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Jobs from Active Labour Market Policies and Their Effects on Slovak Unemployment

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JOBS FROM ACTIVE LABOUR MARKET POLICIES
AND THEIR EFFECTS ON SLOVAK UNEMPLOYMENT

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Abstract

The system of active labour market policies (ALMP) in the Slovak Republic consists to a large extent of the creation of socially purposeful and publicly useful jobs. These jobs are intended for unemployed workers to get them out of unemployment, give them additional work experience and get them to find a regular job more easily. So far, the effects of these types of jobs on the labour market position of unemployed workers have hardly been investigated. This paper makes attempt to measure these effects. We use data from various administrative files to describe the outflow from unemployment into regular jobs and into ALMP-jobs, and the outflow from ALMP-jobs to regular jobs. We investigate to what extent it is beneficial for unemployed workers who want a regular job to accept a temporary ALMP-job. We conclude that those workers who have a better position when it comes to finding regular jobs are also in a better position to find SPJ or PUJ. The jobs created by active labour market policies are complementary to the regular labour market rather than compensating for bad labour market characteristics.

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1. INTRODUCTION

Since the late 1980s Central and Eastern European countries have economies in transition. Their economies have changed rapidly to adjust the old centralised command system to a new competitive market economy. Along with this economic change the countries had to adjust their institutional structure. For the labour market this implied that the social security system had to be reformed substantially to cope with the new phenomenon of unemployment. Having to deal with a new system of unemployment benefits and social assistance schemes in a rapidly changing economic environment caused many transitional countries to adjust the system several times in the course of the 1990s. In addition to the passive labour market policies active labour market policies were introduced. These have been also reformed frequently.

So far, not a lot of research has been done on the effects of active labour market policies. The main purpose of this paper is to study these effects more closely. The paper focuses on active labour market policies in Slovakia, a small country in Central Europe which was created on 1 January 1993 after the split of the former Czechoslovakia. The population of Slovakia is about 5 million, out of that about 2 million are employed and 350 thousand are unemployed workers.

The paper is set up as follows. In section 2 we provide stylised facts about recent developments in Slovak unemployment and the system of active labour market policies. In section 3 we discuss our data. In section 4 we present our statistical model and in section 5 our estimation results. Section 6 concludes.

2. UNEMPLOYMENT AND ACTIVE LABOUR MARKET POLICIES

Like many other transitional countries, Slovakia underwent a sharp increase of unemployment at the initial stage of the transition. In the course of 1991 unemployment in Slovakia increased from practically zero to 400,000 persons which corresponded to the unemployment rates of about 12 %. Since then the authorities have been fighting with double-digit unemployment rate which did not decline, as was originally hoped, at the later stages of the transition when the restructuring of the economy should have been completed to a large extent. During the seven years of transition, the unemployment rate has been fluctuating between the levels of 12 to 15%. At the end of the first quarter of 1997 the rate was at 13.4 % and the trend was increasing again.

Slovak authorities have been very active in the field of institutional reforms at the labour market. The passive labour market policy underwent major reforms more often than in the other Central and Eastern Europe (CEE) countries. Unique was, for example, the loosening reform of unemployment insurance benefits in 1995 followed by some more relaxing steps. In 1997 the system was re-built again. Despite the fact that the aggregate level of unemployment proved to be slightly responsive to the unemployment insurance reforms (mostly after the tightening reform of 1992), the existing empirical research at the micro-level did not prove any substantial effects of the passive policies on the individual duration of unemployment. Lubyova and Van Ours (1997a) examined the effects of unemployment insurance (UI) reforms on the exit rates from unemployment. The tightening and loosening reforms of unemployment insurance did not influence individual re-employment probabilities very much. Instead, the alternative exit state - out of labour force - seemed to be more sensitive to the changes. In Lubyova and Van Ours (1997b) the authors looked at the possible disincentive effects on exits from unemployment provided by unemployment insurance and social assistance benefits. Although there were certain groups of unemployed identified for whom the potential labour income was comparable to the income from social assistance, the hazard function analysis based on micro-data from the Slovak LFS did not prove any significant disincentive effects. However, as the nature of LFS

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data did not allow to measure accurately the true individual replacement ratios, some proxies for the amount of social assistance received had to be used.

