficit of regular employment, there is greater temporal stability. For example Freising is the employment office with the lowest underemployment in all three of the years under observation and Sangerhausen is that with the highest each year. The regional daily income was only given for information purposes. It is the adjusted daily income that goes into the empirical estimate. In order to obtain a wage indicator that can be compared across regions an adjustment is necessary as the income is determined to a

[17] The underemployment rate relates the regional underemployment (cf. footnote 8) to the dependent labour force + participants in further vocational training .

considerable extent by the particular economic structure. This adjustment was done by means of an OLS estimation into which among other things the industry structure, qualification structure, establishment size structure, occupational structure and the employees' occupational status were incorporated as exogenous variables. It was shown that even after controlling for employment structure there are still considerable wage differences. The wage in Pirmasens for instance is about 4% lower than would be expected according to the economic structure, in Pfarrkirchen on the other hand it is about 3% higher.

3.3 Measure-specific indicators

The variables used to operationalise the labour market policy measures can be seen in Table 3-2. As already explained these are the measure-specific accommodation ratio and the composition of participants.

Table 3-2 Descriptive statistics on measure-specific indicators 1998 to 2000

Variable (each as a %)	minimum	maximum	arithmetic mean	standard deviation
Job creation measures (ABM)				
Accommodation ratio (1997-1999)	0.142	14.794	3.145	3.206
Proportion of long-term unemp.	0	100	79.788	16.760
Proportion of severely disabled	0	40.157	6.443	5.482
Proportion of older workers	0	66.292	22.284	11.209
Proportion of women	0	70.588	36.754	13.041
Further training measures (FbW)				
Accommodation ratio (1997-1999)	4.250	17.478	7.996	2.220
Proportion of severely disabled	0.416	6.213	2.010	0.997
Proportion of older workers	3.445	18.748	8.939	3.054
Proportion of women	33.287	64.999	49.424	6.192

Source: own calculations

Information concerning the proportion of long-term unemployed in further training measures is only available from 2000 and therefore can not be taken into account in the panel analysis. With regard to the extreme values it must be noted that they can be caused by low participant figures, which is the case for job creation measures especially in western Germany. These differences between eastern and western Germany are also

substantiated by the higher standard deviations for the indicators for job creation measures. In addition to that the results suggest that the problem groups of the labour market are taken into consideration to a greater extent in job creation measures than in further training.

4 Specification of the empirical model and results

After the presentation of the matching model has completed the analytical framework for the empirical study and necessary additions and modifications have been made, in the following section the panel estimate and its results are presented. First of all, however, it is necessary to point out some technical limitations of the panel analysis. This justifies the need for adding a cross-sectional regression.

4.1 Reasons for the two-step estimate procedure

The panel regression as an econometric method has a limitation: factors that are constant over time must be eliminated from the analysis as they would be in perfect multicollinearity with the fixed regional effects. That is why we conduct a two-step estimate procedure in which first the panel estimate is made in order to include in a second step the fixed regional effects as endogenous variables in a cross-sectional regression.

In the dataset used here there are no variables which are in principle to be regarded as constant over time. The period under observation here covers only three years, however, and processes of change in the regions sometimes take longer. Consequently some of the variables integrated here are virtually constant throughout the period under observation and therefore can not be included in the panel estimate.

On the basis of their mean variation coefficient, the variables “population density” and “degree of tertiarisation” were determined as those that show the least variation in the time. Furthermore, the underemployment rate can not be included at first as it correlates very highly with other decisive variables. For example a high bivariate correlation can be seen to the accommodation ratio in job creation measures. These problems do not arise in the subsequent cross-sectional regression as there only variables are integrated which have a slight correlation to underemployment.

4.2 The panel regression

4.2.1 Specification of the panel regression

Before discussing the results of the empirical study, the estimate equation of the central model is to be presented. A selection of different variations of this model are described in the appendix, but we focus on one model here.

The central model includes all the relevant variables resulting on the basis of the analytical framework. What must be mentioned here first of all are vacancies and the search efficiency. These two variables are included in logarithmic form analogous to the derivation above. In addition the labour market policy measures are included in the operationalisation described, i.e. regional participation rates and participant composition. Finally different variables which control for the situation on the regional labour markets are integrated. Examples of this are the development of employment, the recruitment rate, the workload, the proportion of women among the unemployed and the adjusted daily wage.

The estimate equation therefore has the following shape:

$$\ln Q_{rt} = \beta_0 + \beta_1 \ln \frac{V_{r(t-1)}}{U_{r(t-1)}} + \beta_2 \ln c_{r(t-1)} + \beta_3 T^{ABM}_{r(t-1)} + \beta_4 T^{FbW}_{r(t-1)} + \sum_{i=5}^{i=9} \beta_i M_{irt} +$$
$$+ \beta_{10} \hat{B}_{r(t-1)} + \beta_{11} H_{r(t-1)} + \beta_{12} L_{r(t-1)} + \beta_{13} F_{r(t-1)} + \beta_{14} w_{r(t-1)} + \lambda_t + \mu_r + \varepsilon_{rt}$$

With:

Q_{rt}: measure-specific employment-status rate in region r at point in time t

β_0: regression constant

β_i : regression coefficients of the i-th variable (i=1,...,I)

$V_{r(t-1)}$: vacancies in region r at point in time t-1[18]

$U_{r(t-1)}$: people without regular employment = numerator of the underemployment rate

$c_{r(t-1)}$: regional search effectiveness at point in time t-1

$T^{ABM}_{r(t-1)}$: participation rate for job creation measures

[18] From the viewpoint of theory, the inclusion of vacancies, i.e. all vacancies, would be desirable. There are no data available for this however. Therefore the vacancies reported to the Federal Employment Service must be used. In the past years the proportion of reported vacancies was largely constant and amounted to about 40% in the whole of Germany. Cf. Magvas (2001), p.12.

$T_{r(t-1)}^{FbW}$: participation rate for measures to promote further vocational training

$\sum_{i=5}^{i=9} \beta_i M_{irt}$: a vector describing the participant composition of the measure :

$$\beta_5 \frac{LTU_{rt}^{Out}}{LMP_{rt}^{Out}} + \beta_6 \frac{SD_{rt}^{Out}}{LMP_{rt}^{Out}} + \beta_7 \frac{E_{rt}^{Out}}{LMP_{rt}^{Out}} + \beta_8 \frac{F_{rt}^{Out}}{LMP_{rt}^{Out}} + \varpi_r \beta_9 \frac{F_{rt}^{Out}}{LMP_{rt}^{Out}}$$

where LTU^{Out} = long-term unemployed; SD^{Out} = severely disabled; E^{Out} = older workers; F^{Out} = women among those completing job creation measures *or* further training, and LMP^{Out} = total number of people completing job creation measures *or* further vocational training

ω_r: dichotomous variable for eastern Germany (ω_r = 1 if the employment office area is in eastern Germany, otherwise ω_r = 0)

$\hat{B}_{r(t-1)}$: development of employment $\hat{B}_{r(t-1)} = \frac{B_{r(t-1)} - B_{r(t-2)}}{B_{r(t-2)}}$

$H_{r(t-1)}$: recruitment rate $H_{r(t-1)} = \frac{H_{r(t-1)} - H_{r(t-2)}}{B_{r(t-2)}}$

$L_{r(t-1)}$: workload of the placing service (number of unemployed per employee in the job placement department)

$w_{r(t-1)}$: adjusted daily wage

λ_t: period effect at point in time t (t=1,...,T)

μ_r: region-specific effect of region r (r=1,...,R)

ε_{rt}: random error, normally distributed with mean 0 and variance σ^2

The results of this estimate model are presented and discussed in the following section. After testing different variations of this model it emerged that it is best suited for "explaining" the impact of labour market policy on the regional employment-status rate. Nevertheless variations of the model and their effects on the results are also discussed.

