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**Labour Market Transitions of Individuals in Eastern and Western Europe**

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# Chapter 1

## Introduction

Policies which affect the labour market opportunities of individuals have long-term impacts on economic prosperity. The types of jobs individuals take, the possible remunerations available for their skills, and the types of firms in which individuals work, are shaped by the macroeconomic environments that they face. Levels and types of ancilliary protection measures offered to workers have effects on income inequality, poverty, migration, and the level of investment in a country. Aggregate labour productivity, which is largely a result of decisions individuals make regarding their education, occupation, and level of attachment to the labour market, has important consequences for the rate of economic development of countries.

Whereas in Western European countries macroeconomic environments are relatively stable, in Eastern European countries the local situation has evolved radically in a short period of time. Since the fall of the Berlin Wall and the ensuing breakup of the Soviet Union, social safety nets, the industrial structure, financial market conditions, and wage structure have altered dramatically. Among Eastern European countries, huge variations in outcomes have also emerged, with some countries recording quick recoveries in labour productivity and a renewal of economic growth, and others experiencing continued year-on-year output falls.

One of the major problems facing economists wishing to do comparative research into the labour markets of former communist countries is that generally very little longitudinal data has been collected. The extent of data collection is largely dependent on the financial situation of national governments, so that poor performers are left more "in the dark" than prosperous ones. In general, data collection for the purpose of labour market analysis

has been much more extensive in Central Europe and the Baltic States than in Russia or the Central Asian economies of the former Soviet Union.

As well as the lack of data collection, much of the data which is collected from firms and households in the transition economies was not collected specifically for undertaking research on labour markets. Most existing surveys of firm-level labour demand and of household labour supply for transition economies are drawn at a single point in time, and do not contain much longitudinal retrospective information. For example, the Russian Longitudinal Monitoring Survey (RLMS), does not ask individuals to give a complete history of labour market transitions made between interviews, nor of reasons for leaving previous employment. As well, the peculiarities of extremely deregulated labour markets in these countries mean that key economic variables have very different meanings for survey respondents than they do in Western Europe. For example, wages earned in primary jobs may give a good indication of the standard of living of individuals in Western Europe, whereas in Eastern Europe the primary job is often not a person's primary income source.

Another obstacle facing labour economists working on Eastern Europe is that macroeconomic conditions evolve so rapidly that empirical analysis is quickly outdated, and no longer useful for policy purposes or model building. Stylised facts change quickly. This makes it difficult to build and estimate structural labour market models which both capture the incentives facing workers and explain observed behavior. Structural models, which often rely on equilibrium assumptions for tractability, are not easily adapted to explain the highly non-stationary labour market dynamics found after sudden market deregulation. As a result, very little structural econometric analysis has been done for Eastern European labour markets.

Reduced-form econometric models, on the other hand, are difficult to interpret in the same ways in Eastern Europe as they generally are for Western Europe or North America, given that the explanatory variables often capture dissimilar information. For example, workers in Russia generally receive a substantial portion of their monthly remuneration in the form of bonuses, as they did in the Soviet period. As well, some workers do not receive any payments for months at a time. Thus sample survey questions regarding wages do not capture the same ideas about worker wellbeing as they do in countries where wages are the sole reward obtained by workers, and where

they are paid promptly. While models of labour market dynamics for the former communist economies now exist in the literature (see for example Grosfeld et al. (1999), Boeri and Flinn (1999), Boeri (1999)) relatively little emphasis has been placed on estimating them.

Whereas existing structural models of the labour market are not easily applicable to the analysis of labour markets in transition economies, they can provide important information about the relationship between worker behavior and wage structures. Given that structural models of the interaction between worker transitions and wage structures assume general equilibrium settings, they are more likely to be successful in fitting data for Western European countries and North America. If the data is consistent with the basic assumptions needed for identification of the structural parameters of a model, estimation can yield clear insights into the relationship between labour market transitions and wage outcomes. Analysis of wage differentials between groups, the propensity to exit the labour market, unemployed search behavior, and job-to-job transition behaviour can be considered simultaneously in a framework which allows exploration of the inter-relations between these factors.

