

Assessing Active Labor Market Policies in Transition Countries: Their Rationale and Evaluation

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Structure of Lecture

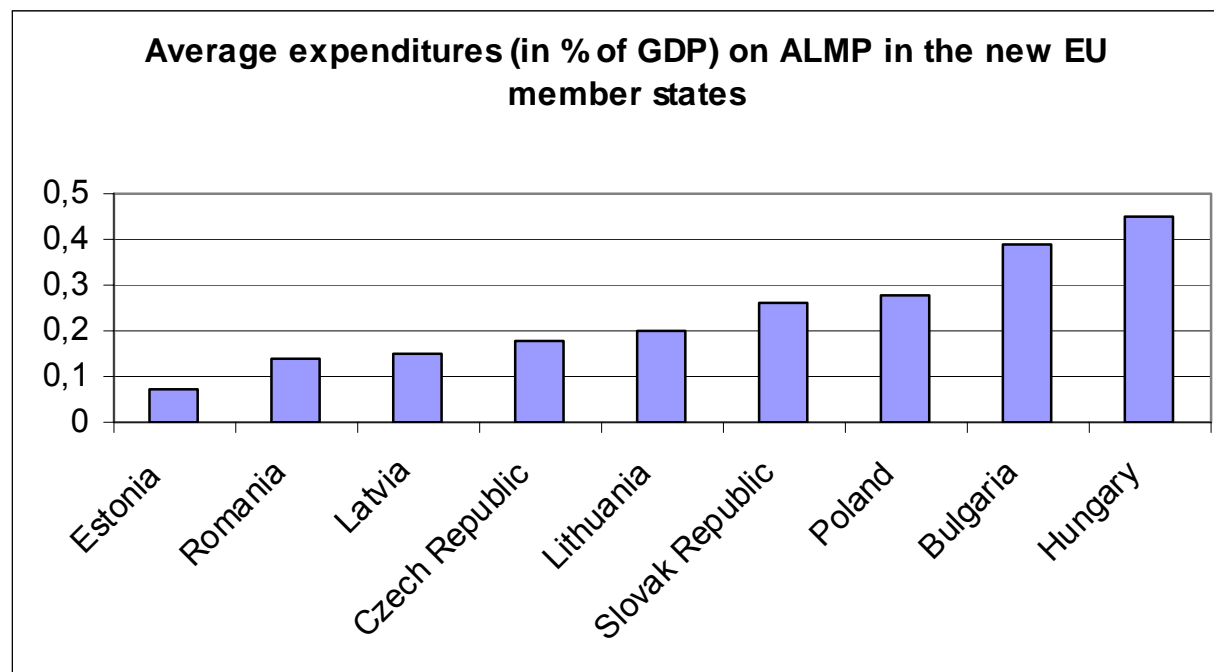
- Active Labor Market Policies (ALMP): types of programs, scope, their rationale and issue of applicability;
- A brief history of the evaluation of ALMP in transition countries:
 - Macroeconometric studies;
 - Microeconometric studies;
- Some recent microeconometric studies on transition countries and their value added;
- Own study: Kluge, Lehmann and Schmidt (2008).

ALMP in OECD: archetypical programs and generic purpose

Type of program	Generic purpose
a. Public employment services (“job brokerage”) and administration	Improve matching efficiency
b. Labor market training	Attenuate skill mismatch; human capital accumulation
c. Employment incentives / Start-up incentives	Improve job matching process; increase labor demand
d. Direct job creation / Public sector employment	Increase labor demand; prevent human capital deterioration
e. Youth measures (training and/or subsidized jobs)	See b, c and d.
f. Measures for the disabled	Integrate discriminated persons into the labor market

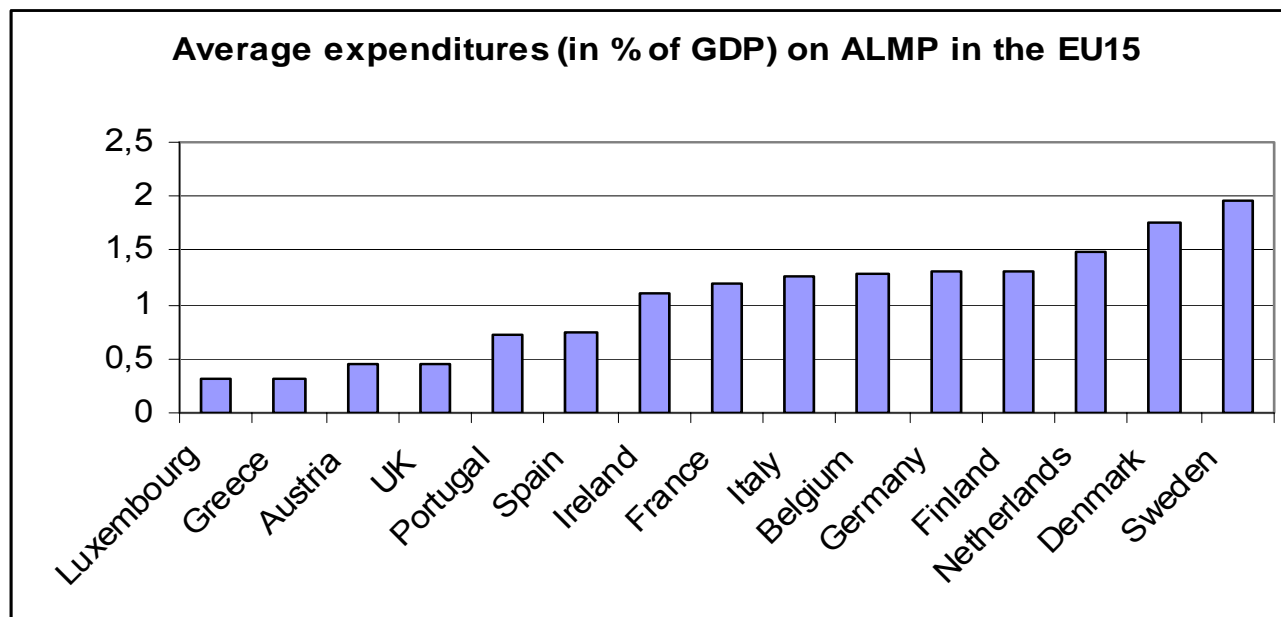
Scope of ALMP: expenditures in new EU states

Figure 1:



Scope of ALMP: expenditures in EU-15 states

Figure 2:



ALMP in OECD countries

- ALMP in mature OECD countries like *b*, *c*, *d* and *e* seek to integrate marginal social groups or to re-integrate marginalized groups into the labor market.
- large majority of the labor force are continuously employed, but certain groups with relatively loose labor market attachment and/or very low human capital experience great difficulties in finding permanent employment
- the human capital of such "marginal" persons can be increased and their labor market attachment strengthened thus boosting the probability of employment or re-employment.

ALMP in OECD countries, “business cycle perspective”

Integration or re-integration of "problem persons" \uparrow effective labor supply, *ceteris paribus* \downarrow equilibrium wage;

Relates also to persons who have lost their job because of structural shocks or a deep recession (long-term unemployed).

ALMP which successfully increase the effective labor supply, during the expansionary phase of the business cycle, can contribute to the dampening of inflationary pressures and/or help in the solution of partial hysteresis of unemployment due to long-term unemployment.

General questions asked when evaluating ALMP measures

- Did the schemes target the groups identified as those having problems leaving unemployment?
- Did participation in a scheme enhance individuals' productivity, expressed in higher wages?
- Did the measure increase the average re-employment probability of participants?
- Have distortive effects, e.g. substitution - dead weight- displacement of output- and fiscal substitution effects, been minimized?

Applicability of ALMP measures developed in another context to transition countries

- *Historically*, ALMP in mature OECD countries like *b*, *c*, *d* and *e* seek to integrate marginal social groups or to re-integrate marginalized groups into the labor market.
- The large majority of the labor force are continuously employed.

Applicability of ALMP to transition countries

Labor markets in transition economies are in general characterized by:

- *a low demand for labor*
- *a stagnant unemployment pool*
- *rising long-term unemployment*
- *tougher competition for jobs among the unemployed than in most mature OECD countries*
- *Strong labor market attachment of a significant component of the unemployed (and even of the long-term unemployed)*
- *Large stock of accumulated human capital among the unemployed (and even the long-term unemployed)*

Applicability of ALMP to transition countries – example training

- Unemployed in CEE countries have potential for adapting relatively quickly to new tasks. They may, therefore, be the typical target group for measures like further training and retraining.
- Targeting the “standard” target groups (unskilled, low-educated, older workers, etc.) for further training and retraining might not be efficient – see stylized facts.
- In actual fact, in most transition countries we observe “creaming effects.”