4.2.2 Results of the panel regression

In this section the results from two panel regressions which were carried out separately are explained in detail and discussed. In both of the estimates an appropriate set of variables was used for job creation measures and for further vocational training measures. The results for the two measures are placed next to each other in order to bring out differences and similarities more clearly.

Table 4-1 Results of the panel regression 1998 to 2000

dependent variable: logarithm of the measure-specific employment-status rate
regression with fixed regional effects; base region Berlin, base year 1998.

	Job creation measures (ABM)		**Further vocational training (FbW)**	
Number of observations	507[19]		528	
	coefficient	t-value	coefficient	t-value
Column No.	1	2	3	4
Constant	1.648***	2.895	3.443***	27.053
$\ln (V/U)_{(t-1)}$ (vacancies)	0.105*	1.700	0.033**	2.259
$\ln c_{(t-1)}$ (search effectiveness)	-0.402*	-1.742	0.077	1.398
Participation rate for $ABM_{(t-1)}$	-0.023*	-1.750	0.003	1.019
Participation rate for $FbW_{(t-1)}$	0.005	1.034	-0.004***	-3.012
Prop. of long-term unemp. in measure	-0.002*	-1.805	∅	∅
Prop. of severely disabled in measure	-0.004*	-1.656	-0.0003	-0.099
Proportion of older people in measure	0.004*	1.940	-0.003**	-2.256
Proportion of women in measure	0.003**	2.466	-0.001	-0.753
Prop. of women in measure (eastern Germany)	-0.017***	-3.090	-0.004**	-2.019
Development of $employment_{(t-1)}$	0.003	0.440	-0.001	-0.591
$Recruitment\ rate_{(t-1)}$	0.001	0.425	0.001	1.100
$Workload_{(t-1)}$	0.004***	2.985	0.001***	3.265
Prop. of women among $unemployed_{(t-1)}$	0.043***	5.811	0.014***	6.980
$Daily\ wage_{(t-1)}$	-2.618*	-1.911	-0.615*	-1.901
1999	0.190***	4.631	0.024**	2.306
2000	0.246***	6.177	0.009	0.862
R^2	0.861		0.965	
adjusted R^2	0.782		0.945	

Source: own calculations.[20] $_{(t-1)}$ = variable goes into the estimate with a time lag (t-1); ∅=not available.[21]

*** significant at the 1% level, ** at the 5% level, * at the 10% level.

[19] The lower number of cases for ABM arises since in seven employment offices fewer than 10 people completed a measure in 1998 and it was therefore not possible to report an employment-status rate. These seven employment office areas (Ludwigshafen, Ludwigsburg, Pforzheim, Waiblingen,

Table 4-1 first shows a largely uniform picture for both of the instruments. The majority of the regional indicators show the same sign. Consequently, despite the different arrangement of the instruments, both their use and the regional basic conditions have a similar effect on the success of the labour market policy.

Both models show a high degree of determination, although the very high value for further training suggests that the employment-status of the participants for these measures can be "explained" better using the integrated regional indicators.

The variable of ***vacancies*** (in relation to underemployment), which was emphasised in the analytical framework as being particularly important, shows a positive sign for both instruments, according to which a large number of vacancies leads to a better employment-status rate. But a large number of vacancies also suggests a generally better labour market condition in which there are greater chances of getting into employment. It is also possible though that the skills or knowledge gained are not relevant for the hiring and it is more that the person who has completed the measure finds employment *in spite of* his/her participation in the measure.

Different signs occur for ***search effectiveness***. Whereas a high search effectiveness in a region has a significantly negative effect on the employment-status rate of participants in job creation measures, for further training a positive coefficient is found though it is not significant. For participants in job creation measures, therefore, the so-called "locking-in effect" predominates as the welfare gain of a regular job is only slight compared with the measure. A possible reason for this is that the higher earnings can only be achieved with greater performance requirements and with less freedom. In addition it is worth mentioning that especially in eastern Germany the income obtained during a job creation measure can be higher than that from a non-assisted job.[22] In the competition with other unemployed people, participants in further training measures are

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Tauberbischofsheim, Ulm and Freising) were eliminated from the analysis for the entire period of the study.

[20] The account of the regional effects was not included here for reasons of clarity. They are listed in the appendix, Table 5-1 for ABM and Table 5-2 for further training. The Durbin-Watson statistic for autocorrelation can also be found there.

[21] The "Variance Inflation Factor" was used as a measure for the strength of the multicollinearity, it did not reach critical values for any of the integrated variables. Cf. Tabachnick/Fidell (1989), p.88.

[22] Cf. Sperling (1994), p.401f.

in a somewhat better position. For this group there is evidence that a high regional search effectiveness at least does not have a detrimental effect on their reintegration. The positive association between regional search effectiveness and the employment-status of participants in further vocational training is insignificant, however, and therefore can not be regarded as statistically certain.

The results on the ***participation rates*** show in both cases that the success of a measure falls when the use of the instrument increases. This can be interpreted to the effect that also the use of labour market policy measures has decreasing marginal utility. The drop in the effect of the measure utilisation could be put down to the greater competition among the people completing the measures. From this one can derive the demand to gear the use of instruments closely to the capacity of the labour market to absorb more workers.

A weak indication of a "revolving door effect" is provided by the coefficients of the respective other measure. In both of the estimates they are positive. According to this the success of job creation measures increases when the use of further training measures increases and vice versa. If one considers the definition of the employment-status rate (not unemployed six months after completion of the measure), it becomes clear why the "success" of one instrument can be influenced by the use of a different one. A certain proportion of the people completing a measure goes into a different measure afterwards and is not considered unemployed. As a result of the non-significance of the estimate coefficients, this relationship must be interpreted with caution; nevertheless it provides indications that by using the employment-status rate a supposed success of labour market policy is reported which actually should not be judged as success.

The results on ***participant composition*** are largely in line with expectations. Both long-term unemployed people and severely disabled people experience particular difficulties and obstacles on the labour market with the result that a lower employment-status rate can be seen as a consequence of a greater proportion of participants from these groups.[23]

Special attention should be paid to the findings for older workers. Whilst a larger proportion of this group in a further training measure leads to a lower employment-status rate, there is a positive relationship between the "success" of a job creation

[23] Cf. for example Blaschke/Nagel (1999), p.188 and the literature listed there.

measure and the participation rate of older people. In principle it is to be assumed that a higher age has an unfavourable effect of the reintegration of unemployed individuals.[24] However, once again the definition of the employment-status rate seems to be relevant. Since it monitors non-unemployment, it must be borne in mind that job creation measures are frequently used to facilitate a withdrawal from active working life which is cushioned against social disadvantage.

For the proportion of women in the measures an interaction term was estimated for the states of eastern Germany in order to take into account the different employment tendencies of women in eastern and western Germany. For eastern Germany a significantly negative association between the proportion of women and the employment-status rate was found for both of the measures. This makes clear the high employment tendency of women in eastern Germany, where after participating in a measure they wish to maintain their offer of labour and continue to be employed. At least for job creation measures the opposite picture is seen for western Germany. Here a large proportion of women is accompanied by a more favourable employment-status rate, from which it is possible to derive the assumption that a considerable proportion of the women withdraw to the hidden labour force after the measure.

For the variables of ***development of employment*** and ***recruitment rate*** this panel analysis found no significant coefficients in either of the two measures. Nonetheless it is possible to ascertain with caution that, with the exception of the development of employment in the case of further training measures, the signs are in line with expectations as both indicators depict the dynamics of the regional labour markets and high dynamics are accompanied by a more favourable reintegration of unemployed people.