Simultaneously with the use of passive labour market measures the Slovak authorities were trying to implement active labour market policies (ALMP) extensively. ALMP were introduced in 1991 and gradually developed into a comprehensive system of more than 8 basic types of programmes. The last major re-organisation occurred in 1997. So far, none of the micro-analysis was dedicated to the evaluation of ALMP effectiveness. The existent research was focused mostly at the effects of ALMP spending on the overall outflow from unemployment. Burda and Lubyova (1995) examined the effectiveness of ALMP expenditures in the Czech and Slovak Republics. The elasticities of unemployment outflow with respect to ALMP expenditures were found to be positive and statistically significant, with the Slovak one being slightly higher than the Czech one. Similar results were obtained by Boeri and Burda (1996) for the Czech Republic in their study which also accounted for possible homogeneity in the matching function.

In the present paper we try to measure at the individual level the effects of subsidised job creation programmes on exits from unemployment. The programmes examined by us, known as socially purposeful jobs (SPJ) and publicly useful jobs (PUJ), form the major part of ALMP measures in Slovakia. The institutional set-up of the programmes is described in details in sections 2.3 and 2.4.

2.1 Labour market policies

The split-up of resources between the passive and active labour market policies can be observed from Table 1. It is obvious that the expenditures on benefits for unemployed were always prevailing over those on ALMP programmes. However, speaking strictly about PLMP expenditures, the benefits for unemployed should be divided into unemployment insurance benefits and social assistance benefits. The former are insurance-based, paid mostly to the unemployed with some prior work experience. The latter are income-tested, paid to those unemployed who are not eligible to the unemployment insurance or whose income falls below the minimum living standard. Social assistance benefits have been always financed from the state budget. They are not considered to be a part of PLMP. Unemployment insurance benefits form the major part of PLMP. Since 1994 the unemployment insurance benefits and ALMP programmes started to be financed from the insurance contributions paid mostly by employers and employees. Since the very same year 1994 the ALMP expenditures have been prevailing over the PLMP expenditures. This confirms that the Slovak authorities opted for an active approach in the struggle with unemployment. However, the main component of PLMP expenditures is the unemployment insurance payment which is complementary to the social assistance benefits: the social assistance benefits accommodate all the passive payments other than unemployment insurance. Therefore, the volume of PLMP expenditures depends on the legislation as some people can be shifted from unemployment insurance to social assistance benefits by changing the eligibility conditions. Therefore, the prevalence of ALMP over PLMP has to be interpreted with caution. The total volume of passive payments to the unemployed represented by the sum of the two mentioned benefits has been permanently larger than the expenditures on ALMP.

2.2 Active labour market policies in general

The main ALMP programmes introduced in 1991 were the following: SPJ, PUJ, retraining, subsidies for shorter working hours, sheltered workplaces for disabled and consulting. Later on, jobs for school-leavers were separated from SPJ as well as subsidies for self-employment. A

more detailed breakdown of ALMP expenditures is presented in Table 2. It is obvious that SPJ were the most important throughout the period, followed by PUJ and retraining.

Table 1   Expenditures on active and passive labour market policies (million Sk)

	Benefits for unemployed			ALMP
Year	Total	Social assistance	Unemployment insurance	Total
1992	3 237	1 526	1 711	3 813
1993	4 059	2 200	1 859	1 107
1994	5 534	3 824	1 710	1 882
1995	6 239	4 058	2 181	3 797
1996 (a)	6 706	4 084	2 622	3 891

Notes: (a) Preliminary estimate
Source: Ministry of Labour, Social Affairs and Family of SR

PUJ shares were higher at the beginning and at the end of the period. The increase of the PUJ share since 1995 was a consequence of a new strategy - massive subsidies to jobs in construction (mostly highways and water dams). Despite its high efficiency, retraining has been used modestly and the rest of the programmes occupied only a negligible share of total expenditures. In 1997 the structure of ALMP programmes was substantially reformed. The main changes included diversification of SPJ programmes (SPJ in general, self-employment, jobs for school-leavers, and special targeted programme for long-term unemployed, persons older than 50 years, parents after prolonged maternity leave, and those to be laid-off for organisational reasons). Three new programmes were introduced aiming at maintenance of existing jobs, support of entrepreneurs projects promising creation of new jobs, and design of such projects at the regional level.

Table 2   Expenditures on ALMP programmes (thousand Sk)

	1991	1992	1993	1994	1995	1996
Total expenditures	3 262 454	5 523 670	2 966 154	3 592 111	5 978 518	7 433 305
PLMP(a)	2 739 949	1 710 877	1 858 938	1 709 667	2 181 452	3 142 789
ALMP	522 505	3 812 793	1 107 216	1 882 444	3 797 066	4 290 516
of which: SPJ	54 %	75 %	68 %	81 %	71 %	53 %
PUJ	21 %	11 %	15 %	9 %	21 %	31 %
Retraining	12 %	8 %	11 %	6 %	4 %	5 %
Consulting	0.02 %	0.1 %	0.1 %	0.1 %	0.1 %	0.2 %
Shelter. workplaces	n.a.	0.6 %	1 %	1 %	3 %	2 %
School-leavers	n.a.	3 %	5 %	2 %	0.5 %	8 %
Short work. hours	3 %	3 %	0.7 %	0.4 %	0.1 %	0.01 %

