IZA DP No. 576

Active Labor Market Policy in Germany – Is There a Successful Policy Strategy?

Michael Fertig
Christoph M. Schmidt
Hilmar Schneider

September 2002

Active Labor Market Policy in Germany – Is There a Successful Policy Strategy?

Michael Fertig
University of Heidelberg and IZA Bonn

Christoph M. Schmidt
University of Heidelberg, CEPR and IZA Bonn

Hilmar Schneider
IZA Bonn

Discussion Paper No. 576
September 2002

ABSTRACT

Active Labor Market Policy in Germany –
Is There a Successful Policy Strategy?[*]

Each year Germany and many other developed economies spend tens of billions of Euros on active measures of employment promotion with the explicit aim of contributing to the reduction of unemployment. Yet, high unemployment has universally been a persistent problem throughout the last two decades, raising the question as to the actual effect of the measures of employment promotion. This paper contributes to the received literature by investigating whether a specific strategy of active labor market policy measures can contribute to a significant reduction of unemployment on the (semi-) aggregate level of the local labor offices in Germany. To this end, we analyze ALMP in Germany in a spatially augmented regression framework. Our results suggest that a policy strategy focusing on monetary incentive schemes rather than on public employment programs is more successful.

JEL Classification: J68, H43, R23

Keywords: evaluation, identification, spatial econometrics

Corresponding author:

Christoph M. Schmidt
Department of Economics (Econometrics)
University of Heidelberg
Grabengasse 14
69177 Heidelberg
Germany
Tel.: +49 6221 54 2955
Fax: +49 6221 54 3640
Email: schmidt@uni-hd.de

1 Introduction

Each year Germany and many other developed economies spend tens of billions of Euros on active measures of employment promotion with the explicit aim of contributing to the reduction of unemployment. Yet, high unemployment has universally been a persistent problem throughout the last two decades, raising the question as to the actual effect of the measures of employment promotion. Unfortunately, most of the scarce information available on the effects of various policy instruments pertains merely to the individual level. The effect of the intervention on the average unemployed worker receiving treatment takes center stage in the economic and econometric work on the subject. The obvious reasons for this focus are data availability, the clarity of the counterfactual question posed, and the conviction that any successful measure should first and foremost look for those targeted by the program (KLUVE AND SCHMIDT (2000)).

Inspired by a growing body of international evaluation literature (cf. the pioneering work of RUBIN (1974), (1986); for a survey see FRIEDLANDER ET AL. (1997), HECKMAN ET AL. (1999) and SCHMIDT (1999)), several recent studies evaluate the labor market impact of some measures of active labor market policy (mainly training measures) for Germany[1]. The evidence collected in these studies regarding the efficacy of active labor market policy ($ALMP$) interventions is rather mixed. Most of them, as well as the majority of the international studies, show a rather small, if any, effect of employment promotion measures on the individual level. Yet, individual level studies can at best be indicative of the overall program impact, since indirect and economy-wide effects are not addressed at all.

By contrast, the aggregate effects of employment promotion are the focus of this paper. On the basis of suitably defined outcome measures, we ask, on the level of local labor offices, the counterfactual question: What would have happened to these outcomes if the intensity and the policy strategy implemented had been different? The fundamental conceptual problem with this question is that this situation is not observable. Therefore, one has to construct an observable counterpart by invoking convincing identification assumptions. The validity of these assumptions is decisive for the credibility of the results derived upon them. However, since they are not testable and have to be assumed to hold true *a priori*, their validity has to be judged upon economic reasoning alone. In the case at hand, we use the exogenous variation created by recent employment promotion reforms.

In line with other re-organizations attempting to refine governance in administration, a major reform of the rules and regulations underlying employment promotion was launched in 1998, combined with the requirement that the effect of any implemented measure be evaluated systematically. Since then the *Federal Employment Services Agency* and its local employment offices have concentrated on the implementation of the policy according to the new regulations. Systematic evaluation has still not been provided, mainly because no clear guidance was given to the administration on how any evaluation attempt should proceed. Rather, what is required of the local employment offices is a pure accounting exercise, leaving open the question if favorable outcomes have to be attributed to the specific design of the programs, to the particular selection of target individuals within a

---

[1]See e.g. FITZENBERGER AND PREY (2000), HÜBLER (1997), HUJER ET. AL. (1997), LECHNER (1998) and (1999).

region, or even to the state of the regional labor market.

Primarily since the state of knowledge on the efficacy of active labor market policy is so poor, local labor offices – forced by the 1998 reform to explicitly determine the policy mix implemented in their jurisdiction for the first time in their existence – generated a variation in this mix across regions which is arguably exogenous to its effects. The introduction of the reform thus generates a situation that is as close to an experimental ideal as one could possibly hope for in a non-experimental setting. In addition, for the first time in post-war history local labor offices have comprehensively collected and reported data on the types of measures undertaken, and on the structure of unemployment dynamics. It is this unique favorably analytical base that our paper departs from.

In this endeavor, we have to ward off several pitfalls inherent in such an aggregate-level analysis, despite these advantages. By contrast to the evaluation of interventions at the individual level, we can hardly maintain an assumption of complete independence among observation units. Rather, at such a semi-aggregate (regional) level the effect of a specific set of measures and its regional heterogeneity has to be assessed in a formal approach. Here, we utilize spatial regression models to account for regional interactions and regional heterogeneity, with the aim to isolate the genuine effects of the policy measures in our estimates. Specifically, we ask which discretionary measures are the most promising on the level of local labor markets.

Second, since at the time being a thorough process analysis of the local decision and spending processes is precluded, it is impossible to fully account for the reasons underlying regional differences in the chosen policy mix. Therefore, it is inevitable to collect additional data supplementing the available figures which are regularly published in the balance sheets of the local labor offices. Finally, there is no point in trying to evaluate the regime change of 1998 itself, since it is prohibitively difficult to match pre-reform and post-reform data on ALMP.

To this end, we provide an overview on ALMP in Germany in **section 2** of the major institutional issues as well as the set of policy instruments available to the labor offices. The following sections analyze whether an optimal policy strategy of these instruments can be detected at the level of the local labor offices. **Section 3** offers an extensive discussion of the conceptual challenges involved in such an investigation and provides a set of models explicitly incorporating spatial interactions and spatial heterogeneity. **Section 4** presents our empirical findings for the years 1999 and 2000. Finally, **section 5** offers some conclusions.

2   Active Labor Market Policy in Germany

This section provides a brief overview on active labor market policy in Germany (for a more detailed discussion see e.g. FERTIG AND SCHMIDT (2000)). Firstly, we outline the major institutional issues, especially the consequences of the 1998 reform of employment promotion policy. Secondly, we briefly describe the different measures of ALMP in Germany and provide some summary statistics on the level and the distribution of

expenditures. Finally, our concise review of the current state of the literature aims at paving the way for our own empirical analysis which is reported in the following sections.

2.1 Institutional Issues

One of the declared objectives of the German *Federal Ministry of Labour and Social Affairs* (*Bundesministerium für Arbeit und Sozialordnung*) has always been the promotion of employment. While a specific employment promotion law provided the legal basis for employment promotion policies throughout much of (West) German post-war history, this legal framework has been integrated into the *Social Code* in January 1998 (*Sozialgesetzbuch, Drittes Buch – Arbeitsförderung*, SGB III). Actual employment promotion policies themselves are implemented by the *Federal Employment Services Agency* (*Bundesanstalt für Arbeit*) in Nürnberg and its regional (*Landesarbeitsämter*) and local employment offices (*Arbeitsämter*).

Approximately three quarters of the annual budget disbursed for employment promotion policies are unambiguously determined by eligibility criteria alone, while the remaining quarter is earmarked for discretionary measures of employment promotion (*Ermessensentscheidungen*). These discretionary expenditures are granted at the level of the individual recipient on a case-by-case basis by administrators working in the local employment offices. **Table 1** reports the expenditures incurred for discretionary measures, together with the number of unemployed workers at the federal level for the years 1998-2000.

Table 1: Unemployment and Expenditures for ALMP, 1998-2000

	1998	1999*	2000*
Expenditures for Discretionary Measures in Mio. DM	30,229	34,108	33,601
Total Number of Unemployed in 1,000	4,279	4,099	3,889
Average Unemployment Rate East Germany	19.5	19.0	18.8
Average Unemployment Rate West Germany	10.5	9.9	8.7

Source: BUNDESANSTALT FÜR ARBEIT (1999B), (2000B) AND (2001B); own calculations. *Expenditures for 1999 and 2000 do not include the newly established youth program "JUMP".

The reform of the employment promotion law had several important implications for employment promotion in Germany. One very important change was that the largest part of the funds earmarked for discretionary measures were pooled (*Eingliederungstitel*)[2]. Moreover, the administrative boards of the *local* employment offices were awarded discretion on how to allocate these funds to the individual policy measures. These local agencies cover regions varying in size and economic structure, in particular regarding the labor market. As a consequence of this reform, the local agencies now directly determine the amount of money spent for the discretionary measures of active labor market policy. There are

---

[2]Some funds for discretionary measures are separated from the *Eingliederungstitel*.

some general principles which have to be adhered to, but within this framework the local agencies are free to decide[3]. However, there is no more detailed regulation on how this policy should be implemented.

The overall budget for discretionary measures of active labor market policy is distributed from the federal level to the regional labor offices (*Landesarbeitsämter*) according to a labor market indicator developed by the Federal Employment Agency (for more details see BLIEN (1998)). In this indicator the regional number of unemployed, the structure of regional unemployment (especially the number of long-term unemployed) and similar regional characteristics are summarized. It remains unclear, however, how exactly the regional offices further distribute the money to their different local offices. Finally, we also do not have information on the decision process of the local labor offices and to what extent, if at all, they co-operate in this process. It is clear, though, that these decisions are not the object of systematic evaluation of the instruments' effect.