The "***workload***" of the employment service is defined in such a way that the number of unemployed is related to the number of employees in the job placement department.[25] It was expected that a low number of people seeking help to find work would facilitate greater placement efforts on the part of the labour administration and would thus lead to a higher level of integration of unemployed people. However, the empirical analysis

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[24] In accordance with Büttner/Prey (1998), p.405, who regard age, in addition to gender, as a decisive indicator for the quality of the labour supply.

[25] Cf. OECD (1996), p.33ff.

shows the opposite picture for both measures. The positive coefficients imply that a greater number of unemployed people per member of staff is associated with a more favourable employment-status rate. This result can not be interpreted conclusively. In order to reduce remaining uncertainties, the workload was left out of a further panel estimate and the influence of these variables was not tested until the cross-sectional regression.

For both of the measures it applies that a larger ***proportion of women among the unemployed*** in a region is accompanied by a more favourable employment-status rate. This can be interpreted to the effect that in regions whose labour markets are in a better condition fewer women tend to be unemployed and it is thus also easier for people completing measures to get into employment. In addition it must be assumed that women are more likely to withdraw into the hidden labour force when the situation on the labour market is poor. Consequently the "proportion of women among the unemployed" must be regarded as a variable that depicts the condition of the regional labour market in many respects.

The ***adjusted daily wage*** shows by how much the average regional wage diverges from the wage that would be expected according to the economic structure. The panel analysis shows a significantly negative association between wage level and the success of labour market policy. According to this participants in measures have poorer chances of getting into employment if a relatively high wage is paid in the region. If the size of the coefficients are examined it emerges that this association is more marked for job creation measures than for further training. It can be derived from this – for example in the sense of the efficiency wage theory – that participants in job creation measures are put at a particular disadvantage if higher wages are paid, as it is assumed that they are not able to yield a productivity which is in accordance with the wages. This association seems to be less marked for people completing further training measures. On the whole it is thus possible to conclude that participation in further training gives potential employers more favourable signals than job creation measures.

4.2.3 Alternative panel estimates

Finally another two variants of the model described above were estimated. In Model 2 the variable "***duration of unemployment"*** was introduced, which provides evidence as to how persistent the regional unemployment is.[26] However this variable demonstrates a high bivariate correlation to the regional search effectiveness and the workload. In this model the problem of multicollinearity exists to a certain degree with the consequence of increasing variance of the estimators. Nevertheless it is seen that the results discussed above can be confirmed in principle.[27] With various variables there are only changes with regard to the level of significance, the interpretation of which is not included for reasons given previously. The "duration of unemployment" itself provides a non-uniform picture. In the panel regression for job creation measures there is a negative sign, whilst a positive sign results for further vocational training. It must be assumed, however, that this result was caused by the named estimate-related restrictions so that the variable "duration of unemployment" should not be interpreted.

A further variant of the model is based on the considerations made on the variable "***workload***". The results on this in the model above are contrary to expectations. As a control, the variable "workload" was left out of the panel regression for Model 3 and was instead integrated into the subsequent cross-sectional regression. For the remaining variables no relevant changes are found in the panel regression. Once again the significance levels of various variables change and for job creation measures the sign reverses for the development of employment. For this variable, however, very low t-values result in all the models so that none of the coefficients is statistically certain. The results on the "workload" from the cross-sectional regression are discussed in Section 4.3.1.

As a summary of the model variations it can be ascertained that the key findings prove to be stable and are found in all the estimates. In particular the findings on the use of labour market policy measures are not affected by changes made to the structure of the model.

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[26] Cf. for example Hirschenauer (1999), p.170f; Blaschke/Nagel (1999), p.191ff.

[27] The results for Models 2 and 3 can be found in Table 5-1 for job creation measures and in Table 5-2 for further training. These tables are in the appendix.

4.3 Cross-sectional regression to explain the regional effects

The aim of the cross-sectional regression that is now to be discussed is to "explain" the variance of the fixed regional effects on the basis of further, time-constant variables and thus to gain further information about which regional indicators affect the success of labour market policy measures.

For this an OLS regression is estimated in which a linear mean over the three years under observation is included for each exogenous variable.

The result is thus the following estimate approach for the cross-sectional regression:

$$\mu_r = \beta_0 + \beta_1 \omega_r + \beta_2 Pop_r + \beta_3 Ter_r + \beta_4 UR_r + \varepsilon_r$$

With:

μ_r: regional effect of the region r from the panel regression

β_0: regression constant

βi: regression coefficient of the i-th variable

ϖ_r: dichotomous variable for eastern Germany, which assumes the value 1 if the employment office area is located in eastern Germany and otherwise 0[28]

Pop_r: population density in region r

Ter_r: proportion of employees in the tertiary sector

UR_r: underemployment rate

ε_r: random error, normally distributed and mean 0 and variance σ^2

4.3.1 Results of the cross-sectional regression

In accordance with the procedure described above the results of the two separate estimates for each corresponding model of the panel regression are presented here.

[28] In the cross-sectional regression Berlin was classed as belonging to eastern Germany due to its geographical location.

Table 4-2 Results of the cross-sectional regression

dependent variable: regional coefficients from the panel regression

	Job creation measures (ABM)		**Further voc. training (FbW)**	
Number of observations	169		176	
	coefficient	t-value	coefficient	t-value
Column No.	1	2	3	4
Constant	-0.419***	-3.697	0.032	1.060
Population density	-0.00004	-1.317	0.00002**	2.357
Degree of tertiarisation	0.007***	3.664	0.003***	5.122
Underemployment rate	-0.033***	-6.123	-0.014***	-9.780
Eastern Germany (dummy)	0.547***	6.270	0.041*	1.703
R^2	0.245		0.677	
adjusted R^2	0.227		0.669	

*** significant at the 1% level, ** at the 5% level, * at the 10% level.[29]

Source: own calculations.

The ***population density,*** as a variable depicting the agglomeration of a region, shows opposing pictures for the two instruments. Whereas participants in further vocational training in densely populated areas have rather better prospects of not being unemployed following the measure, poorer chances are indicated there for participants in job creation measures. This finding coincides with the theoretical considerations about structural change taking place more in conurbations, as the market potential is greater there and synergy effects are more likely to be effective.[30] Consequently in densely populated areas further training measures show a greater effect as they contribute more to adapting the labour supply to the changed demands.

These considerations correspond with the results on the ***degree of tertiarisation.*** This indicator provides information about the proportion of the workforce that is employed in the service sector and thus depicts how advanced the structural change is in a region. It

[29] The "Variance Inflation Factor" was used as a measure of the strength of the multicollinearity, which did not reach critical values for any of the integrated variables. Cf. Tabachnick/Fidell (1989), p.88. Table 5-3 (ABM) and Table 5-4 (FbW) in the appendix contain the Durbin-Watson statistic for autocorrelation.

[30] Cf. Krugman (1991).

can be seen that labour market policy has a greater impact if a region shows a high degree of tertiarisation.

The results on the regional ***underemployment rate*** are highly significant for both of the types of measure and make it clear that even using labour market policy it is only possible to an inadequate degree to counter a high deficit of regular demand for labour. Nonetheless it is worth considering that labour market policy measures can have long-term macroeconomic effects which are not reflected in this analysis.

Finally it is necessary to deal with the dichotomous variable for eastern Germany. This is to be interpreted to the effect that the particular regional coefficients were higher under control of underemployment than would have been expected according to the exogenous variables. From this it can be derived that labour market policy does by all means have successful effects in an especially strained labour market situation.