Source: Ministry of Labour and Social Affairs of SR
Notes: (a) Including benefits in retraining

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2.3 Socially purposeful jobs

The socially purposeful jobs (SPJ) programme has been the most extensive one among Slovak ALMP measures both in terms of expenditures and participants. SPJ are subsidised jobs in private sector. The concept of SPJ and rules of administration have undergone numerous revisions as the authorities learned how to tailor the programmes to labour market conditions. In what follow we provide a brief summary of the programme development. Detailed chronological description can be found in Appendix 2.

Back in March 1991 a SPJ was considered to be every job created on the basis of agreement with labour office by an employer in production, business or other activities aimed at profit. In 1992 the profit-seeking requirement was eliminated and the requirement that the job had to be occupied by registered unemployed was introduced. The latter was partially relaxed in 1994 when the school-leavers, persons younger than 18 years and those who would be full-time self-employed under SPJ were allowed to participate without prior registration.

The main forms of support introduced in 1991 were subsidies, interest repayments and loans, later reduced to 2-years loans and subsidies. The upper limit for financial support per job was originally set at a 12-multiple of the average monthly unemployment benefit paid by the relevant labour office during the last calendar quarter, later averaged over the whole Slovak Republic. In 1992 the ceiling was set at 50 000 Sk, later raised to 60 000 and then to 200 000 Sk per job. The minimum duration of a SPJ was introduced in 1992 and set to 2-years period. In case of lay-off or quit, the job should be occupied by another registered unemployed within 30 days.

Numbers of created jobs and placed persons are depicted in Figure 1 which shows that the stocks were built up in the course of 1992 and stabilised afterwards. Inflows were subject to fluctuations depending on financing decisions. The generous spending before the end of 1992 resulted in a major inflow of almost 25 000 jobs. Another large inflow of about half that size occurred at the end of 1994.

