Transition with Labour Supply

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Abstract

The literature on the economics of transition has devoted little, if any, attention to labour supply. We show in this paper that, properly accounting for labour supply adjustments permit to understand some of the most puzzling features of transition, such as the strikingly low workers' mobility associated with dramatic changes in the structure of employment, the presence of many job leavers as opposed to job losers, the frequency of direct shifts of workers from one job to another without intervening unemployment spells, and the role played by flows to inactivity in the dis-employment process. Our models show that transitional unemployment involves significant locking-in effects at the micro-level, and unemployment persistence at the aggregate level. It also suggests that, rather than starting with generous non-employment benefits and then subsequently cutting them down, as done by most countries in the region, the right sequence should have been the other way round. The paper sheds some light on other design features of unemployment benefits, suitable for economies undergoing rapid structural change.

1. Introduction

Ten years after the start of transition, there are many puzzles we still have to live with. Why did all countries experience strong declines in output at the outset of economic transformations and most of them are slowly, if at all, recovering from this "transitional recession"? How can these L-shaped patterns of GDP be reconciled with a shift from a less efficient to a more efficient economic system? Why were (and still are) unemployment pools of these countries so desperately stagnant in spite of the radical transformations going on? Why was unemployment dynamics so much different between, on the one hand, the Czech Republic, and, on the other hand, the other members of the Visegrad group? Why were employment-to-output elasticities negligible in Russia compared not only with Western countries, but also with the countries now knocking the door of the European Union?

We argue in this paper that many of these puzzles can be explained by simply taking on board labour supply. Surprisingly enough, the literature on the economics of transition has devoted little, if any, attention to labour force participation decisions. In the models of the optimal speed of transition (OST) literature, the labour force is generally assumed to be fixed. All the action takes place on the demand side. No mention is made to labour supply factors, the unsustainability of full employment at low wages in the absence of coercive power and the role played by non-employment benefits in inducing large flows to inactivity.

Yet, Central and Eastern European countries (CEECs) and the former Soviet Republics entered the 1990s with participation rates, notably women participation rates, significantly higher than those of countries at comparable stages of development and are now displaying employment rates in some cases even lower than those of nations at comparable GDP per capita levels. CEECs were also characterised by sizeable quit rates at the onset of transition, as many workers previously employed in state enterprises withdrew altogether from the labour force. All this suggests that labour supply has indeed played a major role in the transition. Labour force participation is bound to play an even more important role in the years to come. As soon as unions get more organised in the private sector, low effective labour supply will start exerting a strong upward pressure on wages. Moreover, the adoption of Western-European social policies associated with the track to EU accession is likely to increase further the social security burden induced by low participation and, more broadly, non-wage labour costs.

Clearly, labour supply is only part of the story. There are other factors which came with it. Among these, a low fungibility of the workforce associated with the

over-investment of the previous regime in vocational education. Contrary to popular wisdom and to a vast literature stating that the Communists were, at least, good human capitalists, the past regime left to the (inhuman) capitalists to come a workforce which was overly-specialised. Needless to say, a highly specific human capital is not quite the most desirable feature to have in place when the task is to accommodate dramatic changes in the structure of an economy, involving significant workers' reallocation. Another ingredient which made adjustments along the "extensive margins" of labour force participation so important in these countries is the fact that a large fraction of the population was living in rural areas. Subsistence-oriented agriculture was (and still is in some countries) a powerful factor making reservation wages of individuals at least partly exogenous with respect to wage setting. If wage offers fall below a given level, survival oriented activities (e.g., one grows her/his own crop for self consumption) prevail. Put another way, it is wages which should rise in order to induce more (formal) participation as there is a floor to reservation wages.

The model developed in this paper allows for labour supply to play a key role in the transition by introducing three basic mechanisms in the Harris-Todaro type of models of the OST literature. First, room is made for frictions in the shift of workers from the old to the new sector. Second, job-to-job shifts are not ruled out: employers are free to choose their recruitment pool, that is, whether to hire from the unemployment ranks or among the employees of the old sector. Third, those without a job are allowed to make a non-trivial decision between searching or not searching a job. The model generates significant locking-in effects at the micro-level, and unemployment persistence at the aggregate level. The initial steps of transition are crucial in determining the importance of these locking-in effects. When the initial market-oriented reforms promote large flows from the old-sector to inactivity, it is very likely that employers in the new sector will be reluctant to hire from the ranks of the unemployed, as many of those without a job are not actually seeking. Low job finding probabilities in turn induce "discouraged worker" effects thereby those without a job do not actively seek a job, as their outside opportunity looks more appealing than spending a long time in job search efforts, having a very low chance to succeed.

Our model has important policy implications. Among these, it suggests that the emphasis placed by the OST literature on measures winning the resistance of insiders to restructuring, e.g., "buying-off" workers in the old sector, is ill-placed and possibly conducive to wrong policy prescriptions. By putting in place at the outset overly-generous non-employment benefit schemes, conditions were

created for having stagnant unemployment pools throughout the transition. Long-duration unemployment made these promises unsustainable because generous non-employment benefits had been conceived for unemployment of a shorter-duration. Moreover, this tightening did not significantly reduce the duration of unemployment. Rather than starting with generous non-employment benefits and then subsequently cutting them down, the right sequence should have been the other way round.

We certainly cannot claim that our model solves all the puzzles of transition. To some extent, it just opens-up new issues. The most intriguing of these concern the reasons for the policy failures, e.g., the manifestly wrong design features of many unemployment benefit systems, to be addressed by further resarch on the political economy of transition. While some legacies of the past and features of labour supply could have escaped the lenses of Western theoreticians, policy-makers of these countries were generally aware of the consequences of their own actions on labour supply. Why then were policies, notably non-employment benefits, ill-conceived?

The plan of the paper is as follows. Section 2 documents the puzzles of transition. Section 3 presents a simple model which combines the two-sector, Harris-Todaro type, models of the OST tradition with matching frictions and on-the-job search and provides numerical simulations of the model against evidence on the effects of a different timing of reforms of non-employment benefits. Section 4 extends the model allowing for a non-degenerate earning distribution in the new sector and discusses how another dimension of non-employment benefits, namely their relation with previous earnings, has magnified cross-country asymmetries in unemployment dynamics and in the pace of structural change, besides affecting workers' reallocation in rural and urban areas. Section 5 concludes speculating on the reasons why a bad design of non-employment benefits was adopted in most countries and what may happen in the years to come.

2. The Puzzles of Transition

Before listing the puzzles we need to explain what was expected to occur in these countries.

2.1. Predictions

There were three common predictions made at the outset of transition.

First, the removal of state subsidies and associated hardening of budget constraints would force many state enterprises to close down, inducing large scale labour shedding. In order to restructure these firms, rather than simply close down the shop, it was essential to win the strong resistance of workers to change, that is, it was indispensable to "buy them off".

Second, as a result of this shake-out striking at the core of "socialist employment", large inflows into unemployment of redundant workers would have to be expected. As the size of these inflows was related to the pace of closure of state enterprises, it was also argued that unemployment could be considered as an indicator of the determinacy of government to push through reforms and impose tough budget constraints on enterprises.

Third, unemployment would gradually be absorbed by the growth of the emerging sectors, namely private firms, mainly clustered in retail trade, the service sector or in light, final consumption goods, industries artificially compressed by central planning emphasis on primary accumulation.

In a nutshell, labour reallocation was deemed to occur mainly through unemployment, the single most important indicator of the speed of transition trajectories.

From a normative point of view, a careful timing of reforms was called for. Most of the models used to speculate on the future course of events yielded a multiplicity of equilibria and a non-trivial relation between the speed and final outcomes of transition. On the one hand, reforms had to be enforced in such a way as to avoid creating too much unemployment before a critical size of the private sector had been reached. Otherwise, social unrest related to increasing unemployment and the associated political backlashes of reformers, the fiscal burden induced by unemployment benefit payments or other "feedback" mechanisms (e.g., income effects of dis-employment) would block reforms. On the other hand, reforms could not be too slow as resources had to be freed for the growth of the private sector, unemployment had to start exerting its moderating effects on wage claims (and employers were deemed not sufficiently organised to resist such claims) and increased productivity had to stimulate investment. This was the essence of the trade-offs entailed by the models of the optimal speed of transition[1] developed at early stages of the process and widely used in policy advice throughout the region.

A key assumption of the OST literature is that labour supply is fixed: one can be either employed or seeking a job. Inactivity is banned. In the light of this

[1]The OST literature is reviewed in [11].

assumption, the many variants of the basic Harris-Todaro-type model which have been developed by this literature all consider the rate of decline of state sector jobs, as something that can be altered at will by governments. The control over the speed of the downsizing of state enterprises is both direct - insofar as governments decide upon the amount of subsidies to be granted to state enterprises - and indirect - because workers controlling state enterprises can be induced to accept restructuring plans by more generous unemployment benefits. Thus unemployment benefits ease[2] the restructuring of state enterprises by reducing the opposition of insiders to employment reductions (the value of the outside option for state sector workers is increased), and to privatisation. However, the financing of unemployment benefits puts a brake on private employment creation and hence reduces its capacity to absorb labour shed from state enterprises. Owing to this trade-off between the effects of benefits on restructuring and on private job creation, unemployment benefits should be rather generous at the start of transition and then reduced (actually, in order to rule out bad equilibria, governments should from the beginning commit themselves to reduce benefits if unemployment reaches a certain threshold[3]). As shown by Blanchard [5], later on, when unemployment is large, the "fiscal externality" tends to dominate. At that stage, a case for high benefits can only be made on equity grounds.

2.2. Facts

For quite some time labour market developments in these countries seemed to closely conform to a priori expectations and the predictions of the OST models.

[2]However, higher unemployment benefits negatively affect job finding probabilities of the unemployed by putting a higher floor to wage bargaining in the private sector, which means lower job creation. If individuals place a relatively high value on future consumption (if they have a rather low discount rate), the negative effect of higher benefits on unemployment outflows may offset the positive effect on the instantaneous value of being unemployed.

[3]In Aghion-Blanchard's model [1] model, depending on the expectations of private sector employers, the economy may end up at a low unemployment equilibrium or the transition may derail, leading the economy to be trapped in a high unemployment equilibrium. Expectations matter because private employers decide on hirings on the basis of their assessment of their lifetime tax liabilities. Expectations are self-fulfilling as pessimistic private employers end up paying more taxes: they absorb workers shed by state enterprises too slowly, and hence have to pay more for unemployment benefits. The announcement that benefits will be reduced if unemployment becomes too high may not be credible ex-ante. However,governments in the region proved capable (ex-post) of significantly tightening up unemployment benefits when unemployment was at its transitional peaks.

Employment in state enterprises was plummeting, unemployment skyrocketing and private employment growing rapidly.

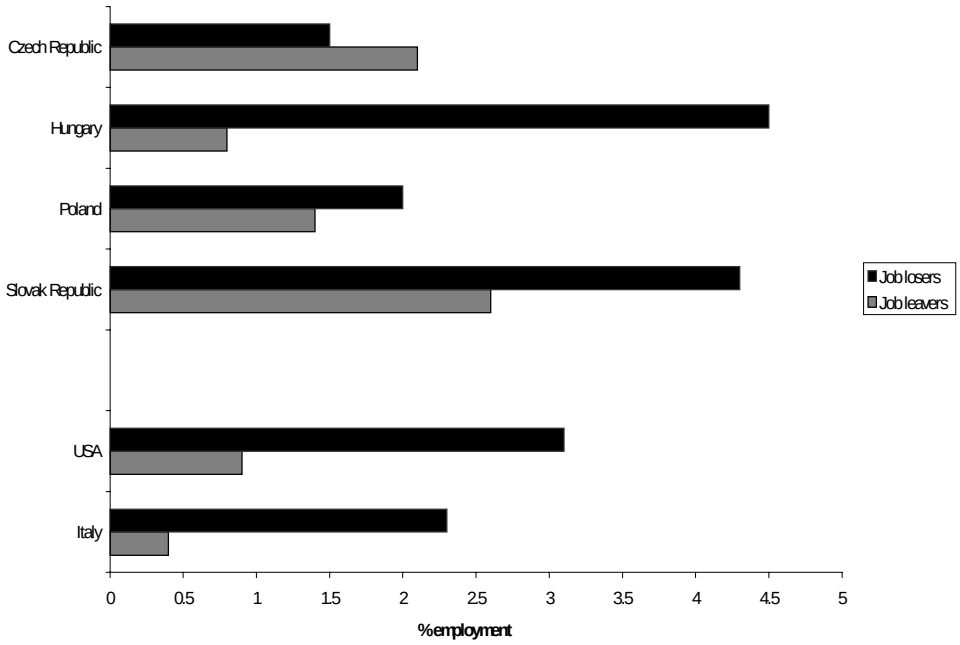
However, a closer scrutiny of labour market dynamics and access to flow data soon revealed [6] that the adjustment of labour markets in CEECs was very different from what was predicted by these models and anticipated in most policy fora and academic discussions.

While employment reductions were expected to be driven by layoffs, a significant component of outflows from state sector jobs was associated with voluntary quits. In particular, rather large ratios of job *leavers* (persons currently non-employed because they had quit their previous job) to total employment were observed while shares of job *losers* (persons currently non-employed because they were laid-off from their previous job) were roughly comparable to those observed even in the most sclerotic countries of the European Union, like Italy[4]. It should be stressed that the Labour Force Survey (LFS) questionnaire asks about the nature of the separation only those currently non-employed and many quits are likely to end up in the take-up of another job rather than in non-employment. Hence, the data reported in Chart 1 are likely to significantly underestimate the proportion of quits in the total number of separations[5].

[4]Italy is located at the top of rankings of employment protection against dismissals [42]and features one the lowest layoff rates in Western Europe [41].

[5]Disentangling quits from layoffs on the basis of administrative data is notoriously difficult as often separations classified as under "mutual" agreements may hide actual layoffs. The above notwithstanding, data from the unemployment registers (reported in [11]), which also have the advantage of covering the very beginning of the transition process, suggest that the bulk of flows from employment to unemployment in 1991-2 was indeed represented by quits. Relatively many voluntary separations were also observed in countries which embarked later upon a structural transformation process, such as Russia. Based on an enterprise survey carried out by the World Bank, [21, 20] report that only about 25 per cent of separations from state enterprises in Russia were associated with individual or collective layoffs.

Chart 1 Job Losers and Job Leavers at Early Stages of Transition



[a] Non-employed for less than 6 months with previous work experience by reason of termination of previous contract as a percentage of LFS employment.

Information from the registers of jobseekers pointed to monthly inflow rates into unemployment (unemployment inflows as a proportion of the working age population) of half a percentage point in most transition countries [40], compared with above one per cent in Western Europe and 2-3 per cent in North America. Thus, unemployment was rising not because of the predicted large cohorts of workers being laid-off from state enterprises, but as a result of remarkably low outflow rates. Outflows from unemployment to jobs, in particular, were marginal: at most five out of one hundred jobseekers were leaving unemployment every month because they had found a job.