4.3.2 Alternative approaches in the cross-sectional regression

The cross-sectional regression for Model 2 shows no essential changes for either of the instruments compared with the initial model.[31] This makes it clear that taking into account the "duration of unemployment" has only very slight effects on the regression coefficients. The directions of effect of the regional indicators considered here are unchanged although the coefficient of the population density is no longer significant for further vocational training.

An interesting finding is provided by Model 3 in which the average workload is included as an exogenous variable. In the panel analysis this variable was excluded as an experiment since the results did not correspond with expectations. Both of the instruments now show negative signs in the cross-sectional regressions. This means that a heavy workload in the placement service tended to lead to a lower regional effect and thus to a lower rate of success of labour market policy. This negative effect is caused by the level of care given to the individuals completing the measures decreasing as the workload increases. It was not possible, however, to clarify conclusively the reason for the different results in the panel and cross-sectional regressions.

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[31] The results of the cross-sectional regression discussed here can be found in Table 5-3 for job creation measures and in Table 5-4 for further vocational training. These tables are in the appendix.

5 Conclusion

The aim of the empirical analysis was to be able to make general statements about the impact of labour market policy on the employment-status of participants in measures. Another aim was to identify how regional factors influence the effect of labour market policy. For this job creation measures and further vocational training measures were examined as especially significant instruments with different arrangements and objectives. In several panel estimates with fixed regional effects the measure-specific employment-status rates as endogenous variables were “explained” by indicators regarding the use and implementation of the measures. For this further variables were taken into account to control for the regional labour market situation. This was followed by cross-sectional regressions in order to reach a further explanation of the regional effects. The results demonstrate a high level of stability across the different model specifications, so that it is possible to make general statements about the effect of labour market policy.

It is therefore possible to record the key result that with an increasing assistance intensity, expressed by the accommodation ratio, the success of labour market policy decreases. A larger proportion of so-called problem groups among the participants also leads to a lower reintegration of unemployed. Nevertheless job creation measures are also used to facilitate older workers to make a more socially acceptable transition into retirement, which resulted in a positive association to the employment-status rate. With regard to the employment-status of women. the different employment tendency in eastern and western Germany became clear. The regional indicators mainly portrayed the expected picture; thus a large number of vacancies fostered non-unemployment, as did a high degree of tertiarisation. In contrast both a high level of regional underemployment and a high daily wage made reintegration more difficult.

Appendix

Table 5-1 Results of the panel analyses for job creation measures (ABM)

dependent variable: logarithm of the employment-status rate for ABM

regressions with fixed regional effects; base region Berlin; base year 1998.

507 observations in each case:

Model No.	**1**		**2**		**3**	
	coefficient	t-value	coefficient	t-value	coefficient	t-value
Column No.	1	2	3	4	5	6
Constant	1.648	2.895	1.966	3.087	2.776	6.446
ln $(V/U)_{(t-1)}$	0.105	1.700	0.100	1.613	0.088	1.415
ln $c_{(t-1)}$	-0.402	-1.742	-0.669	-2.010	-0.624	-2.823
Participation rate $ABM_{(t-1)}$	-0.023	-1.750	-0.026	-1.940	-0.031	-2.402
Participation rate $FbW_{(t-1)}$	0.005	1.034	0.005	0.898	0.003	0.530
Proportion of long-term unemployed in measure	-0.002	-1.805	-0.001	-1.723	-0.001	-1.617
Proportion of severely disabled in measure	-0.004	-1.656	-0.004	-1.668	-0.004	-1.488
Proportion of older people in measure	0.004	1.940	0.004	1.935	0.003	1.575
Prop. of women in measure	0.003	2.466	0.003	2.549	0.003	2.452
Prop. of women in measure (eastern Germany)	-0.017	-3.090	-0.016	-3.042	-0.017	-3.084
Development of $unemp._{(t-1)}$	0.003	0.440	0.003	0.395	-0.001	-0.076
Recruitment $rate_{(t-1)}$	0.001	0.425	0.001	0.303	0.002	0.633
Duration of unemployment in $weeks_{(t-1)}$			-0.013	-1.113		
$Workload_{(t-1)}$	0.004	2.985	0.004	3.186		
Proportion of women among all unemployed $_{(t-1)}$	0.043	5.811	0.046	5.870	0.040	5.319
Daily $wage_{(t-1)}$	-2.618	-1.911	-2.653	-1.937	-2.328	-1.684
1999	0.190	4.631	0.196	4.736	0.194	4.671
2000	0.246	6.177	0.253	6.278	0.208	5.451
Neubrandenburg	-0.233	-1.254	-0.294	-1.520	-0.381	-2.103
Rostock	-0.143	-0.832	-0.196	-1.097	-0.345	-2.154
Schwerin	-0.240	-1.542	-0.287	-1.780	-0.446	-3.152

Stralsund	-0.011	-0.065	-0.066	-0.360	-0.196	-1.177
Cottbus	-0.455	-2.961	-0.537	-3.152	-0.466	-2.996
Eberswalde	-0.427	-2.957	-0.519	-3.119	-0.440	-3.016
Frankfurt (Oder)	-0.331	-2.296	-0.419	-2.549	-0.438	-3.100
Neuruppin	-0.288	-1.960	-0.374	-2.253	-0.315	-2.121
Potsdam	-0.438	-3.121	-0.511	-3.299	-0.512	-3.663
Dessau	-0.849	-5.456	-0.909	-5.520	-0.943	-6.117
Halberstadt	-0.455	-3.032	-0.504	-3.224	-0.573	-3.907
Halle	-0.289	-1.992	-0.344	-2.246	-0.369	-2.561
Magdeburg	-0.250	-1.632	-0.301	-1.881	-0.408	-2.795
Merseburg	-0.515	-3.189	-0.595	-3.367	-0.583	-3.599
Sangerhausen	-0.514	-3.157	-0.575	-3.348	-0.623	-3.882
Stendal	-0.209	-1.251	-0.266	-1.521	-0.345	-2.117
Wittenberg	-0.430	-2.422	-0.493	-2.646	-0.619	-3.680
Altenburg	-0.279	-1.520	-0.338	-1.772	-0.461	-2.635
Annaberg	-0.157	-0.805	-0.235	-1.134	-0.338	-1.800
Bautzen	-0.482	-2.665	-0.546	-2.877	-0.577	-3.198
Chemnitz	-0.369	-2.194	-0.433	-2.436	-0.559	-3.540
Dresden	-0.403	-2.705	-0.439	-2.880	-0.572	-4.101
Leipzig	-0.172	-1.138	-0.223	-1.415	-0.311	-2.144
Oschatz	-0.444	-2.752	-0.507	-2.967	-0.491	-3.018
Pirna	-0.370	-2.155	-0.449	-2.416	-0.519	-3.118
Plauen	-0.029	-0.161	-0.107	-0.556	-0.214	-1.260
Riesa	-0.458	-2.479	-0.508	-2.671	-0.643	-3.647
Zwickau	-0.684	-3.889	-0.750	-4.041	-0.836	-4.908
Erfurt	-0.116	-0.760	-0.179	-1.098	-0.243	-1.635
Gera	-0.237	-1.438	-0.314	-1.759	-0.419	-2.711
Gotha	-0.153	-0.851	-0.241	-1.227	-0.307	-1.759
Jena	0.012	0.077	-0.070	-0.403	-0.185	-1.270
Nordhausen	-0.300	-1.569	-0.375	-1.849	-0.451	-2.410
Suhl	-0.063	-0.378	-0.149	-0.810	-0.248	-1.575
Bad Oldesloe	-0.561	-1.666	-0.562	-1.670	-0.672	-1.985
Elmshorn	-0.602	-1.843	-0.599	-1.833	-0.719	-2.189
Flensburg	-0.119	-0.365	-0.111	-0.341	-0.288	-0.887
Hamburg	-0.214	-0.660	-0.175	-0.538	-0.400	-1.246
Heide	-0.212	-0.612	-0.191	-0.550	-0.442	-1.291
Kiel	-0.332	-1.057	-0.312	-0.989	-0.432	-1.363
Lübeck	-0.376	-1.159	-0.366	-1.128	-0.469	-1.435
Neumünster	-0.359	-1.119	-0.366	-1.143	-0.437	-1.352

