TITLE: UNEMPLOYMENT, THE SOCIAL SAFETY NET AND EFFICIENCY IN TRANSITION: EVIDENCE FROM MICRO DATA ON CZECH AND SLOVAK MEN

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NCSEER NOTE

This report consists of the Executive Summary, the Introduction, and the Summary and Conclusions of a 66-page paper submitted by the authors. That economic-modelling paper includes the preceding sections plus a 37-page text, References, seven Tables, and two technical Annexes. The original paper in full is available by request from the Council, Tel. (202) 387-0168.

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Executive Summary

This paper investigates one of the most important issues in transitional economies -- unemployment. Almost all the Central and East European (CEE) countries have experienced rapidly rising and persistent double digit unemployment rates, accompanied by long spells of unemployment. The Czech Republic is an outlier with unemployment rates staying at 3-4% and with a relatively short average spell. The unemployment crisis in the other CEE countries has brought about an immediate political backlash and the experience to date points to the importance of two questions. First, how can these economies strike a balance between (a) providing an adequate social safety net and thus ensuring public support for the restructuring of enterprises and the transition in general and (b) reducing government intervention and introducing incentives so as to complete the transition process? Second, why has the unemployment problem in the Czech Republic been much less pronounced? In addition to being of academic interest, answers to these questions are essential for the governments in the transition economies, the U.S. and other western governments, as well as international institutions that provide substantial financial, technical and policy assistance to the CEE countries.

In this paper, we provide econometric evidence that addresses these questions. We collected administrative data on 3,000 men who registered as unemployed between October 1, 1991 and March 31, 1992 in the Czech and Slovak Republics. Separate time varying hazard functions (which allow for flexible duration dependence and unobserved heterogeneity) were estimated for unemployed men who received unemployment compensation (recipients) and those who did not (non-recipients) in each republic.

Understanding why the Czech case is so different is clearly desirable for both academic and policy purposes. Slovakia is the best natural comparison country since the two countries had such similar institutions over the 1918-1992 period and yet such different labor market experiences since the "Velvet Revolution" of 1989. Since the Slovak unemployment experience resembles that of other transitional economies in CEE, our results are relevant for policy in these economies as well.

Determinants of the Duration of Unemployment

We estimate the effects of the unemployment compensation system (UCS), demand conditions and demographic variables on the duration of an unemployment spell.
Effects of the UCS: Our findings for the sample of recipients suggest that the elasticity of duration with respect to benefits lies between .39 and .56 in the Czech Republic and is considerably smaller in the Slovak Republic. Moreover, our estimates suggest that the elasticity of duration with respect to adding another week of entitlement to unemployment benefits lies between .30 and .45 in the Czech Republic and between .18 and .39 in the Slovak Republic. From our comparison of recipients to non-recipients, we find that moving an individual from the eligible to ineligible category reduces the expected length of an unemployment spell by 26% to 41% in the Czech Republic (which is at most seven weeks) and by 23% to 28% in the Slovak Republic. Given these results, we conclude that inefficiencies caused by the UCS in terms of lengthening an unemployment spell are likely to be moderate, giving policy makers in the transition economies considerable latitude to provide an adequate safety net.

Demographic Effects: The most striking demographic effects in both republics are for Gypsies and the handicapped; both groups have dramatically longer unemployment durations than other workers. Older workers, particularly those who are unmarried, also have a difficult time once they become unemployed. Finally, poorly educated workers in Slovakia experience unemployment spells almost twice as long as more highly educated workers. To the extent that the Slovak Republic is a representative of Eastern and Central Europe, these results indicate the importance of targeting older workers, more poorly educated workers, the handicapped, and Romanies.

Effects of Demand Conditions: We find the expected outcomes in both republics although the coefficient estimates are more precise in the Czech Republic. A higher rate of unemployment (vacancies) for the individual's education group in the district lowers (raises) the probability of leaving unemployment and lengthens (shortens) the duration of unemployment. A higher level of industrial production per capita in the district increases the likelihood that a person will leave unemployment.

Explaining Differences in the Czech and Slovak Unemployment Duration

To understand the large differential between the expected duration of a covered unemployment spell in the Czech Republic (approximately 17 weeks) and in the Slovak Republic (about 65 weeks), we calculated a non-linear of Oaxaca-type decomposition. For recipients, we find that 31% of the difference in the expected durations of unemployment in the Czech Republic and Slovak Republic can be attributed to differences in observable demand conditions (local unemployment and vacancy rate by education and local industrial production), and 69% to differences in the estimated coefficients. Counter to popular wisdom, none of the difference in expected duration is attributable to differences in demographic variables between the two republics.
for recipients.