Hence, while the stocks seemed to behave as anticipated, for labour market flows it was a different story. And quite a different one.

The differences between actual labour market flows and their characterisation under the OST literature can be grasped by mapping transitions across public

and private employment, unemployment and inactivity on the basis of matched records across LFS waves[6]. Table 1 displays the 1992-3 yearly transition matrix (each entry corresponds to gross flows across the various states over the base-year stock of origin), which could be estimated for Poland, the first country in the [7]region to have introduced such a survey.

Table 1 Yearly Labour Market Flows in Poland 1992-93 (LFS)

	E_s	E_p	U	OLF
Employment State (E_s)	79.6%	8.7%	***3.9%***	7.8%
Employment Private (E_p)	5.9%	78.8%	4.7%	10.6%
Unemployment (U)	12.0%	***24.6%***	45.6%	17.8%
Out of the Labour Force (OLF)	4.3%	7.5%	4.6%	83.6%

Note Numbers in the chart denote estimated flows as a percentage of the population of origin.

Bold characters denote the flows allowed by the Optimal Speed of Transition Literature.
Source Boeri and Bruno, 1997: matched records across quarterly LFS waves.

Three facts are striking. First, outflows from employment to inactivity are twice as large as flows from employment to unemployment. Second, large direct (and genuine[8]) shifts from state-sector-employment to private-sector-employment occur which are not mediated by intervening unemployment spells: in Poland such

[6]A statistical problem involved by using matched records across different LFS waves is that sample attrition, non-response and errors in the classification of the labour market states of individuals at different points in time tend to bias results in a direction which is not predictable a priori.

[7]Similar patterns emerge by matching records across LFS waves in other Central European countries, such as the Czech and Slovak Republics and Hungary [12].

[8]Workers in privatised enterprises by definition shift from the public to the private sector without experiencing unemployment spells. We removed these spurious flows by combining

job-to-job shifts were in 1992-3 more than twice as large as flows from public sector employment to unemployment (almost 9 per cent of state sector employment moved directly to the private sector compared with a modest 4 per cent becoming unemployed). Third, a very significant component of outflows from unemployment (almost 35 per cent!) involved withdrawals from labour force participation rather than flows to private sector employment.

Thus, the stagnancy of unemployment pools in these countries was a by-product both of the fact that i) employment reductions were accommodated mainly via flows into inactivity and ii) significant direct shifts of workers from the state to the private sector were occurring. Both channels of labour market adjustment are banned under the OST literature which assumes a constant labour force and focuses exclusively on flows between public and private employment mediated by intervening unemployment spells. As a matter of fact, the flows allowed under the OST models (the shaded entries in the matrix) account for no more than 15 per cent of the total flows mapped in Table 1.

Labour markets where shifts of workers from declining (e.g., state-owned-enterprises) to expanding (private units, notably in the service sector) sectors occur without intervening unemployment spells typically generate relatively small worker flows. This is because there is just one shift rather than two: workers go directly to the new sector, rather than moving from employment to unemployment and vice versa. Moreover, mobility is low when the two non-employment states (not only inactivity, but also unemployment) tend to become "absorbing states" of sorts where, once in, it is very difficult to get out. In spite of the radical and historically unprecedented transformation occurring in these economies, transition countries have indeed displayed remarkably low mobility of workers across labour market states, occupations and sectors.

Table 2 reports worker mobility indexes and measures of structural change for all transitional economies for which LFS data were available, for the remaining OECD countries and for Italy, a country traditionally displaying a very low mobility of its workforce. In particular, the first four columns display summary measures of structural change, namely the standard deviation of employment growth across 9 sectors (STD), two measures of job reallocation[9], respectively

matched records with the retrospective information contained in the survey. In particular, we counted as yearly flows from public to private employment only workers who had tenures in the private sector shorter than 12 months.

[9]The two indexes, SR and PR are increasing in the pace of job reallocation across sectors and between the public and private sectors respectively. In particular, the two indexes are given

across sectors (SR) and firms of different ownership (PR) as well as the average yearly change in the share of private employment in total employment (ΔPS). The next two columns display scalar mobility measures for yearly transition matrices[10] : such measures are bounded between 1 (maximum mobility) and zero (no mobility, i.e. each individual is in the same state as one year before).

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by:

$SR = 1\text{-}\frac{|\Delta E|}{\Delta E^{+}+|\Delta E^{-}|}$ and

$PR = 1\text{-}\ \frac{|\Delta E|}{|\Delta E^{PUB}|+|\Delta E^{PRIV}|}$

where ΔE^{+} denotes the sum of sectoral employment variations over expanding sectors and ΔE^{-} is the sum employment variations across declining industries while the superscipts PUB and PRIV stand, respectively, for public sector and private sector employment. Both indexes are bounded between 0 and 1, and increasing in the extent of job reallocation from declining to expanding industries and from public to private job. Unlike the standard deviation measure which can take high values even when all sectors and firms of different ownership are experiencing employment declines, these two indexes isolate the extent of the job reallocation from *declining* to *expanding* units involved by transition process.

[10]In particular, the scalar measure is given by the index: $\frac{(n-tr(M))}{(n-1)}$ where n denotes the number of states (the number of rows of the transition matrix, M). As shown by [50, 42], when matrix have a maximal diagonal – that is, stayer coefficients are larger than any mover coefficient – this index is bounded between 0 and 1, is monotonically increasing in mobility, attaches value zero only to identify matrices, and one to matrices with identical rows (hence probabilities of moving independent of the state originally occupied). All the computed matrices had a maximum diagonal, hence in our case the index satisfies the four properties listed above.

Table 2 Structural Change, Labour Mobility and Employment-Output Elasticity (average yearly measures)

Country	Year	Measures of Structural Change				Workers' Mobility		Employment-output elasticity[g]
		STD[a]	SR[b]	PR[c]	Δ PS[d]	Across Sectors[e]	Across States[f]	
Visegrad	**1991-7**	**11.3**	**0.63**	**0.69**	**0.66**	**0.09**	**0.11**	**0.80**
Slovenia	1993-7	13.1	0.73	...	*0.65*	...	...	0.69
Balkans	**1991-7**	**7.9**	**0.44**	**0.71**	**0.51**	**0.16**		**0.58**
Russia	1991-94	9.0	0.39	0.66	*0.47*	…	…	0.17
Other OECD[h]	1990-6	1.7	0.33	0.09	0.02	0.16	0.17	…

[a] Standard deviation of employment growth rates across 9 sectors (average of yearly standard deviations).
[b] Sectoral Reallocation index calculated over gross employment variations in 9 sectors; see the text for details. OECD data 1990-93.

[c] Privatisation Reallocation index calculated over gross employment variations in the public and private sectors; see the text for details. Czech Republic, Hungary and Romania 1991-93. For Russia data on emploeeys used instead, 1992-1998.
[d] Average yearly change in the share of private employment in total employment, 1988-1997. Bulgaria 1990-97; Romania 1989-98; Slovenia 1994-97, share of firms privatized used instead; Russia 1990-1998. OECD displays data for USA.
[e] Mobility measure for transition matrix across 9 sectors (plus unemployment and inactivity); see the text for details. Balkans = Romania data based on 6 status matrix (5 main sectors plus non-employed): the one-year index is computed on the basis of the 1993-1995 transition matrix, assuming a Markovian process.
[f] Mobility measure for transition matrix between the public and the private sectors (plus unemployment and inactivity); see text for details.

[g] Employment-output elasticity during the "transitional recession" (1989-1992 except for Russia 1991-1994).
[h] Workers' Mobility indexes display data computed for Italy only.

Note ... = not available.
Sources Individual data from National Labour Force Surveys for Central and Eastern Europe; OECD, Labour Force Surveys, for the OECD countries. T. Boeri and C. Flinn (1999).

Quite strikingly, all transitional economies display lower worker mobility than a sclerotic country like Italy. Moreover, such a low mobility stands in sharp contrast with the pace of structural change in these countries: indicators of structural change across sectors and occupations are indeed consistently larger than those computed for the whole group of OECD countries. Taken together, the evidence presented in Table 2 suggests that dramatic changes in the distribution of employment across sectors and by ownership type of firms have occurred in these countries with relatively low worker flows.

Table 2 hints also at significant cross-country variation in the pace of structural change and in the extent of labour mobility. The standard deviation of

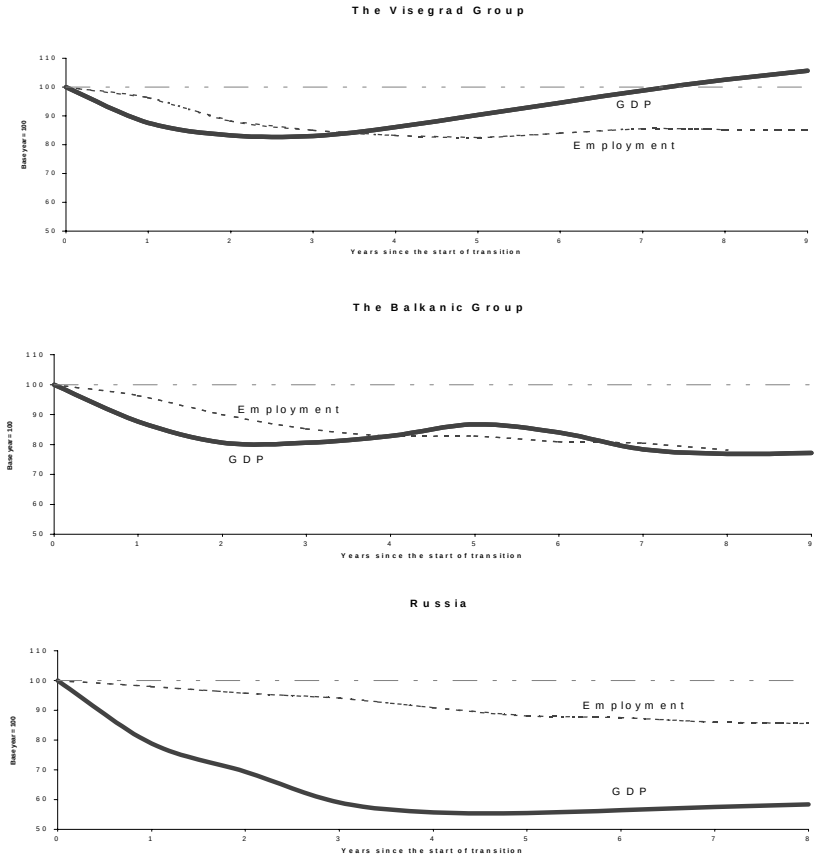
employment growth rates across sectors (as well as the other measures of structural change displayed in the table) in Russia has been typically between one-half and two-thirds of the level observed in the Visegrad countries, while Romania and Bulgaria are located in an intermediate position[11].

These marked cross-country differences in the pace of structural change are associated with asymmetries in the responsiveness of employment to output changes. The employment-to-output "elasticity" is much smaller in Russia than elsewhere and, more broadly, it is lower in the countries that have achieved less structural change than in those having significantly altered the sectoral structure of their employment (e.g., the Balkans group vis-a-vis the Visegrad group).

Chart 2 suggests that the recovery from the transitional recession has gained momentum only in the countries of Visegrad, and yet some of them were at the end of 1998 still lagging behind the GDP levels of the previous decade. Elsewhere the letter which could best describe the evolution of output is a L rather than a U. Quite strikingly, and in spite of its steep output falls, Russia has experienced since 1990 a much slower decline of employment than other transitional economies. In the Visegrad group we observe broadly the same patterns – employment lagging behind output adjustment and hence procyclical labour productivity – that are common over the cycle in OECD countries, but employment growth is very very slow during the recovery from the initial shock.

[11] These asymmetries in the pace of structural change are even more marked when account is made of initial conditions. The distance between the employment distribution prevailing at the outset of transition and the structure of employment in Southern EU members was significantly larger in Romania and Bulgaria than in the Visegrad four [32].

Chart 2 The Evolution of GDP and Employment since the Start of Transition



Note Visegrad Group includes Czech Republic, Hungary, Poland and Slovak Republic. Balkanic Group includes Bulgaria and Romania.
Source OECD, Short Term Economic Indicators and EBRD 1998 Transition Report.

Unemployment has also been growing at a much lower pace in Russia than elsewhere. The puzzling low unemployment rates observed in this country in the midst of output declines of the order of 50 per cent have often been attributed to measurement problems. It has been suggested that the output fall was overestimated because of over-reporting of output under the previous regime, changes in the composition of output and in the availability of goods to consumers as well as quality improvements not be captured by official statistics. However, such problems should have been present also in the CEECs and output declines of this magnitude can hardly be dismissed as statistical artifacts. It was also argued that Russian unemployment was not properly measured. Administrative counts of the

unemployed tend to underestimate the extent of labour slack when unemployment benefits are low and the widespread use of unpaid leaves in Russia were pointed out as factors capable of explaining the puzzle. However, when LFS results, hence data unbiased by regulations and comparable across countries, became available, they replicated the gap between CEECs and Russian unemployment. Unpaid leave (or, worse, unpaid work, given the emergence of wage arrears in Russia) also cannot explain the puzzle. If one stays attached to one's job even if one does not get paid, there should be a reason for it. Often the unemployed are without a job because they refused to work for lower salaries and were clearly not ready to consider the possibility of not being paid at all.

Asymmetries in the evolution of unemployment are present also within the CEECs, as the Czech Republic has for many years displaying one of the lowest unemployment rates in the OECD arena, while the other countries in the region were experiencing two-digits unemployment rates. The wide literature on the Czech unemployment miracle has provided so many different explanations[12] for this fact, that hardly any of them is truly convincing.

2.3. Summarising....

The adjustment of labour markets during transition has been quite different than anticipated. In particular, it has involved stagnant unemployment pools, large flows to inactivity and strikingly low workers' mobility especially when account is made of the changes occurring in the structure of employment by sector, occupation and ownership of firms.

Among the puzzles still looking for convincing explanations:

Why did all countries experience steep declines in output at the start of transitions and most of them are still lagging behind their pre-transition output levels? Shouldn't the shift from a less efficient to a more efficient organisation of production involve strong GDP growth?

How could radical changes in the structure of employment coexist with low workers' flows? If job-to-job shifts can explain this, why did private employers recruit their workers mainly from the state enterprises rather than from the large unemployment pools of these countries, which should offer the cheapest labour?

Why were there so many job leavers, as opposed to job losers, in the years of the steepest employment and output declines? Why did so many workers, notably

[12] See[13] for a review of the literature on the "Czech unemployment miracle".

among the male population, leave the labour force altogether after the start of transition?

Why was the responsiveness of employment to output declines so much lower in Russia than elsewhere? What lies behind the "Czech unemployment miracle"? More broadly, why do we observe such a large variation of aggregate outcomes for countries undergoing quite similar transformations and experiencing to a large extent the same kind of external shocks?