Figure 1
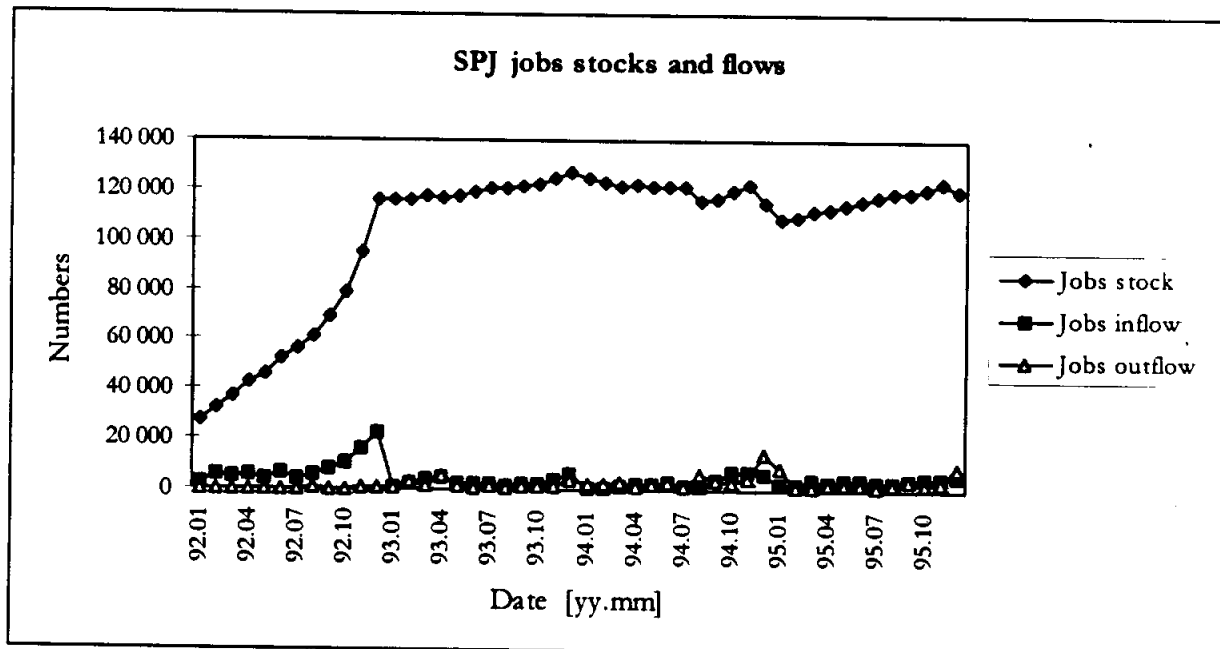
2.4 Publicly useful jobs

In terms of the number participants and expenditures the publicly useful jobs (PUJ) rank after SPJ. PUJ are public works (community works) designed mostly for lower qualified workers for a limited period of time. In 1991 PUJ were introduced as short-term employment opportunities created on the basis of agreement with labour office by an employer who is not in production, business or other activities aimed at profit (for example, organs of state administration, municipalities, local administration). The requirement for non-profit orientation of the employer was cancelled in 1992. State budgetary organisations and state contributory (partial budgetary) organisations were excluded from PUJ programmes in 1994.

The upper limit for financial support was originally set at the wage costs of the participant, later extended to cover also participant's social insurance contributions. The maximum duration of PUJ in 1991 was 6 months. Given that the participation renewed unemployment benefit entitlement, many unemployed were shifting between SPJ and open unemployment. Therefore, the maximum duration of SPJ was raised to 9 months in 1994 and to 12 months in 1995.

Stocks and flows of jobs and participants in the programme are presented at Figure 2. It is immediately obvious that the stocks have reached merely one sixth of those of SPJ. The stocks were strongly built up after two major inflows of about the same size which occurred in the financing boom of 1992 (together with the major SPJ inflow) and in the first half of 1995. The latter inflow was a result of changed priorities in 1995 - more means were put into PUJ, partly at the expense of other programmes. Because of the limited duration of PUJ the stocks were not as stable as in the case of SPJ. After the large inflows the stocks were gradually depleted.

Figure 2

PUJ jobs stocks and flows
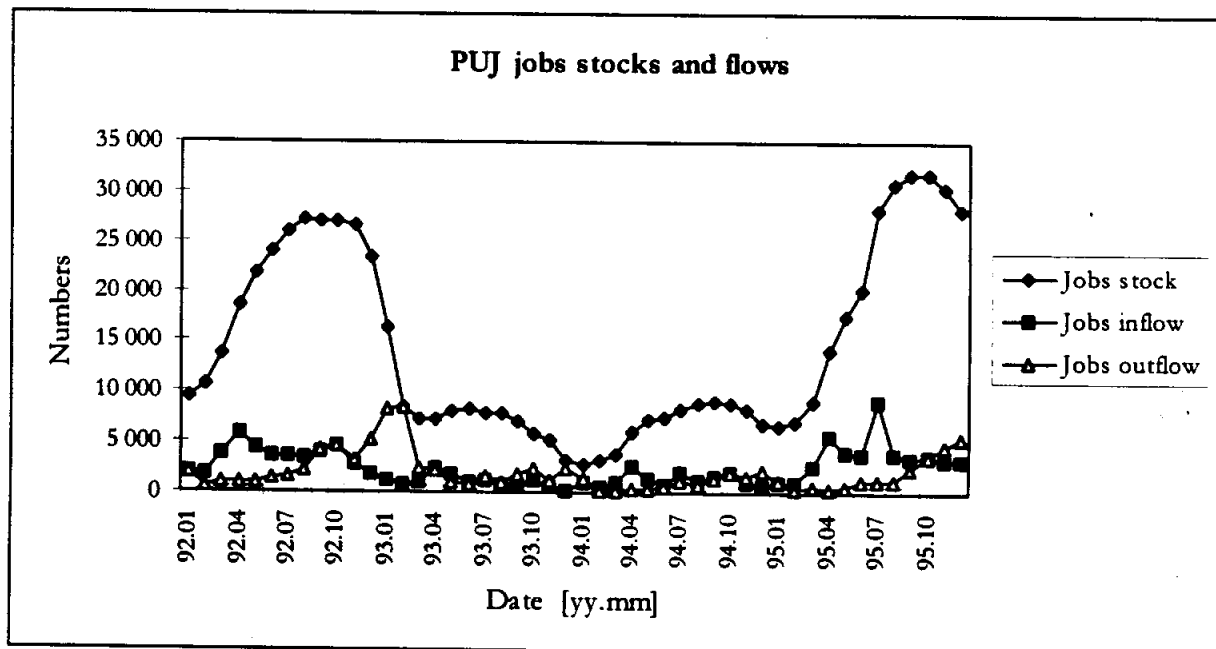
3. DATA

We use data from the district of Dunajska Streda which is located in the south-west of Slovakia, close to the capital Bratislava and neighbouring to Hungary. It is one of the former 38 Slovak districts (after administration reform of 1997 there are 76 districts in SR). The total population of the district at the end of 1996 was about 56 000 which represented 2% of the total Slovak population.