For non-recipients, we find that 60% of the difference in expected duration is due to the difference in the coefficients and 40% of the difference in expected duration is due to differences in the explanatory variables. This outcome is similar to the decomposition of the recipient group. However, unlike the above finding, the difference in demographic variables account for 42% of the contribution of the differences in the explanatory variables and differences in demand variables account for 58% of the differences. Hence, demographic differences between the non-recipients in the Czech and Slovak Republics (mainly the proportion who are Romany) matter. This suggests two avenues for future research. First, does this differential experience of more marginal workers in the two republics reflect a fundamental difference in the structure of the two economies or the experience of these workers in a depressed economy compared to one with a very tight labor market? Second, does the differential reflect the behavior of individuals, firms, government or the interaction of these agents?

1. Introduction

The Central and East European (CEE) countries are in the sixth year of a dramatic transition from a centrally planned economic system to a market system. While outcomes in terms of most performance indicators have been diverse, all the CEE countries except for the Czech Republic have had one identical experience—a rapidly rising and persistent double digit unemployment rate, accompanied by long spells of unemployment. In contrast, in the Czech Republic the unemployment rate has stayed at 3-4% and spells have been short.

The unemployment crisis in the CEE countries has brought about an immediate political backlash and the experience to date points to the importance of two questions. First, how can these economies strike a balance between (a) providing an adequate social safety net and thus ensuring public support for the restructuring of enterprises and the transition in general\(^2\) and (b) reducing government intervention and introducing incentives so as to complete the transition process? Second, why has the unemployment problem in the Czech Republic been much less pronounced? In addition to being of academic interest, answers to these questions

\(^2\) In all transition economies except the Czech Republic, the former (now pro-reform) communists have been voted back into office.

\(^3\) See Blanchard (1995) for a theoretical model of the effect of worsening economic conditions on worker opposition to enterprise restructuring.
are essential for the governments in the transition economies, the U.S. and other western
governments, as well as international institutions (World Bank, IMF, and EBRD) that provide
substantial financial, technical and policy assistance to the CEE countries. In this paper we
provide econometric evidence that addresses these questions. In doing so, we also make
methodological contributions to the study of unemployment duration in general and the study of
such durations in the transition economies in particular.

In addressing the tradeoff between efficiency and social security, it must be noted that
the unemployment compensation scheme (UCS) plays a very important part in the economics
and politics of the transition. The UCS provides a partial safety net but it may also generate
economic inefficiency and large government expenditures because of poor incentive effects and
moral hazard. The need to quantify this tradeoff is particularly pressing in the transition
economies, given their limited resources and the desirability of introducing markets rapidly.
Thus, while the study of the UCS is important in all economies, it is especially crucial that
governments and international institutions understand its role in the transition economies.

Understanding why the Czech case is so different is desirable for both academic and
policy purposes. With a 3-4% unemployment rate and short unemployment spells, the Czech
Republic is a socially desirable outlier. Yet, in comparing the Czech experience to that of the
other CEE countries, one is hampered by the limited ability to control for cross-country
differences in the relevant laws, institutions and definitions of variables. In order to minimize
this problem, we have collected parallel data sets in the Czech Republic (CR) and the Slovak
Republic (SR). The SR is a natural comparison country for the CR since (except during World
War II) the two republics formed one country in the 1918-1992 period and therefore shared the
same laws, institutions, currency and government programs. Yet, in terms of labor market
outcomes, their experience has been very different since the "Velvet Revolution" of November
1989. In the SR, the unemployment rate started at 0.1% in January 1990 and by January
1992 it reached 12.7%, a level from which it has increased to about 15% to date. In the
Czech lands, the unemployment rate went from 0.1% to 4.4% during the same period and is
currently below 3%. Furthermore, unemployment duration is much longer in Slovakia than in
the CR. Since Slovakia is very similar to the other CEE countries in terms of all
unemployment statistics, the Czech-Slovak comparison is relevant for all the economies in the
region. We compare the CR and SR using micro data that we collected on unemployment

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3The two republics split into two countries on January 1, 1993.
4Despite popular assertions to the contrary, annual changes in other indicators of economic performance
such as GDP, CPI, and wages have been quite similar. (See Dyba and Svejnar 1995, Tables 2.1, 2.6, and 2.8.)
durations on men who registered as unemployed at the district labor offices between October 1, 1991 and March 31, 1992. We followed these men until the end of their unemployment spell or July 31, 1993, whichever came first.

As mentioned above, our study also makes methodological contributions. We add to the general literature on unemployment duration in two ways. First, we derive and implement an Oaxaca-type decomposition of the difference in the nonlinear expected durations between the CR and SR which allows us to compare the relative importance of different factors across the two republics. Second, we provide an alternative means of measuring the incentive effects of the UCS by comparing the durations of recipients of unemployment compensation (recipients) to the durations of the unemployed who do not receive benefits (non-recipients). To the best of our knowledge, these issues have not been addressed previously in the literature. Moreover, by studying non-recipients as well as recipients, we gain a significantly broader picture of unemployment than that obtained in the literature. We also make a methodological contribution to the study of unemployment duration in the CEE countries by proposing an identification strategy for estimating the effects of benefits and entitlement in the CR and SR. 6 This strategy provides relatively precise estimates of the benefit and entitlement elasticities from a sample of recipients. Since the compensation schemes are similar across the CEE countries (see Section 2 below), our approach should be of general interest to those studying the UCS in the other CEE countries.