This collection of essays, which I have brought together under the title of "Labour Market Transitions of Individuals in Eastern and Western Europe", looks at how the labour market outcomes of individuals vary over time, and how workers react to evolving economic opportunities. I investigate relationships between individual flows through the labour market, the evolution of wages over time, and aggregate labour market dynamics. Under this very broad theme, I have opted to make detailed country-specific studies of different labour market issues, and to compare the results with general trends found in other countries of Europe and North America. Household survey data from the United Kingdom and Russia is used to estimate both structural and reduced-form econometric models. Labour force survey data from Eastern and Western Europe and North America is used to place each of the phenomena under study in an international context.

## **1.1 Stylised facts about worker transitions**

In this section, I briefly introduce the theme of worker transitions in Eastern and Western Europe. I present statistics on transitions between labour mar-

ket states, long-term unemployment, and non-participation, which I have calculated using national labour force survey data contained in the Luxembourg Employment Study database at CEPS/INSTEAD in Luxembourg.

Unemployment pools in Eastern European countries in the 1990's are commonly characterised as being "desperately stagnant"<sup>1</sup>, with relatively high fractions of long-term unemployed amongst non-working searchers. Transition economies are generally considered to have relatively low out-flow rates from unemployment, high fractions of exits from unemployment to non-participation, and relatively high job-to-job transition rates. One of the reasons commonly given for the stagnancy of the non-employment pools in transition economies is that firms in the new (*de novo*) sector of the economy prefer to hire workers who are already employed.

In this section I investigate the above characterisations of Eastern European labour markets using retrospective information contained in national labour force surveys for Western and Eastern European countries, and the USA. These data sets are described in more detail in Appendix A of this book. The distinction between the unemployed and non-participants is made according to the ILO definition of unemployment. According to this definition, an individual is unemployed if he or she reports to be without employment, to be seeking employment, and to be currently available for employment (see ILO (1982)). I include individuals aged 23 until local retirement age in the samples. The disabled, retired individuals, and students are excluded. For Russia, I use Rounds 5 and 6 of the RLMS and distinguish between the unemployed and non-participants according to ILO-style job search criteria.

Labour force participation rates, especially amongst women, were particularly high in Eastern Europe prior to transition. When unemployment was legalised and labour markets deregulated, levels of non-employment rose rapidly in these countries. However, at least in the mid 1990's, employment rates were still comparable to those found in Western Europe. In Table 1, labour force participation rates for Eastern and Western European countries in the mid-1990's are presented. At that time, labour force participation rates of women were still much higher in Eastern than in Western Europe.

A major motivation for a "big bang" approach to market deregulation

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<sup>1</sup>See, for example the December, 1999 address of Tito Boeri to the 5th Nobel Symposium in Economics

was that this would cause unprofitable enterprises to release their labour quickly and to go bankrupt. Many economists thought that the level of unemployment in transition economies would be a positive indicator of the level of success of economic reforms. The larger this transitional unemployment pool, the more successful must have been market mechanisms in shaking out unprofitable firms and in enforcing hard budget constraints. Within a few years, this pool of unemployed individuals was expected to be reabsorbed into a rapidly-emerging private sector, which would efficiently match workers and their skills. After a transitional recession, labour productivity and output would increase.

Amongst both Eastern and Western European countries, there were large variations in unemployment rates in the mid 1990's. This is evident from Table 1.1. ILO-style unemployment rates were not consistently higher in Eastern than Western Europe. As well, unemployment rates were very low in some successful transition economies such as the Czech Republic, while they were relatively high in other successful reformers such as Hungary (see for example the analysis of Ham et al. (1998)). Slovakia, which was slower at recovering output, had rather high unemployment rates. As such, it does not appear that unemployment *per se* is a useful measure of the degree of the success of economic reforms in a country.

Table 1.1 also shows that there was a steady drop in employment and a rise in both unemployment and non-participation in Russia through the 1990's. Still, even by 1998 the level of non-participation in Russia was still lower than in Western European countries (except for Sweden). Male employment rates have fallen more dramatically than female in the initial years of Russian economic transition. As a result, male and female employment rates are very similar. Differences in the employment rates of males and females were smaller in Eastern than in Western Europe (except for Sweden) in the mid 1990's. As in the other former communist countries, female labour force participation rates remained high in Russia.