Labour market conditions in the district rank among the worst in the region of Bratislava. Local unemployment rate at the end of 1996 was 16.7% as compared to the average level of 13.4% for SR and 4.9% for the region of Bratislava. The district employment in 1995 represented about 1.3% per cent of the total employment in SR. There were about 10,000 unemployed in the district at the end of 1996 which was about 2.8% of the total Slovak unemployment.

Table 3 summarises the numbers of both created jobs and participants of SPJ, PUJ and the numbers of people in retraining in the district as compared to the Slovak totals. The use of active labour market policies in the district was relatively intensive as compared to the district share in total unemployment, especially in case of SPJ.

Table 3   ALMP programmes in the district of Dunajska Streda, end of year stocks (percentage of Slovak totals in parenthesis)

Year	SPJ		PUJ		Retraining by LO	
	Jobs	Persons	Jobs	Persons	Employed	Unemployed
1992	4 462	3 808	186	171	28	96
	(3.8 %)	(3.7 %)	(0.8 %)	(0.8 %)	(1.0 %)	(1.3 %)
1993	5 723	5 002	0	0	31	104
	(4.5 %)	(4.4 %)	(3 215)*	(2 644)*	(2.5 %)	(3.3 %)
1994	5 451	4 996	152	148	36	91
	(4.7 %)	(4.8 %)	(2.2 %)	(2.7 %)	(4.4 %)	(3.1 %)
1995	6 412	6 072	520	516	55	47
	(5.3 %)	(5.5 %)	(1.8 %)	(2.0 %)	(6.0 %)	(1.2 %)

Source: Ministry of Labour and Social Affairs   Note: * Totals for SR

The data used in our analysis come from the unemployment registers of all the three labour offices in the district: Dunajska Streda, Velky Meder and Samorin. We used several types of information in order to reconstruct individual histories. An individual history consists of a sequence of spells representing three possible labour market states: employment, unemployment and out of labour force. In addition to that, we are able to identify the spells of participation in SPJ and PUJ programmes.

The information about the last unemployment spell comes directly from the unemployment register which contains also information about the personal characteristics of job applicants. Due to the overwriting of records in case of repeated registration, the unemployment register does not contain information on previous unemployment history. Therefore, we had to turn to unemployment archives in order to reconstruct the information on previous unemployment spells. The archive information is not as rich as the one based on unemployment register.

In addition to the unemployment information, we used separate files containing information about previous employment or OLF spells prior to every registration. Finally, we used information about dates and duration of SPJ and PUJ spells.

From the unemployment register and unemployment archives we selected an inflow sample of all the unemployed who became registered in the course of 1993. The censoring point for our sample was February 1996 (in case of ALMP spells February 1997). By combining the

four sources of information (unemployment register, unemployment archives, information on previous employment or OLF, and information on ALMPs), we were able to obtain individual histories starting elsewhere in the past and ending at one of the above mentioned censoring dates.

The variety of data sources causes our sample to contain information which is not fully consistent over the various types of spells. By far the richest and most up-to-date information is contained in the unemployment register. The personal characteristics from the register were therefore taken to be decisive (one can assume that most of personal characteristics did not change significantly over time).

The use of 1993 inflow is justified by the relative stability in the institutional set-up of labour market (major reforms occurred at the beginning of 1992 and 1995). Another reason was a sufficient time period elapsed before the censoring point in order to avoid large shares of censored spells. In our previous research based on individual data from the Slovak unemployment register there was a trade-off between censoring and overwriting: the longer the time period observed, the smaller share of censored spells was in the sample. At the same time, an increasing proportion of information was lost due to the overwriting of older spells by newer ones in case of repeated registration. In our current sample we eliminated the overwriting problem by using the archived information.

We traced all other spells of individuals who were in the 1993 unemployment inflow. We sorted the cells chronologically in ascending order of the spell beginning and ending dates. In this way we obtained individual histories, typically beginning by the previous employment or OLF spell(s) prior to the first registration in unemployment register. Employment spells are by far the longest, mostly due to the long reported employment spells starting before 1989.

We were interested in duration of the unemployment spells and the exit states for the flow out of unemployment. In case when the unemployment spell resulted in SPJ or PUJ participation, we were interested also in the duration of these spells and the subsequent destination states. At the moment information on exit states is missing in some cases as we have to do more data collecting in the archives of labour offices. As explained below, for the time being, we treat these spells as censored.