Braunschweig	-0.575	-1.812	-0.546	-1.716	-0.614	-1.913
Bremen	-0.381	-1.188	-0.345	-1.071	-0.503	-1.561
Bremerhaven	-0.568	-1.778	-0.537	-1.676	-0.669	-2.082
Celle	-0.556	-1.701	-0.556	-1.702	-0.603	-1.825
Emden	-0.213	-0.630	-0.190	-0.560	-0.381	-1.127
Goslar	-0.492	-1.540	-0.493	-1.545	-0.569	-1.767
Göttingen	-0.660	-2.067	-0.648	-2.030	-0.700	-2.167
Hameln	-0.399	-1.224	-0.405	-1.242	-0.473	-1.436
Hannover	-0.386	-1.191	-0.363	-1.119	-0.436	-1.333
Helmstedt	-0.905	-2.673	-0.839	-2.439	-0.836	-2.444
Hildesheim	-0.469	-1.470	-0.457	-1.432	-0.469	-1.453
Leer	-0.580	-1.783	-0.570	-1.754	-0.694	-2.122
Lüneburg	-0.670	-1.974	-0.681	-2.005	-0.664	-1.930
Nienburg	-0.078	-0.215	-0.077	-0.213	-0.216	-0.596
Nordhorn	-0.421	-1.284	-0.432	-1.319	-0.500	-1.513
Oldenburg	-0.434	-1.349	-0.422	-1.313	-0.520	-1.607
Osnabrück	-0.536	-1.594	-0.531	-1.578	-0.686	-2.037
Stade	-0.329	-0.983	-0.316	-0.945	-0.454	-1.351
Uelzen	-0.605	-1.839	-0.607	-1.846	-0.690	-2.082
Vechta	-0.448	-1.263	-0.452	-1.277	-0.530	-1.484
Verden	-0.615	-1.826	-0.611	-1.816	-0.730	-2.155
Wilhelmshaven	-0.347	-1.079	-0.321	-0.998	-0.416	-1.282
Aachen	-0.853	-2.660	-0.815	-2.532	-0.914	-2.823
Ahlen	-0.661	-1.935	-0.668	-1.956	-0.836	-2.453
Bergisch Gladbach	-0.780	-2.411	-0.754	-2.324	-0.848	-2.595
Bielefeld	-0.660	-2.012	-0.649	-1.978	-0.704	-2.124
Bochum	-0.596	-1.819	-0.551	-1.668	-0.745	-2.272
Bonn	-0.424	-1.278	-0.404	-1.217	-0.542	-1.628
Brühl	-0.252	-0.757	-0.230	-0.690	-0.371	-1.106
Coesfeld	-0.509	-1.460	-0.506	-1.451	-0.662	-1.897
Detmold	-0.622	-1.901	-0.635	-1.939	-0.707	-2.142
Dortmund	-0.698	-2.177	-0.620	-1.886	-0.742	-2.285
Düren	-0.916	-2.773	-0.902	-2.729	-0.987	-2.958
Düsseldorf	-0.637	-1.901	-0.592	-1.757	-0.707	-2.092
Duisburg	-0.422	-1.278	-0.320	-0.932	-0.756	-2.402
Essen	-0.437	-1.314	-0.366	-1.078	-0.591	-1.776
Gelsenkirchen	-0.622	-1.943	-0.577	-1.790	-0.617	-1.906
Hagen	-0.507	-1.537	-0.482	-1.455	-0.592	-1.777
Hamm	-0.632	-1.926	-0.606	-1.844	-0.817	-2.508

Herford	-0.726	-2.155	-0.733	-2.176	-0.791	-2.323
Iserlohn	-0.503	-1.498	-0.496	-1.476	-0.632	-1.875
Köln	-0.465	-1.445	-0.413	-1.271	-0.564	-1.742
Krefeld	-0.750	-2.299	-0.717	-2.188	-0.790	-2.393
Meschede	-0.405	-1.194	-0.396	-1.168	-0.597	-1.769
Mönchengladbach	-0.433	-1.307	-0.412	-1.245	-0.512	-1.533
Münster	-0.302	-0.899	-0.278	-0.825	-0.577	-1.762
Oberhausen	-0.195	-0.590	-0.154	-0.461	-0.303	-0.911
Paderborn	-0.748	-2.231	-0.750	-2.240	-0.813	-2.403
Recklinghausen	-0.803	-2.548	-0.764	-2.408	-0.807	-2.530
Rheine	-0.426	-1.235	-0.432	-1.252	-0.576	-1.666
Siegen	-0.450	-1.359	-0.429	-1.295	-0.584	-1.758
Soest	-0.606	-1.779	-0.614	-1.801	-0.750	-2.198
Solingen	-0.787	-2.405	-0.781	-2.384	-0.895	-2.717
Wesel	-0.707	-2.066	-0.666	-1.938	-0.794	-2.302
Wuppertal	-0.746	-2.316	-0.726	-2.252	-0.785	-2.409
Bad Hersfeld	-0.634	-1.954	-0.652	-2.007	-0.678	-2.067
Darmstadt	-0.632	-1.842	-0.605	-1.759	-0.720	-2.079
Frankfurt	-0.153	-0.445	-0.105	-0.302	-0.375	-1.105
Fulda	-0.719	-2.238	-0.745	-2.313	-0.726	-2.231
Gießen	-0.403	-1.274	-0.397	-1.258	-0.467	-1.463
Hanau	-0.446	-1.387	-0.425	-1.318	-0.462	-1.418
Kassel	-0.502	-1.614	-0.493	-1.583	-0.499	-1.584
Korbach	-0.322	-0.984	-0.346	-1.056	-0.472	-1.442
Limburg	-0.319	-0.926	-0.323	-0.939	-0.479	-1.394
Marburg	-0.179	-0.521	-0.178	-0.519	-0.399	-1.177
Offenbach	-0.345	-1.089	-0.333	-1.052	-0.411	-1.288
Wetzlar	-0.536	-1.687	-0.536	-1.687	-0.599	-1.868
Wiesbaden	-0.011	-0.032	0.023	0.068	-0.211	-0.623
Bad Kreuznach	-0.497	-1.544	-0.479	-1.487	-0.607	-1.875
Kaiserslautern	-0.509	-1.561	-0.498	-1.526	-0.567	-1.722
Koblenz	-0.129	-0.357	-0.103	-0.286	-0.400	-1.133
Ludwigshafen						
Mainz	-0.422	-1.206	-0.381	-1.081	-0.610	-1.752
Mayen	-0.148	-0.434	-0.139	-0.407	-0.296	-0.867
Montabaur	-0.246	-0.725	-0.242	-0.713	-0.410	-1.211
Neunkirchen	-0.225	-0.683	-0.192	-0.582	-0.421	-1.287
Landau	-0.560	-1.617	-0.546	-1.576	-0.685	-1.968
Neuwied	-0.478	-1.440	-0.461	-1.389	-0.654	-1.979