These puzzles are relevant from both a heuristic and a normative standpoint. Understanding why all this occurred can improve our knowledge of economies undergoing major structural change. Moreover, it can help us identifying the relevant policy trade-offs and the actual degrees of freedom of policy-makers in economies undergoing radical transformations.

The policy trade-offs embedded in the OST literature relate mainly to the alternative between a big-bang strategy and a gradual transition process. This amounts to assuming that governments can control the pace of closure of state enterprises. However, the facts outlined above suggest that separations from state sector employment were, ultimately, an endogenous variable rather than a policy instrument, as they were to a large extent the byproduct of voluntary choices of workers. Thus, it is still necessary to ascertain which policy instruments, if any, can be activated by policy-makers in countries shifting from one system to another.

In the next two sections we take the view that non-employment benefits (encompassing unemployment benefits, social assistance, liberal access to disability pensions and sickness benefits and other transfers to able-bodied individuals in working age) were the main policy instruments in the hands of governments and were quite poorly used by them. In the last section of the paper we try to cope with the reasons why such mistakes were made.

3. The Crucial Role of Non-employment Benefits

Unemployment benefit systems introduced at the outset of transition were supposed to play the twin and crucial role of relieving managers of state enterprises from their social responsibilities (allow them to cut down employment) while, at the same time, not discouraging the reallocation of workers involved in the systemic transformation. This view of the role of unemployment benefits was reiterated by foreign advisors in the region and clearly stated in the famous "Study of the Soviet Economy" carried out jointly by IMF, World Bank, OECD and the

EBRD in 1991. Besides providing a safety net and contributing a big deal to contain the rise of income inequalities, non-employment benefits played in the region two additional important functions. First they determined to which extent the "forced participation" inherited from the previous system had to result in large flows to inactivity at the onset of transition. This, in turn, deeply affected subsequent developments of employment and unemployment. Second, due to the weaknesses of unions and a virtual absence of statutory minimum wages, unemployment benefits also ended-up providing floors to wage setting in the private sector. Both functions are characterised below and contribute to explain much of the cross-country differences in labour market outcomes, which have been documented in the first section. Before doing that, we need to deal with two frequent misunderstandings concerning the legacies of the previous system.

3.1. Skill Specificity ....

There are a number of mythologies about the legacy of the Communist regime. Among these, the belief that the old system had developed a highly qualified labour force. Contrary to such belief, the Communists were everything but not good "human capitalists". They over-invested in narrowly-based vocational training, forcing most of those entering secondary education to invest in skills that were not fungible. Thus, rather than having jobs attributed according to everybody's talents - as implied by the Marxian ideology – there were a lot of bad "matches" around. Workers were stuck in these bad matches and not necessarily by coercive power – workers had much more freedom to change jobs than usually thought – but because their skills were non-transferable across jobs.

The optimistic views about the human capital of formerly planned economies were fed by aggregate data on educational attainments of the workforce. The latter pointed to employment shares of workers with only primary or lower educational attainments generally of the order of 25-35 per cent compared with well over 45 per cent in countries like Greece and Spain and with an average of 37 per cent in the European Union.

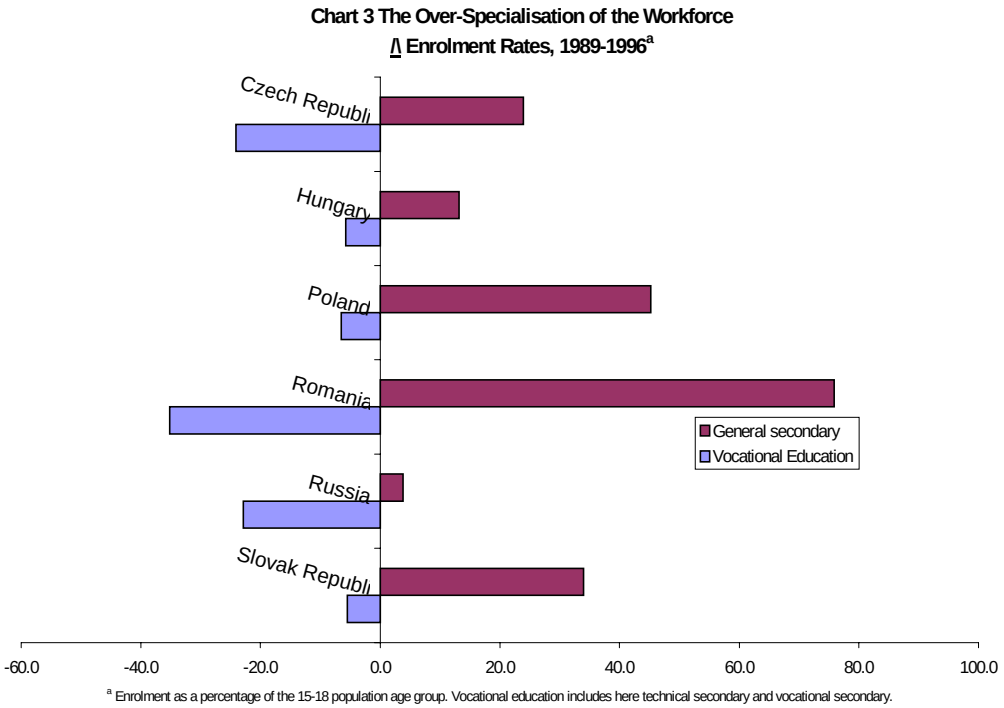
However, a closer look at schooling systems and educational attainments of the workforce in these countries would suggest a less optimistic assessment of the legacies of the previous regime [15]. The fact of having a relatively high number of workers with educational attainments above elementary schooling was mainly a by-product of the presence in these countries of lower vocational schools offering generally one to two years of training in narrowly defined occupations up to the

completion of compulsory schooling. These lower vocational schools were actually part of the basic schools and were indeed not formally considered as a part of the secondary system in these countries. Much of this training was also done within the enterprises the training centres were attached to and this further strengthened the specificity of the skills being provided. Moreover, upper vocational schooling – although offering up to five year courses and then the possibility to have access to tertiary schooling – was also de facto a dead-end. Only a minor fraction of the pupils (generally below five per cent) in upper vocational schools were indeed enrolled in courses offering a school-leaving certificate and VOTEC fields were not covering a broad range of new occupations while those contemplated were to a large extent outdated . Finally, general secondary schools were heavily undersized by OECD standards: enrolment to general secondary schools was of the order of 20-30 per cent (of the population of the relevant age group) compared with 60 to 90 per cent in western Europe.

Thus, far fewer workers in central and Eastern Europe than in the West had completed secondary education at the outset of transition, and even less had tertiary-level educational attainments. If the quantity, that is the coverage, of education was far less satisfactory than thought at the outset, the quality of education was even worse. Adult literacy surveys (e.g., the TIMS and SIALS surveys) attribute rather low scores to CEECS in terms of linguistic, literary, documentary and numerical literacy at all levels of the educational ladder.

A confirmation of the inadequacy of the education system inherited from the previous regime comes from data pointing to adverse labour market outcomes (in terms of both incidence of job loss and low probabilities of finding a new job) for those with vocational education[13]. An even stronger confirmation comes from data on enrolments in institutes of secondary education since 1989, which are displayed in Chart 3. The latter points to a veritable boom of enrolments for general secondary and a strong decline of inflows into vocational education. This happened even in a country like the Czech Republic, which had in place at the outset the best apprenticeship system in central and eastern Europe (heavily influenced by the German *Lehrausbildungs*-system) and where significant effort had been put since 1990 into the modernisation of vocational schooling . The issue is that in the CEECs there were far too many VOTEC fields, e.g., in Poland about 700, almost ten times as many as in Germany. Curricula were just too narrow for market conditions.

[13] See [11].



3.2. Repressed Inactivity .....

A dominant concern of policy-makers, advisors and academicians at the outset of transition was how to win the resistance of workers to staff reductions. The prevailing view was one where workers maintained substantial veto power over managerial decisions in state enterprises and were strongly opposed to staff reductions. In order to overcome the resistance to restructuring, it was therefore necessary "to buy them out", that is, to grant rather generous transfers to the workers involved in layoffs.

A variety of models were developed which suggested smart ways to buy out the workers[14]. For instance, in Dewatripont and Roland model [23], the only way to enact reforms is to introduce them gradually using divide-and-rule tactics whereby only the workers hurt by each reform will oppose it[15]. Divide-and-rule tactics and generous benefits were also deemed essential to start restructuring firms whose workers exerted substantial control over managerial decisions.

Ex-post it is possible to argue that these concerns were somewhat overstated. Too much emphasis was put on the demand side, as if workers were desperately attached to the enterprise without having any outside opportunity.

However, employment dynamics in the years immediately preceding the transition revealed that there was a significant portion of the state enterprise workforce that had one foot outside the firm. Already before 1989, Hungary and Poland, in particular, had experienced significant employment reductions associated with voluntary decisions of workers to leave the firm as, after all, dismissals were still legally forbidden at that stage. The supply-side determinants of these pre-transition staff reductions are also highlighted by the fact that they were unrelated to the dynamics of sales at the firm level [34].

Why were workers so prone to leave the firm they were attached to?

First there was a significant shadow economy outside, deemed to have a high potential to develop further in the disorganisation following the systemic transformation. Before the systemic transformation, informal sector activities were combined with formal sector job attachments, but since the beginning of the 1990s it was no longer necessary (work was no longer considered as a duty) or possible (e.g. because the tightening of budget constraints induced a stronger monitoring of workers' productivity) to combine formal with informal job attachments. All the measures of the informal sector activity which could possibly be devised [36] show that the informal sector has grown in the last decade.

Second, there was a formidable lack of small entrepreneurship, notably a gap of basic activities to be filled, especially in the retail sector, which required in many cases rather low initial investment. In other words, it was tempting for many to leave the state firm and start up their own business. Walking round the centre of Budapest in the early 1990s it was frequent to see several plates announcing the

[14]This is the case of the frameworks proposed, inter alia, by [44], [46] and [23] and [24].

[15]This applies also when workers are forward-looking provided that the "old" sectors (e.g. state enterprises and co-operatives) are bound to disappear at some finite date. This is not the case in some OST models. For instance, in [46] model, the state sector is supposed to survive even at the steady state equilibrium in spite of persistent productivity (and wage) differentials vis-à-vis the private sector.

presence in the building of some sort of consulting firm. Strangely enough, the denomination of these new activities always contained the word "market" .

Third, the climate of uncertainty surrounding the initial steps of transition and the unpredictability of future events were inducing workers to heavily discount the future and make decisions on a "day-by-day" basis. The short time horizon of workers in post-Communist transition is revealed by the failure of many programmes providing one-off lump-sum payments to workers made redundant. One of such examples is that of miners in Romania, "bought-off" with generous severance payments provided in just one instalment. The miners ate them up rather than using these sums to invest in new activities or to pay the costs of migration to areas offering better employment opportunities[53]. Public opinion polls carried out at the outset of transition also show that there was much optimism as to the implications of moving to market conditions . This faith in the market created a window of opportunities not only to Governments, but also to managers wishing to reduce their workforce.

3.3. ...and the Persistence of Transitional Unemployment

It is time to frame these neglected features into a simple model of transition and see whether it sheds some light on at least some of the puzzles discussed above.

As in the optimal speed of the transition literature (Harris-Todaro type of models), we have two sectors endowed with different technologies. In particular, we have an *old* sector (firms inherited from the previous regime) and a *new* sector (ex-novo firms). Old and new are used, rather than the usual *public* and *private* divide, as neither privatisation nor downsizing are sufficient for a firm to move from one sector to another. Only new firms can have access to new technologies/products.

Unlike the OST models, here workers are heterogeneous. In particular, they differ along two dimensions: they have different skills (horizontal differentiation), and varying reservation utilities (productivity in the subsistence sector). Both skills and reservation utilities are uniformly distributed over the relevant spectrum. Workers' skills matter only in the new sector. The old firms use standardized production techniques: for them all workers are alike. New firms, instead, can produce only if the workers have a given range of skills. For simplicity, we assume that all workers within this range are equally productive. Outside this range, their productivity is zero. The extension of this range, call it σ, can be

interpreted as a measure of the "fungibility" of the workforce[16], in turn associated with the specificity of skills developed by the education system. Transitional economies inherited from the previous system a low σ,due to their over-investment in vocational education.

The presence of different skills implies that there is a non-trivial matching to occur between the firms-jobs and the workers[17].

Individuals can be either employed in one of the two sectors or non-employed. Both employed and non-employed individuals can search. Hence, employers when issuing a vacancy have also to choose a recruitment pool: they can either hire from the pool of workers in the old sector or from the unemployment ranks. Search is non-sequential as suggested by an increasing body of empirical evidence[18]: employers fill a vacancy only after having interviewed *all* applicants rather than stopping the interview process after finding the first workers with the right skills.

3.4. A Simple Model[19]

All persons in working age (their total is normalised to one unit) have a reservation utility (productivity in the informal sector), u which is distributed uniformly over the unit interval and is private information of the workers.

The value added of old sector jobs is normalised to one (this rules out cases where, *in the absence of unemployment benefits*, workers are better off being non-employed than in an old enterprise) and is entirely appropriated by the workers[20]. Let δ denote the discount factor. The asset value of being employed in the old sector is then:

$$W_o = 1 + \delta \left\{ \pi_o W_n + \lambda(1 - \pi_o) W_u + (1 - \pi_o - \lambda(1 - \pi_o)) W_o \right\} \tag{3.1}$$

where λ is the (exogenous) layoff rate, π_o denotes the probability of moving to the new sector, and subscripts "n" and "u" denote, respectively, the new sector

[16] One may think of a ring of skills and new firms being located along this ring. The parameter σ is a measure of the arc distance between the upper and lower boundary of the "skill-area" covered by the firm.

[17] In the optimal speed of transition literature workers are homogeneous,and hence the "matching" process is only a byproduct of transaction costs.

[18] See, in particular, [51].

[19] The non-technical reader can skip this sub-section and go directly to the discussion of the numerical simulations.

[20] The model can be readily extended to allow only for a share of the surplus going to the workers, as in the case of private sector employees.

and non-employment. We show in [11] that workers in the old sector can only quit to non-employment in the first period.

The value of being employed (at wage w_n) in the new sector is:

$$W_n = w_n + \delta \{(1 - \lambda_n)W_n + \lambda_n W_u\} \tag{3.2}$$

where λ_n is the probability of dismissal in the new sector[21].

Non-employed individuals can be actively seeking a job or non-searching. If they are seeking jobs, they receive a non-employment benefit and face a probability π_u of finding a job in the private sector. If they are *not* seeking, they continue to receive the non-employment benefit[22] and, on the top of that, they can draw their reservation utility (or productivity in the subsistence sector, e.g. they can grow their own crop). However, they have no chance to find a job in the new sector. Hence, the value of being non-employed for an individual with reservation utility u is:

$$W_u(u) = b + \max \{\delta(\pi_u W_n + (1 - \pi_u)W_u(u)), u + \delta W_u(u)\} \tag{3.3}$$

where $0 < b < 1$.