ALMP and regional mismatch in transition

ALMP measures like b, c, and d are means of reducing mismatch by skill but also by region.

1. Taking the workers to the work:

FOCUS: helping the unemployed move to regions with better employment opportunities.

- Further training and retraining schemes
- direct interventions by governments (e.g. subsidizing public housing in high opportunity regions; government contributions to moving expenses.)

ALMP and regional mismatch in transition, cont.

2. "bringing work to the workers",

FOCUS: *creating jobs in high unemployment regions.*

- investment grants or subsidies to firms if they locate or undertake new capital investment in such regions.

In transition countries both strands of regional policies are problematic because:

- High barriers to worker mobility
- Investment policies are prohibitively expensive (especially as most governments in transition economies have budgetary problems)

An example of ALMP in a CEE country:

Polish ALMP measures in some detail

Polish ALMP measures

- Public Works;
- Intervention Works;
- Further training and re-training;
- Start-up loans.

Public Works

Local authorities employ those with *uninterrupted unemployment spells of more than six months* on public projects.

Purpose of projects:

- expand or maintain the public infrastructure (latter more common);
- environmental protection or amelioration.

The duration of these jobs cannot exceed six months and it is the expressed intention of the government to rotate them among the long-term unemployed.

people employed on public works might receive wages that are above the minimum wage.

Intervention Works (wage/job subsidies)

Firms (private or state-owned) can approach the local employment council and ask for subsidized *additional* work places.

In order to qualify for this scheme the firm has to have more than 10 employees and must not have released more than 10 percent of its workforce in the last six months.

Subsidized employment is not to exceed six months. The state pays a wage subsidy to the firm equal to the level of benefits and often firms or local employment councils pay additional wages to these workers.

Intervention works, aims

Intervention works have two aims.

1. by hiring an unemployed person on a subsidized job he or she can enhance or regain human capital that might enable him or her to subsequently enter a regular job.
2. entrepreneurs can learn about the productivity of a worker without paying him or her a full wage.

Intervention works, structure of incentives

- Incentives to the firm are structured in such a way that ensures the longest possible employment relationship. The longer a previously unemployed worker is kept in an intervention works slot the higher the cumulative subsidy going to the firm will be.
- Workers have an incentive to hold on to such a subsidized job for at least 6 months as, in the 1990s at least, an employment relationship of this length entitled workers to another round of 12 months benefit receipt.

Further training and re-training

Private and public agencies are paid a fee to train some of the unemployed who in turn are paid an allowance (115 percent of benefits) while on the course.

Main objectives: solve skill mismatch and augment human capital.

By increasing the human capital of the unemployed in skills that employers in the expanding sectors want, the chances of the unemployed to enter a regular job are meant to increase and bottlenecks in the supply of certain skilled workers are meant to be eliminated.

Start-up Loans: set-up

Subsidies (in the form of credits) to the unemployed given by LLOs to start-up their own businesses.

If after 24 months of founding a business it is still operative, 50 percent of the loan will be written off. Employment offices seem to examine applicants well as many of the started businesses presumably survive for more than two years.

Start-up Loans: small displacement of output effects

- Most of the started businesses are in the services sector which at least in early transition was underdeveloped in Poland.



- Displacement of output effects which, e.g. in the case of the British Enterprise Allowance Scheme, were estimated to be approximately 50 percent should, therefore, be relatively small.

Evaluation of ALMP:

- **Macroeconometric approach**
- **Microeconometric approach**

Macroeconometric evaluation of ALMP

- Flow analysis of administrative macro data - aim: establish the overall effect of an ALMP measure on outflows from unemployment to employment (sensible when measure is “large”).
- Potential strong point of such an approach: take account of dead weight loss and substitution effects.

Macroeconometric evaluation of ALMP

- Heuristic model:

$$O = f(x_1; x_2), f_1 > 0, f_2 \leq 0 \text{ or } f_2 \geq 0$$

Working horse of this model: “augmented” matching function;

Data in industrialized countries: quarterly time series at national level (if stationary, little problems regarding estimation);

Haskel and Pissarides (1988), Layard et al. (1991), Lehmann (1993).

Macroeconometric approach, cont.

“Augmented” Matching Function

The "working horse" giving economic content to models of outflows from unemployment to employment is the matching function where in its simplest form unemployed job searchers are matched with vacant jobs.

In this context ALMP can be thought of as measures which facilitate this matching process.

When **ALMP are added** to the stock of unemployment and vacancies as factors potentially determining job matching **we speak of an "augmented" matching function**. The following briefly motivates one theoretical derivation of an estimable "augmented" matching function.

Macroeconometric approach, cont.

Short theoretical derivation of an estimable augmented matching function

$$H = f(V, \tau U), \quad f_1, f_2 > 0. \quad (1)$$

H is the number of unemployed being hired in non subsidized jobs in a given period; U and V are respectively the stock of registered unemployed and of notified vacancies, both measured at the beginning of the period; **τU is the search effective stock of the unemployed.**

Macroeconometric approach, cont.

- $\tau = c (1 + \alpha M),$
- with $M = \sum_{i=1}^{i=n} \beta_i E_i,$ and $\sum_i \beta_i = 1$ (2)
- τ is the **search effectiveness index**, c is an index of search effectiveness in absence of search-enhancing labor market schemes, and M is the weighted sum of the search-enhancing employment measures E

Macroeconometric approach, cont.

- Log-linearizing equation (1) and adding a constant term we get

$$\ln H = \ln \gamma_0 + \gamma_1 \ln V + \gamma_2 \ln(\tau U) \quad (3)$$

- $\ln(\tau U) = \ln \tau + \ln U$. But $\ln \tau = \ln [c(1 + \alpha M)]$. We know that, for small values of x , $\ln(1 + x) \approx x$.

⇒ For small values of αM the equation becomes

$$\ln H \approx \delta_0 + \delta_1 \ln V + \delta_2 (\ln U + \ln c) + \delta_3 M, \text{ where } \delta_3 = \alpha \gamma_2 \quad (4)$$

Macroeconometric evaluation of ALMP in transition countries

- Data used: regional panel data on outflows, vacancies and unemployment stocks, ALMP measures;
- Problems: quality of vacancy data, endogeneity of ALMP measures.
- OLS estimates can be biased upwards or downwards
- Nice example of instrumenting ALMP: Boeri (1997)

$$a_{it} = \alpha_0 + \alpha_1 u_{it-1} + \alpha_2 v_{it-1} + c_1 a_{it-1} + c_2 a_{it-2} + D_{it}'\theta + \gamma_1 \text{almp}_{it} + \gamma_2 \text{almp}_{it}^2 + \varepsilon_{it}$$

Boeri (1997) Table 4: Czech Republic

	c1	c2	gamma 1
Czech Republic (1993–1994)			
OLS	0.395	0.228	0.051
	<i>0.022*</i>	<i>0.024*</i>	<i>0.019*</i>
IV	0.347	0.160	0.209
	<i>0.051*</i>	<i>0.045*</i>	<i>0.060*</i>

Boeri (1997) Table 4: Poland – (1) outflows to all jobs; (2) outflows into non-subsidized jobs only