4. STATISTICAL MODEL

We use a proportional hazard model with a flexible baseline hazard. The hazard rate is assumed to be constant within time intervals but is allowed to differ between time intervals. The specification of the hazard rate from unemployment to a particular destination is as follows:

$$\theta_j(t; x_i) = \exp(\beta_j' \, x_i + \Sigma_k \, \lambda_{kj} \cdot I_{ki}(t)) \qquad (1)$$

where t is unemployment duration measured in quarters and x is a vector of explanatory variables. Furthermore, i refers to individuals, j refers to the destination and I_k, k=1,..,5 are time-varying dummy variables which are one in six months time intervals. Finally, β and $\lambda_1,...,\lambda_5$ are parameters to be estimated.

In case the destination is a job the duration dependency coefficients indicate whether or not conditional on the explanatory variables the exit rate to a job changes over the duration of unemployment. These changes may occur because of employers' behaviour, workers' behaviour or a combination of both. If employers prefer short term unemployed to long term unemployed then the exit rate to a job steadily declines over the duration of unemployment. If the unemployed worker is discouraged by remaining unemployed and decreases search intensity the exit rate will also decline. It may also be that the rules of the benefit system

influence the exit rate. Unemployed may be inclined to leave unemployment just before there is a drop in their benefit. In this case there is no continuous change in the exit rate but a sudden jump. So, from the pattern of duration dependence we may get information about the effect of financial incentives which change over the duration of unemployment.

Apart from transitions from unemployment to a regular job we also investigate the transitions from unemployment to socially purposeful jobs and to publicly useful jobs. In case a SPJ or a PUJ is the destination of the outflow, the interpretation of the duration dependency coefficients is different than before. Here, the value of these coefficients most likely reflects the functioning system of active labour market policies. If over the duration of unemployment there is an increase in the hazard rate to SPJ or PUJ then this is caused by the rules of the system which give a higher priority for long term unemployed to participate in the system.

In this initial stage of the project we estimate the coefficients of the three hazard rates separately. When estimating the coefficients of the regular job finding hazard rate the observed durations until a regular job is found are considered to be completed durations while the durations until SPJ, PUJ, exit to out of the labour force or durations which have not yet been completed are considered to be right-censored. The estimations of the coefficients of the SPJ finding hazard rate and the PUJ finding hazard rates are done in a similar way.

The explanatory variables we use refer to sex, age, education, marital status, possible disability, nationality and district of the unemployed worker. (See appendix 1 for a definition of the variables). Some of these variables are related to the labour market position of the individuals, i.e. the availability of vacant jobs. Other variables are indirectly related to the benefit system. We found that the direct information on the benefit of the worker was either unavailable or seemed to be unreliable.

The density function of completed unemployment durations is specified as:

$$f(t; x_i) = \Sigma_j(\theta_j(t; x_i)).\exp[-_0 \int^t \Sigma_j(\theta_j(s ; x_i))ds] \tag{2}$$

As indicated we have exact information about the length of the unemployment spell, which we define in quarters. If we define an indicator variable d_i that is equal to 1 if the duration is completed and is equal to 0 otherwise the loglikelihood is specified as:

$$LogL = \Sigma_{di=1}\{\Sigma_j [\theta_j(t; x_i) .f(t; x_i)/ \Sigma_j (\theta_j(t; x_i))] \} + \Sigma_{di=0} [1-F(t; x_i)] \tag{3}$$

where $F(t)$ is the distribution function of $f(t)$.

5. ESTIMATION RESULTS

We estimated the parameters of the model using maximum likelihood. Table 1 presents the estimation results for the separately estimated hazard rates to regular jobs, to socially purposeful jobs and to publicly useful jobs. The estimation results are very preliminary since our dataset contains information about unemployment spells of which for 42% it is unknown what caused the end. Furthermore, in our estimation we have to account for the possibility that there is a correlation between the three hazard rates. Finally, in this initial stage of the project we only have information that allows us to investigate the inflow into the active labour market policy jobs. So far, we have insufficient information to investigate the efficiency of these jobs. We discuss the preliminary estimation results for each hazard rate separately.

With respect to a regular job, males have a hazard rate that is 70% higher than the exit rate of females. Obviously males find jobs much quicker. Age seems to be relevant for workers older than 50 years. For them the exit rate to a job is substantially lower than for their

younger colleagues. A somewhat surprising result is that unemployed workers with incomplete secondary education have a larger exit rate to a regular job than workers with either lower or higher education. Marital status, ability and nationality do not influence the exit rate to a regular job. Finally, we find that the exit rate to a regular job in the district Meder is lower than the exit rates in the other districts. Duration dependence in the exit rate to a regular job is not important since this rate stays constant over the duration of unemployment. From this we conclude that the transition process from unemployment to regular jobs favours males, workers below 50 years, workers with incomplete secondary education.