The local employment offices, however, are required to implement an accounting system capturing the allocation of their individual funds to the various employment promotion measures at their discretion. The principal tools employed for this purpose are balance sheets (the so-called *Eingliederungsbilanzen*) documenting selected characteristics of recipients as well as the amounts granted to and the measures received by different recipient groups. Moreover, without further discussion of the fundamental methodological problems arising with such a request, the law demands that local labor offices also report the effectiveness of their policy (§11 SGB III). Without further guidance this prescription must lead to the wrong answer, namely a pure accounting approach.

The primary measures of success of each local employment office are the so-called *stayer quota* (*Verbleibsquote*) and the so-called *relief calculation* (*Entlastungsrechnung*). Both of them are completely unsuited for providing answers to the counterfactual question raised in the beginning. The *relief calculation* reports how many originally unemployed have been taken out of the pool of the officially registered unemployed via different employment measures. Since the participants in e.g. public employment programs are not counted as unemployed anymore they are termed as a relief for the labor market. Consequently, such an approach, if taken seriously, suggests to transfer money from unemployment benefits to active employment promotion measures since any such transferred unemployed would be another relief to the labor market irrespectively whether he or she has found a regular job after the program or not.

The second proposed success measure, the *stayer quota*, measures the number of unemployed who did *not* find a job after they have participated in a specific measure relative to the number of all jobless workers leaving unemployment into regular employment in a specific time period. This approach is a measure of effectiveness of employment promotion policy, if and only if, one is willing to accept the underlying assumption that every unemployed worker who has found after participating in a program would have stayed unemployed without the labor market program. These are indeed very restrictive assumptions and we hesitate to invoke them for the purpose of our analysis.

---

[3]In this process the new law itself offers some guidance to local decision makers. The first section of the SGB III contains these fundamental principles as well as the overall goals of the new law.

2.2 Measures of Employment Promotion

Approximately three quarters of the expenditures on employment promotion in Germany are spent on *non-discretionary* measures. Those measures are defined by the existence of a legal claim for workers who fulfill certain eligibility requirements. This claim cannot be rejected by the employment agencies, and overall expenditures are determined by the volume of labor market problems alone. Most prominently, non-discretionary measures comprise the several forms of benefit payments replacing work income (*Entgeltersatzleistungen*)[4], varying in the duration and amount of entitlement. The quantitatively most important benefit payments are the unemployment benefit and the unemployment assistance amounting to approximately 66% of the total expenditures for non-discretionary measures in 2000.

Our interest is, by contrast, on *discretionary* measures of employment promotion. These instruments are used to alter the situation of selected recipients. This selection is completely at the discretion of local labor labor offices, thereby providing a means to address the labor market problems of particular target groups. This section provides a brief overview on these measures (for more details see e.g. FERTIG AND SCHMIDT (2000)).

To conceptualize affairs, we divide these measures into four broad categories: (i) measures promoting the qualification of the unemployed ("human capital formation"), (ii) incentives for employers and self-employed, (iii) measures promoting the creation of jobs and (iv) other measures[5]. **Table A1** in the appendix describes the following individual measures in more detail.

(i) Measures promoting the qualification of the unemployed
Three measures aim at improving the qualification of unemployed individuals[6] with the objective of increasing their job finding prospects. These are training measures, the promotion of vocational training, and the promotion of further training.

(ii) Incentives for employers and self-employed
Several other measures directly aim at increasing the willingness of employers to hire unemployed individuals, usually by some form of wage subsidies. Individual measures mainly differ in the amount and the duration of the grant. These measures comprise *integration subsidies*[7] and *self-employment start-up and recruitment subsidies*.

(iii) Measures directly providing jobs
Moreover, employment offices have the possibility to provide jobs directly to the unemployed in so-called *public employment programs* and in *structural adjustment measures*. In

---

[4]These measures comprise unemployment benefits and assistance; allowances for employees who attend training measures; temporary benefits for disabled persons who attend integration schemes; short–time allowance; insolvency allowance; winter bad weather benefit and the winter allowance.

[5]The following applies to the state of the law until the end of 2001. For the purpose of this paper the reform of 2002 (the so-called *Job-Aqtiv-Gesetz*) is not relevant.

[6]The same measures are available to employed workers being at risk of dismissal.

[7]A comparable, though quantitatively less important, measure are the so-called *integration contracts*.

the implementation of these measures, the employment offices face the difficult trade-off between preventing to crowd out private entrepreneurial activity and offering jobs with sensible work content.

(iv) Other measures
Finally, the employment offices are obliged to give advice about job opportunities to job seekers, and to help in matching supply and demand on the labor market. To this end, they can reimburse some of the expenses incurred in job search and can support workers being the subject of mass layoffs by awarding grants for so-called "social plan measures". **Table 2** reports the expenditure shares for these different groups of discretionary measures from 1998 to 2000.

Table 2: Expenditure Shares for Discretionary Measures in %

	1998	1999	2000
East Germany			
Human Capital Measures	36.6	39.4	34.9
Incentive Schemes	2.1	3.4	7.8
Job Provision Schemes	51.9	49.1	46.9
West Germany			
Human Capital Measures	57.6	58.1	54.5
Incentive Schemes	8.1	9.9	15.6
Job Provision Schemes	12.9	17.7	14.9

Source: BUNDESANSTALT FÜR ARBEIT (1999a), (2000a) and (2001A); own calculations.

In West Germany most of the expenditures for discretionary measures falls into category (i) "human capital formation", while the shares for public employment programs and the different incentives for employers are quite small. In East Germany largest share is spend for job provision schemes, followed by measures aiming at "human capital formation", whereas the money spent for direct incentive schemes was even lower than in West Germany.

2.3 The Current State of the Literature

In an influential study CALMFORS AND SKEDINGER (1995) analyze data for Swedish regions and provide an intensive discussion of potential macroeconomic (side-) effects of active labor market policy. The empirical application utilizes pooled time-series and cross-section data from Swedish regions in an augmented matching function framework (for a survey see LAYARD, JACKMANN AND NICKELL (1991)) for the time period covering 1966-1990. The authors estimate the reduced-form of such a model by OLS and IV, utilizing time lags of the independent variables and some political indicators, like the number of seats of the regions in the Swedish Parliament for specific parties, as instruments. Their dependent variable is the number of job seekers, i.e. the sum of unemployed and program participants.

The policy instruments employed are captured as explanatory factors in so-called accommodation ratios, i.e. the number of program participants relative to the number of job-seekers, distinguishing job-creation and training programs. Furthermore, CALMFORS AND SKEDINGER (1995) estimate different specifications of their model by adding regional dummy variables and some economy-wide control variables, like the national jobless rate, with different lag structures. Their results suggest that job-creation programs crowd out regular employment, whereas the effect of training programs is completely mixed. In total, however, the latter programs seem to be more promising than job-creation schemes.

BELLMANN AND JACKMAN (1996) and KRAFT (1998) are cross-country analyses on an aggregate level. Both papers utilize pooled time-series and cross-section data. BELLMANN AND JACKMAN (1996) estimate a reduced-form version of an augmented Layard-Nickell model by OLS for a set of dependent variables and different specifications with data from 17 OECD countries and a time period covering 1979-1993. Their dependent variables include among others the growth rate of employment, labor force participation rates and long-term unemployment as a percentage of total unemployment. The employed policy variables include expenditures for different measures of active labor market policy relative to the countries' GDP. Furthermore, they control for the prevalence of central wage bargaining, the countries' union density and other characteristics. Their results suggest that expenditures on active labor market policy increases regular employment and labor supply.

KRAFT (1998) utilizes data from Austria, France, Germany, UK, Sweden, and the USA to regress wages and employment as dependent variables on total expenditures for active and passive labor market policy, GDP and total government expenditures in an error-corrections framework. The author suggests that expenditures for active labor market policy increases employment, whereas those for passive labor market policy displays the opposite impact.

There are several empirical studies at the level of the local labor offices and other regional entities for Germany. The most recent study by HAGEN AND STEINER (2001) provides an intensive overview on the literature for Germany. Furthermore, the authors analyze the effect of active labor market policy on transitions into and out of unemployment. To this end, they estimate an augmented matching function using the unemployment rate, the number of job openings and the number of participants in public employment programs and further training measures together with different lags of these variables as independent variables. The authors analyze East and West Germany separately and utilize monthly data for the local labor offices from 1992-1999 (East Germany) and 1990-1999 (West Germany) divided into two different sub-periods. Finally, the authors employ seasonal dummies and a time trend as control variables. Their results suggest that active labor market policy has a differential effect on inflows into and outflows from unemployment with a zero net-effect on average.

SCHMID ET AL. (1999) analyze the impact of active labor market policy on different indicators of long-term unemployment on the level of the German local labor offices for the years 1994-1997. The authors employ the number of participants in different training and wage subsidy programs relative to the labor force as policy instruments and the average duration of these measures together with some regional control variables. In sum, their

fixed-effects estimation results suggest that further training programs are able to reduce long-term unemployment significantly, with shorter programs being more effective.

The paper by BÜTTNER AND PREY (1998) aims at analyzing the impact of active labor market policy on the matching efficiency of 64 West-German regions – which do not coincide with the local labor offices – for the years 1986-1993. The authors utilize the accommodation ratios of further training and direct public employment programs as explanatory variables for the mismatch between regional labor demand and supply. To account for the potential endogeneity of these variables they perform IV estimations using the structure of the regional labor demand and some political variables as instruments. The authors conclude that – contrary to direct job creation – further training measures do not display a significant impact on the regional labor market mismatch.