The above equations define a cutoff reservation utility level, $\tilde{u}$, at which the non-employed are indifferent between searching/being available for jobs and not searching. In particular, $\tilde{u}$ is defined by:

$$\tilde{u} = \delta \pi_u (W_n - W_u(\tilde{u})) \tag{3.4}$$

By substituting (3.2.) into (3.4.) it can be readily shown that the cutoff reservation utility is decreasing in the probability of being laid-off in the new sector while it is increasing in w_n and the discount factor. In other words, per given π_u, the lower the discount rate, the larger the share of the unemployed not

[21] Empirical evidence suggests that separation rates from state and private firms are roughly comparable; however, there are more quits in state firms than in private units. Differences between old and new firms are marked on the hiring side: new firms display higher hiring rates than the other firms. In this model we have two different parameters for job destruction (λ and λ_n) and we only allow firms in the new sector to hire workers.

[22] Although some countries have norms conditioning the provision of unemployment benefits for able-bodied individuals to the passing of a work-test, such rules were rarely enforced. Moreover, other kind of non-employment benefits (e.g., disability benefits) are not conditioned on passing a work-test.

engaged in job search. This is because seeking jobs involves a trade-off between foregone income from informal (survival-oriented) activities and future gains from employment in the new sector[23].

Summarising, at any point in time, persons in working age can be either employed in the old sector (E_o), employed in the new sector (E_n) or non-employed (N). In the latter case, they can be either inactive or "ILO-type unemployed" (i.e., actively searching and available to immediately take-up jobs offered to them), the latter denoted by E_u.

Employers in the new sector can hire either from the non-employment ranks (i.e., the unemployment registers, which include not only ILO-type unemployed, but also many persons not actively seeking jobs) or from the pool of workers in the old sector. In both cases, they have to issue vacancies at a fixed cost per period.

Matching technologies are identical for both kind of pools: we assume for simplicity that they are of the constant-returns-to scale type[24]. Hence, the two job-finding probabilities, for old sector workers and for non-employed seeking jobs are, respectively, given by:

$$\pi_i = \sigma\, m(1, \frac{v_i}{E_i}) = \sigma\, \theta_i\, q(\theta_i)\ i = o, u \tag{3.5}$$

where $q(\theta_i) \equiv m(\frac{E_i}{v_i}, 1)$, and, by the properties of matching functions, $q\prime < 0$ .Moreover, σ is a parameter increasing in the (exogenous) fungibility of the working age population, and θ_i is the vacancy to jobseekers ratio (market tightness) for the pool i.

Filled vacancies from any of the two pools (see wage determination below) are jobs with a value J. We have, therefore, the two "free-entry conditions" for vacancies issued in the old sector and for the non-employed, respectively:

[23]Under the conditions of "Knightian" uncertainty prevailing at the outset of transition, static decision rules may have been extensively followed. This may also contribute to explain the large drop in participation occurred at the start of the transition.

[24]Our results would be strengthened were we to assume that there is a higher efficiency in matching when employers recruit from the old sector. Evidence from transitional economies points to decreasing returns to scale in unemployment outflows. Theoretical arguments are often made in favour of increasing returns. Matching functions estimated over a wide range of OECD countries do not falsify the assumption of constant returns to scale, which is also consistent with a constant unemployment rate along a balanced growth path.

$$\delta\,\sigma\,\frac{J}{\theta_o} = c \quad \forall \;\; 0 < \theta_o < \infty \tag{3.6}$$

and:

$$\delta\,\sigma\,\phi\frac{J}{\theta_u} = c \quad \forall \;\; 0 < \theta_u < \infty \tag{3.7}$$

where c denotes the (fixed[25]) cost of issuing vacancies and ϕ the proportion of non-employed who are seeking jobs (E_u/N). This is because, from the pool of the non-employed individuals, only those actively seeking come for interviews and we assume – as it seems more realistic – that job matching is non-sequential, that is employers screen all the potential applicants before making a decision.

The above conditions imply that when vacancies are issued for both, old sector workers and non-employed jobseekers, the following condition holds:

$$\frac{\phi}{q(\theta_u)} = \frac{1}{q(\theta_o)}$$

which implies (since $0 \leq \phi \leq 1$ and $q\prime < 0$) that $\theta_u \leq \theta_o$. Notice that, for given θ_u, an increasing proportion of non-employed seeking jobs involves a decline in θ_o. By appropriate choice of the parameters (it suffices to assume that c is sufficiently small) we will always impose that at the beginning of transition vacancies are issued for both pools of jobseekers. Insofar as there are initially more employed in the old sector than non-employed jobseekers (that is, at time 0, $E_o > E_u$), we will also have that, at the outset, $v_o > v_u$

Let ρ be the positional rent enjoyed by new posts relative to those located in the old sector. The value of a new job-firm for the employer is then:

$$J = 1 + \rho - w_n + \delta(1 - \lambda_n)\,J \tag{3.8}$$

[25] We could allow c to vary together with the size of the pool of potential applicants, which is consistent with a non-sequential matching process (i.e., one where employers have to interview all applicants before hiring one of them). This would, however, complicate algebra without adding further insights to the model (as it would increase the asymmetries between the two recruitment pools). There is just too little empirical evidence on this matter to offer some guidance to the modelling of the relation between costs of posting vacancies and the size of the recruitment pools.

In fact, when a job is hit by an adverse shock, its value reduces to that of a vacancy, which is always zero by the free entry condition. As is customary in the matching literature, we assume that wages in the new sector are set according to a Nash bargaining rule[26] having as threat point for the worker the value of non-employment (this holds also for workers from the old sector as the latter is bound, sooner or later, to disappear[27]). Only one wage is set. Albeit the distribution of the reservation utility of workers is non-degenerate, the threat point for those seeking a job is unique because it is not possible to seek jobs and carry out informal activities at the same time. Put it another way, the threat point relevant in wage bargaining always coincides with that of the worker with zero reservation utility ($W_u(0)$ or W_u for short), i.e.:

$$W_n - W_u = \gamma(J + W_n - W_u) \tag{3.9}$$

where $0 < \gamma < 1$ denotes the bargaining power of workers.

The laws of motion for the state variables of the model, E_o, E_n, N, E_u, θ_u and $\theta_o$are derived in [11]. It is worth stressing here that the key step in the derivation procedure is to express the transition probabilities as a function of market tightness, that is, the vacancy to unemployed ratio.

Comparative statics of the steady state equilibrium reveals that $\frac{\partial \theta_u}{\partial b} < 0$. It then follows that the steady state equilibrium employment (non-employment) rate is declining (increasing) in the level of non-employment benefits, whilst the effect of higher b on unemployment is ambiguous[28]. Thus the steady state proportion of non-employed seeking jobs, ϕ, declines with b.

Along the saddle path, θ_u is constant, hence also w_n and $\tilde{u}$. For the remaining state variables of the model, dynamics are induced by matching technologies (which are function of the past realisations of the state variables), associated to N,E_u and J in the previous period.

In the numerical simulations discussed below, the following system of difference

[26] The latter maximises $J^{(1-\gamma)}(W_n - W_u)^{\gamma}$, yielding

$$W_n - W_u = \frac{\gamma}{1-\gamma} J$$

[27] Empirical evidence, after all, suggests that the mean of the distribution of job offers for employed and unemployed jobseekers are almost identical in countries like Poland. See [14].

[28] The stronger the responsiveness of labour supply to changes in labour market tightness, the more likely that b results into a decline of E_u.

equations is used.

$$E_o^{t+1} = (1 - \lambda - \pi_o^t)\, E_o^t \tag{3.10}$$

$$E_n^{t+1} = (1 - \lambda_n)\, E_n^t + \pi_o^t\, E_o^t + \pi_u^t\, E_u^t \tag{3.11}$$

$$E_u^{t+1} = E_u^t(1 - \pi_u^t) + \lambda \frac{\tilde{u}^t}{\tilde{u}_o} E_o^t + \lambda_n \mu(\tilde{u}) E_n^t \tag{3.12}$$

where $\mu(\tilde{u})$ is the proportion of employed in the new sector with reservation utilty lower or equal than $\tilde{u}$. Clearly $\mu(\tilde{u})$approaches one unit as the transition proceeds given that inactivity is an absorbing state.

We specialize matching technologies as Cobb-Douglas and we let $0 < \alpha < 1$ denote the elasticity of job findings with respect to vacancies. Given the assumption of constant-returns to scale matching technologies, $(1 - \alpha)$ is then the elasticity of job finding with respect to the pool of jobseekers.

The specificity of skills is embedded in a parameter $0 < \sigma \leq 1$ hitting matching technologies in a multiplicative fashion. We also use in the simulations a "fiscal externality" effect. This involves adding a Government budget constraint to the model, related to the payment of non-employment benefits out ot payroll taxation. Unlike OST models, we posit the presence of statutory contribution rates, τ_n and τ_o, which vary across the two sectors.

$$bN = \tau_n\, w_n E_n + \tau_o E_o \tag{3.13}$$

It is reasonable to assume that the only control variable of governments is the contribution rate on the old jobs (which can also be negative, implying a subsidisation of the old sector). The payroll tax rate in the new sector, τ_n, is the only variable that can be adjusted[29] in order to clear at each point in time the social security budget:

$$\tau_n = \frac{bN - \tau_o E_o}{(w_n E_n)} \tag{3.14}$$

[29] Subsidies to state enterprises did not look at all as a control variable. As discussed in [49], subsidies to enterprises in these countries took mainly the form of tax arrears allowed by weak tax collection administrations or by governments fearing domino effects originated by the interlocking of banks and firms.

which shows that - insofar as $w_n > 1$ - an increased employment share in the new sector (per given N), involves lower statutory contribution rates.

3.5. Calibrating the Model

The way in which the various factors mentioned above interact in the midst of transition can be better grasped by calibrating the model against real data and then producing some numerical simulations, under different assumptions concerning the level of non-employment benefits. The model generates at each point in time flows from employment in the old sector to the new sector, unemployment and inactivity, flows from inactivity to unemployment and vice-versa as well as from these two states and employment in the new sector. Finally it generates flows from the new sector to unemployment and inactivity. This accounts for about 75 per cent of the flows summarised in Table 1, compared with a low 15 per cent under the OST literature.

Matching technologies are assumed to be the same for employed and unemployed jobseekers[30]. Thus, the key parameters of the matching process (namely the two elasticities of job findings with respect to vacancies and jobseekers, respectively) can be estimated from unemployment outflow to jobs regressions run over monthly, district-level, data for a number of countries in transition [18] [6] [7] [38]. Results are fragile insofar as they depend on the functional form being used and on the lag structure allowed for in the response of unemployment flows to vacancy formation. However, all estimates point to a rather low elasticity of outflows to jobs with respect to vacancies. In the simulations, we take an average over the vacancy elasticities estimated by the earlier studies, namely .3. Given the assumption that matching takes place at constant returns to scale, the elasticity of job finding with respect to the stock of jobseekers is .7.

The fraction of jobs destroyed each period in the old and in the new sector are two exogenous parameters (job destruction is endogenised in the next sub-section) which can be recovered from labour turnover data. The latter series are available in the initial years of transition limited to state sector employment only. The scant evidence on labour turnover in the private sector does not point to significant differences in (total) separation rates, but the composition of separations is different as there is a higher incidence of layoffs in the private sector. This

[30]There are, a-priori, good reasons for assuming that old-sector workers enter matching functions both with a stronger (e.g., because of networking effects) or a lower (because of the less time they can devote to job search) weight than the unemployed job-seekers.

can be partly explained by the lower average size of business units in the private sector, given that job destruction bears a strong and negative relation with plant size [41]. In the numerical simulations, we assume that 3.5 and 5 per cent of jobs are destroyed per year in the old and new sectors respectively. The first number is obtained by simply averaging out layoff rates (which mostly cover state sector firms) for the period 1990-3 for all countries for which such data are available. The layoff rate for the new sector is then obtained by multiplying 3.5 by the ratio of private to public layoffs rates in the countries and time-periods covered by data. Clearly the fact that layoff rates are lower in the state sector does not mean that overall separation rates are also lower. Quite the opposite: the baseline scenario yields in the first period higher separation rates in the old sector, owing to the effects of the introduction of non-employment benefits, and, later on, a significant number of voluntary separations originated by transitions from the old to the new sector .

As discussed above, wage formation in the new sector is governed by a Nash bargaining rule, splitting the surplus from the match (the total value of the match minus the foregone value of continued job search) in fixed proportions between the worker and the employer. The stronger the bargaining power of workers, the higher the share of the surplus going to them. The parameter assigning a fraction of the quasi-rents to the worker is taken from the labour cost share in total value added, which was roughly of the order of 40 per cent (allowing for measurement errors, which could have biased downwards statistics on the wage shares) throughout CEECs in the 1990s.

There are still three parameters that need to be specified before evaluating the model, and these have to do mainly with vacancy formation. In particular, we have the (fixed) cost of issuing a vacancy for the employer, c, the parameter capturing the degree of fungibility of the workforce (σ), and the discount factor. In our simulations c equals a yearly wage in the old sector: this is broadly the same amount than the startup loans offered as an active policy tool in many transitional economies and deemed to cover the costs associated with self-employment. The degree of fungibility of the workforce is calibrated so as to generate flows from the old sector to the new sector comparable to the shifts from public sector to private sector jobs observed in the countries for which such data are available [9]. In particular, σ equals .2, that is, ceteris paribus, matching probabilities should be reduced by a factor of five. As discussed below, some simulations allow σ to slowly increase over time, e.g., as a result of improvements in the quality of human capital and/or simply in the information available to employers on the

actual skills of the applicants. Finally, the discount factor is assumed to be .8, allowing for the relatively short-time horizons prevailing especially at early stages of transition. Simulations with higher discount factors yield more or less the same results than those with the fungibility parameter increasing over time: there are just more non-employed seeking jobs around, and hence more matches.

3.6. Evaluating the Model

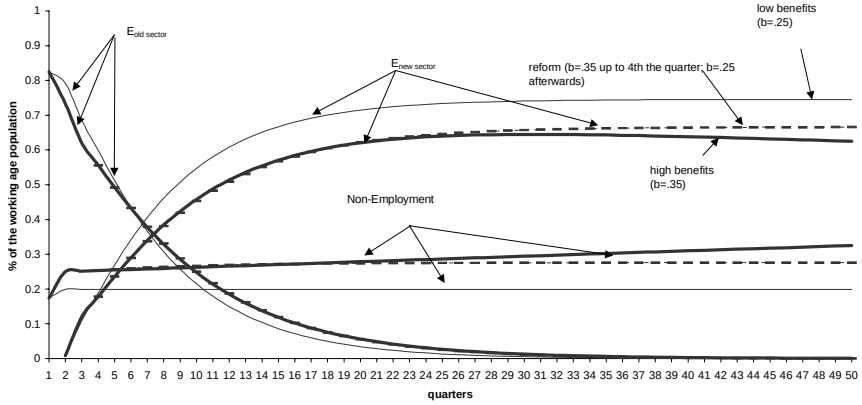
Charts 3a through 3c display numerical simulations of the model under different values of the non-employment benefits. At time 0, 80 per cent of the working age population is employed in the old sector (as was the case in most CEECs at the outset of transition). At t = 1 a non-employment benefit is introduced and, as a consequence of this, some workers quit the old sector to draw benefits and their reservation utility (productivity in the subsistence sector). Then the transition starts with workers moving from the old to the new sector either directly or indirectly (that is, via intervening non-employment spells). The system eventually settles down with positive non-employment and unemployment and with the disappearance of the old sector. The speed of transition is, in this context, the number of periods required for the process to converge . The scope of transition is the share of employment in the new sector (the complement to non-employment) resulting at the end of the process.