Table 1.2 shows the percentages of non-participants amongst the non-working population of each country, by age group and sex. It is apparent that there are substantial variations among both Western and Eastern European countries in the fractions of non-employed individuals who are not labour force participants. Russia and the USA appear to have large fractions of non-searchers amongst the male non-employed population. It does not appear

Table 1.1: Labour force participation by country, percentages

	males			females		
	<i>E</i>	<i>U</i>	<i>N</i>	<i>E</i>	<i>U</i>	<i>N</i>
<b>Eastern European Countries</b>						
Russia, 1992 (RLMS)	93.3	4.4	2.3	87.8	5.1	7.1
Russia, 1995 (RLMS)	86.4	6.7	6.9	81.3	6.3	12.4
Russia, 1998 (RLMS)	79.3	10.4	10.3	77.2	8.6	14.2
Czech Republic, 1994	96.6	2.6	.8	89.4	3.9	6.7
Slovakia, 1997	88.6	10.7	0.7	77.0	11.3	11.7
Poland, 1994	77.8	9.3	12.9	66.7	10.7	22.7
Slovenia, 1994	89.1	7.2	3.7	83.6	5.7	10.7
Hungary, 1993	79.8	12.8	7.4	76.7	8.0	15.3
<b>Western European Countries and USA</b>						
Spain, 1993	81.5	14.5	4.0	39.0	13.9	47.2
Sweden, 1990	94.8	.9	4.2	98.1	1.0	.9
USA, 1990	91.7	3.3	5.0	72.7	3.0	24.3
UK, 1989	89.6	6.3	4.1	68.7	4.8	26.6
France, 1997	86.9	7.8	5.3	68.8	8.9	22.4

Source: author's calculations using national labour force surveys and household panel surveys. For more on each survey, see data appendix A of this book. E=employed, U=unemployed, N=non-participant.

that, in the mid 1990's, the countries of Eastern Europe tended to have larger numbers of non-participants amongst the non-employed than Western European countries.

Table 1.2: Percentages of working age non-workers who are not seeking jobs

Age group (M=male, F=female)	23-25		25-29		30-39		40-49		50-ret.	
	M	F	M	F	M	F	M	F	M	F
<b>Eastern European Countries</b>										
Russia, 1995	37.5	63.2	56.3	63.6	50.8	62.8	49.0	71.7	56.0	75.0
Czech R., 1994	30.4	76.1	23.8	71.6	18.8	58.2	23.8	46.5	32.6	77.4
Slovakia, 1997	0	75.0	6.3	64.2	5.1	45.8	9.4	39.8	3.8	38.1
Poland, 1994	18.0	68.5	21.5	68.9	34.1	56.6	53.9	65.1	87.2	90.8
Slovenia, 1994	29.6	32.4	28.0	50.9	25.6	48.7	25.6	71.4	60.7	89.3
Hungary, 1993	21.5	79.4	32.6	71.5	34.6	62.6	35.4	58.0	50.2	78.4
<b>Western European Countries and USA</b>										
Spain, 1993	15.0	37.2	13.4	54.5	15.1	72.2	19.1	86.1	41.8	94.0
Sweden, 1990	40.9	79.4	38.5	83.9	49.5	81.6	45.7	80.0	60.9	82.6
USA, 1990	48.4	84.8	45.2	86.0	58.6	88.1	61.6	89.6	74.2	95.0
UK, 1989	34.0	80.5	33.4	81.9	34.9	85.5	42.1	85.1	46.6	87.4
France, 1997	21.2	46.0	21.2	58.6	28.6	70.9	38.3	74.8	65.9	82.4

Source: author's calculations using national labour force surveys and household panel surveys. For more on each survey, see data appendix A of this book.

Another proposition commonly made about Eastern European labour markets is that outflow rates from unemployment are relatively low, and that large fractions of the unemployment pools are made up of the long-term unemployed. From Table 1.3 it does appear that long-term unemployment is more prevalent in Eastern European countries than in European Union countries or in the USA. However, France in 1997 and the UK in 1989 both have fractions of long-term unemployed in the unemployment pool which are higher than those in Hungary or the Czech Republic in 1994. In both Eastern and Western Europe, long-term unemployment appears to be relatively prevalent amongst women, and amongst older unemployed workers.<sup>2</sup>

<sup>2</sup>Admittedly, individuals who initially were unemployed are more and more likely to become "discouraged workers", and to abandon job search as time goes on. As such,



Table 1.3: Percentages of long-term unemployed individuals amongst the unemployed