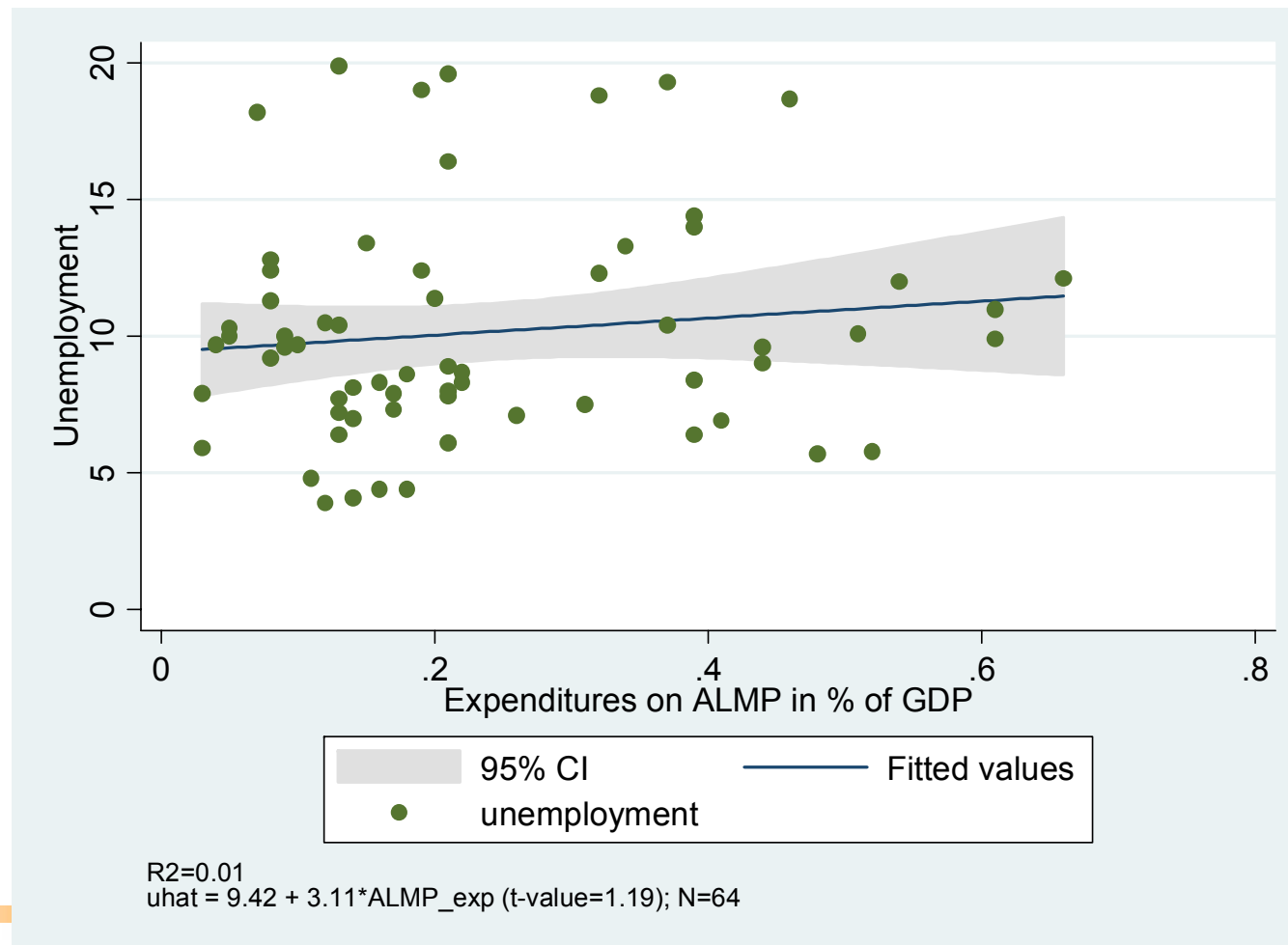
	c1	c2	gamma 1
Poland			
(1994–1995) ^c			
(1) OLS	0.287	0.093	0.339
	<i>0.045*</i>	<i>0.046*</i>	<i>0.042*</i>
(1) IV	0.300	0.125	0.194
	<i>0.055*</i>	<i>0.048*</i>	<i>0.036*</i>
(2) OLS	0.398	0.117	0.283
	<i>0.055*</i>	<i>0.055*</i>	<i>0.034*</i>
(2) IV	0.434	0.168	0.067
	<i>0.034*</i>	<i>0.031*</i>	<i>0.017*</i>

Macroeconometric evaluation of ALMP in transition countries

- This type of evaluation has fallen from grace – what are the reasons?
 - Too many loose ends with methodology;
 - Hard to tease out some correlation between any measure of ALMP and the unemployment at national level;
 - James Heckman has set the evaluation agenda (micro guy).

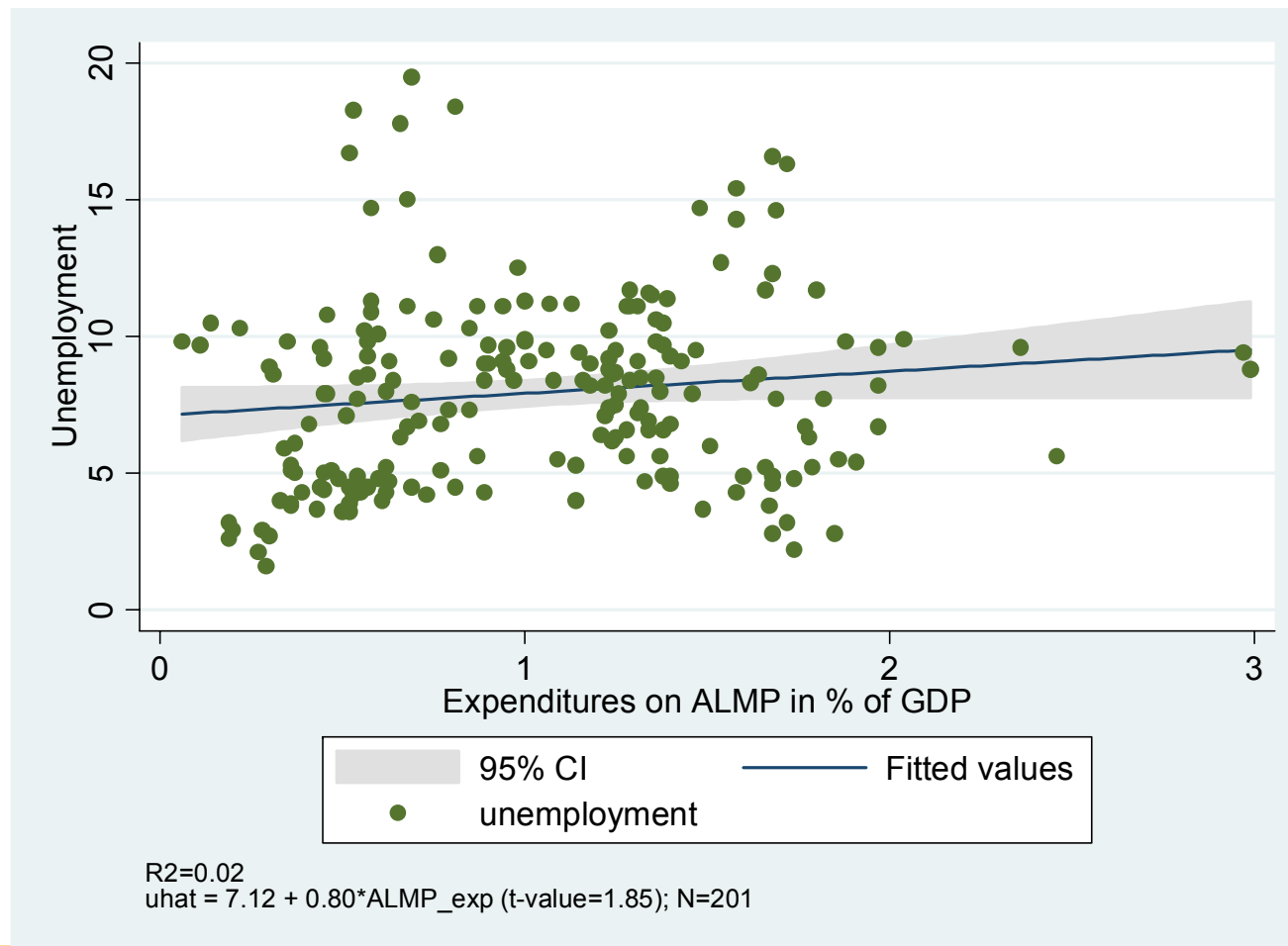
Expenditures on ALMP and unemployment rates: EU transition countries

Figure 3: Relation between unemployment rate and expenditures on ALMP, new EU Member States



Expenditures on ALMP and unemployment rates: EU-15 countries

Figure 4: Relation between unemployment rate and expenditures on ALMP, EU-15



Microeconomic studies on effectiveness of ALMP

This approach looks at post-treatment labor market outcomes, **mainly labor market status but sometimes also earnings**, of persons who have been on an ALMP scheme and compares them to those **hypothetical** labor market outcomes that would have occurred if the same persons had not participated.

→ problem of counterfactual

Rationale and Methods

- Rationale: how sensible given that I can't catch general equilibrium effects?
- Methods:
 - Hazard rate analysis/multinomial logit
 - Exact matching
 - Matching on the propensity score, i.e. on the probability to participate in a measure

Problem of counterfactual

Consider binary treatment D , treatment participation or not

$$Y = Y_0 \quad \text{if } D = 0,$$

$$Y = Y_1 \quad \text{if } D = 1,$$

Unit level effect $\Delta = Y_1 - Y_0$ is never directly observable

Problem of counterfactual

- Need measure that summarizes individual impacts appropriately:
- ATET = Average Treatment of the Treated

$$E(\Delta | D=1) = E(Y_1 - Y_0 | D=1) = E(Y_1 | D=1) - E(Y_0 | D=1)$$

- Not identified without random assignment!
- Most of the work is essentially on how to construct a control group such that

$$E(Y_0 | D=1) \approx E(Y_0 | D=0)$$

Some first generation microeconomic studies

- mainly based on hazard rate analysis
- Some of these studies in Boeri and Lehmann (1999) symposium:
 - Terrell and Sorm (1999) on job brokerage in CR;
 - Vodopivec (1999) on public works in Slovenia;
 - Lubyova and van Ours (1999) on training and wage subsidies in Slovakia;
 - Kluge, Lehmann and Schmidt (1999) on training, wage subsidies and public works in Poland;
- Puhani (1998) on same Polish ALMP also worth mentioning.