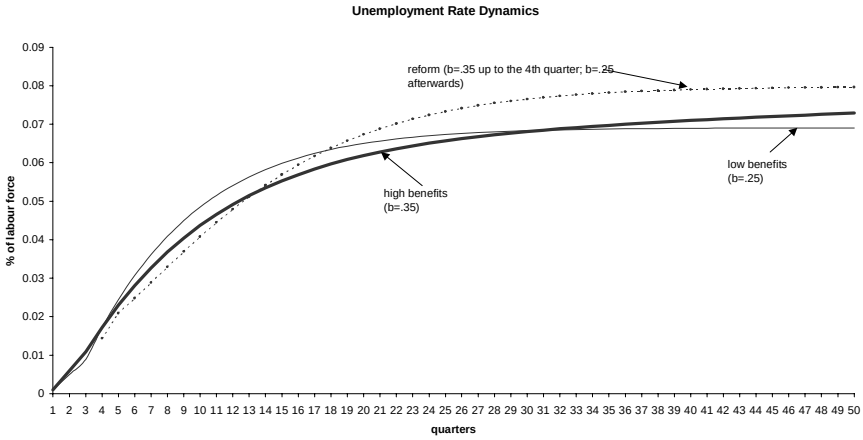
We consider three scenarios. In the low benefit scenario (continuous line, narrow band), the non-employment benefit (perceived by workers as open-ended[31] insofar as it encompasses social assistance of the last resort, bridging schemes to retirement and various kind of disabilities) is .25, that is, the benefit replaces one fourth of the wage earned in the old sector. In the high-benefit scenario (continuous line, wide band), b is .35. In the third scenario (dotted lines) benefits are initially high, but one year after the start of transition as in most CEECs the replacement rate is reduced by ten percentage points (from 35 down to 25 per cent of the old sector wage).

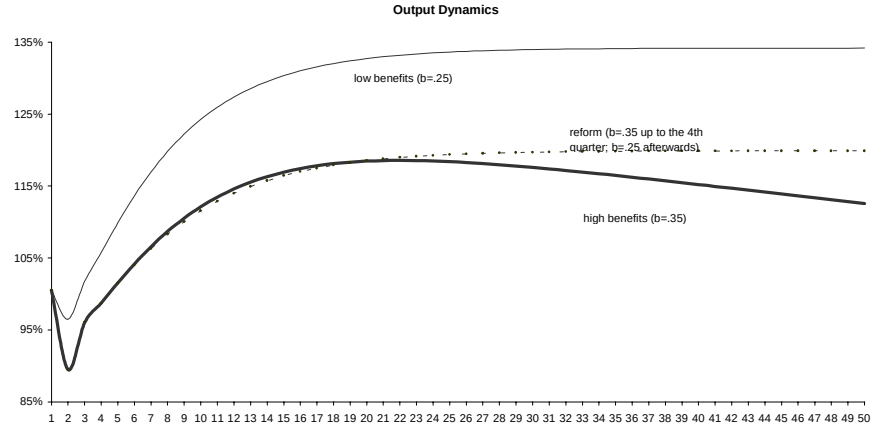
[31] It should be stressed that in most countries unemployment benefits introduced at the outset of transition involved nominal replacement rates declining over time rather than flat, as is assumed in our simulations. However, under rapid inflation and indexation only of benefit minima, unemployment benefits systems collapsed de facto in most countries to a flat rate . Moreover, after the exhaustion of the unemployment (insurance) benefits, so-called unemployment assistance benefits (if not general social assistance) are offered in most countries and the amount of transfers in this segment of non-employment benefits is (even in nominal terms) independent of previous earnings.

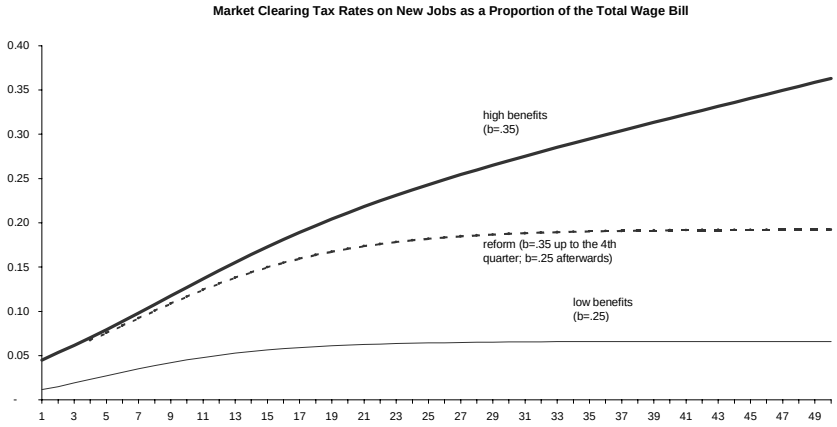
Under low benefits, the speed of transition is of the order of 8 years (30 quarters), while the steady state employment rate is almost 70 per cent of the working age population. The unemployment rate is roughly 6.5 per cent and the economy recovers quite rapidly from the transitional recession. Under the high-benefit scenario, non-employment and unemployment continue to grow (albeit at a rather low pace) even ten years down the road of transition. Output initially recovers, but later on it starts declining again, as soon as the economy gets onto a low-participation high-labour taxation path. Such an outcome is avoided when benefits are tightened (dotted lines), but the effects of reforms on non-employment are initially very mild. Significantly in the quarters immediately after the reforms unemployment grows faster than in the absence of reforms, mainly because a larger number of non-employed people start actively seeking jobs.

Chart 4 Numerical Simulations of the Model









Note See appendix 2 for details on the simulated model.

The effects of reforms on employment and output are significantly affected by the timing of reforms. If the benefits are low from the start there is a visible improvement with respect to the high-benefit scenario in terms of both job generation in the new sector and unemployment. If the reform is implemented at t=4, hardly any change can be perceived in the time path of N and E_n. Simulations of reforms intervening at t=1, 2 and 3 produce the same results: the earlier the change in the benefit system, the faster the transition and the lower non-employment generated in the process and prevailing at the steady state.

The timing of reforms is important because when a large pool of non-employed individuals is in place and a significant portion of them is interested only in drawing benefits (that is, people are registered at labour offices just to draw some

sort of non-employment benefits, e.g., even simply free medical insurance), it is improbable that reforms can induce employers in the new sector to significantly increase the number of vacancies issued for the non-employed segment of the population. As most applicants are likely not to be interested in the jobs offered to them, employers prefer recruiting most of their workers among the ranks of the old sector workers. It follows that less non-employed people will search because job finding probabilities are low. The fiscal externality is also at work. Labour taxes required to pay non-employment benefits (the bottom panel of Chart 3 displays the rates clearing the social policy budget under the 3 scenarios) depress job creation in the new sector.

These locking-in effects arise in our model even if there is no human capital loss associated to long spells of unemployment and no-ranking of workers on the basis of unemployment duration. Were these effects present in the model, its implications as to the importance of a good timing of reforms could only be stronger. At the steady state, the old sector is no longer in place and hence there is no substitutability between the two recruitment pools. However, the system settles down at a level where outflows from non-employment are too low to induce all the non-employed people to take up job offers giving up their reservation utility.

Simulations of the model in which the degree of fungibility of workers is allowed to gradually increase over time, e.g. in which σ converges to unity in about 20 years, yield lower non-employment rates ad larger employment in the new sector throughout the transition, while unemployment rates are only mildly affected (because the positive effect of larger σ on outflows from unemployment are partly offset by encouraged participation in the labour force). Clearly, convergence is achieved only after σ stabilizes and output indeed continues to grow up to the 80th quarter unlike in the baseline simulations. Simulations with lower values for c, that is lower entry barriers, also yield higher employment rates at the steady state. Significantly in this case it is intensive margins to play a major role in the reduction of non-employment: almost the entire increase of employment in the new sector is brought about by a decline of the unemployment rate.

Overall, unlike the OST literature, this model suggests that late reforms of the benefit systems are largely ineffective in reducing non-employment, at least in the short-term. While OST models implied that it is preferable to have initially relatively high benefits in order to ease restructuring, and then lower in order to reduce the fiscal burden on the emerging private sector, in this model the optimal sequence can only go the other way round[32]. High non-employment benefits at

[32]This is because, tax rates imposed later on in the process can be lower as the new sector

the outset do not speed up transition, but simply induce a large number of quits to inactivity thereby making the absorption of non-employment more difficult.

When non-employment benefits exceed approximately 70 per cent of the old sector wage, transition never takes-off. Under these circumstances, transition can start (in the sense that some positive employment is created in the new sector) only if Governments can borrow (or, taking a partial equilibrium view, non-employment benefits are paid out of general Government revenues). As in the OST literature, borrowing is, however, treated as a gift in our simulations. We did not go as far as to model intertemporal budget constraints.

3.7. Understanding the "Czech Miracle"

The above is broadly consistent with the effects of the tightening of unemployment benefit systems and early retirement schemes implemented in most CEECs as a component of broader fiscal consolidation plans. The maximum duration of unemployment benefits was halved in the Czech and Slovak lands and in Hungary, and a maximum duration of one year was set in Poland which had initially adopted an open-ended system. Gross statutory replacement rates were also decreased in Bulgaria, in the former Czechoslovakia and in Poland, where the earnings-related system was turned into a flat-rate scheme and minimum employment record conditions were introduced for eligibility to benefits. The lifting of benefit minima or the introduction of benefit ceilings ranging between 140 and 150 per cent of the minimum wage also contributed to reducing benefit levels. In the Czech and Slovak Republics, regulatory changes were enforced retroactively, while in Bulgaria, Poland and Hungary existing entitlements were grandfathered. Needless to say, in OECD countries cuts in the generosity of benefits are rarely made and when so, are much less radical and diluted over a longer time period.

The impact of the tightening of benefits was made even more dramatic by the spread of long-term unemployment. The combined effect of a rising percentage of unemployed for more than one year and of a decreased duration of benefits was a large decline in the proportion of registered jobseekers receiving unemployment benefits.

Although reforms in unemployment benefit systems were mainly inspired by budgetary restraint, policy-makers expected that the tightening of unemployment benefit systems would boost outflows from unemployment to employment. Economic theory also unambiguously suggests that reductions in the generosity of

pays higher wages than the old sector.

a system should induce more "matches" between employers and jobseekers by reducing the "reservation wages" of the unemployed. Job creation should also be boosted by benefit cuts because of the stronger competition for jobs - and hence lower wages - between unemployed and employed jobseekers and because of the reductions in statutory contribution rates on top of the payroll, which could accompany expenditure savings.

However, aggregate data on unemployment outflows and microeconomic evidence on hazards from unemployment do not point to a significant increase in exits from unemployment to employment after the tightening of unemployment insurance systems (Table 3). With the important exception of the Czech Republic, unemployment outflows to jobs as a proportion of the population of origin have not significantly reacted to benefit cuts . The limited effects of policy changes on aggregate outflows to jobs can be econometrically assessed by testing the stability of matching functions, relating outflows to jobs to the stocks of unemployment and vacancies in the various countries. These tests seem to confirm that policy changes have not significantly boosted outflows to jobs, except in the case of the Czech Republic.

Table 3 The Tightening of Unemployment Benefits and Unemployment Outflows (Before and After the January 1992 reforms[a])

Country	Gross replacement rates[b]	Coverage rate[c]	Monthly ouflow rates	Monthly outflow to job rates	Outflows to jobs on total outflows	Matching function estimates	
						time -dummies[d]	OJ to U elasticity[e]
Bulgaria[f]							
before	**61**	**52**	**6.8**	**4.5**	**35.5**	**...**	**...**
after	**40**	33	9.5	1.5	15.8	...	...
Czech Republic							
before	**41**	**72**	**15.1**	**10.3**	**68.1**	**-0.01**	**0.40 (0.08)****
after	**30**	48	21.3	15.4	72.8	-0.56	0.51 (0.04)*
Hungary[j]							
before	**56**	**80**	**6.2**	**3.6**	**55.9**	**-0.20**	**0.78 (0.09)****
after	**36**	40	8.1	2.1	26.4	-0.50	0.78 (0.00)
Poland							
before	**54**	**75**	**...**	**2.5**	**...**	**0.05**	**0.28 (0.16)***
after	**30**	55	5.8	2.9	51.3	-0.05	0.31 (0.05)
Slovak Republic							
before	**41**	**82**	**5.4**	**3.2**	**52.1**	**0.09**	**0.67 (0.13)****
after	**30**	27	8.7	3.4	38.3	-0.01	0.70 (0.07)

a Data before the reforms refer to the period 1/91 to 12/91. Data after the reforms refer to the 1/91-12/95 period unless otherwise specified. Further (marginal) adjustment were made to be UB systems in 1996.

b Gross benefit income in unemployment as percentage of gross wage in previous employment for a single worker, aged 40, who has been working continuosly since age 18 with no interruptions and who was earning the average of replacement rates at two levels (average earnings and two-thirds of average earnings). Average values for the replacement rates of the first 3 months, the first year and the second year.

c Unemployment benefit recipients as a percentage of registered unemployment. Figures before the change refer to December 1991. For figures after the change:Bulgaria, December 1995; Czech Republic, December 1996; Hungary, December 1997; Poland, April 1998 and Slovak Republic, December 1996.

d Average time-dummies in matching functions estimated at monthly frequencies before and after the reforms break.

e Elasticity of outflows to jobs to unemployment before (U_1) and after (U_2) the break. Robust standard errors (with respect to heteroskedasticity and serial correlation) of U_1 and (U_1-U_2) in parentheses. One asterisk denotes significance at 5% level, two asterisks at 1% level.

f Data on flows refer to the period October to December 1991.

g Since October 1990.

h But 70% of the minimum living standard (MLS) if not employed before.

i The recipient receives 180% of the minimum wage if enrolled in a training course.

j In Hungary benefit maxima and minima are not expressed as as percentage of the minum wage, but are fixed in levels. The figures reported in the table refer to the relativities between benefit floors and cealings and the minimum wage in 1995. Unemployed that were previously earning less than the benefit minima are entitled to 100% of the previous earnings. In 1997 the benefit minima and maxima were calculated as a percentage of pension minima (min = 90% & max = 180) and the gross replacement rates were 48, 48, 0 for the durations considered. Data on flows prior to January 1993 refer strictly to unemployment benefit recipients.

k One year until January 1990 when it was extended to two years.

l Net monthly wage if lower than the minimum pension.