None of these papers takes into account the potential effect of spatial interactions or spatial heterogeneity across the local labor offices which are their unit of observation. Moreover, the only paper able to account for differential effects of active labor market policy on labor market results is HAGEN AND STEINER (2001). Furthermore, due to data limitations they only estimate the impact of a subset of all policy measures. Finally, some of the mentioned papers suffer from severe conceptual weaknesses especially regarding the potential endogeneity of some of the employed explanatory variables.

3   Is There a Successful Policy Strategy?

The ultimate aim of this paper is to investigate whether there exists a successful strategy of measures of active labor market policy in Germany. Contrary to official statistics, active labor market policy in this paper is defined as the set of *discretionary* measures which are described in more detail in section 2.2. The relevant decision units for all discretionary measures of ALMP in Germany are the local labor offices, once the overall budget has been disbursed to them. Consequently, we aim at analyzing the effect of employment policy in Germany on a semi-aggregated level.

To conceptualize ideas, it is helpful to embed our study into the received literature on the the evaluation of public interventions. Key element of any evaluation study is the counterfactual question "What would have happened to a suitably defined outcome measure if the employment promotion policy of the local labor offices had been different?" Clearly, since the situation implied by this counterfactual question is unobservable, one has to invoke identification assumptions to construct an observable counterpart. Here we invoke all assumptions necessary to set up a spatially augmented linear regression model. Most importantly, this includes the exogeneity assumption for all explanatory variables of the model. We will discuss the implications and possible problems of this assumption in more detail below.

3.1 Conceptual Issues

At the time being, it has to remain completely unclear according to which principles local labor offices disbursed their budget to the different programs and how they replaced any scientific assessment of the local labor market situation by heuristic rules. All that we know is that the state of the discussion on all conceptual matters of evaluation – in particular, the requirement for asking an appropriate counterfactual question – between science on the one hand and policy and adminstration on the other, effectively precluded a systematic feedback from policy effects to the choice of policy mix. Consequently the 1998 reform introduced a quasi-experimental situation. Since the situation after 1998 was completely unique for the local labor offices and their advisory boards, it is conceivable that in the first years after the regime change some of the labor offices did not change their expenditure policy to a large extent, whereas others put a focus on policy instruments by "best guess". Therefore, it is conceivable that the actual allocation of funds in no predictable way constitutes a function of local labor conditions. Proceeding with this maintained assumption we have to solve the following conceptual challenges.

(i) What is a convincing outcome measure?
The most prominent measures in the received literature are some form of unemployment rates, either total or problem group-specific rates. Another strand of the literature utilizes labor market flows, i.e. transitions out of unemployment into regular employment and transitions from regular employment into unemployment. As the choice of an adequate outcome measure should be dictated by the aim of the study, here we take the perspective that labor market flows do allow more insight into the effects of employment promotion measures.

Specifically, all evaluation attempts have to address potential side effects of targeted labor market interventions. In this discussion two adverse side effects of ALMP have received special attention. Firstly, these are the so-called deadweight loss, i.e. the subsidization of activities that would have happened also without the measure, and secondly, substitution effects, i.e. the replacement of unsubsidized by subsidized activity. Clearly, these two effects are always difficult to measure and to disentangle from genuine net effects of any program. However, choosing unemployment rates as the outcome measure precludes the revelation of substitution effects *a priori*, since all countervailing labor market effects are hidden in a stock measure. Therefore, we decided to utilize the transitions into and out of unemployment as our dependent variable.

(ii) What are the relevant policy measures?
It is perhaps the major contribution of the recent economic and econometric literature in the field of labor market policy to emphasize the heterogeneity of program effects with respect to the specific measure implemented and the particular target group of program recipients involved. Our empirical work acknowledges this insight by trading off analytical detail and policy relevance. Specifically, we capture variation in the regional policy mix by expenditure shares of the various measures, since we do not believe that the principal alternative, the number of program participants, reflects the employment offices' efforts adequately.

Regarding the degree of aggregation of policy measures we decided to pursue an ag-

nostic strategy. In one set of regressions we cluster measures into three big groups, but we also analyze the effects of all single measures taken separately. Finally, while there might well be a close-response relationship between policy measures and outcomes, these effects are unlikely to be immediate. rather, we have to specify an adequate lag structure. In our context, 12 months seem to be suitable, since this is the average duration of the different measures

(iii) What are the appropriate decision units?

The semi-aggregate nature of our analysis creates an additional subtlety, since the treatment unit is a complete region, i.e. all workers residing in the region of a specific labor office. While it is clear that the policy mix varies across regions, and we do like to exploit this variation for the purpose of our analysis, it is hardly imaginable that these regions are disjunct economic units. By contrast, there might be regional business cycles, informal or formal co-operations, commuters or other spill-over aspects yielding a close connection of the outcome measures of adjacent regions. Such interactions necessarily link together the performance of active labor market policy and the outcome of specific policy mixes.

If detailed information on spatial interactions were available, this data could become an integral part of the structural empirical model. It is unlikely that such information will ever become accessible in comprehensive fashion. Here we treat these spatial interactions as completely unobservable, with the unobserved information manifesting itself in an observable spatial structure in policy instruments and outcomes. These aspects are captured by explicitly modelling the spatial structure of our outcome measure (ANSELIN (1988), ANSELIN AND FLORAX (1995) and ANSELIN AND BERA (1998)).

(iv) What is the most convincing identification strategy?

For the purpose of evaluation we perform a comparison across regions in a spatially-augmented regression framework. This necessitates to invoke a series of maintained assumptions justifying the implementation of a regression model, most prominently an exogeneity assumption regarding the explanatory variables. We argue that the 1998 reform of the German system of employment promotion generates a quasi-experiment. Moreover, since we use the lagged expenditure shares as regressors, we can even be more confident that the explanatory factors are uncorrelated with current disturbances. Furthermore, we control for a variety of local labor market and regional characteristics to further mitigate potential problems of unobserved heterogeneity. Finally, since it might be inappropriate to impose an identical structure in East and West Germany, we interact most of the explanatory factors with an indicator for East Germany.

3.2 The Spatial Model

In our analysis, we treat the years 1999 and 2000 individually and estimate two separate cross-sectional models. Formally, a general model for spatial cross-sectional data can be written as (see e.g. ANSELIN (1988))

$$y = \rho W_A y + X\beta + \epsilon \tag{1}$$

$$\epsilon = \lambda W_B \epsilon + \nu \tag{2}$$

with
$$\nu \sim N(0, \Omega), \quad \Omega_{ii} = h_i(Z\alpha) \quad for \quad \alpha = 0 : \quad \Omega_{ii} = \sigma^2$$

In equations (1) and (2) y, ϵ and ν are $(N \times 1)$ vectors of the dependent variable and the error terms, respectively. X is $(N \times K)$ and Z a $(N \times P)$ matrix of exogenous regressors, W_A and W_B are $(N \times N)$ (row-standardized) matrices representing the spatial structure, β and α are $(K \times 1)$ and $(P \times 1)$ vectors of unknown parameters, respectively, and λ and ρ are unknown scalars. The function h_i describes the relationship between the elements of the covariance matrix of ν and the exogenous variables in Z. Overall, there are $3 + K + P$ unknown parameters: ρ, λ, σ^2, β, α. Without further restrictions, it is difficult to estimate this model as soon as K and P are becoming large. However, applying different restrictions on these parameters yields different special cases of spatial models that are able to capture a variety of spatial interactions and/or spatial heterogeneity.

Since tests for spatial correlation in the error terms do not lead us to reject the null hypothesis that $\lambda = 0$ for almost all cases in our empirical application we concentrate on the estimation of the spatially lagged dependent variable model of equation (1). That is, applying the restrictions $\lambda = 0$ and $\alpha = 0$ yields the homoscedastic spatially autoregressive model $y = \rho W_A y + X\beta + \epsilon$. In addition, we also relax the assumption of a constant variance for all residuals and derive a heteroscedastic version of our model with a spatially lagged dependent variable (for more details see below).

The spatially autoregressive specification of equation (1) implies a correlation of the spatially lagged dependent variable $(W_A y)_i$ with ϵ_i, irrespective of the error structure, i.e. $E[(W_A y)_i \cdot \epsilon_i] \neq 0 \; \forall \; i$. Therefore, estimating equation (1) by OLS does not yield consistent estimates. Instead, we estimate equation (1) by Maximum Likelihood. Furthermore, since the spatial dependence inherent in W_1 is not uni-directional, the matrix $(I - \rho W_A)^{-1}$ is a full matrix and not triangular as in the time-series case. Finally, the covariance between observations of different locations i and j is $Cov(y, y') = (I - \rho W_A)^{-1} \Omega (I - \rho W_A')^{-1}$ with $\Omega = Cov(\epsilon, \epsilon')$. Therefore, again irrespective of the error structure, each value of y in each location is correlated with each other location, with decreasing weights implied by the powers of W_1 in the series expansion of $(I - \rho W_A)^{-1}$ (see ANSELIN AND BERA (1998) for more details). Intuitively, this means that for instance the dependence between regions i and j on the one hand and the dependence between the regions j and k on the other hand translates into a relationship between the regions i and k as well.