Example: Effect of Public Employment Scheme in Slovenia (Vodopivec, 1999)

- $EXIT_{ni}$ = individual's labor market status after spending n months searching for a job.
- For those who participated in the public works program, the start of the searching time was set to zero at the moment when they finished their participation in the public works program. For those who did not participate in public works, the start of the searching time coincided with the registration at the employment office.
- The variable $EXIT_{ni}$ - three values:
0, if after n months individual still unemployed; 1, if after n months individual employed; and 2, if after n months individual inactive (out of labor force).

Vodopivec (1999)

Model individual's labor force status after n months of job search as:

$$\text{EXIT}_{ni} = X'_i \beta_1 + \text{PW}_i \beta_2 + \varepsilon_i \quad (1)$$

where X_i - a vector of personal characteristics (gender, ethnicity, and age) and human capital characteristics (education, work experience, health condition), PW_i is a dummy representing past participation in public works ($\text{PW}_i = 1$ if an individual participated in public works, 0 otherwise), and β_1 is a parameter vector and β_2 is parameter (scalar) to be estimated.

By assumption, $E(\varepsilon_i) = 0$ and $\text{Var}(\varepsilon_i) = \sigma_\varepsilon^2$.

Vodopivec (1999)

Sample selection problem and possible bias of coefficients

We might get biased estimates of the impact of public works on chances to find a job if there is a problem of selection.

Individuals opting to participate in public works may differ from those opting not to in many aspects, some of which may be unobservable. If these unobservable characteristics also affect job prospects individual, the equation (1) is misspecified and the estimated coefficient β_2 biased.

This bias can be negative or positive!

Vodopivec (1999)

Remedy to self-selection problem

Heckman two-stage procedure:

In the first stage, equation of participation in public works is estimated, with regressors derived from the process and circumstances described above. The outcome of that stage is a new variable (the inverse Mills ratio, λ), to be used as one of the regressors in the second stage -- that is, in the estimation of equation of exit from unemployment.

Vodopivec (1999)

Participation equation:

$$PW_i = X_i \gamma_1 + Z_i \gamma_2 + u_i \quad (2)$$

where X_i : personal and human capital variables,

Z_i : factors capturing criteria for selection for public works (number of dependents, for example).

This estimation produces a new variable - inverse Mills ratio

$\lambda_i = \phi(X_i \gamma_1 + Z_i \gamma_2) / \Phi(X_i \gamma_1 + Z_i \gamma_2)$, for participants of the public works,

$\lambda_i = - \phi(X_i \gamma_1 + Z_i \gamma_2) / (1 - \Phi(X_i \gamma_1 + Z_i \gamma_2))$, for non-participants

Vodopivec

Assuming joint normality for distribution (ε_i, u_i) with the correlation ρ , for participants,

$$E(\text{EXIT}_i | \text{PW}_i = 1) = X_i\beta_1 + \beta_2 + E(\varepsilon_i | \text{PW}_i = 1) = X_i\beta_1 + \beta_2 + \rho\sigma_\varepsilon \left\{ \frac{\phi(X_i\gamma_1 + Z_i\gamma_2)}{\Phi(X_i\gamma_1 + Z_i\gamma_2)} \right\},$$

and for non-participants:

$$E(\text{EXIT}_i | \text{PW}_i = 0) = X_i\beta_1 + E(\varepsilon_i | \text{PW}_i = 0) = X_i\beta_1 + \rho\sigma_\varepsilon \left\{ -\frac{\phi(X_i\gamma_1 + Z_i\gamma_2)}{(1 - \Phi(X_i\gamma_1 + Z_i\gamma_2))} \right\},$$

Vodopivec (1999)

- The difference in expected value of EXIT between the participants and non-participants is thus
- $E(\text{EXIT}_i | \text{PW}_i = 1) - E(\text{EXIT}_i | \text{PW}_i = 0) = \beta_2$
 $+ \rho\sigma_\varepsilon \{ \phi(X_i \gamma_1 + Z_i \gamma_2) / \Phi(X_i \gamma_1 + Z_i \gamma_2) (1 - \Phi(X_i \gamma_1 + Z_i \gamma_2)) \}$ (3)
- By including the selectivity correction term in the estimation of equation (1), the bias presented by the second term of the right-hand-side of equation (3) is purged from the estimates.
- Programs selection rules produce a variable to be used as an instrument identifying the selection equation.

Vodopivec (1999)

- Results:
 - Immediately following participation in Slovenian public works scheme higher probability to find regular employment than non-participants;
 - This positive effect dissipates as participants stay on in unemployment.
- Main problem: bi-variate normal distribution of the two errors is just assumed



Some second generation microeconomic studies (no studies on East Germany and Russia included)

- Micklewright and Nagy (2005) on job search monitoring and unemployment in Hungary;
 - 1st randomized experiment to my knowledge;
 - UB recipients randomly assigned to intense and very frequent interviewing on job search or to minimal interviewing;
 - Econometrics can be kept simple but treatment effect is identified;
 - Result: only women age 30 or over had shorter duration of unemployment after treatment; o.w. no treatment effect.

Some second generation microeconomic studies

- Rodriguez-Planas and Benus (2006) evaluate 4 Romanian ALMP measures using propensity score matching; these measures are: Job brokerage, self-employment assistance, training and re-retraining and public employment;
- Their large and rich data set allows the construction of a convincing control group since Conditional Independence Assumption (CIA) is credible:

Rodriguez-Planas and Benus (2006): CIA

- Conditional Independence Assumption (CIA): consider a vector of covariates $X \Rightarrow$ identifying assumption: assignment mechanism D is independent of potential outcomes Y_0, Y_1 conditional on X (see Rubin 1974, 1977).
- Given “unconfoundedness” (Imbens 2004), i.e. selection on observables:

$$\begin{aligned} E(\Delta|X, D=1) &= E(Y_1 | X, D=1) - E(Y_0 | X, D=1) \\ &= E(Y_1 | X, D=1) - E(Y_0 | X, D=0) \end{aligned}$$

Propensity score matching

- Popular matching technique since it circumvents “curse of dimensionality” of matching on \mathbf{x} vector;
- Propensity score is the (estimated) probability of participating in a scheme, $P(\mathbf{x})$;
- Rosenbaum and Rubin (1983): instead of conditioning on \mathbf{x} , it is sufficient to condition on $P(\mathbf{x})$, a scalar, for “unconfoundedness” to hold;
- Rodriguez-Planas and Benus (2006) include many variables that affect participation and labor market outcomes in their $P(\mathbf{x})$ basing the inclusion on taking carefully recourse to economic theory.