Notes Data before the reforms refer to the period 1/91-12/91, that is the year immediately preceding the reforms. Data after the reforms refer to the period 1/92-12/95, that is the 4 yeras after the reforms. Further margina changes were made to the unemployment benefits systems after the 1995.

Sources Boeri and Edwards (1996); Employment Observatory no 8, OECD Short-term Economic Indicators. Sources and Definitions, National Labour Ministries; Rutkoswski (1996), Micklewright and Nagy (1996); Terrel, Erbenova and Sorm (1996), Vodopivec (1996), Lubyova and van Ours (1996).

3.8. Non-employment Benefits as Minimum Wages

Among the windows of opportunities opened by the transition to a market economy, the possibility offered to Governments to shape earning distributions by adjusting the floors to non-employment benefits. Governments in the region could do much more in this respect than thought at the outset. Attention was concentrated at early stages of transition on aggregate wage dynamics rather than on the structure of earnings. The danger of wage-inflation spirals was often pointed

out and administrative intervention advocated, which should have fixed ceilings (rather than floors) to wage setting and enforced them via tax-based income policies. Much less attention was devoted to the lower end of the wage distribution.

However, owing to the weakness of bargaining institutions, and the virtual absence (and non-enforceability) of statutory minimum wages, the generosity and structure of cash transfers provided to those without employment had the potential to significantly affect the wage distribution. The disorganisation and segmentation of workers' organisations at the outset of transition was not only a by-product of a lack of credibility of the old unions, which had been supporting the Communist regime. It was also resulting from the fact that the old unions were actually not rooted at the workplace . Unions under the old system were "transmission belts" for authorities rather than voices for workers. They were nourished by the soft budget constraint and largely unprepared for tough wage negotiations and opposition to staff cuts.

Statutory minimum wages existed in many CEECs. However, they were set by Governments at frequencies which were not legally compelling. Thus, they were often kept unaltered for several years in spite of two-digit inflation rates. For instance, in the Czech Republic the minimum wage was kept at 2,200 crowns from 1992 to 1996, and declined by about 50 per cent in real terms. Inevitably, minimum wages became increasingly irrelevant in wage setting. Minimum wages had by 1999 fallen below 40 per cent of the average wage in all countries (in Russia even below 10 per cent), which is significantly lower than the level typically observed in European OECD countries with minimum wage legislation (minimum wages in these countries range between 50 and 60 per cent of the average wage). Perhaps, the best indication of the increasing irrelevance of minimum wages[33] to wage setting comes from the fact that minimum wages were no longer binding even in the budgetary sphere[34]. One of the reasons why minimum wages were de facto not used as a policy tool is that they were to a large extent non-enforceable. Due to the weakness of bargaining institutions and a lack of an efficient network of labour inspectorates in these countries, it is quite unlikely that statutory minimum wages would have been, in any event, applied in the new small business sector.

[33]Minimum wages have continued to play an important role as a social policy parameter (indexation scheme) as many benefit floors like social pensions, unemployment benefit minima and some family allowances are often established as a multiple (or fraction) of the minimum wage.

[34]To give an example, in Russia already in 1995 the lower wage rate for workers in the public administration was established at a level which was almost 10 per cent higher than the statutory minimum wage (60,000 rather than 55,000 roubles).

Thus, weak unions and the absence of minimum wages ended-up assigning an additional task to non-employment benefits, namely the role of floors to wage setting. In order to characterise all this, and evaluate how different structures of non-employment benefits have affected wage setting, the basic model presented above has to be extended in order to produce non-degenerate wage distributions. Thus a bit more of formalism is needed, but just a bit.

3.9. Extending the Model

In the model presented above, the reservation utility of individuals and job destruction are exogenous. Here, we extend this model in two respects.

First, we allow the (unobservable) reservation utility, u, to be positively correlated with some (observable) measure of individuals' skills, e.g., years of schooling. This is consistent with evidence on (declared) reservation wages of Polish workers[35]. In particular, let s denote this signal, whose lower and upper bounds are a $(0 < a < 1/2)$ and $1 - a$ respectively. Per any given s, u is uniformly distributed over the $[s - a, s + a]$ interval. We may think of s as years of schooling normalized by the average age of entry in the labour market, and at a as a measure of the information provided by the education system as to the reservation utility of individuals: as a tends to zero, the reservation utility is no longer private information to individuals. Under the basic model (and in the case of rural areas discussed below) a is just too large to convey any information, and consequently $E[u/s] = E[u] = \frac{1}{2}$, while in this extended version of the model, the conditional expectation $E[u/s] = s$.

As a second extension, we allow the probability of job loss in the new sector to vary across workers, that is, a vertical source of heterogeneity is added to the horizontal dimension (varying reservation utilities) introduced so far. In particular, we assume that larger values of s are associated with a higher degree of "fungibility" of workers. There is evidence in OECD countries that education does indeed increase the duration of a match. In formerly planned economies, this relationship is milder (mainly because of the "anomaly" of vocational education) but partly present, notably when the focus is on separations related to exogenous shocks hitting the value of a match (rather than to on-the-job search activities). In particular, the layoff rate[36] is modelled as a function of the signal for skills, s,

[35] See [11].

[36] this amounts to partly endogenise layoff rates. See [30] for a model in which separation rates from the private sector are fully endogenous.

i.e.,$\lambda_n(s)$ where $-1 < \lambda_n' < 0$ and $\lambda_n(0) > \lambda$.

As there are signals on the fungibility of workers, it is reasonable to assume that the labour market is segmented along these signals, that is, over s. This means that now employers choose not only the recruitment pool (as in the basic model), but also the type of vacancy to be offered. The two choices are, clearly, interdependent and related no longer simply to the size of the two pools, but also to the (conditional) distribution of u given s.

We characterise non-employment benefits either as a flat-rate benefit,b, or as a subsidy proportional to wages in the new sector (in the old sector all workers are paid the same wage), that is, $b = k\ w(s)$ where $0 < k < 1$. In both cases, the value of being non-employed is now:

$$W_u(s) = b + \max\{\delta(\pi_u(s)W_n(s) + (1 - \pi_u(s))W_u(s)), u + \delta W_u(s))\} \qquad (3.15)$$

As in the basic model, there will be a cutoff reservation utility at which those non-employed are indifferent between searching and non-searching. Such a cutoff, reservation utility will vary depending on the skill-type of individuals, that is, $\tilde{u}(s)$.

It is possible to show (the formal proofs are in [11]) that when non-employment benefits are paid at a flat-rate, market tightness is monotonically increasing in s, a result which holds also when benefits are earning-related, but in a progressive fashion, that is, benefits increase less than proportionally with previous earnings.

Other results have to do with the association between reservation utility of individuals and s. In particular, when **u** is uncorrelated or mildly correlated with **s,** non-participation decisions are more frequent at the lower end of the educational attainments ladder, notably when unemployment benefits are flat. Reservation utilities steeply increasing in s yield instead a high proportion of flows into inactivity at the upper end of the educational ladder, particularly when benefits are earning-related.

Finally, it is possible to show that earning-related benefits without minima may discourage low-s types to move from the old to the new sector. This holds independently of the shape of the relation between reservation utility and s because what ultimately matters for wage setting in the new sector is only the level of the benefit paid to those out of employment.

3.10. Benefits, Unemployment and Inequality: Russia vs. CEECs

The extended model can shed some light on the differences in labour market adjustment between the Visegrad four, Romania and Bulgaria, and the CIS countries. As discussed in Section 2, we can order formerly planned economies along two dimensions: employment-to-output elasticities and the pace of structural change. The Visegrad four have more of both, followed by the Balkanic group and by Russia. According to the extended model, earning-related benefits without minima tend to discourage the low-skilled to move from the old to the new sector and we have seen above that such direct job-to-job shifts are indeed the driving force of structural change in formerly planned economies.

A simple way to test the heuristic value of the model is to look at the generosity and distribution of benefits in the various countries. This is done in Table 4, which also provides information on changes in earning and income inequality occurred since the start of transition and the role played in this context by non-employment benefits. Three facts stand out.

Table 4 Social Policy Models, Redistribution and European Union Accession

Countries	Social policy expenditure as a percentage of GDP[a] (1991-5)				The role of social policies in redistribution			Minimum benefit[f]	Measures of earning
	1) NE benefits[b]	2) Old-age pensions[c]	1/2	Total	Δ Gini[d]	Contribution of social transfers to Gini[e]	of which non-pensions	(% average wage) 1995	Δ Gini (%) 1990-93
Visegrad 4									
Czech Republic	3.6%	11.0%	32.7%	25.5%	8.0	0.9	0.4	no minimum (30)	0.055
Hungary	2.4%	11.5%	20.9%	32.3%	2.2	1.2	-0.2	35 (25)	0.024
Poland	5.0%	15.8%	31.8%	29.5%	10.6	3.3	-0.1	36 (28)	0.034
Slovak Republic	2.7%	9.1%	29.6%	26.0%	-1.0	…		no minimum (32)	…
Unweighted average	*3.4%*	*11.8%*	*28.8%*	*28.3%*	*4.95*	*1.80*	*0.03*	…	…
Balkans									
Bulgaria	1.6%	9.4%	17.2%	14.1%	10.0	0.9	0.4	20 (17)	0.040
Romania	1.9%	6.9%	27.5%	16.5%	6.0	…		23 (16)	0.050
Unweighted average	*1.8%*	*8.2%*	*22.3%*	*15.3%*	*8.0*	*0.9*	*0.4*	…	…
CIS countries									
Belarus	0.6%	5.8%	10.3%	8.3%	7.0	…		…	…
Russia	0.6%	5.5%	10.9%	8.5%	29.9	6.0	2.3	10 (no minimum)	0.250
Ukraine	0.3%	7.7%	3.3%	9.8%	24.0	…		…	…
Unweighted average	*0.5%*	*6.3%*	*8.2%*	*8.9%*	*20.3*	*6.0*	*2.3*	…	…

[a] As a percentage of GDP. Dates: Czech Republic 1991/95, Hungary 1991/94, Poland 1990/1994, Slovenia 1990/95, Bulgaria 1991/95, Romania 1990/94, Slovak Republic 1990/95

[b] Non employment benefits include unemployment benefits, social assistance, early retirement, disability pensions and sickness benefits.

[c] Average-period data.

[d,e] Czech Republic 1987-88/1993-95, Estonia 1987-88/1993-95, Hungary 1987/1993, Poland 1987/1995, Slovenia 1987/1995, Bulgaria 1989/1995, Latvia 1989/1996, Lithuania 1987-88/1993-95, Romania 1989/1993-95, Slovak Republic 1987-88/1993-95, Belarus 1987-88/1993-95, Russia 1989/1996 and Ukraine 1987-88/1993-95.

[e] Contribution of social policy to changes in the Gini coefficient between the pre-transition phase and 1995-6. See the text and Milanovic (1999) for details on the de-composition

[f] Statutory minimum benefit. Normal characters denote UB, italicised figures SA. As minima are either set in terms of the minimum wage, minimum pension or arbitrarily fixed by Governments. The data displayed in the table are actual average 1992-3 minima. In brackets the measures obtained by applying benefit indexation mechanisms (if any) to

[g] Δ Gini = first difference in the Gini coefficient; Δ Decile ratio = first difference in upper decile to bottom decile ratio; Δ low pay = first difference in the % of workers receiving wages lower than 2/3 of the median wage (for CR, Poland and Romania the base year is 1989).

Notes Groups 1, 2 and 3 refer to the likely rounds of accession to the European Union.
... = not available
Sources Boeri and Edwards (1998) for data on NE benefits in CEECs; Milanovic (1999) for data on income inequality; World Bank Technical Paper 339 (1996) for data on pension expenditure; Unicef, Regional Monitoring Report, n.4 1997, for data on total social expenditure.

First, among the CEECs, Romania and Bulgaria are those with lower benefit minima and a closer relation of the benefits to previous earnings, that is, less redistribution in favour of the low-income earners. The cross-country differences are more striking when comparisons are made between, on the one hand, the Visegrad group and, on the other hand, Russia. Here unemployment benefit minima coincide with the minimum wage which - under the hyper-inflation of 1992 - fell to about 10 per cent of the average wage and never regained the ground lost. Moreover, in Russia as in most of the former Soviet Republics, there are no national standards for the provision of social assistance and there is a virtual absence of fiscal transfers across regions enabling the poorest oblasts to

pay social assistance of the last resort. Nominal replacement rates for high income earners may appear of the order of those provided in CEECs, but in real terms are negligible for everybody. It is often claimed that in Russia and in most of the former Soviet Republics there is virtually no unemployment benefit system in place and it is difficult to disagree with this point of view.

Second, Russia, by and large, experienced the strongest increase in income inequality (fifth column). Significant increases in earning inequality and, above all, in the incidence of low pay were recorded also in Bulgaria, Romania and the Czech Republic. Needless to say, these are all countries with relatively low benefit floors (at least after taking inflation into account) and a closer link between past earnings and the distribution of non-employment benefits. Hungary and Poland, the countries with flatter benefits and higher minima, experienced a much less marked increase in earning inequality and in the extent of low pay.

Thus, the countries with the largest dispersion in the structure of non-employment benefits experienced the largest increases in the inequality of the earning distribution just as the model predicts. The latter suggests that the relationship between the distribution of benefits and that of earnings is to a large extent driven by self-selection; that is to say, under relatively high benefit floors the least educated and less productive workers are either subject to long duration unemployment (and hence are under-represented in the employment pool) or decide to withdraw from the labour force altogether. These selection effects can be better assessed by econometric estimates of earning functions, notably including terms correcting for the probability of not being employed. Significantly we found elsewhere [11], that Heckman correction terms controlling for these selection effects, are significant in Poland and the Czech Republic, but not in Russia.

Overall, differences in social policy models between the Visegrad 4, Romania and Bulgaria, and Russia would seem to account for the cross-country differences in labour market adjustment. In Russia, the bulk of adjustment involved wages, while in the CEECs it was employment to bear the weight of adjustment. Quantity, as opposed to price, adjustment resulted in more structural change, which may explain the better output performance of the Visegrad four vis-a-vis the other transitional economies five to ten years after the start of transitions. Large social policy outlays as a proportion of GDP in the Visegrad 4 relative to the other transitional economies also prevented the explosion of inequalities. However, they generated more unemployment throughout, particularly at early stages of transition, and large non-employment pools, which are still there.