The significance of the presumed spatial structure can be tested by LR- or LM-tests. The parameter ρ might be interpreted in two distinct ways. Firstly, a statistically significant estimator for ρ indicates substantive spatial dependence or spill-over effects. However, such an interpretation would presume a theoretical model explicitly explaining the behavior of agents across spatial units under consideration. In the case at hand, the spatial unit of measurement does in all likelihood not concur with the unit of economic activity of the agents since the local labor offices are administrative units which do not necessarily reflect the scope of economic activity of the relevant agents. Furthermore, the absence of a behavioral model does not allow any structural interpretation of our empirical findings. What we have instead is a sophisticated descriptive tool.

3.3 The Dataset

In our analysis we utilize data provided by the *Federal Employment Services Agency* and complementary data from the *Bundesamt für Bauwesen und Raumordnung* on the level of the 181 local employment offices for the years 1998 to 2000. For reasons of missing data and organizational change, the labor offices of the city of Berlin are deleted from the sample. In result, we have 175 observations in each year on the level of the local employment offices. **Table A1** in the appendix describes all variables in more detail.

(i) The Outcome Measures

The complete set of estimates employs three different outcome measures. The first one (*relative outflows*) are the yearly transitions from unemployment into regular employment relative to the sum of dependent employees and registered unemployed. This measure does not include transitions from unemployment into employment promotion measures like public employment programs. The second outcome measure (*relative inflows*) are the yearly transitions from regular employment into unemployment relative to the sum of dependent employees and registered unemployed. The third outcome variable (*relative net-outflows*) measures the difference between relative outflows and relative inflows. Since we do not have information on the size of the labor force on the level of the local labor offices, we chose the sum of dependent employees and unemployed as a base to account for differences in the size of the respective regions.

(ii) The Policy Instruments

For each outcome measure we utilize two different specifications of the policy instruments. The first specification employs the expenditure shares of three (of the four) aggregate groups of discretionary measures. The second specification utilizes a more detailed set of expenditure shares for the policy instruments. Both specifications always include the absolute sum of local expenditures for discretionary measures to account for economies of scale induced by by differences in the size of the local labor offices and an intensity measure of employment policy, i.e. total expenditures per unemployed in each region.

In both specifications the policy instruments of the preceding year are utilized as explanatory variables to account for a time lag in the effects of specific measures. In result, we have two different cross-sectional regressions: (i) the 1999 relative labor market flows together with the 1998 policy variables (*first wave*) and (ii) the year 2000 relative labor market flows with the set of policy instruments from 1999 (*second wave*).

(iii) Other covariates

To control for regional heterogeneity, we utilize an indicator for a rather traditional regional industry structure, i.e. the number of dependent employees in specific industries[8] relative to all dependent employees. Furthermore, we employ a measure of local cyclical fluctuations, i.e. the relative change in part-time workers. And finally, we add a measure of overall change in labor demand, i.e. the relative change in job openings. All these variables also enter the regressions with a lag of twelve months.

(iv) The spatial structure

---

[8]The main industries falling into this category are: fishing, mining, agriculture, steel, glass, ship building, construction and textiles.

In our empirical analysis we employ three different spatial weighting matrices: (i) a row-standardized matrix where only direct neighbors receive a non-zero weight (W_1), (ii) a row-standardized matrix where every local labor office belonging to the same *regional* labor district receives a non-zero weight (W_2), irrespective of a common border and (iii) a row-standardized matrix rebuilding the *relative* commuter flows of 1999 between the different regions (W_3). All these weighting matrices are utilized for the spatial lag model as well as for tests regarding a spatially lagged error structure.

Tables **A2** and **A3** in the appendix report some descriptive statistics for the variables in our dataset. A comparison of both waves of our dataset reveals that there is a rather small variation over time in the policy variables as well as in the labor market flows. However, during our sample period we observe negative net-outflows on average, so that unemployment has increased.

4 Empirical Evidence

Tables 3-6 report our estimation results. The first two tables document the specification with three (of four) coarse policy shares, whereas **Table 5** and **Table 6** report the results for the detailed policy instruments. Before proceeding with the interpretation of our results we briefly discuss some aspects concerning the specification of our spatially adjusted regression models.

Specification Search and Spatial Structure
While the following tables report the results of our preferred specification we performed a series of specification checks to gauge the robustness of our findings. Our preferred specification is a spatially lagged dependent variable model with alternative spatial weighting matrices. The results of an OLS benchmark regression without controlling for spatial heterogeneity[9] are qualitatively comparable. We checked the sensitivity of our results regarding changes in the set of control variables by dropping the potentially endogenous variable *Job Openings*. However, this does not change the results substantially. Thus, while we would maintain the importance of taking the spatial nature of our data into account, it is not only the utilization of spatial regression models nor the particular set of controls that lends a particular credence to our results. Rather, it is the appropriate definition of our outcome measures and treatment indicators, and the robustness of the qualitative results which we would like to emphasize.

Furthermore, it turns out that all three spatial weighting matrices produce qualitatively comparable results. Therefore, we report only the estimation results of the spatially lagged model with the first weighting matrix (W_1)[10]. Finally, in the majority of cases different tests for spatial lag and spatial error dependence display a statistically significant impact of the spatially lagged dependent variables but after controlling for the spatial lagged dependent variable there is rather no spatial structure detectable in the error terms. Therefore, we are quite confident that our model describes the observable data well.

---

[9]Results of the OLS estimations are available upon request from the authors.

[10]All other estimation results are available upon request from the authors.

Table 3: Estimation Results of Spatial Lag Model – Aggregate Policy Instruments and Common Border Weighting Matrix, *First Wave*

	RELATIVE OUTFLOWS 1999	RELATIVE INFLOWS 1999	RELATIVE NET-OUTFLOWS 1999
	Policy Instruments:		
Expenditures 1998 (bn. DM)	-0.194	-0.213	0.006
	(-7.501)	(-6.709)	(0.439)
Expenditures 1998, East (bn. DM)	0.155	0.127	0.042
	(4.836)	(3.218)	(2.469)
Human Capital Share 1998	-0.101	-0.121	0.010
	(-2.653)	(-2.566)	(0.475)
Human Capital Share 1998, East	-0.046	0.004	-0.091
	(-0.403)	(0.026)	(-1.507)
Incentives Share 1998	-0.143	-0.240	0.069
	(-2.084)	(-2.848)	(1.907)
Incentives Share 1998, East	-0.699	-1.184	0.179
	(-1.356)	(-1.859)	(0.647)
Job Provision Share 1998	0.000	0.030	-0.025
	(0.009)	(0.653)	(-1.247)
Job Provision Share 1998, East	-0.149	0.041	-0.254
	(-1.185)	(0.266)	(-3.799)
Intensity Measure 1998	-0.001	-0.002	0.000
	(-0.333)	(-0.655)	(0.329)
Intensity Measure 1998, East	0.004	0.014	-0.010
	(1.072)	(2.948)	(-4.833)
	Control Variables:		
Spatial Lag Parameter (W_1)	0.592	0.357	0.056
	(9.130)	(5.235)	(0.943)
Constant	0.122	0.174	-0.023
	(3.978)	(4.667)	(-1.469)
Cycle Proxy	0.182	0.218	-0.111
	(0.645)	(0.626)	(-0.741)
Job Openings	0.011	0.010	0.003
	(2.521)	(1.834)	(1.190)
Industry Proxy	0.082	0.072	-0.007
	(2.097)	(1.496)	(-0.314)
Industry Proxy East	0.315	0.549	-0.163
	(2.372)	(3.328)	(-2.254)
East Germany	0.037	-0.124	0.198
	(0.347)	(-0.945)	(3.481)
	Diagnostics:		
LR-Test for Spatial Lag Dependence (W_1)	62.355	28.455	0.890
LM-Test for Spatial Error Dependence (W_1)	0.788	8.649	0.140
LM-Test for Spatial Error Dependence (W_2)	2.561	5.910	0.341

Number of observations: 175. See Appendix **Table A1** and text for a description of the variables. t-values in parenthesis. The 5% critical value of the $\chi^2(1)$ distribution is 3.84

Controls for Regional Economic Structure

The estimation results for our first wave of data are reported in **Table 3**. Our first regressor, the absolute level of expenditures on active labor market policy serves as a proxy for the size of the region. Larger regions typically experience lower gross flow rates, both in terms of outflows from unemployment to regular employment and vice versa in terms of inflows. The level of expenditures is found to be irrelevant for the net flow rate in West Germany. In the East, regions with low and with large expenditures do not experience noticeably different gross rates, but there is a statistically significant positive association between ALMP expenditures and net outflow into regular employment.

The measure of ALMP intensity displays remarkably little effects on any flow rate in West Germany, but the intensity of active labor market policy is positively associated with inflows into unemployment and, correspondingly, negatively with net outflows from unemployment to regular employment in East Germany. This association indicates an intricate relationship between labor market developments and the decisions leading to the allocation of regional budgets. Note that our principal interest is lying in the policy strategy associated with the allocation of given regional budgets on different bundles of policy instruments.

In both directions, we find a strong spatial structure for the gross flow rates as measured by our spatial lag parameter. Gross outflows from and gross inflows into unemployment are autocorrelated across space, while the net flow rate does not display a noticeable spatial structure. This pattern of spatial lag parameters suggests that regional flow intensities are highly correlated across transition paths. That is, regions with high gross outflows and regions with high gross inflows do not only tend to share these characteristics with neighboring regions, but the spatial coincidence of high gross outflows and high gross inflows seems to go hand in hand.

Individual t-tests as well as a LR-tests for the spatial lag parameter reveal that it is statistically insignificant in the relative net-outflow equation but significantly positive in the equation for the transitions into and out of unemployment. After controlling for the spatial lag the LM-tests for a remaining spatial structure in the errors of the model do not allow to reject the null hypothesis that $\lambda = 0$ irrespective of the weighting matrix in all first wave regressions except the outflow equation.