Our findings for a sample of recipients in the 1991-1993 period suggest that the elasticity of duration with respect to benefits lies between .39 and .56 in the CR and is considerably smaller in the SR. Moreover, our estimates suggest that the elasticity of duration with respect to adding another week of entitlement to unemployment benefits lies between .30 and .45 in the CR and between .18 and .39 in the SR. Finally, by comparing recipients to non-recipients, we find that moving an individual from the eligible to ineligible category reduces the expected length of an unemployment spell by 26% to 41% in the CR and by 23% to 28% in the SR. Given these results, we conclude that inefficiencies caused by the UCS in terms of lengthening an unemployment spell are moderate, giving policy makers in the transition economies considerable latitude to provide an adequate safety net. 7


7 Unfortunately we do not have any evidence on the effect of benefits and entitlement on the inflow to unemployment in any of the CEE countries since this would require data on employment spells. We hope to collect such data in the future and analyze the effect of the UCS on the inflow to unemployment for the CR and SR.
The average unemployment spell lasts about four times as long in the SR as in the CR. For recipients, we find that almost one-third of this difference is due to differences in observable demand conditions in the two republics (as measured by unemployment, vacancies and industrial production in an individual’s labor market district) and that the remaining two-thirds is due to differences in the coefficients of the hazard functions. Contrary to popular wisdom, none of the difference in expected duration comes from differences in demographic variables. For non-recipients, almost one-quarter of the difference in expected duration is due to the difference in demand conditions, slightly less than one-fifth is due to differences in demographic variables and the remainder (60%) is due to differences in the coefficients. With regard to the differences in the coefficients, we find the following factors to have significantly stronger negative effects on the probability of leaving unemployment in the SR relative to the CR: i) having a low of education relative to higher levels of education; ii) being single relative to being married and iii) being a recent graduate of high school or college relative to not being a recent graduate.

The paper is organized as follows. In Section 2 we describe the UCS in the CR and SR and compare it to the systems in other CEE countries. In Section 3 we discuss our strategy for identifying the effects of the UCS. In Section 4 we outline our empirical specification of the hazard function and our data. In Section 5 we present our results for recipients and examine the sensitivity of our results to a number of changes in the model. In Section 6 we describe the parameter estimates for the non-recipients and compare the expected durations of recipients to non-recipients to obtain an alternative estimate of the effect of the UCS. In Section 7 we decompose the difference in the expected duration of unemployment spells between the CR and SR. We carry out this cross-republic comparison for recipients and for non-recipients. We conclude the paper in Section 8.

Summary and Conclusions

In this paper we analyze the determinants of unemployment duration of men in the Czech Republic (CR) and Slovak Republic (SR). We focus on the incentive effects of the unemployment compensation system, which provides a significant part of the safety net. First, we find that changing unemployment benefits has a moderate effect on the duration of unemployment in the CR and a small effect in the SR. Second, we estimate moderate unemployment duration effects of increasing entitlement in both republics. Third, we predict that moving a typical individual from the recipient category to the non-recipient category would reduce expected duration by approximately one-third in both republics.
We have isolated a number of demographic effects on the duration of unemployment spells in both republics. The most striking demographic effects are for Romanies in general and the handicapped in the SR—both groups have dramatically longer unemployment durations than other workers. Older workers, particularly those who are unmarried, also have a difficult time leaving unemployment. Finally, poorly educated workers in Slovakia experience unemployment spells almost twice as long as more highly educated workers. To the extent that the SR is a representative CEE country, these results indicate the importance of targeting older workers, less educated workers, the handicapped, and Romanies.

To understand the large differential between the expected duration of a covered unemployment spell in the CR and SR (about one year), we calculated a nonlinear Oaxaca-type decomposition. For recipients, we find that 31% of the difference in the expected durations of unemployment in the CR and SR can be attributed to differences in observable demand conditions (local unemployment and vacancy rate by education and local industrial production), and 69% to differences in the estimated coefficients. None of the contribution of the explanatory variables is attributable to differences in demographic variables between the two republics and all of it is attributable to differences in observed demand variables. For non-recipients, we find that 40% of the difference in expected duration is due to the difference in the explanatory variables and 60% is due to differences in the coefficients. Differences in demographic variables and demand variables account for 42% and 58% respectively of the contribution of the differences in the explanatory variables.

Overall, our findings indicate that the unemployment compensation scheme has a moderate effect on unemployment duration, suggesting that policy makers in governments and international agencies have considerable latitude in providing a safety net without endangering efficiency in the CR and SR. Given the similarity between the SR and the other CEEs, we believe that this result is likely to hold also for the other transition economies.