3.11. Regions

The models above assume that reservation utilities of individuals are at least partly exogenous with respect to the ongoing wage distribution. In other words, while deciding optimal stopping rules in their job-search strategies, individuals consider factors other than the wages potentially offered to them in the labour market. The important thing is that such additional factors, mainly capturing individuals' productivity in home production, are somewhat unrelated to wage setting. Provided that relocation is costly, differences in the efficiency of home production between urban and rural areas can play such a role. The fact of being resident in rural areas can make jobseekers more choosy independently of the wages prevailing nation-wide (collective bargaining is carried out in most countries mainly at the sectoral level).

Chart 5 display the reservation utility-education profile which can be estimated on the basis of information, provided by the LFS, on the "reservation wage" (the lowest wages at which individuals declare to be willing to accept job offers) of unemployed individuals in Poland[37]. We use a Mincerian specification of the earning function[38], run separately for urban areas (districts with more than 50,000 inhabitants) and rural areas (the remaining districts). As can be seen from Chart 5 (which refers to two male jobseekers, aged 25, resident in urban and rural areas respectively), for low levels of education, the reservation wage of the individual

[37] The average reservation wage in the various quarters is about half of the actual average wage and nearly one fourth larger than the minimum wage. It should be stressed that the question on the reservation wage is formulated in such a way as to find out whether or not the jobseeker had in mind posts outside the place of residence (likely to involve therefore some compensation or premium for the costs of mobility) or involving reduced working time, e.g., part-time jobs. Hence, by checking all these factors, it is possible to get some comparable information about the reservation wage of individuals . Indications as to the reliability of data come by matching observations on the same individual over time and comparing reservation wages stated when still searching a job with the actual accepted wages. Significantly, for those finding a job shortly (within two months) after the interview in which they stated their wage aspirations, the ratio of the accepted wage to the reservation wage is close to unity. This is also consistent with the presence of a fairly compressed distribution of wage offers for the unemployed compared with on-the-job seekers.

[38] The estimated equation is

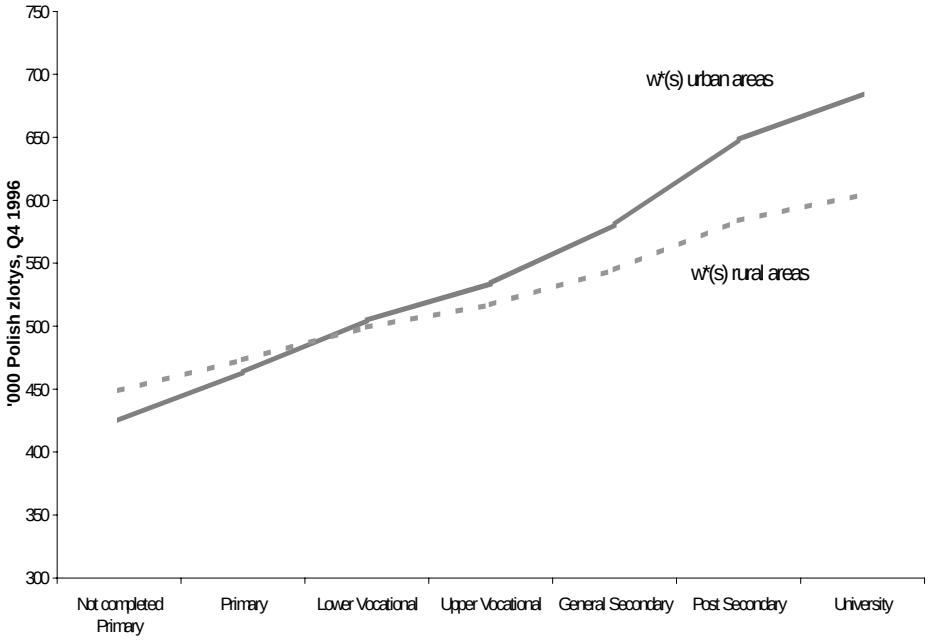
$$\ln(w_i*) = \alpha + \beta_1 EDU_i + \beta_2 (EDU_i)^2 + \gamma_1 AGE_i$$

$$+\gamma_1 (AGE_i)^2 + \delta UBREC_i + \varepsilon_i$$

where w* denotes the stated reservation wage, EDU years of schooling, and UBREC is a dummy variable taking the value one when the jobseeker is receiving unemployment benefits.

living in rural areas is larger than that of the urban jobseeker while for educational attainments above the primary level, the opposite holds true. Thus, there is some indication (supported by formal test of the homogeneity of the coefficients across rural and urban areas) that the area of residence does affect optimal stopping rules of individuals.

Chart 5 Reservation Wage and Education[a]



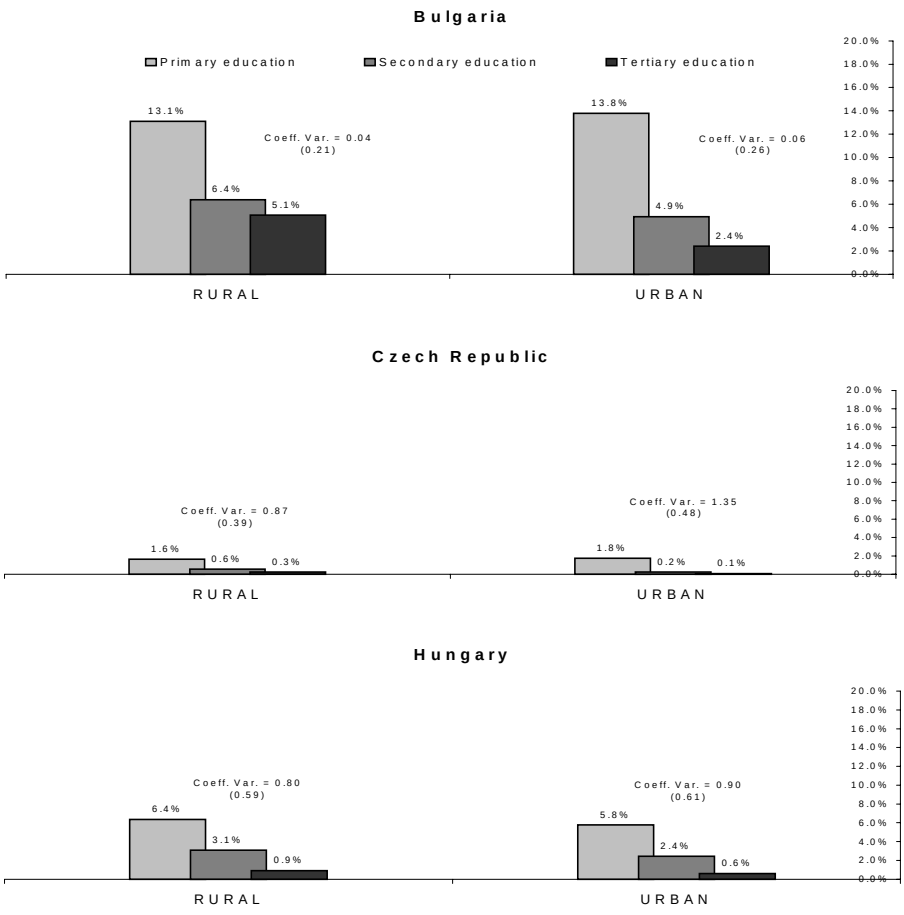
[a] Education reservation wage profile estimated on the basis of the Mincerian-Type Earnings Function: the profile diplayed concerns a 35 years old man non receiving unemployment benefits.

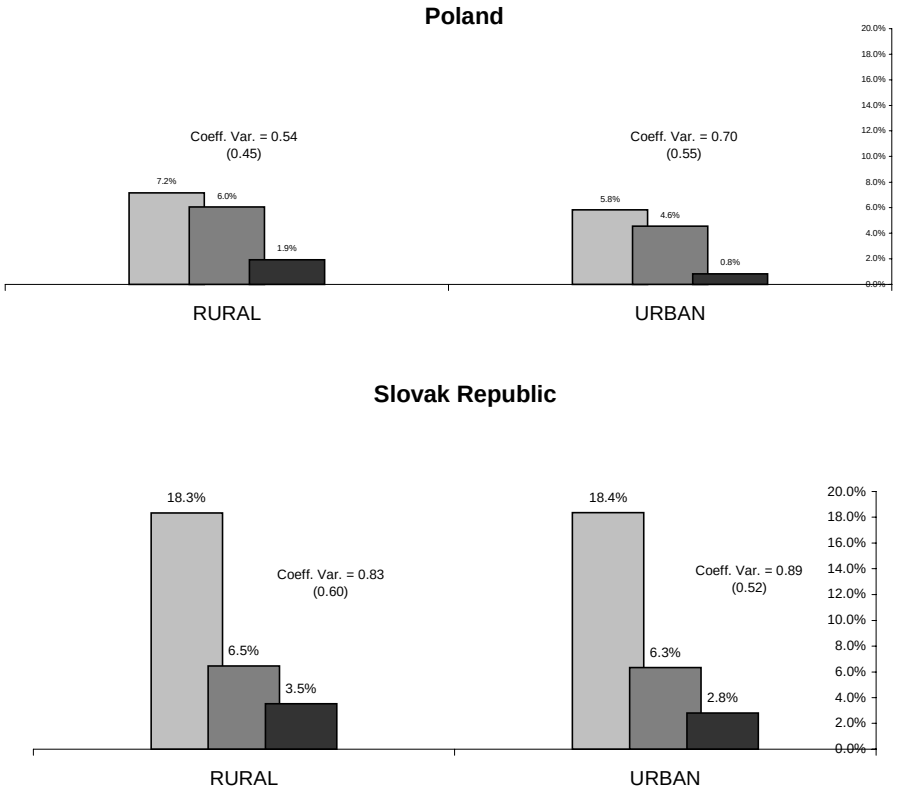
This result is also important to understand why regional labour market imbalances are so marked and persistent in transitional economies [16]. According to the extended model above, such disparities and the surprisingly low regional mobility of the workforce accompanying them may have to do with the fact that

in rural areas, unlike in urban centres, higher education does not significantly increase the opportunity cost of employment. In the presence of non-employment benefit floors, the less educated in urban areas are crowded out of employment and experience long-term unemployment, whilst in rural areas they become inactive (i.e., active in home production, family-run businesses, etc.). While the distribution by education of non-employment rates should not be significantly different between the two kind of regions, rural areas should display a larger proportion of non-employed persons in working age who are not actively seeking employment.

Chart 6 displays long-term unemployment rates by educational attainment in urban and rural areas. The information comes from LFS sources, which allow to better discriminate between unemployment and inactivity than administrative records. For purposes of cross-country comparability (data on the size of the district of residence are available only for Bulgaria and Poland) urban areas are defined herein as the regions with a major urban centre.

Chart 6 Educational Attainment, LTU and the Rural/Urban Divide (1996)





Note Urban regions are those in which there is a main city, rural regions are all the others.
The values in brackets refer to the coefficient of variation for the non-employment rates.
Source National Labour Force Surveys: Hungary March 1996, Czech Republic 3Q 1996, Hungary 4Q 1996, Poland 4Q 1996 and Slovak Republic 1Q 1996.

The chart suggests that in rural areas differences across educational groupings in terms of the incidence of long-term unemployment are less marked than in urban areas. This is indicated not only by the coefficients of variation (reported above the histograms) of the distribution of long-term unemployment, which are always smaller in rural than in urban areas, but also by the fact that long-term unemployment rates for the least educated are in most countries lower in rural than in urban areas, in spite of the fact that outside urban centres long duration unemployment is more pronounced. The distribution of non-employment rates by educational attainments is more similar across the two types of regions (the coefficients of variation of this distribution are reported in parentheses).

The fact that non-employment among the least educated mainly takes the

form of inactivity (or involvement in a family-run business) in rural areas may in turn contribute to explain the low regional mobility of the workforce in CEECs in response to widening regional unemployment differentials [16], notably low out-migration from rural areas [26]. Usually, the low interregional mobility of workers in these countries is attributed to the high costs of housing in urban areas. However, given the small size of many of these countries, workers can move where vacancies are located without having to change residence. Commuting flows, however, have not picked up after the emergence of large and increasing labour market imbalances across regions. The coefficients of variation of regional unemployment rates is currently about .40 and .41 in Poland and Hungary respectively from about .35 in both countries in 1996 [16]. This is well above what typically observed in Western countries [37] with the exception of Italy and Germany after the Eastern enlargement. Regional unemployment differentials in the CEECs are also highly persistent. To give an example, the rank correlation coefficient of regional unemployment rates in 1991 and 1997 in Poland and Hungary, the two country with the flatter unemployment benefits, was .91 and .89 respectively [11]. This compares with .49 across the US states in the 1983-91 period. The model presented in this chapter provides an explanation for these large and persistent regional labour market imbalances.

Summarising, high benefit floors tend to generate among the unskilled long-term unemployment in urban areas and non-employment in rural areas. These are the typical conditions that make migration from high-unemployment (mainly rural) regions to low-unemployment (urban) regions less likely to occur. The unskilled, those who could feed rural-urban migration flows - being the most sizeable group of the rural population - prefer to remain in the country-side in order to combine (more generous because of differences in the cost-of-living) cash transfers with (relatively more efficient than elsewhere) home production. By moving to urban areas they would run a high risk of falling into unemployment, and non-employment is a much more precarious condition for the unskilled in urban than in rural areas. Thus, under uniform unemployment benefits across rural and urban areas, regional labour market imbalances tend to persist.

4. The Reasons for Bad Policies

According to the models above, policies reducing labour supply and overly generous non-employment benefits at the outset of transition have favoured a large drive to non-employment, and, more importantly, the spread of long-term un-

employment in the CEECs. Countries undergoing structural change should have used a different design of non-employment benefits and a different timing in their reforms.

4.1. A Better Design of Non-employment Benefits

Unemployment benefits ought to be schemes of fixed-duration, aimed only at providing temporary income support to job-seekers. Offering de facto open-ended benefits (e.g., sort of bridging schemes to retirement) ultimately turned out to play against the workers' own interests because their effect on the instantaneous welfare of the non-employed population is offset by the increased duration of unemployment. A justification for providing generous benefits even on these accounts is that unemployment benefits may offer partial insurance against exogenous and temporary adverse events [20]. In particular, unemployment benefits can raise the utility of the unemployed if they are relatively generous during downturns, when the duration of unemployment is not strictly related to job search efforts of the unemployed . Yet, this justification does not hold in the case of economies undergoing systemic transformations because the speed and scope, hence the success itself, of the transformation is affected by the incentives put in place to move from one sector to another as well as by the general equilibrium effects of the cash transfers, namely the fiscal externalities associated with the payment of non-employment benefits. Put another way, there is no guarantee that the "transitional recession" will end and the likelihood that transition derails (that a halt is put to the downturn) is not independent of the design of unemployment benefits.

Unemployment benefits should have been of fixed duration, but still offer non-trivial replacement rates at the beginning of non-employment spells, not only for equity reasons, but also because – under the conditions of transitional economies (weak bargaining institutions, no statutory minimum wages and, above all, non-enforceable minimum wages) – unemployment benefits played the role of wage floors in the new sector, fostering labour reallocation of the unskilled from the old to the new sector.