Rodriguez-Planas and Benus (2006): results

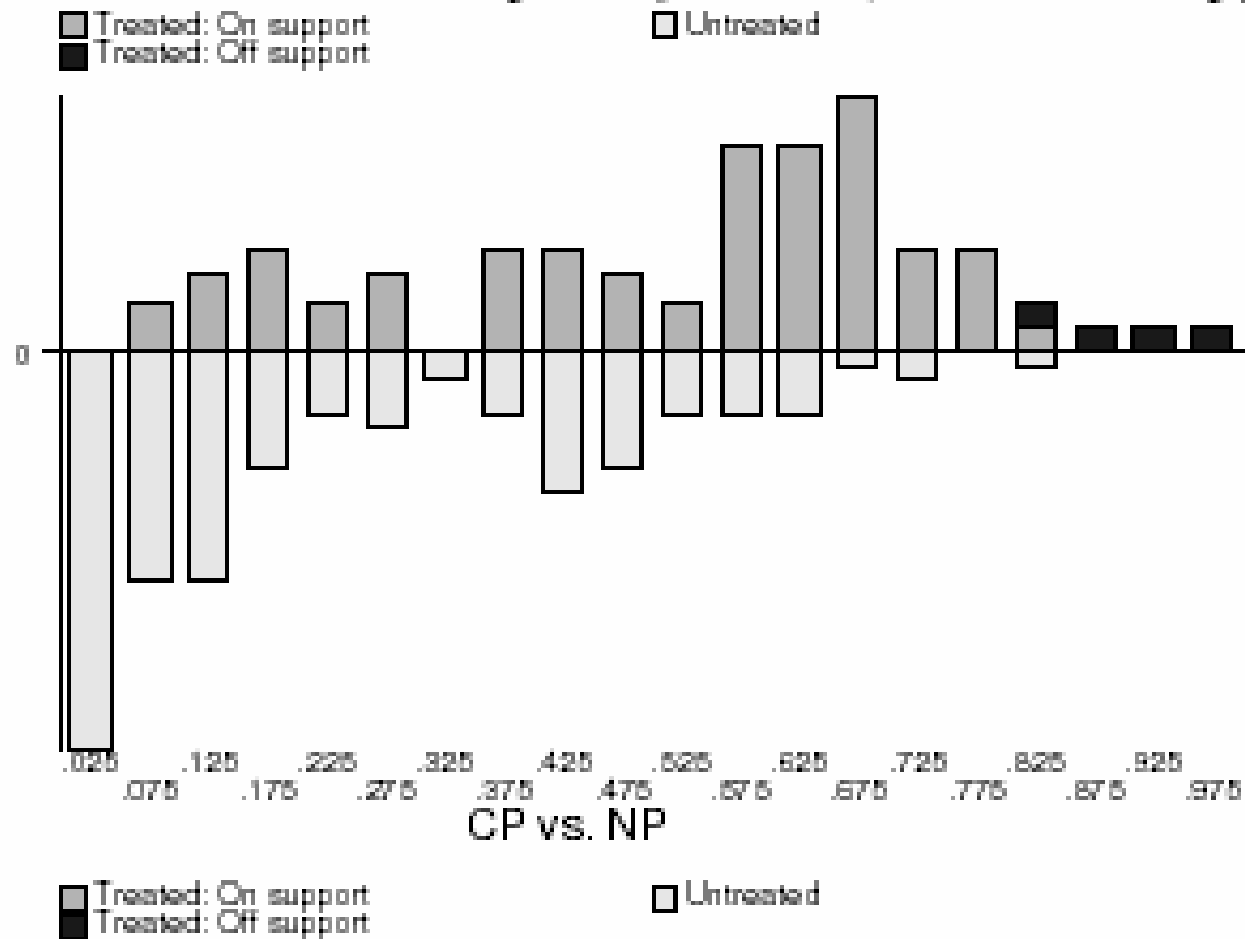
- Job brokerage, self-employment assistance and training and re-retraining improve employment prospects and monthly earnings; the public employment measure does not;
- “Back-of-the-envelope“ cost-benefit calculations show large net benefits for first 3 programs.

Some second generation microeconomic studies

- Bonin and Rinne (2007) evaluate the “Beautiful Serbia” program, comprising vocational training and/or temporary employment in construction;
- Study uses propensity score matching;
- Main innovation: looks not only at “objective” labor market outcomes but at “subjective” well-being;
- Main result: program ineffective as far as labor market outcomes concerned, but improves subjective measures (*social contacts, health status, family income situation, personal qualifications and skills, chances to find job*).
- Follow-up would be interesting here...

Bonin and Rinne (2006): demonstration of common support of covariates of treated and controls with $P(x)$

Figure 1: Distribution of Propensity Scores, Common Support.



Some second generation microeconomic studies

- Van Ours (2004) looks at “lock-in effect” of subsidized jobs in Slovakia, taking advantage of a “natural experiment” – extension of Publicly Useful Jobs (PUJ) from 6 to 9 and then 12 months, while Socially Purposeful Jobs (SPJ) retain their duration of 24 months.
- Two countervailing forces as far as the effect of subsidized jobs on gaining regular employment: (+) signal of higher willingness to work/higher productivity and (-) with length of subsidized job fall in job search intensity (i.e. lock-in effect);
- Result: increase in duration of PUJ lowers transition into regular jobs (increased lock-in).

Own Study

Disentangling Treatment Effects of Active Labor Market Policies: The Role of Labor Force Status Sequences

Jochen Kluve
Hartmut Lehmann
Christoph M. Schmidt

Background: Polish labor market

Measures of ALMP to combat U and LTU:

- Provision of human capital: Further **training** and re-training
- Wage subsidies: **intervention works**
- Public works
- Loans to set up own business

Note:

- To participate need to be registered with labor office.
- for wage subsidies and public works:
>=6 months employment, benefit receipt eligibility restored