As a second important regional variable, all our regressions include an indicator for East Germany. In the data for 1999, the estimation results for this indicator variable suggest relatively large net outflows from unemployment to regular employment. To account for the state of the regional labor market as well as possible, our regressions control for several other variables, all expressed in rates. We do not find any effect for our proxy variable for the economic cycle on relative net-outflows. Unsurprisingly, a relatively favorable situation regarding job openings typically leads to higher gross outflows from unemployment. In our data for West Germany, our measure of industry structure only affects gross outflows positively, while both gross flow rates are enhanced in East German regions with a more traditional industry structure. Yet, the effect on gross inflows dominates in the East, leading to a relatively unfavorable net effect. Since both left-hand side and right-hand side variables are measured in rates, a coefficient of 0.1 thus indicates that the corresponding rate rises by one percentage point, if the measure of interest rises

by ten percentage points. In consequence, the net outflow rate is around 1.6 percentage points lower in a given East German region, if ceteris paribus its employment structure displays a ten percentage point higher share of classical industries.

The Policy Strategy

Our principal interest lies on the coefficients of the policy shares for human capital measures, incentive schemes, and public employment programs. Human capital measures tend to take the target population out of the population at risk for both types of gross transitions. Correspondingly, it is not surprising that gross flow rates tend to be low in regions with a large share of human capital measures. Net flow rates remain unaffected, and the pattern is not different in East and West Germany.

Incentive schemes tend to unfold their effects immediately after their inception and throughout the lifetime of the program. Thus, if these measures were successful, we would expect relatively low gross outflow rates from unemployment in the year after high expenditures on incentive schemes. This is the pattern displayed by the regression results for West Germany. In addition, in regions with a high share of incentive scheme expenditures gross inflow rates into unemployment are low as well. Yet, the net outflow is shy of being significantly positive. For East Germany, all these results are emphasized quite strongly.

By contrast to human capital measures, while they are in operation, public employment programs create spells of regular employment among the target group. Only after the program is running out, for some workers after several years, the genuine effect on the labor market situation of the program is revealed in the data. For West Germany, no effect whatsoever can be detected on either flow rate. Quite in contrast, for East Germany we find a strong and highly significant negative association between the share of expenditures going to public employment programs and net outflow rates from unemployment in the subsequent year. While for none of the two gross rates we can document significant effects of these shares, a negative, insignificant effect on gross outflows and a positive insignificant effect on gross inflows lead to a significantly negative effect on net outflows from unemployment.

Table 4: Estimation Results of Spatial Lag Model – Aggregate Policy Instruments and Common Border Weighting Matrix, *Second Wave*

	RELATIVE OUTFLOWS 2000	RELATIVE INFLOWS 2000	RELATIVE NET-OUTFLOWS 2000
	Policy Instruments:		
Expenditures 1999 (bn. DM)	-0.138	-0.153	0.009
	(-6.477)	(-5.534)	(0.784)
Expenditures 1999, East (bn. DM)	0.100	0.091	0.015
	(3.815)	(2.661)	(1.044)
Human Capital Share 1999	-0.026	-0.067	0.049
	(-0.678)	(-1.339)	(2.290)
Human Capital Share 1999, East	-0.188	-0.285	0.097
	(-1.855)	(-2.167)	(1.734)
Incentives Share 1999	0.001	-0.050	0.064
	(0.023)	(-0.785)	(2.370)
Incentives Share 1999, East	-0.782	-1.433	0.660
	(-2.579)	(-3.638)	(3.946)
Job Provision Share 1999	0.056	0.061	0.011
	(1.458)	(1.210)	(0.493)
Job Provision Share 1999, East	-0.293	-0.283	-0.017
	(-2.551)	(-1.901)	(-0.276)
Intensity Measure 1999	0.001	-0.001	0.002
	(0.506)	(-0.195)	(1.546)
Intensity Measure 1999, East	0.001	0.003	-0.002
	(0.238)	(0.846)	(-1.531)
	Control Variables:		
Spatial Lag Parameter (W_1)	0.610	0.482	0.362
	(9.704)	(7.573)	(5.988)
Constant	0.050	0.109	-0.058
	(1.466)	(2.482)	(-3.138)
Cycle Proxy	0.002	-0.001	0.002
	(0.642)	(-0.150)	(1.095)
Job Openings	-0.024	-0.035	0.011
	(-3.188)	(-3.543)	(2.506)
Industry Proxy	0.058	0.071	-0.017
	(1.471)	(1.396)	(-0.762)
Industry Proxy East	0.102	0.314	-0.199
	(0.701)	(1.657)	(-2.462)
East Germany	0.224	0.283	-0.064
	(2.070)	(2.020)	(-1.071)
	Diagnostics:		
LR-Test for Spatial Lag Dependence (W_1)	66.381	50.643	31.946
LM-Test for Spatial Error Dependence (W_1)	3.322	11.675	8.278
LM-Test for Spatial Error Dependence (W_2)	7.575	14.220	1.570

Number of observations: 175. See Appendix **Table A1** and text for a description of the variables. t-values in parenthesis. The 5% critical value of the $\chi^2(1)$ distribution is 3.84

Temporal Variance in the Results

Our estimation results suggest that there is a significant spatial strucure in gross flows as measured by the spatial lag parameter in both waves. Furthermore, the expenditure share for incentive schemes tends to significantly increase net outflows from unemployment into regular employment in 1999 and 2000 and most of the results regarding the level of expenditures and their intensity are qualitatively comparable across sample waves. In the latter wave, the positive association between a high level of expenditures and high net outflows in East Germany vanishes, though. Similarly, intensity apparently played no role for gross inflows and net outflows in East German regions in the more recent sample year.

The results for the indicator of East German regions performs different in the second sample wave, though. While in 2000 both gross flow rates were higher in the East than in the West, net outflow rates are not different across the two broad German regions. While the coefficients of our industry proxies do not exhibit a large qualitative variation across years, the rate of job openings does have a differential effect across years. Specifically, it is associated with lower gross flows in and out of regular employment, but leads to a significantly higher net outflow rate.

The effect of larger shares of ALMP expenditures devoted to human capital measures exerts quite different effects on gross and net flow rates in 2000 than in 1999. Specifically, gross inflow into unemployment in East Germany is estimated to be significantly lower in the latter sample, and the net outflow from unemployment is significantly enhanced by larger human capital expenditures.

Despite some discrepancies in the individual gross rates, the positive effect of incentive schemes on net outflow rates are confirmed in the estimates for the more recent year. By contrast to 1999, point estimates are significantly positive for West Germany, and significantly positive and quantitatively substantial for the East. The dismal perspective on the performance of public employment programs which was presented by the 1999 results is not entirely confirmed in the more recent sample. In 2000 a large share of expenditures devoted to these programs is estimated to reduce gross outflows from unemployment in East Germany, but otherwise there does not seem any effect worth mentioning.

Again, the formal test for the spatial structure document that there is a statistically significant association in labor market flows across the different labor offices. Furthermore, there seems to be a considerable remaining structure in the errors of the model after controlling for the spatial lag. However, since this is not the case in all other specifications we decided to maintain to the spatial lag model without any extensions in the error structure.

18

Table 5: Estimation Results of Spatial Lag Model – Detailed Policy Instruments and Common Border Weighting Matrix, *First Wave*

	RELATIVE OUTFLOWS 1999	RELATIVE INFLOWS 1999	RELATIVE NET-OUTFLOWS 1999
	Policy Instruments:		
Expenditures 1998 (bn. DM)	-0.184	-0.199	0.007
	(-7.596)	(-6.750)	(0.544)
Expenditures 1998, East (bn. DM)	0.158	0.133	0.034
	(5.155)	(3.547)	(2.031)
Share Training Measures 1998	-0.110	-0.101	-0.063
	(-0.881)	(-0.660)	(-0.905)
Share Further Training 1998	-0.089	-0.100	0.009
	(-2.425)	(-2.242)	(0.428)
Share Integration Subsidies 1998	-0.178	-0.265	0.058
	(-2.679)	(-3.282)	(1.587)
Share Self-Employment Subsidies 1998	0.176	0.202	0.027
	(2.196)	(2.079)	(0.613)
Share ABM 1998	0.018	0.056	-0.028
	(0.444)	(1.131)	(-1.247)
Share SAM 1998	0.456	0.487	0.072
	(4.157)	(3.742)	(1.289)
Share Training Measures 1998, East	-0.998	-1.174	0.135
	(-2.011)	(-1.939)	(0.493)
Share Further Training 1998, East	-0.199	-0.304	0.053
	(-1.445)	(-1.814)	(0.696)
Share Integration Subsidies 1998, East	-0.537	-0.822	0.057
	(-1.056)	(-1.323)	(0.203)
Share Self-Employment Subsidies 1998, East	-1.539	-2.566	0.844
	(-2.666)	(-3.635)	(2.629)
Share ABM 1998, East	-0.278	-0.211	-0.132
	(-1.952)	(-1.216)	(-1.684)
Share SAM 1998, East	-0.788	-0.758	-0.180
	(-3.362)	(-2.687)	(-1.426)
Intensity Measure 1998	-0.001	-0.001	0.000
	(-0.321)	(-0.478)	(0.187)
Intensity Measure 1998, East	-0.003	0.002	-0.006
	(-0.601)	(0.366)	(-2.252)

Table 5 (cont'd): Estimation Results of Spatial Lag Model – Detailed Policy Instruments and Common Border Weighting Matrix, *First Wave*