Age group (M=male, F=female)	23-25		25-29		30-39		40-49		50-ret.	
	M	F	M	F	M	F	M	F	M	F
<b>Eastern European Countries</b>										
Russia, 1995	20.0	71.4	42.9	75.0	53.3	57.8	52.0	47.1	45.5	66.7
Czech R., 1994	37.5	42.9	9.8	38.3	21.5	42.5	31.3	35.6	31.0	37.5
Slovakia, 1997	46.7	47.6	51.5	64.8	60.9	68.2	68.9	69.2	70.3	75.0
Poland, 1994	25.6	32.8	43.0	65.5	45.1	64.6	53.9	64.8	66.3	68.2
Slovenia, 1994	63.2	52.2	58.9	61.8	69.6	64.4	63.8	73.9	63.6	68.4
Hungary, 1993	35.7	47.6	39.4	51.6	40.2	45.8	38.5	43.4	43.5	40.8
<b>Western European Countries and USA</b>										
Spain, 1993	27.6	25.6	28.2	37.0	35.8	52.6	36.4	53.9	47.0	53.5
Sweden, 1990	0	14.3	12.5	6.7	11.1	10.2	12.0	9.1	16.0	10.5
USA, 1990	18.8	17.4	23.1	29.8	19.2	38.8	28.6	38.3	31.7	31.4
UK, 1989	31.8	50.6	43.2	55.2	58.2	59.1	61.7	58.5	72.1	67.7
France, 1997	24.6	22.0	26.0	39.6	42.6	52.0	50.5	57.8	61.7	64.4

Source: author's calculations using national labour force surveys and household panel surveys. For more on each survey, see data appendix A of this book.

Table 1.4: Year-on-year transition intensities of individuals in national labour force surveys (in percent)

transitions	E-E	E-U	E-N	U-E	U-U	U-N	N-E	N-U	N-N
<b>Eastern European countries</b>									
Hungary, 1994	87.5	6.0	6.5	38.0	40.7	21.3	29.6	16.8	53.6
Russia, 1995	88.7	5.1	6.2	67.7	16.7	15.6	51.8	12.1	36.2
Slovakia, 1995	96.1	2.4	1.5	24.6	72.5	2.9	19.6	12.0	68.4
Slovenia, 1994	96.6	2.1	1.3	30.3	43.7	26.1	21.3	2.4	76.3
<b>Western European countries</b>									
Spain, 1993	90.9	7.0	2.1	25.9	66.7	7.4	5.3	4.4	90.3
UK, 1989	95.9	2.1	2.1	38.9	47.3	13.8	16.8	8.3	74.9
France, 1997	94.5	3.7	1.8	34.7	43.2	22.1	7.8	6.3	85.8

Source: author's calculations using national labour force surveys and household panel surveys. For more on each survey, see data appendix A of this book. E=employed, U=unemployed, N=non-participant.

Another stylised fact about Eastern European labour supply is that large fractions of outflows from unemployment are to non-participation, and that outflows from unemployment to jobs are relatively low. This is a corollary of the proposition that new firms prefer to hire workers who are already employed, rather than from the unemployment pool. In Table 1.4 I address this issue, using the information contained in the respective national labour force surveys about the labour market status of the individual one year prior to the LFS interview. The international comparison is more limited on this issue than in the previous tables, due to a lack of retrospective information in some of the available labour force surveys.

Although I am restricted to a small sample of European countries, it does appear that results are at odds with the stylised facts about outflows from unemployment in Eastern Europe. In particular, smaller fractions of the unemployed appear to exit the labour force in Russia and Slovakia than the UK in 1989 or France in 1997. In Eastern Europe it appears that non-participants are more likely than in Western European countries to be found in employment one year later. Despite the caveat that sample sizes for Russia

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they would then be classified as non-participants according to an ILO-style definition of unemployment.

are small (the data comes from a household survey), it does appear that transition intensities are very high in Russian labour markets. To a certain extent, this result may be due to the marginal nature of employment in Russia, and to the fact that a majority of unemployed individuals do not register. Thus, some portion of the wide differences in year-on-year response may be due to the fact that employment relations in Russia are not clear-cut. In any case, Table 1.4 does not suggest that outflows from unemployment into jobs are consistently lower in Eastern than in Western Europe.