With respect to socially purposeful jobs males also have a significantly higher hazard rate than females. Unemployed older than 50 years have a much lower hazard rate than workers below 50. Workers with incomplete secondary and with secondary and higher education have a higher exit rate to socially purposeful jobs. Finally, unemployed from Dunajska Streda have a higher hazard rate. The coefficients of the other personal characteristics do not differ significantly from zero. The hazard rate to socially purposeful jobs appears to increase over the duration of unemployment. The hazard rate in the second half of the first year of unemployment is significantly higher than the hazard rate in the first six months. In the second year there is again an increase in the hazard rate. From this we conclude that the transition process from unemployment to socially purposeful jobs favours males, workers below 50 years, workers with incomplete secondary or higher education.

The hazard rate to publicly useful jobs is higher for male than for female unemployed and lower for unemployed under age 30. Workers with incomplete secondary and higher education have higher exit rates to publicly useful jobs. Finally, singles have higher hazard rates. There is a very strong duration dependence of the hazard rate to publicly useful jobs. It appears that the hazard rate in the first six months is extremely low. From this we conclude that the transition process from unemployment to publicly useful jobs favours males, workers older than 30 years, workers with incomplete secondary or higher education and singles.

Comparing the estimation results in the three columns it is striking that they are very similar. The only variables which have some discriminating effects between the three exit states are age, marital status and duration of unemployment: Young workers and single workers have a smaller exit rate to PUJ, while SPJ and PUJ are obviously favouring long term unemployed workers. Apart from that the sign of the coefficients of the three hazard rates are about the same. Female, lower educated and unemployed older than 50 years are worse off for every exit state. Marital status, ability and nationality do not seem to matter for any of the exit states. So, the surprising result is that SPJ and PUJ seem not to balance the effect of the ordinary labour market, but they seem to strengthen these effects. Those workers who have a better position when it comes to finding regular jobs are also in a better position to find SPJ or PUJ.

6. CONCLUSIONS

The system of active labour market policies in the Slovak Republic consists to a large extent of the creation of socially purposeful and publicly useful jobs. These jobs are intended for unemployed workers to get them out of unemployment, give them additional work experience and get them to find a regular job more easily. So far, the effects of these types of jobs on the labour market position of unemployed workers have hardly been investigated. This paper makes attempt to measure these effects. We use data from various administrative files to describe the outflow from unemployment into regular jobs and into socially purposeful and publicly useful jobs.

Preliminary estimation results indicate that female, lower educated and unemployed older than 50 years have a worse labour market position, both in terms of the speed with which

they find regular jobs as in terms of the speed with which they find SPJ or PUJ. The latter type of jobs are indeed especially for long term unemployed. One of the striking results of our analysis is that there are hardly any variables that discriminate between the three exit states. It seems the case that those workers who have a better position when it comes to finding regular jobs are also in a better position to find SPJ or PUJ. The jobs created by active labour market policies are complementary to the regular labour market rather than compensating for bad labour market characteristics.

In the near future we intend to investigate the outflow from socially purposeful and publicly useful jobs into regular jobs. Then, it will also become clear to what extent it is beneficial for unemployed workers who want a regular job to accept a temporary socially purposeful or publicly useful job. That will allow us to draw conclusions about the efficiency of these active labour market policies to reduce unemployment other than by reducing the stock of unemployed by putting them on a temporary job.

Table 4 Preliminary estimation results; hazard rates to regular jobs, to socially purposeful jobs and to publicly useful jobs; workers that entered unemployment in 1993 (t-values in parentheses)

	Regular job	Socially purposeful job	Publicly useful job
Constant	-4.09 (23.4)*	-4.59 (24.0)*	-9.30 (11.8)*
Male	0.52 (6.7)*	0.24 (3.1)*	0.49 (3.1)*
Age <30	-0.14 (1.5)	0.02 (0.2)	-0.40 (2.4)*
Age >50	-0.57 (3.4)*	-0.83 (4.4)*	-0.19 (0.8)
Incomplete Sec. education	0.29 (3.1)*	0.57 (6.2)*	0.47 (2.8)*
Secondary and higher educ.	0.07 (0.7)	0.42 (4.2)*	0.93 (5.2)*
Single	-0.13 (0.8)	0.09 (0.5)	0.66 (2.1)*
Married	0.14 (0.9)	0.03 (0.2)	-0.01 (0.1)
Disabled	-0.29 (1.4)	-0.26 (1.3)	-0.54 (1.5)
Hungarian	-0.10 (0.7)	0.14 (1.0)	-0.05 (0.2)
District 2	-0.50 (2.8)*	-0.64 (3.8)*	-0.14 (0.5)
District 3	0.05 (0.3)	-1.03 (5.9)*	0.28 (1.3)
3-4 Quarters	0.17 (1.7)	0.36 (3.0)*	3.01 (4.1)*
5-6 Quarters	0.03 (0.2)	0.84 (7.2)*	3.97 (5.5)*
7-8 Quarters	-0.18 (1.4)	0.97 (8.0)*	4.36 (6.0)*
8+ Quarters	-0.01 (0.1)	1.06 (9.1)*	4.80 (6.6)*
Loglikelihood	-3557.3	-3709.6	-1391.6