	RELATIVE OUTFLOWS 1999	RELATIVE INFLOWS 1999	RELATIVE NET-OUTFLOWS 1999
	Control Variables:		
Spatial Lag Parameter	0.491	0.297	0.042
	(7.404)	(4.561)	(0.704)
Constant	0.103	0.140	-0.022
	(3.055)	(3.421)	(-1.204)
East Germany	0.312	0.355	0.014
	(2.152)	(2.009)	(0.173)
Cycle Proxy	0.084	0.138	-0.141
	(0.317)	(0.424)	(-0.954)
Job Openings	0.007	0.005	0.002
	(1.682)	(1.013)	(0.965)
Industry Proxy	0.092	0.087	-0.007
	(2.497)	(1.940)	(-0.340)
Industry Proxy East	0.121	0.214	-0.057
	(0.723)	(1.047)	(-0.617)
	Diagnostics:		
LR-Test for Spatial Lag Dependence (W_1)	43.404	20.598	0.475
LM-Test for Spatial Error Dependence (W_1)	0.366	3.678	0.024
LM-Test for Spatial Error Dependence (W_2)	0.691	4.548	0.239

Number of observations: 175. See Appendix **Table A1** and text for a description of the variables. t-values in parenthesis. The 5% critical value of the $\chi^2(1)$ distribution is 3.84

A Detailed Account of Active Measures

Table 5 documents the estimation results for the first wave of data with the detailed policy instruments. **Table 6** reports the corresponding results for the second wave of data. While there are some discrepancies between the two sets of regressions comprising the coarse and the detailed set of expenditure shares, the overall qualitative association between regional labor market flow rates and the level and intensity of ALMP expenditures is stable across specifications. Perhaps the most remarkable, yet minor discrepancy concerns the indicator of East German regions in 1999. This overall stability of the results on the control factors holds for 1999 as well as for 2000.

For the first sample year, the negative association between human capital expenditure shares and gross flow rates is, by and large, carried by the share of *further training*, while *training measures* are associated with lower gross flow rates of either kind in East Germany. For 2000, the detailed results exhibit a statistically significant positive impact of the expenditure share for *further training* on the relative net outflows. A 10% increase in this expenditure share yields a 0.5% rise in net transitions from unemployment into regular employment.

Table 6: Estimation Results of Spatial Lag Model – Detailed Policy Instruments and Common Border Weighting Matrix, *Second Wave*

	RELATIVE OUTFLOWS 2000	RELATIVE INFLOWS 2000	RELATIVE NET-OUTFLOWS 2000
	Policy Instruments:		
Expenditures 1999 (bn. DM)	-0.146	-0.135	0.007
	(-5.604)	(-6.626)	(0.631)
Expenditures 1999, East (bn. DM)	0.086	0.099	0.018
	(2.681)	(3.940)	(1.308)
Share Training Measures 1999	-0.015	-0.019	0.003
	(-0.102)	(-0.168)	(0.043)
Share Further Training 1999	-0.076	-0.031	0.050
	(-1.629)	(-0.856)	(2.579)
Share Integration Subsidies 1999	-0.103	-0.042	0.065
	(-1.531)	(-0.807)	(2.309)
Share Self-Employment Subsidies 1999	0.143	0.157	0.044
	(1.447)	(2.039)	(1.057)
Share ABM 1999	0.071	0.064	0.008
	(1.477)	(1.708)	(0.385)
Share SAM 1999	0.602	0.502	-0.041
	(4.370)	(4.612)	(-0.737)
Share Training Measures 1999, East	-0.368	-0.328	0.063
	(-0.660)	(-0.752)	(0.270)
Share Further Training 1999, East	-0.203	-0.170	0.027
	(-1.448)	(-1.552)	(0.469)
Share Integration Subsidies 1999, East	-0.566	-0.736	-0.152
	(-1.031)	(-1.713)	(-0.668)
Share Self-Employment Subsidies 1999, East	-1.660	-0.949	0.680
	(-2.816)	(-2.059)	(2.770)
Share ABM 1999, East	-0.142	-0.287	-0.159
	(-0.910)	(-2.356)	(-2.449)
Share SAM 1999, East	-0.870	-0.734	0.085
	(-4.443)	(-4.786)	(1.048)
Intensity Measure 1999	-0.002	0.000	0.002
	(-0.817)	(-0.162)	(1.662)
Intensity Measure 1999, East	0.006	0.002	-0.004
	(1.364)	(0.542)	(-2.212)

Table 6 (cont'd): Estimation Results of Spatial Lag Model – Detailed Policy Instruments and Common Weighting Border Matrix, *Second Wave*

	RELATIVE OUTFLOWS 2000	RELATIVE INFLOWS 2000	RELATIVE NET-OUTFLOWS 2000
	Control Variables:		
Spatial Lag Parameter	0.404	0.521	0.330
	(6.507)	(8.044)	(5.731)
Constant	0.110	0.052	-0.056
	(2.639)	(1.598)	(-3.251)
East Germany	0.202	0.229	0.032
	(1.390)	(2.023)	(0.526)
Cycle Proxy	0.002	0.003	0.001
	(0.369)	(0.925)	(0.449)
Job Openings	-0.037	-0.024	0.013
	(-3.892)	(-3.245)	(3.190)
Industry Proxy	0.082	0.066	-0.018
	(1.722)	(1.761)	(-0.880)
Industry Proxy East	0.267	0.075	-0.191
	(1.346)	(0.490)	(-2.310)
	Diagnostics:		
LR-Test for Spatial Lag Dependence (W_1)	48.761	37.734	29.811
LM-Test for Spatial Error Dependence (W_1)	1.301	3.426	0.498
LM-Test for Spatial Error Dependence (W_2)	0.232	1.390	0.225

Number of observations: 175. See Appendix **Table A1** and text for a description of the variables. t-values in parenthesis. The 5% critical value of the $\chi^2(1)$ distribution is 3.84

The detailed account of expenditures on the various incentive schemes exhibits quite a variegated picture, though. A high share of the numerically dominant *Integration Subsidies* is associated in the 1999 sample with low gross flow rates of either kind. By contrast, for West Germany, high expenditures on *Self-Employment Subsidies* exhibit a positive association with both gross flow rates. It is only in the East that this type of incentive scheme appears to lead to lower gross flows, and to the positive aggregate effect of incentive scheme expenditures on net outflows from unemployment. These patterns are confirmed in the 2000 sample as well.

Perhaps the most striking result in the regressions comprising the coarse expenditure shares has been the complete absence of any association between expenditures on public employment promotion and gross flows in West Germany. The detailed results presented here document that there is a strong positive association between gross flows of either kind and expenditures on the numerically less relevant *SAM* measures in the West. By contrast, both *ABM* and *SAM* employment programs are associated with low gross flows in and out of unemployment and regular employment in East Germany, leading to the overall low net outflow rates in those East German regions whose expenditure shares for public employment programs are high. These patterns by and large hold for both sample years. Finally, formal tests for the spatial structure reveal that the spatial lag

parameter is significant in almost all cases whereas, again, there seems to be no structure whatsoever in the error terms after controlling for this spatially lagged dependent variable.

5   Conclusions

This paper contributes to the received literature by investigating whether a specific strategy of active labor market policy measures can contribute to a significant reduction of unemployment on the (semi-) aggregate level of the local labor offices in Germany. To this end, we analyze the effects of discretionary measures of active labor market policy in Germany in a spatially augmented regression framework. The central aims of our research were the following questions: What effects of different discretionary measures on observed labor market flows can be identified on the local level? Which discretionary measure is the most promising? And is there a connection between the individual local labor markets, and if so, does this make the task of finding a successful policy strategy even more difficult?

Regarding the first question, our empirical results suggest, on balance, that the specific policy strategy matters. Most importantly, there seems to be a sizeable substitution of non-participants by participants in employment promotion measures. By contrast, the intensity of expenditures is almost always statistically insignificant for the labor market transitions under study. In those cases where it is significant, its impact on the relative net-outflows is negative. In the majority of cases, the absolute level of expenditures does not have a statistically significant impact either, indicating that it is neither the absolute level of spending nor its intensity relative to the problem group which is decisive for successful employment promotion.

Regarding the second question, our results suggest that the most promising instrument out of the set of discretionary measures available to the German local labor offices are the further training measures and the incentive schemes, i.e. the wage subsidies. A rather detrimental effect is exhibited by public employment programs (*Arbeitsbeschaffungsmaßnahmen*) which display a statistically significant negative impact on the relative net-outflows from unemployment in East Germany. From an analytical point of view, the recent employment promotion reform creates a particularly favorable, quasi-experimental situation regarding the regional variation of the policy mix. This circumstance lends particular credence to our results.

Finally, regarding the third question, we were able to pin down a very stable spatial relationship. Irrespective of the chosen weighting matrix, the estimated spatial lag model explains the observed pattern of labor market transitions reasonably well. Since in the case at hand the unit of economic activity and the unit of measurement do in all likelihood not coincide, it seems safe to argue that a spatial filtering of the variables does indeed help to find a successful policy strategy at the level of the local labor offices. However, since there is no behavioral model behind our specification, we would hesitate to interpret this parameter as a local spill-over effect induced by some sort of co-operation between local agents. Finally, after controlling for a spatially lagged dependent variable, in almost all cases there does not remain a significant spatial structure in the errors of our model.