The final issue I address in this introduction is that of the prevalence of job-to-job transitions amongst movements out of jobs. While neither the labour force survey data nor the RLMS data contains full histories of job transitions between years, some information can be gained on this question by looking at elapsed durations of job tenures, and year-on-year labour market status. An upper-bound on the job-to-job transition rate can be obtained using information on elapsed durations of job spells, labour force status in the year prior to the interview, and current labour force status. It is possible to compute the fraction of all transitions made in a year which are job-to-job (the individual is employed in both years but has an elapsed duration of the second job spell of less than one year). This is an upper-bounded measure, due to the fact that some of the individuals who satisfy the above criteria will have had an intervening (unmeasured) spell of non-employment. Table 1.5 presents this statistic, disaggregated by sex, for the available data. It appears that job-to-job transition intensities are very high in Russia, a country in which year-on-year outflows from unemployment to jobs are also high. Bearing in mind the caveat that Table 1.5 presents an upper bound on the job-to-job transition rate, it still appears that job-to-job transitions dominate job-to-nonwork transitions in Russia, the UK, and Slovakia. In general, the job-to-job transition rate is higher for men than for women. This is consistent with the idea that women have a relatively high propensity to exit jobs to non-participation.

The preceding summary statistics have served to give a short introduction to the labour market situations in the 1990's in Eastern and Western Europe. A general conclusion is that there are few stylised facts which either group of countries shares. Many of the common propositions made about Eastern European labour markets do not appear to be borne out by the labour force survey data. As well, the patterns observed do not appear

Table 1.5: Upper-bounded job-to-job transition rates in selected European countries

	males	females
<b>Eastern European Countries</b>		
Russia, 1995 (RLMS)	.749	.719
Slovakia, 1995	.740	.732
<b>Western European Countries</b>		
UK, 1989	.757	.658
France, 1997	.399	.267

Source: author's calculations using national labour force surveys and household panel surveys. For more on each survey, see data appendix A of this book.

to be easily related to the relative success with which transition was carried out in a country.

The four essays in this volume have been written to address specific labour market issues in a local context. Given that stylised facts about participation and transition decisions appear to be largely country-specific, most of the results are not generaliseable to other countries in Europe. The issues I have chosen to focus on are those of: (i) flows of workers across sectors, (ii) determinants of unemployment duration, (iii) the evolution of wage structures in the state and non-state sectors, and (iv) the relationship between job search behaviour and gender wage differentials. While Russia and the United Kingdom are the countries of main focus, an attempt is made to situate the issues under investigation in the context of the experience of other Eastern and Western European countries in the 1990's. In the following section, I give a brief overview of these investigations.

## 1.2 Overview

In Chapter 2 I investigate worker flows in Russia. I investigate the movement of workers from jobs held at the end of the Soviet period into new employment, and the movement of workers between jobs during the post-Soviet era. Competing risks models for durations of job tenure with multiple destination states are estimated for the *stock* of job spells underway in January 1991, and for the *flow* into new job spells following this date. Pat-

terns of transitions between sectors and to non-employment are identified for different demographic groups. Levels of worker flows for occupational and demographic groups are compared to those observed in other Eastern and Western European countries in the mid-1990's.

Chapter 3, written with Professor Gerard van den Berg of the Vrije Universiteit Amsterdam, uses longitudinal survey data to assess factors affecting the duration of unemployment in Russia. We examine four types of marginalised labour force participants, according to ILO guidelines and survey responses, and we estimate duration models for each type.

In Chapter 4 I focus on explaining changes in the wage structures and shifts in composition of the state and non-state sectors in Russia between 1992 and 1998. I compare the shares of state and non-state sector employment in Russia to those found in other European countries during the 1990's. I adapt an endogenous switching regression model of sectoral choice to look at changes in wage structure between 1992 and 1998. Special attention is paid to the treatment of wage arrears crisis.

In Chapter 5 of the series, written with Professor Audra Bowlus of the University of Western Ontario, a general equilibrium job search model which allows for non-participation as a distinct labour market state is estimated. The model is estimated using data from the British Household Panel Survey (BHPS). Estimation results are compared to those obtained by Bowlus (1997) for a similar cohort of American workers. Wage differentials between similarly-educated men and women are decomposed into fractions attributable to job search behavior and fractions attributable to productivity differences on the job. We perform goodness-of-fit tests to assess the performance of the model.

In Chapter 6 I summarise and discuss the main findings in each of the preceding chapters. In a concluding section I briefly discuss some unanswered questions which have puzzled me during the writing of this thesis.