Data and Methods

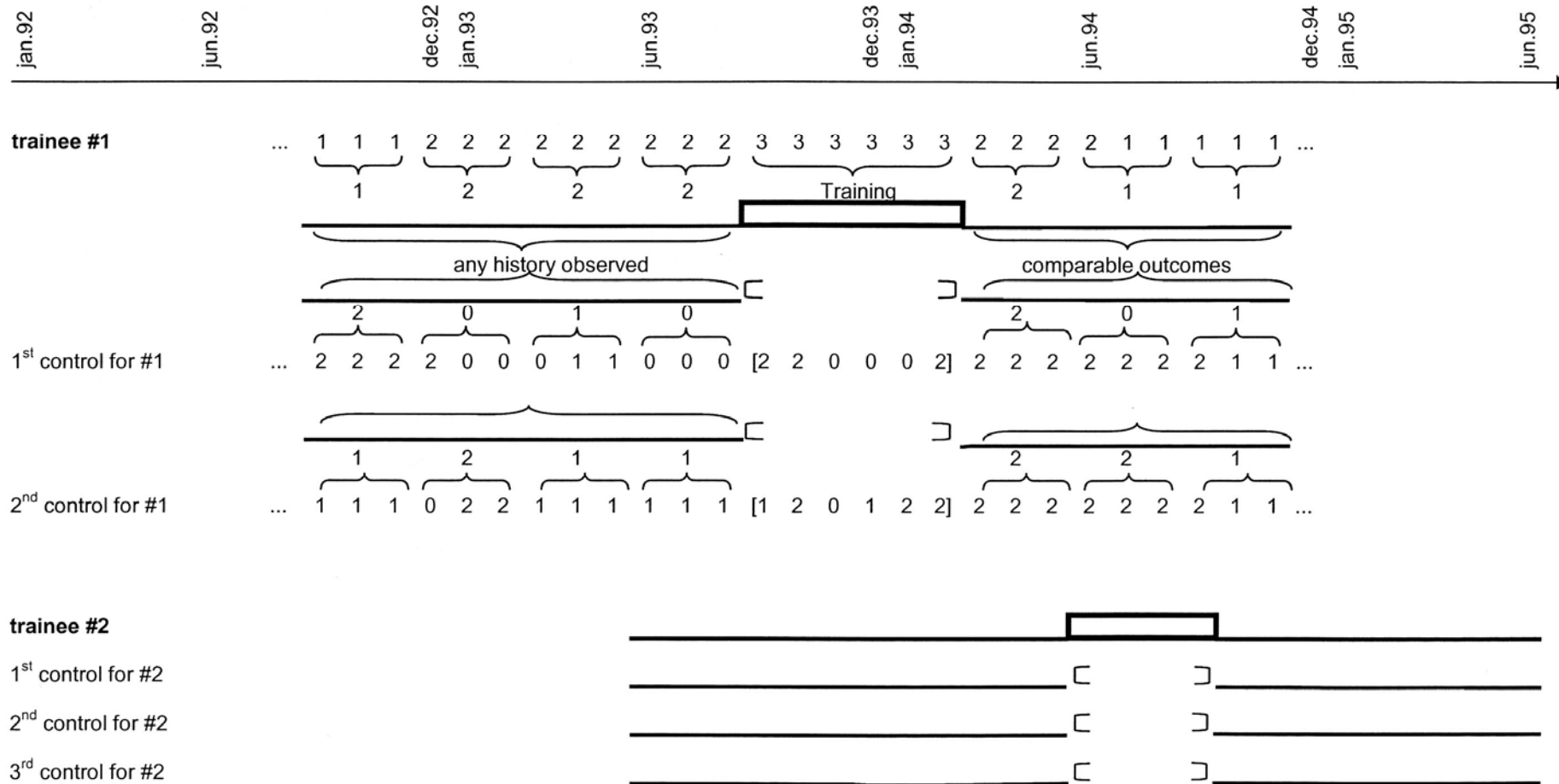
Data: "Polish Labour Force Survey" PLFS

- collected quarterly
- rotating panel
- started in May 1992

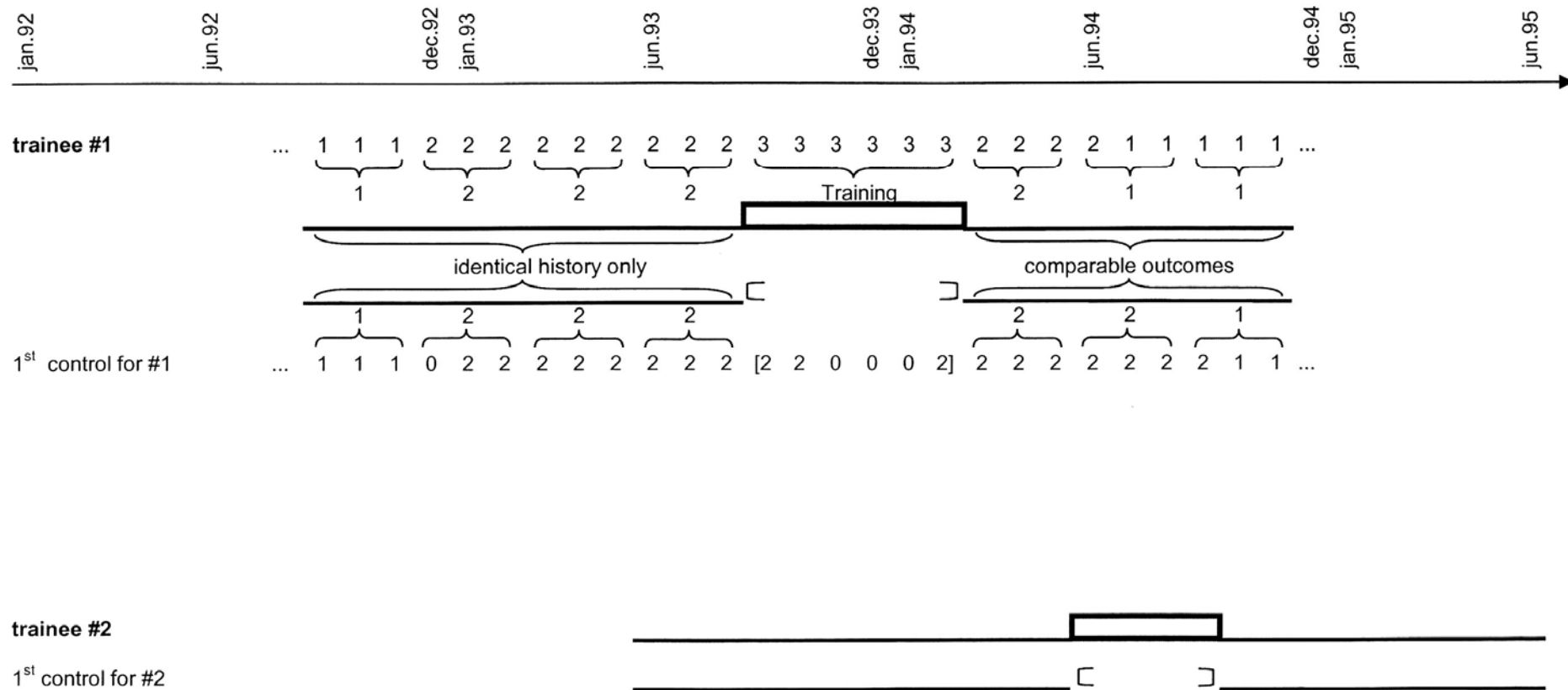
18th wave (August 1996): Monthly information on individual labor market histories, January '92 – August '96 (56 months)

- Condensation into quarterly sequences
- Elimination of individuals with "too early" (before January '93) or "too late" (after November '95) treatment participation
- Labor market outcomes: "employed = 1", "unemployed = 2", "not in the labor force = 0", and "treatment participation=3"

Matching using a "moving window" (sample A)



Matching over identical individual pre-treatment labor market histories using a "moving window" (sample B)



Analyzing Matched Samples

Sample Composition:

- For each of the two treatments, consider 2 matched samples;
- Increasing requirements on covariates;
- Focus on role of LM histories;
- Why? Recent literature (e.g. Heckman and Smith 1999, 2004) emphasizes correlation of outcome before and after intervention, and stresses role of LM dynamics (“LF status dynamics”);
- Employment histories (employment-non-employment):
Card and Sullivan (1988);
- “Ashenfelter's dip”.

Analyzing Matched Samples

We use all records with at least one spell of unemployment in the sample period

Sample A: A comparison unit is matched to a treated unit, if his or her labor market history is observed without substantial gaps for 12 months preceding the start of treatment **and** for 9 months succeeding the end of treatment, and if he or she is identical in observable covariates age, gender, education, marital status, and region.

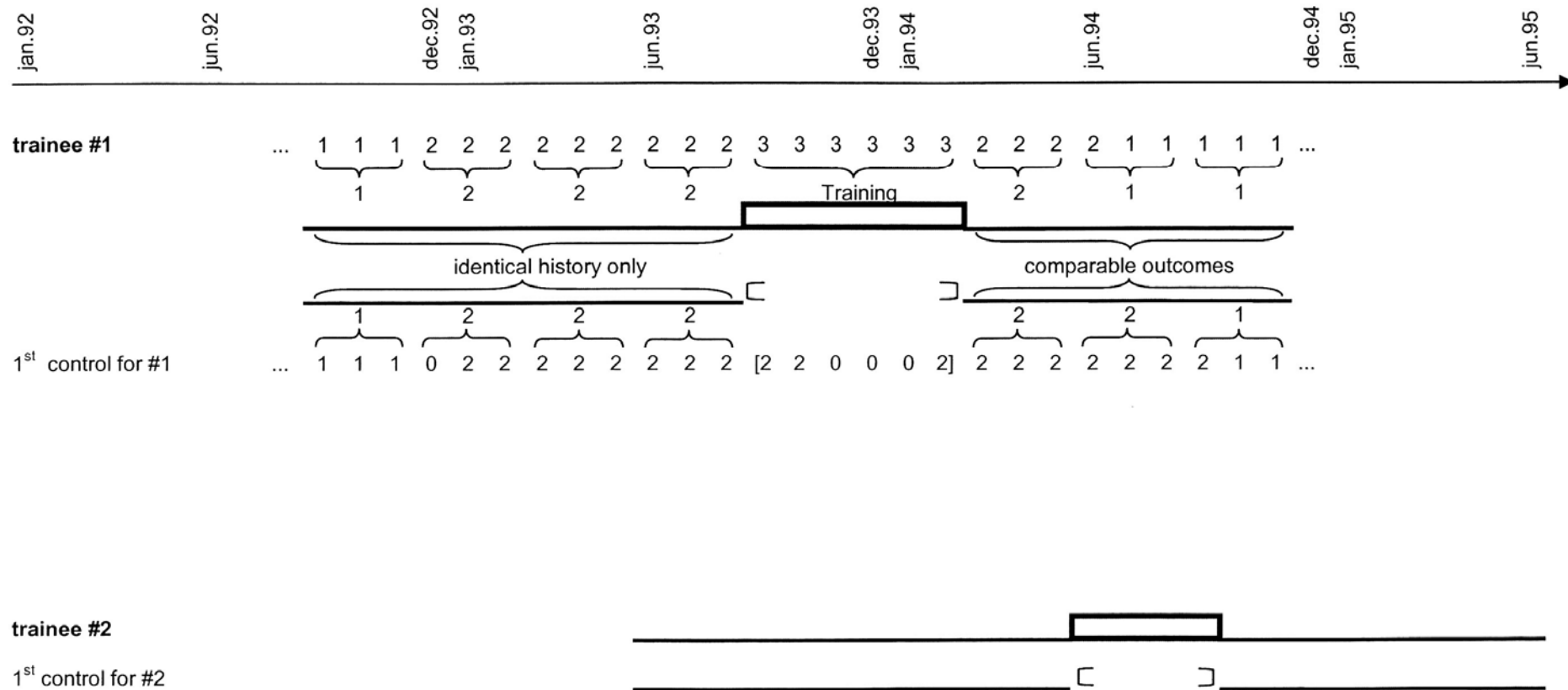
Sample B: A comparison unit is matched to a treated unit, if the requirements for sample (A) are met, and if he or she displays an **identical** 4-quarter (12-month) pre-treatment labor market history at the exact same point in time as the treated unit

Analyzing Matched Samples

The timing of interventions:

- For comparability, timing structure same for all samples (12+x+9)
- Sequences have to be complete
- Information which LM history only used for sample B
- Monthly information condensed into quarterly sequences of LF status: 0=inactive, 1=employed, 2=unemployed
- Duration of treatment variable for individual matches:
- Pre-treatment history ends at beginning of treatment (month "start")
- Post-treatment outcomes start at the end of treatment (month "stop")

Matching over identical individual pre-treatment labor market histories using a "moving window" (sample B)



Analyzing Matched Samples

Individual pre-treatment histories:

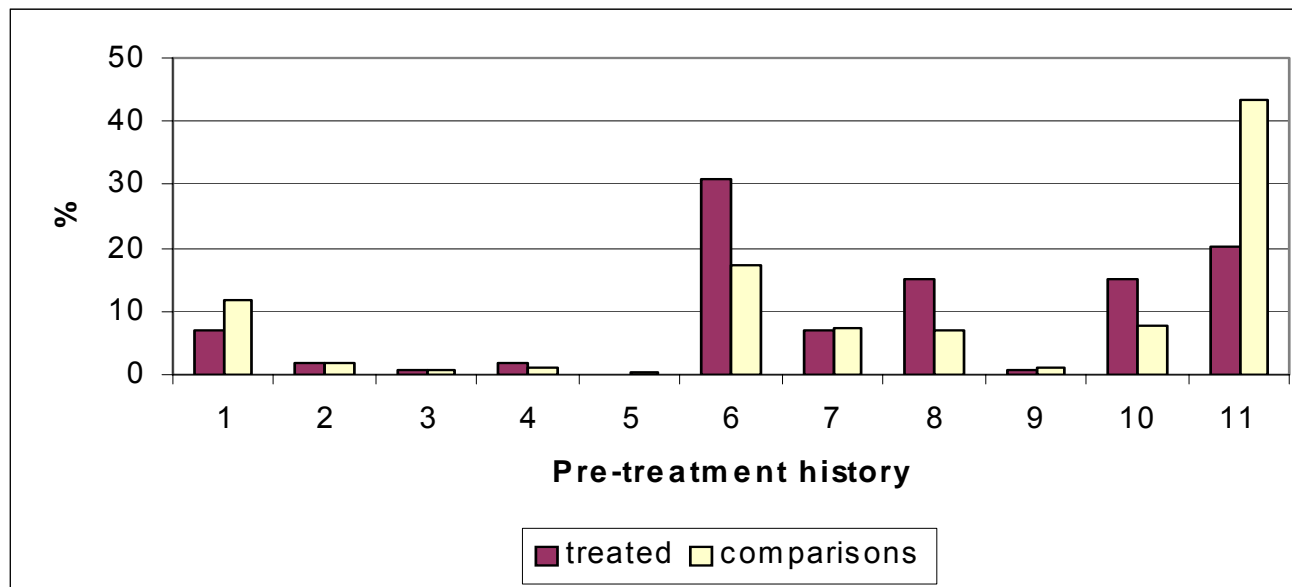
12-month pre-treatment history can be summarized in overall 3^4 , i.e. 81 quarterly sequences (from "0000" to "2222")

For illustration condensed into 11 coarse categories:

- "not active" (many 0s, category 1=0000)
- "unemployed" (many 2s, category 6=2222)
- "employed" (many 1s, category 11=1111)

Analyzing Matched Samples

Figure 5. Distribution of pre-treatment labor market histories – Training sample (A)

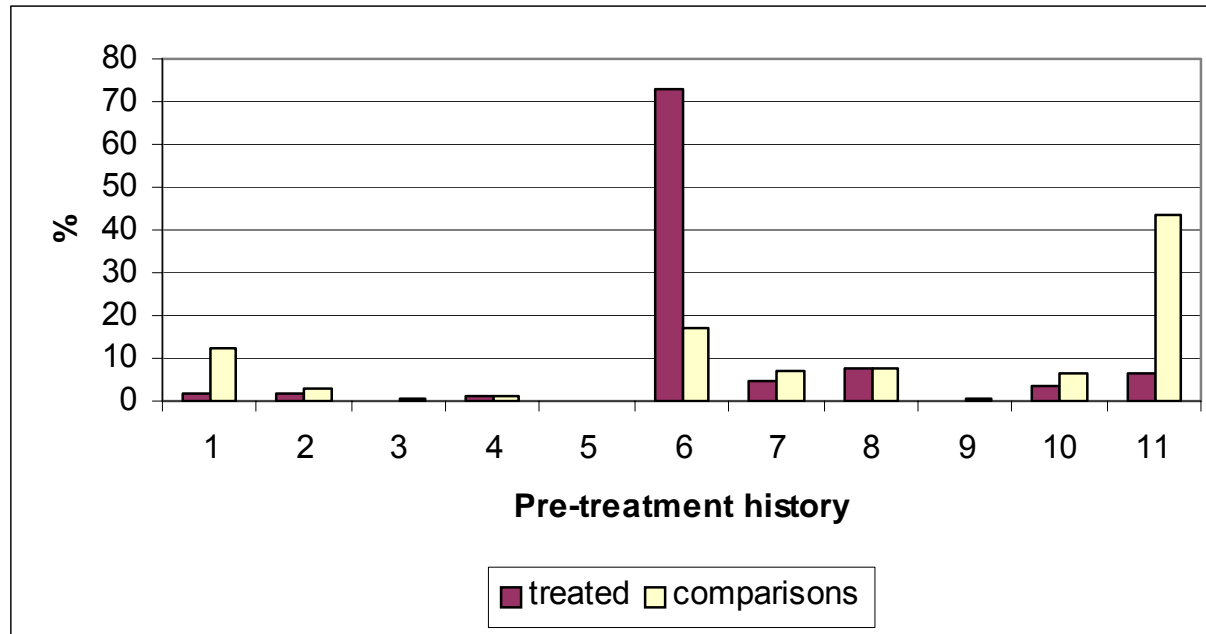


The 3^4 possible labor force status sequences are classified into 11 categories

- Sample A: strong deviation between treated and matched comparison units
- comparisons in sample A for training are "too successful"
- Matching on covariates does not help much in balancing LF status sequences

Analyzing Matched Samples

Figure 6. Distribution of pre-treatment labor market histories –IW sample (A)



The 3^4 possible labor force status sequences are classified into 11 categories

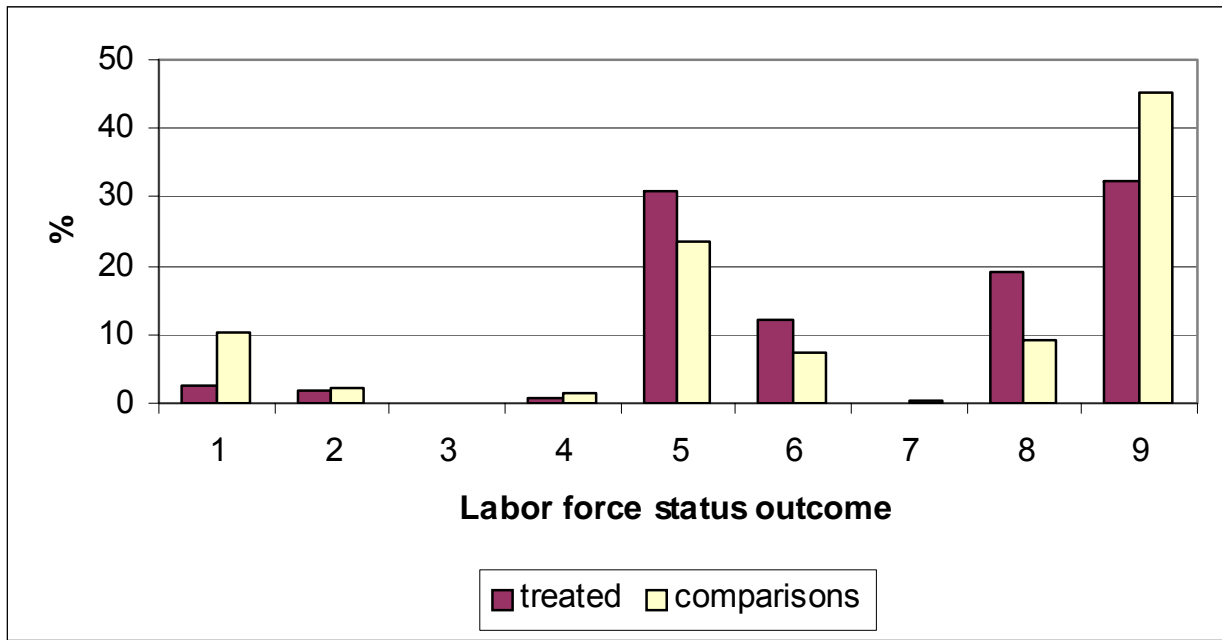
- Sample A: very strong deviation between treated and matched comparison units
- comparisons in sample A for IW are far "too successful"
- Matching on covariates does not help much in balancing LF status sequences

Empirical Results

Distribution of LF states after treatment:

- Accordingly, the 9 months succeeding treatment can be summarized in overall 3^3 , i.e. 27 quarterly states ("000" to "222") and 9 coarse categories:
- "inactive": many 0s, category 1=000
- "unemployed": many 2s, category 5=222
- "employed": many 1s, category 9=111

Figure 7. Distribution of post-treatment labor market sequences – Training Sample (A)