Clearly, from the vantage point of economic policy it is of prominent relevance to reveal the reasons for the success of some of the measures and the failure of others. However, given the limited data situation, especially regarding the local decision process on expenditures and the implementation of different individual measures, our analysis could only be indicative. Further research has to be conducted to get behind these processes. The potential of this research to provide answers to such questions will critically depend on the information available to researchers. In consequence, this means that there has to be a closer co-operation between the local decision units and independent researchers in order to improve upon the design and implementation of future employment policy.

References

ANSELIN, LUC (1988), *Spatial Econometrics: Methods and Models*. Dordrecht: Kluwer Academic Publishers.

ANSELIN, LUC and ANIL K. BERA (1998), Spatial Dependence in Linear Regression Models with an Introduction to Spatial Econometrics. In: ULLAH, AMAN and DAVID E. GILNS (EDS.), *Handbook of Applied Economic Statistics.* Statistics, Textbooks and Monographs, New York: Dekker.

ANSELIN, LUC and RAYMOND J.G.M. FLORAX (EDS.) (1995), *New Directions in Spatial Econometrics*. Berlin/Heidelberg: Springer.

BELLMANN, LUTZ and RICHARD JACKMAN (1996), The Impact of Labour Market Policy on Wages, Employment and Labour Market Mismatch. In: SCHMID, GÜNTHER, JACQUELINE O'REILLY and KLAUS SCHÖNMANN (EDS.), *International Handbook of Labour Market Policy and Evaluation*, Cheltenham: Edward Elgar, 725-746.

BLIEN, UWE (1998), Die regionale Mittelverteilung für die aktive Arbeitsmarktpolitik. Politikberatung des IAB für Zwecke der Maßnahmesteuerung. *Mitteilungen aus der Arbeitsmarkt- und Berufsforschung*, **31**, 674-689.

BÜTTNER, TIES and HEDWIG PREY (1998), Does Active Labor-Market Policy Affect Structural Unemployment? An Empirical Investigation for West German Regions, 1986 to 1993. *Zeitschrift fur Wirtschafts- und Sozialwissenschaften*, **118**, 389-413.

BUNDESANSTALT FÜR ARBEIT (1999A), Daten zu den Eingliederungsbilanzen 1998. *Sondernummer der Amtlichen Nachrichten der Bundesanstalt für Arbeit.* Nürnberg.

BUNDESANSTALT FÜR ARBEIT (1999B), *Geschäftsbericht 1998.* Nürnberg.

BUNDESANSTALT FÜR ARBEIT (2000A), Daten zu den Eingliederungsbilanzen 1999. *Sondernummer der Amtlichen Nachrichten der Bundesanstalt für Arbeit.* Nürnberg.

BUNDESANSTALT FÜR ARBEIT (2000B), *Geschäftsbericht 1999.* Nürnberg.

BUNDESANSTALT FÜR ARBEIT (2001A), Daten zu den Eingliederungsbilanzen 2000. *Sondernummer der Amtlichen Nachrichten der Bundesanstalt für Arbeit.* Nürnberg.

BUNDESANSTALT FÜR ARBEIT (2001B), *Geschäftsbericht 2000.* Nürnberg.

CALMFORS, LARS (1994), Active Labour Market Policy and Unemployment – A Framework for the Analysis of Crucial Design Features. *OECD Labour Market and Social Policy Occasional Papers No. 15*, OECD-Paris.

CALMFORS, LARS and PER SKEDINGER (1995), Does Active Labour Market Policy Increase Employment? Theoretical Considerations and Some Empirical Evidence From Sweden. *Oxford Review of Economic Policy*, **11**, 91-109.

FERTIG, MICHAEL and CHRISTOPH M. SCHMIDT (2000), Discretionary Measures of Active Labor Market Policy - The German Employment Promotion Reform in Perspective. *Schmollers Jahrbuch*, **120**, 537-565.

FITZENBERGER, BERND and HEDWIG PREY (2000), Evaluating Public Sector Sponsored Training in Eastern Germany. *Oxford Economic Papers*, **52**, 497-520.

FRIEDLANDER, DANIEL, DAVID H. GREENBERG, and PHILIP K. ROBINS (1997), Evaluating Government Training Programs for the Economically Disadvantaged. *Journal of Economic Literature* **35**, 1809-1855.

HAGEN, TOBIAS and VIKTOR STEINER (2001), Von der Finanzierung der Arbeitslosigkeit zur Förderung von Arbeit. *ZEW Wirtschaftsanalysen Bd. 51*, Baden-Baden.

HECKMAN, JAMES J., ROBERT J. LALONDE, and JEFFREY A. SMITH (1999), The Economics and Econometrics of Active Labor Market Programs. In: ASHENFELTER, ORLEY and DAVID CARD (eds.) *Handbook of Labor Economics*, vol. III, Amsterdam et al.: North-Holland, 1865-2097.

HÜBLER, OLAF (1997), Evaluation beschäftigungspolitischer Maßnahmen in Ostdeutschland. *Jahrbücher für Nationalökonomie und Statistik* **126**, 21-44.

HUJER, R., K.O. MAURER and M. WELLNER (1997), Estimating the Effect of Training on Unemployment Duration in West Germany – A Discrete Hazard-Rate Model with Instrumental Variables. *Frankfurter Volkswirtschaftliche Diskussionsbeiträge*, University of Frankfurt.

KLUVE, JOCHEN and CHRISTOPH M. SCHMIDT (2000), Can Training and Financial Incentives Combat European Unemployment? A Survey of Recent Evaluation Studies. *Economic Policy* (forthcoming).

KRAFT, CORNELIUS (1998), An Evaluation of Active and Passive Labour Market Policy. *Applied Economics*, **30**, 783-793.

LAYARD, RICHARD, RICHARD JACKMAN and STEPHEN NICKELL (1991), *Unemployment*, Oxford: Oxford University Press.

LECHNER, MICHAEL (1998), Training the East German Labor Force – Microeconometric Evaluations of Continuous Vocational Training After Unification. Physica-Verlag: Heidelberg.

LECHNER, MICHAEL (1999), Earnings and Employment Effects of Continuous Off-the-Job Training in East-Germany After Unification. *Journal of Business and Economics Statistics* **17**, 74-90.

RUBIN, DONALD B. (1974), Estimating Causal Effects of Treatments in Randomized and Nonrandomized Studies. *Journal of Educational Psychology* **66**, 688-701.

Rubin, Donald B. (1986), Which Ifs Have Causal Answers? *Journal of the American Statistical Association* **81**, 961-962.

Schmid, Günther, Hugh Mosley, Christoph Hilbert and Holger Schütz (1999), Zur Effektivität aktiver Arbeitsmarktpolitik – Erfahrungen aus einer intergrierten Wirkungs- und Implementationsstudie. *Mitteilungen aus der Arbeitsmarkt- und Berufsforschung*, **32**, 547-563.

Schmidt, Christoph M. (1999), Knowing What Works. The Case for Rigorous Program Evaluation. *IZA Discussion Paper No. 77*, IZA-Bonn.

Sozialgesetzbuch III - Arbeitsförderung vom 24.03.1997, *Beck-Texte, 6. Auflage.*

Appendix

Table A1: Discretionary Measures of ALMP in Germany

INSTRUMENT	DESCRIPTION
Measures promoting the qualification of the unemployed	
Training measures	Short-term measures (duration: two to eight weeks), e.g. job application or computer application courses. The employment offices cover cost like the course fees, as well as travel and child care expenditures. The payment of unemployment benefits or assistance continues for the duration of these courses.
Promotion of vocational training	Employment offices can grant an allowance for vocational training or courses trying to prepare young unemployed without any or with low qualifications for work. Allowances (partly) cover cost-of-living expenses, course fees, working clothes, travel expenditures, and child care, for workers unable to cover the cost themselves.
Promotion of further training	Allowances granted cover the same expenditures as those of the vocational training grant. Further training measures can be granted to individuals who are unemployed and have no formal job qualification or to employed individuals who can claim convincingly that their lacking job qualification puts them at a considerable risk of dismissal.
Incentives for employers and self-employed	
Integration subsidies	Wage subsidies which can be granted to employers hiring unemployed workers in order to compensate these employers for the presumably lower productivity of the unemployed. Conditional on certain eligibility criteria, a wage subsidy can be granted for usually 12 months covering 30-50% of the subsidizable wage (including employers contribution to social security payments). The duration and/or the amount of the integration subsidies can be increased considerably in cases where the productivity of a person is extremely low.
Self-employment start-up and recruitment subsidies	People becoming self-employed in order to end or avoid unemployment can claim transitional benefit payments to secure a minimum standard of living during the first *six* months of self-employed work. The amount paid is the same as the unemployment benefit or assistance the individual has received or could have claimed, including social insurance contributions. In addition to this start-up subsidy employers who have been running a new business for not more than two years can claim a wage subsidy if they hire an unemployed person.

28

Table A1 cont'd: Discretionary Measures of ALMP in Germany

INSTRUMENT	DESCRIPTION
Measures directly providing jobs	
Job creation schemes	Support for direct job creation programs if the work done within these schemes is of public interest, e.g. projects aiming at the maintenance of public gardens. In addition, it is necessary that this work would either be delayed substantially into the future or not be performed at all without the support of the employment agencies. To be entitled for attending these schemes individuals usually have to be unemployed for more than one year and must also be entitled to some form of income-replacement benefit. Exceptions from this rule are possible under certain circumstances especially for the eastern part of Germany. The maximum duration is usually 12 months, but an extension up to 36 months is possible for special cases as well.
Structural adjustment measures	special form of job creation schemes, originally introduced for the eastern part of Germany, which were extended to Germany as a whole in 1998. Such measures include e.g. environmental conservation and social services projects. The main difference to the usual job creation schemes is the fact that employers receive a *lump sum* subsidy equal to the average amount of unemployment benefit or assistance saved by the specific measure. The duration of the subsidy is usually up to 36 months but can be extended to 48 months
Other measures	
Other measures	This comprises mainly guidance and placement assistance covering cost for application material, travelling to job interviews and, if necessary, accommodation. In addition, unemployed individuals taking up a job offer can claim *mobility benefits* covering, among others, the cost for work clothes and equipment, daily cost of travel between home and work, and part of the cost for running a second household, if necessary. Finally, all measures aiming at disabled individuals are counted in this category.