Pirmasens	-0.820	-2.532	-0.805	-2.485	-0.908	-2.782
Saarbrücken	-0.553	-1.659	-0.475	-1.397	-0.764	-2.319
Saarlouis	-0.223	-0.666	-0.183	-0.543	-0.399	-1.198
Trier	-0.356	-1.024	-0.337	-0.967	-0.561	-1.624
Aalen	-0.458	-1.350	-0.458	-1.350	-0.537	-1.566
Balingen	-0.554	-1.608	-0.582	-1.684	-0.645	-1.858
Freiburg	-0.120	-0.352	-0.102	-0.297	-0.318	-0.936
Göppingen	-0.382	-1.142	-0.383	-1.145	-0.547	-1.638
Heidelberg	-0.219	-0.628	-0.185	-0.528	-0.458	-1.333
Heilbronn	-0.566	-1.628	-0.543	-1.561	-0.648	-1.848
Karlsruhe	-0.256	-0.749	-0.232	-0.678	-0.442	-1.299
Konstanz	-0.482	-1.463	-0.477	-1.449	-0.605	-1.828
Lörrach	-0.345	-1.067	-0.330	-1.021	-0.434	-1.331
Ludwigsburg						
Mannheim	-0.480	-1.453	-0.438	-1.319	-0.619	-1.870
Nagold	-0.030	-0.082	-0.010	-0.026	-0.318	-0.883
Offenburg	-0.486	-1.449	-0.477	-1.422	-0.662	-1.981
Pforzheim						
Rastatt	-0.320	-0.909	-0.299	-0.847	-0.577	-1.668
Ravensburg	-0.103	-0.279	-0.084	-0.228	-0.356	-0.984
Reutlingen	-0.285	-0.830	-0.256	-0.744	-0.469	-1.372
Rottweil	-0.465	-1.328	-0.482	-1.375	-0.609	-1.734
Waiblingen						
Schwäbisch Hall	-0.429	-1.219	-0.442	-1.257	-0.543	-1.535
Stuttgart	-0.188	-0.525	-0.113	-0.312	-0.453	-1.294
Tauberbischofsheim						
Ulm						
Villingen-Schwenningen	-0.390	-1.111	-0.388	-1.105	-0.632	-1.824
Ansbach	-0.268	-0.798	-0.275	-0.818	-0.387	-1.145
Aschaffenburg	-0.425	-1.263	-0.434	-1.289	-0.522	-1.540
Bamberg	-0.566	-1.704	-0.561	-1.689	-0.680	-2.035
Bayreuth	-0.190	-0.579	-0.207	-0.629	-0.326	-0.990
Coburg	-0.484	-1.453	-0.515	-1.540	-0.572	-1.702
Hof	-0.285	-0.861	-0.306	-0.923	-0.413	-1.242
Nürnberg	-0.391	-1.219	-0.398	-1.241	-0.449	-1.386
Regensburg	-0.222	-0.652	-0.225	-0.661	-0.369	-1.081
Schwandorf	0.095	0.283	0.101	0.300	-0.056	-0.167
Schweinfurt	-0.402	-1.240	-0.421	-1.296	-0.466	-1.423
Weiden	-0.008	-0.022	-0.011	-0.033	-0.242	-0.704

Weißenburg	-0.278	-0.807	-0.284	-0.824	-0.441	-1.278
Würzburg	-0.080	-0.234	-0.077	-0.225	-0.280	-0.821
Augsburg	-0.276	-0.826	-0.281	-0.841	-0.342	-1.014
Deggendorf	-0.030	-0.082	-0.006	-0.015	-0.230	-0.638
Donauwörth	-0.358	-1.016	-0.348	-0.989	-0.554	-1.582
Freising						
Ingolstadt	-0.474	-1.355	-0.475	-1.358	-0.577	-1.640
Kempten	-0.178	-0.518	-0.177	-0.515	-0.354	-1.033
Landshut	-0.115	-0.301	-0.101	-0.264	-0.302	-0.791
Memmingen	-0.106	-0.315	-0.113	-0.334	-0.179	-0.524
München	-0.061	-0.175	-0.027	-0.076	-0.299	-0.865
Passau	0.063	0.185	0.071	0.209	-0.083	-0.244
Pfarrkirchen	-0.115	-0.333	-0.113	-0.326	-0.279	-0.806
Rosenheim	-0.075	-0.207	-0.050	-0.139	-0.319	-0.898
Traunstein	0.193	0.528	0.224	0.611	-0.039	-0.107
Weilheim	0.130	0.357	0.157	0.431	-0.099	-0.275
R^2	0.861		0.862		0.857	
adjusted R^2	0.782		0.782		0.776	
Durbin-Watson statistic	1.716		1.731		1.660	

Source: own calculations.

Table 5-2 Results of the panel analyses for promotion of further vocational training

dependent variable: logarithm of the employment-status rate for further vocational training (FbW)

Regressions with fixed regional effects; base region Berlin; base year 1998.

528 observations in each case.

Model No.	**1**		**2**		**3**	
	coefficient	t-value	coefficient	t-value	coefficient	t-value
Column No.	1	2	3	4	5	6
Constant	3.443	27.053	3.269	22.549	3.726	39.334
ln $(V/U)_{(t-1)}$	0.033	2.259	0.034	2.398	0.028	1.944
ln $c_{(t-1)}$	0.077	1.398	0.222	2.750	0.018	0.348
Participation rate $FbW_{(t-1)}$	-0.004	-3.012	-0.003	-2.717	-0.004	-3.552
Participation rate $ABM_{(t-1)}$	0.003	1.019	0.005	1.503	0.001	0.413
Proportion of severely disabled in measure	-0.0003	-0.099	-0.0002	-0.080	0.0002	0.085
Prop. older people in measure	-0.003	-2.256	-0.004	-2.514	-0.004	-2.531
Prop. of women in measure	-0.001	-0.753	-0.001	-0.721	-0.001	-0.990
Prop. of women in measure (eastern German)	-0.004	-2.019	-0.004	-2.214	-0.003	-1.715
Development of $emp._{(t-1)}$	-0.001	-0.591	-0.001	-0.489	-0.002	-1.189
Recruitment $rate_{(t-1)}$	0.001	1.100	0.001	1.362	0.001	1.293
Duration of unemployment in $weeks_{(t-1)}$			0.007	2.445		
$Workload_{(t-1)}$	0.001	3.265	0.001	2.264		
Prop. of women among $unemployed_{(t-1)}$	0.014	6.980	0.012	6.247	0.013	6.427
Daily $wage_{(t-1)}$	-0.615	-1.901	-0.609	-1.897	-0.553	-1.689
1999	0.024	2.306	0.020	1.931	0.025	2.393
2000	0.009	0.862	0.004	0.416	-0.001	-0.081
Neubrandenburg	-0.155	-3.387	-0.123	-2.590	-0.197	-4.420
Rostock	-0.122	-2.759	-0.093	-2.047	-0.179	-4.365
Schwerin	-0.030	-0.773	-0.005	-0.119	-0.087	-2.436
Stralsund	-0.097	-2.223	-0.069	-1.537	-0.150	-3.654
Cottbus	-0.185	-4.949	-0.142	-3.465	-0.190	-5.011