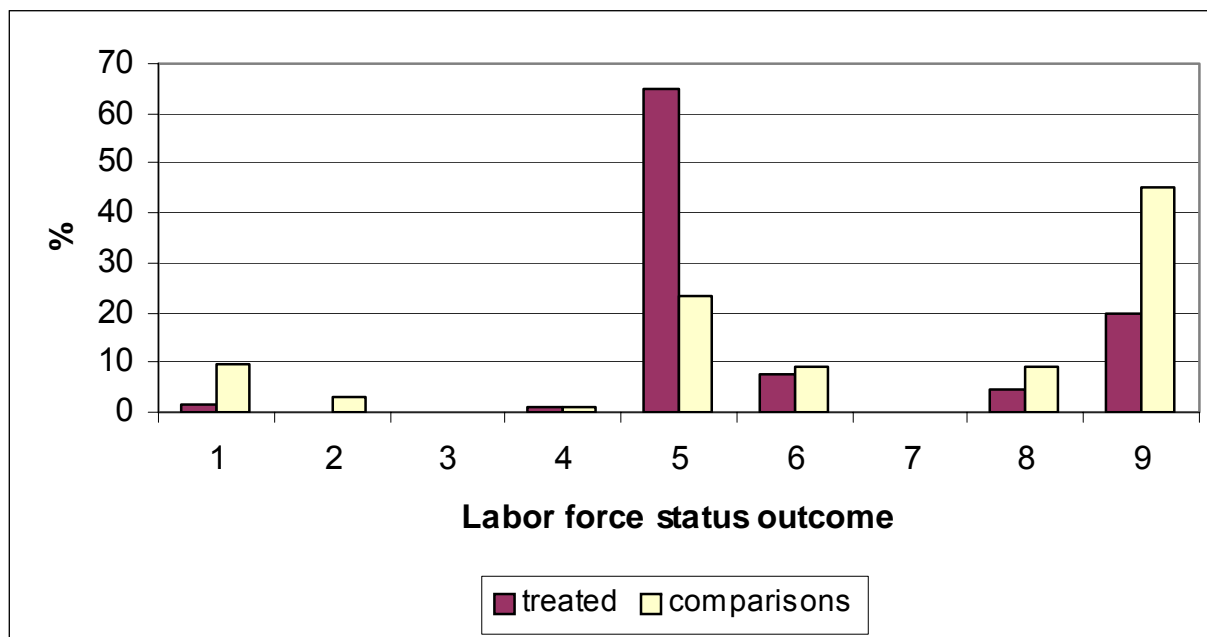


Sample (B)

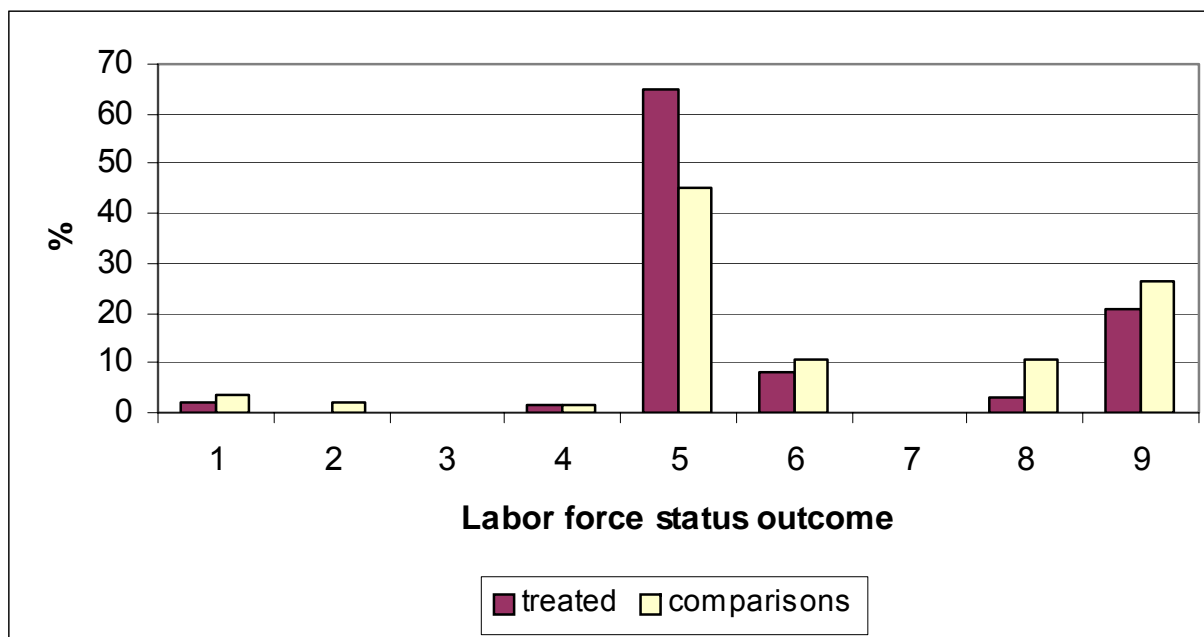
Sample (B)



Figure 6. Distribution of post-treatment labor market sequences – Intervention Works
Sample (A)



Sample (B)



Empirical Results

- loss of treated observations while moving from **A** to **B** does not substantially affect distribution of success after treatment
- without consideration of pre-treatment histories in **A** the matched comparison units are, on average, „too successful“
- among treatment participants, the „more successful“ are on average in „training“, not in „intervention works“

Empirical Results

- For intervention works the "unemployed" sequences dominate the picture for all samples.
- Comparison units in **A** are, on average, quite successful, but not so in **B**.
- A similar, albeit not so pronounced picture emerges for training:
- in **A** the "employed" sequences dominate the picture among comparisons, while "unemployed" sequences are more prevalent among treated
- this order reverses with sample **B** as comparison.

Empirical Results

ATET (sample B) is weighted average of pre-treatment history-specific effects: *intervention works*

job history	treated units			comparison units			effect ^b	std.err.
	N	rate ^a	std.err.	N	rate	std.err.		
0000	5	0.333	0.189	6	0.400	0.219	-0.067	0.289
0002	1	0.000	0.000	1	0.667	0.471	-0.667	0.471
1111	16	0.813	0.098	19	0.729	0.111	0.084	0.148
1112	5	0.467	0.202	6	0.167	0.167	0.300	0.262
1122	6	0.222	0.150	6	0.333	0.192	-0.111	0.244
1222	4	0.500	0.250	4	0.833	0.186	-0.333	0.312
2000	1	1.000	0.000	1	0.000	0.000	1.000	0.000
2111	1	1.000	0.000	1	1.000	0.000	0.000	0.000
2211	4	0.167	0.144	4	0.667	0.236	-0.500	0.276
2221	1	0.000	0.000	1	0.333	0.471	-0.333	0.471
2222	168	0.183	0.027	191	0.333	0.036	-0.150	0.045
total^c	212			240			-0.126	0.040

Table 5. Average post-treatment employment rates – Training

	treated units	comparison units	effect	std.error
Sample (A)	114	983	-.048	.049
Sample (B)	87	111	.138	.059
Sample (B) stratified by labor force status history:				
"1111"	24	34	.071	.115
"2222"	32	43	-.077	.103
Raw effect (i): No covariates	121	6751	-.027	.046
Raw effect (ii): No moving window	121	6309	-.040	.045

Table 6. Average post-treatment employment rates – Intervention Works

	treated units	comparison units	effect	std.error
Sample (A)	244	1354	-.291	.031
Sample (B)	212	240	-.126	.040
Sample (B) stratified by labor force status history:				
"1111"	16	19	.084	.148
"2222"	168	191	-.150	.045
Raw effect (i): No covariates	275	6757	-.285	.026
Raw effect (ii): No moving window	275	6322	-.312	.030
Additional covariate: benefit receipt				
Sample (A)	242	1152	-.208	.033
Sample (B)	149	243	-.147	.037



Conclusions of Kluge, Lehmann and Schmidt (2008)

Analysis of LM interventions involves key problem of non-experimental construction of appropriate comparison situation;

Specific evaluation context here: rapidly changing macro conditions ↻ "moving window" ↻ treatment start / stop for non-participants;

Role of Labor Force status histories: contain indispensable information re/ selection and help reduce overt bias;

Results suggest training might be promising treatment for participants, while intervention works is not: "benefit churning";

Overall conclusions

- Necessary to take labor market conditions into account when applying ALMP of the OECD type to transition countries;
- Macroeconometric and microeconometric evaluations of ALMP are complementary tools;
- Given the budget situation of most transition countries, rigorous evaluation of ALMP by independent experts is important;
- Efficacy of policies show for the most part the following ranking (from best to worst):
 - Job brokerage
 - Retraining and further training
 - Wage and job subsidies
 - Direct public employment