Table A2: Description of Variables

Variable	Description

<table>
<tbody>
<tr><td colspan="2" align="center">DEPENDENT VARIABLES</td></tr>
</tbody>
</table>

Relative Outflows	Yearly transitions from registered unemployment into regular employment relative to the sum of dependent employees and unemployed
Relative Inflows	Yearly transitions from regular employment into registered unemployment relative to the sum of dependent employees and unemployed
Relative Net-Outflows	Difference between *Relative Outflows* and *Relative Inflows*

<table>
<tbody>
<tr><td colspan="2" align="center">EXPLANATORY VARIABLES</td></tr>
</tbody>
</table>

Policy Instruments:

Expenditures	Total expenditures for discretionary measures of active labor market policy
Intensity Measure	Expenditures for discretionary measures per unemployed (in Mio. DM)
Share Training Measures	Expenditure share of training measures
Share Further Training	Expenditure share of further training measures
Share Integration Subsidies	Expenditure share of integration subsidies
Share Self-Employment Subsidies	Expenditure share of self-employment start-up and recruitment subsidies
Share ABM	Expenditure share of job creation schemes
Share SAM	Expenditure share of structural adjustment schemes
Human Capital Share	Expenditure share of all measures promoting the qualification of the unemployed
Incentives Share	Expenditure share of all incentive measures for employers and self-employed
Job Creation Share	Expenditure share of job creation and structural adjust schemes

Control Variables:

East Germany	Indicator variable taking the value of 1 if the local labor office belongs to the eastern part of Germany and 0 otherwise
Cycle Proxy	Relative difference of short-time workers between 1998 (1999) and 1999 (2000)
Job Openings	Relative difference of job openings between 1998 (1999) and 1999 (2000)
Industry Proxy	Share of dependent employees in traditional industries relative to total dependent employees

Number of observations: 175; various data sources. The unit of observation are the local labor offices in Germany. All policy instruments as well as the *Industry Proxy* are also interacted with a dummy variable taking the value of 1 if a local labor office belongs to the eastern part of Germany and 0 otherwise. For a more detailed description of the respective policy measures see **Section 2**.

Table A3: Descriptive Statistics – First Wave

VARIABLE	MEAN	STANDARD-DEVIATION	MIN	MAX
DEPENDENT VARIABLES				
Relative Outflows 1999	0.098	0.027	0.040	0.164
Relative Inflows 1999	0.127	0.052	0.046	0.279
Relative Net-Outflows 1999	-0.028	0.032	-0.150	0.004
EXPLANATORY VARIABLES				
Policy Instruments				
Expenditures 1998 (Mio. DM)	154.485	159.809	23.516	742.221
Intensity Measure 1998	0.005	0.003	0.003	0.012
Share Training Measures 1998	0.021	0.009	0.003	0.057
Share Further Training 1998	0.515	0.099	0.251	0.683
Share Integration Subsidies 1998	0.060	0.027	0.010	0.135
Share Self-Employment Subsidies 1998	0.072	0.031	0.015	0.150
Share ABM 1998	0.164	0.112	0.019	0.469
Share SAM 1998	0.041	0.067	0	0.236
Human Capital Share 1998	0.535	0.101	0.263	0.701
Incentives Share 1998	0.132	0.055	0.027	0.237
Job Creation Share 1998	0.205	0.170	0.022	0.638
Policy Instruments – East Germany				
Expenditures 1998 (Mio. DM)	84.324	184.115	0	742.221
Intensity Measure 1998	0.002	0.004	0	0.012
Share Training Measures 1998	0.003	0.007	0	0.036
Share Further Training 1998	0.068	0.141	0	0.454
Share Integration Subsidies 1998	0.004	0.008	0	0.032
Share Self-Employment Subsidies 1998	0.005	0.010	0	0.056
Share ABM 1998	0.067	0.139	0	0.469
Share SAM 1998	0.034	0.070	0	0.236
Human Capital Share 1998	0.071	0.147	0	0.464
Incentives Share 1998	0.008	0.018	0	0.074
Job Creation Share 1998	0.101	0.207	0	0.638
Control Variables				
Cycle Proxy	-0.003	0.004	-0.033	0.007
Job Openings	0.086	0.273	-0.428	1.343
Industry Proxy	0.056	0.033	0.009	0.229
Industry Proxy East	0.014	0.030	0	0.106

Number of observations: 175; various data sources, see text and Appendix **Table A1** for details.

Table A4: Descriptive Statistics – Second Wave

Variable	Mean	Standard-deviation	Min	Max
Dependent Variables				
Relative Outflows 2000	0.098	0.028	0.038	0.164
Relative Inflows 2000	0.123	0.051	0.042	0.256
Relative Net-Outflows 2000	-0.025	0.027	-0.115	0.006
Explanatory Variables				
Policy Instruments				
Expenditures 1999 (Mio. DM)	171.853	170.676	30.190	875.445
Intensity Measure 1999	0.006	0.003	0.004	0.016
Share Training Measures 1999	0.020	0.010	0.003	0.060
Share Further Training 1999	0.486	0.095	0.237	0.647
Share Integration Subsidies 1999	0.083	0.037	0.013	0.193
Share Self-Employment Subsidies 1999	0.074	0.030	0.016	0.147
Share ABM 1999	0.159	0.108	0.021	0.476
Share SAM 1999	0.042	0.070	0	0.280
Human Capital Share 1999	0.506	0.097	0.248	0.657
Incentives Share 1999	0.157	0.062	0.030	0.290
Job Creation Share 1999	0.201	0.168	0.023	0.623
Policy Instruments – East Germany				
Expenditures 1999 (Mio. DM)	90.429	198.140	0	875.445
Intensity Measure 1999	0.002	0.005	0	0.0016
Share Training Measures 1999	0.003	0.006	0	0.035
Share Further Training 1999	0.063	0.131	0	0.478
Share Integration Subsidies 1999	0.005	0.011	0	0.045
Share Self-Employment Subsidies 1999	0.005	0.012	0	0.067
Share ABM 1999	0.065	0.135	0	0.476
Share SAM 1999	0.035	0.073	0	0.280
Human Capital Share 1999	0.066	0.137	0	0.486
Incentives Share 1999	0.011	0.023	0	0.102
Job Creation Share 1999	0.100	0.205	0	0.623
Control Variables				
Cycle Proxy	0.239	0.339	-1.309	0.859
Job Openings	0.051	0.185	-1.036	0.419
Industry Proxy	0.054	0.031	0.009	0.215
Industry Proxy East	0.013	0.029	0	0.110

Number of observations: 175; various data sources, see text and Appendix
Table A1 for details. t-values in parenthesis.

IZA Discussion Papers

No.	Author(s)	Title	Area	Date
562	J. T. Addison W. S. Siebert	Changes in Collective Bargaining in the U.K.	3	08/02
563	T. Dunne L. Foster J. Haltiwanger K. R. Troske	Wage and Productivity Dispersion in U.S. Manufacturing: The Role of Computer Investment	5	08/02
564	J. D. Brown J. S. Earle	The Reallocation of Workers and Jobs in Russian Industry: New Evidence on Measures and Determinants	4	09/02
565	H. L. van Kranenburg F. C. Palm G. A. Pfann	Survival in a Concentrating Industry: The Case of Daily Newspapers in the Netherlands	3	09/02
566	R. Hujer M. Caliendo D. Radić	Skill Biased Technological and Organizational Change: Estimating a Mixed Simultaneous Equation Model Using the IAB Establishment Panel	5	09/02
567	H. Lehmann K. Phillips J. Wadsworth	The Incidence and Cost of Job Loss in a Transition Economy: Displaced Workers in Estonia, 1989-1999	4	09/02
568	H. O. Duleep D. J. Dowhan	Revisiting the Family Investment Model with Longitudinal Data: The Earnings Growth of Immigrant and U.S.-Born Women	1	09/02
569	J. Haltiwanger M. Vodopivec	Worker Flows, Job Flows and Firm Wage Policies: An Analysis of Slovenia	4	09/02
570	T. K. Bauer S. Bender	Technological Change, Organizational Change, and Job Turnover	1	09/02
571	O. Ashenfelter M. Greenstone	Using Mandated Speed Limits to Measure the Value of a Statistical Life	5	09/02
572	C. Y. Co I. N. Gang M.-S. Yun	Self-Employment and Wage Earning: Hungary During Transition	4	09/02
573	R. T. Riphahn O. Serfling	Item Non-Response on Income and Wealth Questions	6	09/02
574	R. Kuhn S. Stillman	Understanding Interhousehold Transfers in a Transition Economy: Evidence from Russia	4	09/02
575	H. Antecol D. A. Cobb-Clark S. J. Trejo	Human Capital and Earnings of Female Immigrants to Australia, Canada, and the United States	5	09/02
576	M. Fertig C. M. Schmidt H. Schneider	Active Labor Market Policy in Germany – Is There a Successful Policy Strategy?	6	09/02

An updated list of IZA Discussion Papers is available on the center's homepage www.iza.org.