Eberswalde	-0.146	-3.915	-0.097	-2.303	-0.153	-4.048
Frankfurt (Oder)	-0.078	-2.043	-0.031	-0.737	-0.110	-2.928
Neuruppin	-0.150	-4.138	-0.104	-2.572	-0.158	-4.327
Potsdam	-0.042	-1.225	-0.004	-0.115	-0.063	-1.865
Dessau	-0.275	-7.288	-0.242	-6.110	-0.303	-8.146
Halberstadt	-0.227	-6.045	-0.199	-5.124	-0.260	-7.102
Halle	-0.204	-5.431	-0.171	-4.304	-0.228	-6.123
Magdeburg	-0.124	-3.241	-0.096	-2.408	-0.170	-4.724
Merseburg	-0.252	-6.299	-0.210	-4.881	-0.273	-6.844
Sangerhausen	-0.181	-4.574	-0.148	-3.554	-0.212	-5.455
Stendal	-0.173	-3.950	-0.143	-3.159	-0.214	-5.009
Wittenberg	-0.241	-5.389	-0.208	-4.466	-0.294	-6.945
Altenburg	-0.177	-3.885	-0.145	-3.092	-0.229	-5.277
Annaberg	-0.141	-2.977	-0.100	-2.005	-0.193	-4.246
Bautzen	-0.179	-4.095	-0.145	-3.205	-0.206	-4.733
Chemnitz	-0.172	-3.727	-0.134	-2.767	-0.227	-5.184
Dresden	-0.041	-1.168	-0.017	-0.472	-0.087	-2.680
Leipzig	-0.084	-2.358	-0.053	-1.407	-0.120	-3.504
Oschatz	-0.161	-3.969	-0.124	-2.878	-0.175	-4.283
Pirna	-0.061	-1.496	-0.020	-0.448	-0.104	-2.640
Plauen	-0.022	-0.463	0.022	0.436	-0.078	-1.725
Riesa	-0.181	-3.772	-0.152	-3.095	-0.233	-5.059
Zwickau	-0.166	-3.805	-0.130	-2.856	-0.209	-4.973
Erfurt	-0.043	-1.088	-0.006	-0.143	-0.079	-2.056
Gera	-0.087	-2.074	-0.044	-0.979	-0.139	-3.524
Gotha	-0.062	-1.437	-0.016	-0.349	-0.107	-2.591
Jena	-0.031	-0.796	0.013	0.303	-0.087	-2.415
Nordhausen	-0.157	-3.318	-0.116	-2.310	-0.202	-4.381
Suhl	-0.012	-0.290	0.033	0.714	-0.067	-1.677
Bad Oldesloe	0.055	0.542	0.047	0.463	0.058	0.564
Elmshorn	0.014	0.136	0.003	0.033	0.014	0.143
Flensburg	0.105	1.104	0.093	0.987	0.088	0.919
Hamburg	0.097	1.038	0.071	0.761	0.078	0.824
Heide	0.099	1.023	0.080	0.828	0.065	0.667
Kiel	0.040	0.447	0.022	0.246	0.042	0.461
Lübeck	-0.025	-0.268	-0.038	-0.412	-0.021	-0.221
Neumünster	0.042	0.442	0.036	0.386	0.051	0.533
Braunschweig	-0.088	-0.941	-0.112	-1.200	-0.069	-0.731
Bremen	0.034	0.370	0.007	0.078	0.030	0.319

Bremerhaven	0.024	0.264	-0.001	-0.012	0.024	0.261
Celle	-0.078	-0.802	-0.086	-0.891	-0.060	-0.616
Emden	0.018	0.192	-0.001	-0.016	-0.001	-0.010
Goslar	-0.118	-1.252	-0.127	-1.355	-0.110	-1.141
Göttingen	-0.120	-1.281	-0.135	-1.455	-0.102	-1.077
Hameln	-0.040	-0.420	-0.046	-0.494	-0.029	-0.308
Hannover	-0.011	-0.114	-0.029	-0.309	0.005	0.051
Helmstedt	-0.184	-1.873	-0.228	-2.297	-0.136	-1.378
Hildesheim	-0.045	-0.486	-0.061	-0.654	-0.016	-0.173
Leer	-0.005	-0.052	-0.019	-0.205	-0.009	-0.095
Lüneburg	-0.031	-0.310	-0.032	-0.321	0.000	0.000
Nienburg	0.031	0.307	0.022	0.215	0.025	0.242
Nordhorn	-0.016	-0.165	-0.021	-0.216	-0.009	-0.092
Oldenburg	-0.041	-0.435	-0.057	-0.601	-0.036	-0.368
Osnabrück	0.013	0.128	-0.001	-0.005	0.003	0.026
Stade	0.015	0.147	0.001	0.008	0.012	0.119
Uelzen	-0.033	-0.340	-0.041	-0.427	-0.027	-0.268
Vechta	0.034	0.332	0.027	0.262	0.039	0.378
Verden	-0.014	-0.140	-0.026	-0.259	-0.013	-0.126
Wilhelmshaven	0.005	0.055	-0.016	-0.177	0.016	0.175
Aachen	0.049	0.526	0.020	0.213	0.062	0.660
Ahlen	0.041	0.409	0.034	0.344	0.024	0.234
Bergisch Gladbach	0.006	0.063	-0.016	-0.160	0.019	0.191
Bielefeld	-0.011	-0.114	-0.026	-0.270	0.007	0.075
Bochum	-0.028	-0.310	-0.059	-0.652	-0.039	-0.433
Bonn	0.053	0.550	0.034	0.355	0.051	0.520
Brühl	0.073	0.768	0.055	0.577	0.070	0.718
Coesfeld	0.018	0.180	0.006	0.058	0.007	0.065
Detmold	-0.005	-0.053	-0.007	-0.078	0.001	0.015
Dortmund	-0.029	-0.335	-0.078	-0.875	-0.014	-0.156
Düren	0.021	0.214	0.004	0.047	0.031	0.322
Düsseldorf	0.054	0.567	0.023	0.240	0.069	0.710
Duisburg	0.156	1.751	0.094	1.023	0.092	1.051
Essen	0.088	0.955	0.045	0.485	0.076	0.810
Gelsenkirchen	0.003	0.032	-0.030	-0.328	0.033	0.358
Hagen	-0.003	-0.032	-0.023	-0.249	0.004	0.039
Hamm	-0.020	-0.208	-0.042	-0.445	-0.041	-0.424
Herford	-0.040	-0.400	-0.046	-0.466	-0.027	-0.271
Iserlohn	0.014	0.145	0.000	-0.002	0.011	0.113

Köln	0.037	0.405	0.003	0.029	0.038	0.413
Krefeld	0.026	0.277	-0.001	-0.009	0.043	0.459
Meschede	0.003	0.028	-0.012	-0.122	-0.020	-0.205
Mönchengladbach	0.039	0.414	0.021	0.219	0.050	0.515
Münster	0.144	1.492	0.122	1.265	0.099	1.025
Oberhausen	0.074	0.817	0.048	0.524	0.073	0.789
Paderborn	-0.060	-0.614	-0.068	-0.696	-0.050	-0.505
Recklinghausen	-0.021	-0.230	-0.050	-0.555	0.007	0.076
Rheine	0.062	0.616	0.053	0.537	0.053	0.519
Siegen	0.061	0.625	0.041	0.426	0.055	0.554
Soest	-0.037	-0.376	-0.044	-0.447	-0.047	-0.473
Solingen	-0.031	-0.329	-0.044	-0.463	-0.032	-0.327
Wesel	0.040	0.419	0.011	0.115	0.045	0.469
Wuppertal	0.016	0.175	-0.001	-0.014	0.034	0.355
Bad Hersfeld	-0.123	-1.264	-0.125	-1.294	-0.105	-1.058
Darmstadt	0.004	0.039	-0.019	-0.196	0.011	0.113
Frankfurt	0.142	1.455	0.110	1.129	0.113	1.150
Fulda	-0.078	-0.783	-0.077	-0.773	-0.051	-0.507
Gießen	0.032	0.337	0.020	0.216	0.041	0.431
Hanau	0.028	0.283	0.007	0.076	0.055	0.558
Kassel	0.017	0.184	0.002	0.025	0.047	0.504
Korbach	-0.031	-0.305	-0.029	-0.288	-0.040	-0.392
Limburg	0.114	1.130	0.105	1.052	0.100	0.977
Marburg	0.081	0.816	0.071	0.717	0.052	0.521
Offenbach	0.053	0.544	0.040	0.410	0.067	0.680
Wetzlar	-0.020	-0.203	-0.030	-0.309	-0.007	-0.068
Wiesbaden	0.173	1.786	0.147	1.524	0.151	1.537
Bad Kreuznach	-0.099	-1.029	-0.117	-1.218	-0.099	-1.015
Kaiserslautern	-0.027	-0.278	-0.043	-0.450	-0.013	-0.138
Koblenz	0.106	1.050	0.084	0.834	0.064	0.630
Ludwigshafen	-0.039	-0.387	-0.062	-0.618	-0.056	-0.542
Mainz	0.080	0.805	0.051	0.517	0.059	0.589
Mayen	0.111	1.101	0.098	0.976	0.104	1.015
Montabaur	0.096	0.930	0.084	0.822	0.083	0.796
Neunkirchen	0.153	1.635	0.128	1.362	0.128	1.354
Landau	0.028	0.282	0.011	0.114	0.025	0.243
Neuwied	0.043	0.440	0.027	0.276	0.027	0.275
Pirmasens	-0.017	-0.184	-0.036	-0.383	-0.012	-0.128
Saarbrücken	0.113	1.234	0.065	0.693	0.085	0.918