* = significantly different from zero at 5%-level of significance

Appendix 1- Definition and means of variables *All variables are dummy variables (with value 1 where indicated and value 0 for the reference group)*

Definitions of variables
Male
Reference group sex: female
Age<30: age is below 30 years
Age>50: age is over 50 years
Reference group age: age is between 30 and 50 years
Incomplete secondary education
Secondary and higher education (including university)
Reference group education: no education - basic education - apprentice
Single: single person household
Married: married or cohabiting person
Reference group marital status: divorced - widow(er) - unknown
Disabled
Reference group ability: others
Hungarian: if nationality is Hungarian
Reference group nationality: other nationalities
District 2: Velky Meder
District 3: Samorin
Reference group district: Dunajska Streda

Means of variables	Total	Males	Females
(Number of observations)	*(5757)*	*(2760)*	*(2997)*
Male	0.48	1.00	0.00
Female	0.52	0.00	1.00
Age<30	0.44	0.52	0.36
Age 30-50	0.47	0.40	0.54
Age >50	0.09	0.08	0.10
Lower education	0.52	0.50	0.55
Incomplete secondary educ	0.28	0.36	0.21
Secondary and higher educ	0.20	0.14	0.24
Single	0.33	0.47	0.19
Married	0.61	0.46	0.75
Other marital status	0.06	0.07	0.06
Disabled	0.04	0.04	0.04
Able	0.96	0.96	0.96
Hungarian	0.36	0.36	0.36
Other nationalities	0.64	0.64	0.64
Velky Meder	0.24	0.22	0.24
Samorin	0.17	0.19	0.16
Dunajska Streda	0.59	0.59	0.60
First state after the unemployment spell			
Job	0.13	0.15	0.11
SPJ	0.14	0.15	0.13
PUJ	0.05	0.05	0.05
OLF	0.02	0.04	0.00
Censored	0.24	0.19	0.29
Unknown	0.42	0.42	0.42
Total	1.00	1.00	1.00

Appendix 2
Development of the main institutions of SPJ and PUJ programmes in SR

Date	Definition/description
Socially purposeful jobs	
	Definition
March 1991	Every job created on the basis of agreement with labour office by an employer in production, business or other activities aimed at profit
May 1992	Every new job created by an employer on the basis of agreement with labour office which is occupied by registered unemployed
August 1994	Every new job created by an employer on the basis of agreement with labour office which is occupied either by registered unemployed, or by school-leaver or person younger than 18 years, or a new self-employment (full-time) (the latter two do not have to be registered unemployed)
	Minimum duration
July 1992	2 years
	Ceiling on financial support
March 1991	12-multiple of average monthly unemployment benefit paid by the relevant labour office during the last calendar quarter
August 1991	12-multiple of average monthly unemployment benefit paid in SR during the last calendar quarter
July 1992	50 000 Sk per job
January 1994	60 000 Sk per job
August 1994	Loan 200 000 Sk per job, subsidy 90 000 Sk per job (to be used for wages), combination of the two up to 200 000 Sk per job
	Forms of financial support
March 1991	Subsidy, interest repayment, loan
January 1994	Loan to be returned within 2-years period
August 1994	Subsidy, loan
Publicly useful jobs	
	Definition
March 1991	Short-term employment in a job created on the basis of agreement with labour office by an employer who is not in production, business or other activities aimed at profit (for example, organs of state administration, municipalities, local administration)
May 1992	Short-term employment in a job created on the basis of agreement with labour office by an employer
January 1994	State budgetary organisations and state contributory (partial budgetary) organisations are not subject to PUJ programmes
	Maximum duration
May 1992	6 months
August 1994	9 months
October 1995	12 months
	Ceiling on financial support
March 1991	Wage costs of participant
July 1992	Wage costs and social insurance contributions for participant
August 1994	Wage costs and social insurance contributions for participant (including contributions to the Employment Fund)

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