Saarlouis	0.111	1.163	0.083	0.868	0.094	0.967
Trier	0.109	1.103	0.091	0.920	0.083	0.830
Aalen	0.043	0.429	0.032	0.322	0.052	0.516
Balingen	-0.079	-0.741	-0.077	-0.725	-0.071	-0.658
Freiburg	0.046	0.463	0.027	0.272	0.025	0.247
Göppingen	0.078	0.775	0.070	0.694	0.066	0.648
Heidelberg	0.027	0.263	0.000	-0.003	-0.007	-0.072
Heilbronn	0.050	0.494	0.029	0.289	0.057	0.552
Karlsruhe	0.064	0.635	0.044	0.435	0.045	0.444
Konstanz	0.029	0.283	0.017	0.165	0.026	0.254
Lörrach	0.053	0.551	0.037	0.386	0.061	0.620
Ludwigsburg	0.059	0.562	0.046	0.444	0.047	0.441
Mannheim	0.041	0.430	0.012	0.130	0.036	0.370
Nagold	0.109	1.012	0.091	0.846	0.065	0.595
Offenburg	0.006	0.055	-0.010	-0.098	-0.011	-0.105
Pforzheim	0.002	0.024	-0.003	-0.032	0.007	0.069
Rastatt	0.061	0.581	0.040	0.387	0.024	0.227
Ravensburg	0.095	0.898	0.076	0.722	0.059	0.552
Reutlingen	0.095	0.948	0.071	0.709	0.079	0.774
Rottweil	-0.103	-0.951	-0.105	-0.974	-0.110	-1.000
Waiblingen	0.050	0.481	0.033	0.321	0.039	0.368
Schwäbisch Hall	-0.005	-0.050	-0.010	-0.097	-0.006	-0.056
Stuttgart	0.171	1.700	0.126	1.239	0.132	1.304
Tauberbischofsheim	0.010	0.102	0.001	0.014	-0.014	-0.135
Ulm	0.056	0.550	0.041	0.402	0.037	0.355
Villingen-Schwenningen	-0.047	-0.439	-0.057	-0.541	-0.081	-0.752
Ansbach	0.078	0.739	0.071	0.679	0.076	0.710
Aschaffenburg	-0.006	-0.053	-0.011	-0.110	0.001	0.014
Bamberg	0.088	0.869	0.074	0.744	0.088	0.865
Bayreuth	0.060	0.599	0.058	0.580	0.053	0.526
Coburg	-0.032	-0.318	-0.028	-0.279	-0.023	-0.225
Hof	-0.015	-0.156	-0.015	-0.148	-0.019	-0.185
Nürnberg	0.071	0.735	0.065	0.677	0.088	0.890
Regensburg	0.031	0.296	0.022	0.210	0.026	0.245
Schwandorf	0.073	0.724	0.061	0.605	0.062	0.608
Schweinfurt	-0.035	-0.350	-0.036	-0.360	-0.022	-0.221
Weiden	0.013	0.122	0.003	0.032	-0.020	-0.193
Weißenburg	0.071	0.673	0.064	0.607	0.058	0.542
Würzburg	0.091	0.893	0.081	0.797	0.070	0.680

Augsburg	0.088	0.868	0.083	0.822	0.102	0.994
Deggendorf	0.113	1.064	0.092	0.869	0.088	0.819
Donauwörth	0.139	1.309	0.123	1.170	0.113	1.055
Freising	0.182	1.627	0.153	1.371	0.153	1.350
Ingolstadt	0.022	0.210	0.013	0.124	0.024	0.226
Kempten	0.097	0.920	0.087	0.832	0.081	0.760
Landshut	0.127	1.128	0.111	0.992	0.108	0.955
Memmingen	0.076	0.741	0.070	0.691	0.088	0.848
München	0.147	1.433	0.123	1.203	0.118	1.140
Passau	0.092	0.902	0.078	0.773	0.081	0.784
Pfarrkirchen	0.137	1.317	0.125	1.211	0.124	1.179
Rosenheim	0.156	1.464	0.135	1.276	0.126	1.169
Traunstein	0.160	1.462	0.137	1.257	0.128	1.158
Weilheim	0.201	1.829	0.181	1.657	0.171	1.544
R^2	0.965		0.965		0.964	
adjusted R^2	0.945		0.946		0.943	
Durbin-Watson statistic	1.833		1.879		1.844	

Source: own calculations.

Table 5-3 Results of the cross-sectional regressions for job creation measures

dependent variable: regional coefficient from the panel regression, 169 observations in each case.

Model No.	**1**		**2**		**3**	
	coefficient	t-value	coefficient	t-value	coefficient	t-value
Column No.	1	2	3	4	5	6
Constant	-0.419	-3.697	-0.459	-4.003	-0.288	-2.491
Eastern Germany (dummy)	0.547	6.270	0.456	5.183	0.248	2.994
Population density	-0.00004	-1.317	-0.00002	-0.668	-0.00001	-0.336
Degree of tertiarisation	0.007	3.664	0.008	3.944	0.006	3.692
Underemployment rate	-0.033	-6.123	-0.032	-5.917	-0.014	-2.693
Workload					-0.002	-4.346
R^2	0.245		0.212		0.292	
adjusted R^2	0.227		0.193		0.270	
Durbin-Watson statistic	1.599		1.622		1.569	

Source: own calculations.

Table 5-4 Results of the cross-sectional regressions for the promotion of further vocational training

dependent variable: regional coefficient from the panel regression: 176 observations in each case.

Model No.	**1**		**2**		**3**	
	coefficient	t-value	coefficient	t-value	coefficient	t-value
Column No.	1	2	3	4	5	6
Constant	0.032	1.060	0.039	1.322	0.071	2.174
Eastern Germany (dummy)	0.041	1.703	0.098	4.252	-0.052	-2.184
Population density	0.00002	2.357	0.00001	1.255	0.00002	3.453
Degree of tertiarisation	0.003	5.122	0.002	4.816	0.002	5.194
Underemployment rate	-0.014	-9.780	-0.015	-10.436	-0.010	-7.014
Workload					-0.0004	-2.567
R^2	0.677		0.584		0.777	
adjusted R^2	0.669		0.575		0.770	
Durbin-Watson statistic	1.694		1.647		1.774	

Source: own calculations.

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