Unemployment benefits of fixed duration could have been combined with income support schemes of the last resort, notably offering income relief to those not in a condition to successfully take part in the systemic transformation to occur. One of the reasons why unemployment benefits were initially set in the CEECs at relatively generous terms, in particular they were explicitly or de facto open-ended at the outset of transition is that they were used to compensate the "total losers",

that is, persons who were deemed - mainly because of their age and skills – not to be in a condition to enjoy the benefits of the systemic transformation. Bridging schemes to retirement were conceived as a compensation for those who, having lived for long under Communism, had spent almost their entire working life in the wrong occupation and were too old to upgrade their skills. This rationale for these "exit contracts" implicitly assumes that it is possible to identify ex-ante the "total losers" without having to collect information which can be altered at will by individuals, hence without adverse incentive effects. Needless to say, this is quite a strong assumption particularly under the conditions of formerly planned economies in which there were no market signals to draw upon when evaluating the marketability of individuals' skills. Had it been truly possible to target ex-ante the total losers, it would have been preferable not to condition the offer of early retirement schemes to the registration at labour offices. Separating those retiring from work from the actual jobseekers would have, at least, increased the incentives of employers to use registered unemployment as a recruitment pool.

This paper also suggests that it was important not to have generous non-employment benefits at the early stages of transition, as the risk was high to induce large flows into inactivity and fill registered unemployment pools with individuals not actively seeking jobs. CEECs have instead, for the most part, followed the high-low sequence, introducing grossly over-generous benefits (e.g., open-ended as in 1990 Poland) at the outset, which were cut down only after reaching two-digit unemployment rates. As has been documented above, these reforms did not boost outflows from unemployment to jobs and ended up by shifting non-employed people to other social transfer schemes of the last resort. Unfortunately, we do not have the counterfactual of a country following the opposite, low-high, sequence. The only "natural experiment" we can draw upon is that of the Czech Republic, the only country in the region that reformed its unemployment benefit system when unemployment was still relatively low. This has been rewarded by one of the lowest unemployment rates in the OECD area throughout transition (albeit increasing after the explosion of the 1997 foreign account crisis).

Other features of unemployment benefit systems were also poorly designed at the outset of transition. For instance, there seemed to be little justification for unemployment benefits for school-leavers: rather than offering subsidies to first time job seekers, these should have been encouraged to further their studies or assisted in their search for a job promoting a better circulation of information on vacancies being opened in various segments (e.g., regions) of the labour markets. Job leavers should have not been entitled to unemployment compensation or only

after some waiting period. There was also no reason to offer, at least nominally, the same replacement rate to high and low-wage earners. The generosity of the non-employment benefit systems and their capacity to replace incomes of those coming from relatively well-paid jobs could have been increased over time, but not at the beginning of the process. In a nutshell, the main concern of Governments should have not been the reduction of unemployment via labour supply reducing policies, but the containment of non-employment and of the fiscal costs associated with it.

Unemployment benefit levels in rural areas should have been lower than in urban areas in order to take into account of differences in the cost-of-living between the two types of regions, in some cases well above 30 per cent. These adjustments were all the more necessary in the light of the documented differences in the profile of reservation wages between rural and urban areas, which discourage labour mobility.

Summarising, unemployment benefits should have been of fixed duration, and administered separately from bridging schemes to retirement or other labour supply reducing policies. This means also that specialised instruments should have been used to deal with poverty. Adjustment in the level of benefits should have been made in order to take into account of differences in the cost-of-living between rural and urban areas. Eligibility should have been confined to person with previous work experience. Rather than starting out with generous benefits and then cutting them down, the sequence should have been the other way round.

4.2. Why Didn't They Do it Then?

Why Didn't They Do it Then? Sure, it is easy to be wise after the event and policy-makers were undergoing a particularly steep learning process. Yet the experience of the partial reforms of the 1980s and that of countries, such as Spain and Portugal, which had recently exited dictatorships and had strongly reduced the size of the public sector in order to return to Europe was there to provide important lessons as to mistakes not to be repeated in the setting of non-employment benefits. This is, after all, one the main lessons coming from the comparison of the experience of low-unemployment Portugal and high-unemployment Spain [4].

We provide below three tentative explanations for these policy mistakes.

The easiest explanation possible for these weaknesses is that bad policies were the resultant of bad politicians, or the natural by-product of a political class inadequate for market conditions. This explanation is not entirely convincing.

There was at the outset of transition a new political class emerging in CEECs and many new young faces around. It was composed, for the most part, of well-educated people (certainly more educated than many ministers in the West) and with some exposure to Western-type economics. Some of the most credited makers of economic policy in the early years of transition - e.g. Balcerowicz and Klaus - had even been trained in the US. Thus, policy mistakes cannot be entirely attributed to the confusion of politicians, i.e. the use of wrong economic models and bad policy advice. Albeit learning about the consequences of policies was a fundamental component of the transformation, policy-makers were equipped to make a good (if not the best) use of available information, and some events like the drive to non-employment were largely predictable. It is true that there were many bad Western advisors coming for one-day visits and dispensing policy recommendations like hosts. But policy makers were, for the most part, reasoning with their own heads and capable of discerning bad from good policy advice. There was also a big enough selection of Western economists to allow them to choose between good and bad advisors.

There are several political economy models dealing with the setting of unemployment benefits. They describe this choice as one involving a conflict between those who have a stable job and those who do not have one [52], [47] and [48]. Those with a tenured job prefer to protect themselves with firing restrictions (generally involving severance payments increasing with tenure in the firm) rather than with generous unemployment benefits. Those outside the firm are instead in favour of high unemployment benefits. As long as the employed people are the majority, the resulting equilibrium is one involving low unemployment benefits and strong protection against dismissals (the Southern Mediterranean social policy model). In transitional economies there were at the outset very few insiders, as those with the longest tenures were working in firms likely to undergo major restructuring and the new jobs were, for the most part, offering short tenures (like most jobs in the expanding retail trade) and low employment security. Employees in state firms could have gone for stronger employment protection, but there was no stronger legal employment protection than that provided by the Labour Codes of the old regime , which generally banned dismissals of any kind altogether. The issue is that employment protection rules were simply not credible under the revolutionary circumstances of the early 1990s and the tightening of state firms' budget constraints. Neither legal restrictions to dismissals nor high severance payments could have prevented dismissals from occurring simply because it was the survival of most firms which was at stake. The fear of being

dismissed was widespread. Thus, there were virtually no strong opponents to a rise of unemployment benefits.

Yet, there were at the outset also a few people without a job, virtually no experience of (open) unemployment, an ideology strongly stigmatising unemployment and no entitlements to unemployment benefits inherited from the previous regime. Hence, although the opposition to relatively high benefits may not have been too strong, the support for high unemployment benefits was likewise rather weak.

Who pushed then for generous non-employment benefits? Strong pressures, perhaps the strongest pressures, to put relatively generous redundancy schemes and unemployment benefits in place at the outset of transition came from the managers of the state firms. Especially at the early stages of transition, before the large privatisation waves, they exerted strong influence on political decisions. Managerial compensation is a good indication of the power of managers of state enterprises: surveys carried out in Bulgaria [33] suggests that, ceteris paribus, chief executive officers (CEOs) of state enterprises could enjoy in the first five years of transition a 60 per cent premium over the pay of their counterparts in private or commercialised (units in the process of being privatised) firms. Another indication of the power of managers is their capacity to maintain their position throughout the political changes and radical transformation occurring at the beginning of the 1990s. Djankov and Pohl [25] report that 19 out of 21 large Slovak firms surveyed in 1996 had the same top management than at the beginning of the 1990s.

Politicians gave a very personal interpretation to the requests of managers of state enterprises for transfers to the unemployed. They put those leaving state firms into relatively generous and open-ended cash transfer systems, and they did not do it out of unfamiliarity with the rules of democracy. Quite the opposite. Vaclas Klaus was long considered one of the smartest transition country politicians around . He introduced one of the most generous early retirement schemes (without actuarial reductions of pensions and allowing beneficiaries to combine pensions and work) used at the beginning of the 1990s in CEECs, and widely used child-care benefits as a way to achieve labour supply reductions.

Open unemployment was indeed an unknown phenomenon, and one to be particularly concerned about. In Western countries the level of unemployment does not seem to significantly affect political preferences. Right-wing governments survived steep rises in unemployment as Europe went through the job crises of the 1970s and the 1980s without major political turmoil. In transition countries the situation was significantly different or, at least, politicians expected it to

be different: unemployment was deemed by them to be a very important factor affecting political preferences. And they were right. Unemployment turned out to be a very important determinant of political preferences with major shifts in voting taking place - and generally in favour of left-wing parties - in the countries and years with the highest levels of unemployment [28].

In sum, while managers asked for (short-term) lump-sum payments to those leaving the firm, politicians offered pensions. It was not a viable strategy in the long run, and indeed it soon turned out not to be fiscally sustainable or to be sustainable only via significant reductions in the real value of cash transfers. It is important to notice, in any event, that when the fiscal unsustainability of these policies became apparent, the reaction of politicians in most countries was not to cut eligibility to pensions and the duration of social assistance, but mainly to reduce (i.e. by letting inflation erode the real value of cash transfers) the benefits. Public authorities in these countries have always displayed a strong propensity to maintain entitlements spreading available resources too thinly. Throughout transition there were too many beneficiaries of transfers which were too small. Some nominal benefits were close to nil in real terms, and they were still in place. This leads us to the third explanation for the bad policies, a reason which has to do with the behaviour of bureaucracies.

There are two situations in which administrations enjoy more discretionary power in the enforcement of the rule of law. The first case is when laws are rather vague and contain many gaps, so that legislative vacuums have to be filled by the bureaucracies. The second case paradoxically occurs at the other end of the spectrum, namely when the regulatory framework is too heavy, there are too many laws and norms to be respected, and too many entitlements in place, as well as exemptions and ad hoc provisions.

All centrally planned economies entered the 1990s with a very heavy regulatory framework and large bureaucracies. Under the old regime, after all, virtually all aspects of working life had been regulated, and the price of each commodity legally set. There was a large battery of cash transfers provided to the workers and their families to be administered. The case of family allowances was particularly striking in this respect: in the former Soviet Union there were more than 60 kind of subsidies which families with children could draw.

With the transition to a market economy many of these norms became redundant. However, rather than abolishing the old norms and introducing new ones encompassing a broad range of provisions, the new legislative bodies adopted an incremental approach, that is, they tended simply to add new norms to those

previously existing. As a result, the legislative framework became even more complex than at the outset, with a jungle of (often overlapping) provisions, sometimes mutually inconsistent .

This institutional complexity was a way to maintain bureaucracies, to give them a role to play creating specific knowledge about single aspects of the legislative framework. An indication of the self-perpetuating role played by bureaucracies comes from the dynamics of employment in the public administrations of these countries. Table 5 reveals strikingly divergent patterns of employment in the public administration (central government plus local administrations) and in the business sector in the CEECs. While employment in the business sector was declining by 10 to 20 percentage points, the ranks of public administrations were getting larger and larger. Between 1990 and 1996 the employment share of public administration in the CEECs almost doubled. It is worth reminding that one of the legacies of the previous regime was considered by many as being an overmanned public administration and that the reduction of the public intermediation of resources was expected to involve significant reductions in the number of civil servants.

Table 5 Evolution of Employment in the Public Administration[a]

Country	1990	1991	1992	1993	1994	1995	1996	1997
Bulgaria								
Total employment	100	87	80	79	79	80	80	78
Public employment	100	94	96	124	114	136	143	…
Czech Republic								
Total employment	100	95	92	91	91	94	94	93
Public employment	100	104	129	139	153	169	175	181
Hungary								
Total employment	100	95	87	82	80	79	79	79
Public employment	100	94	89	90	97	96	92	89
Poland								
Total employment	100	94	90	88	89	91	92	94
Public employment	100	104	107	110	121	126	132	138
Romania								
Total employment	100	100	96	93	92	88	87	…
Public employment	100	113	129	134	143	150	143	…
Slovak Republic								
Total employment	100	88	88	86	85	87	89	…
Public employment	100	109	161	140	140	157	173	…

[a] Public administration and defence; compulsory social security. Education and Health excluded.

Source OECD-CEET, Labour Market Database 1990-1997.

Overall, the power of managers, the fear of political consequences of open unemployment and the self-perpetuating function of bureaucracies can contribute to explain why so many mistakes were made in the design of non-employment benefits. Needless to say, the three explanations offered above are just tentative. The puzzles are still there and give to political economy scholars (unlike me) a challenging and largely unexplored field of research.

4.3. Looking in the Crystal Ball

We started out recalling the mechanisms considered at the outset and their failure to predict a number of events which occurred thereafter. This is unfair. It is too

easy to be wise after the events. To even out the game, we feel obliged to make some (educated) guesses as to the future course of events. We can guarantee that if ever anybody will still remind these predictions in ten years time (very unlikely), we will perhaps hire a lawyer, but certainly we will not escape from her/his complaints.

While coping with the puzzles of transition we stressed that there are at least two (if not three) social policy models and associated transition trajectories emerging in the arena of transitional economies. The difference between the Visegrad group and Russia has widened up so much that it would make no sense to consider them as sharing the same fate. Thus, in the remainder we will concentrate our attention on the Visegrad group. These countries are closest to Europe in all respects. They are closest because the social policy model they adopted was certainly inspired by the desire to return to Europe and also because they are well on the track to EU accession (it is likely that Slovakia, which is solving its problems with democracy, will soon join-in the first round of accession).

These countries are currently hedging to unemployment rates of the order of 8 to 10 per cent. This is lower than in the lowest-income countries (and above all the lowest-income regions) of the EU and hence one may well think that unemployment is not such a big issue for them. Yet, long-term unemployment involves more than 50 per cent of the jobseekers and non-employment rates are above those of countries at comparable GDP per capita levels.

Low effective labour supply can make recovery more difficult and the entry in the EU more costly. Two factors are playing in this direction

The first is the reorganisation of unions. So far these countries have enjoyed a high degree of flexibility and significant scope for downward wage adjustment. Unions were in the private sector so weak to oppose virtually no resistance to real wage declines and wages subsequently failed to catch up with productivity gains. These conditions are likely to change, particularly now that Western European unions, and the EC itself, are pressing the Eastern European counterparts to play a more active role, not lastly because of a fear of social dumping. And real wages are indeed in recent years on the rise in all CEECs, notably those included in the first round of EU accession.

The second factor is the social infrastructure required for the return to Europe. CEECs are currently spending in social policies about one-fourth of their GDP compared with about one-third in the current EU Members. Compliance with the Acquis Communautaire (notably its health and safety standards) involves a rise of public spending – particularly due to the ineffective policy delivery mech-

anisms that these countries have in place – which is unlikely to be matched by the access to the EU structural funds (subject, in any event, to caps for the new countries joining the European Union). Problems on the revenue side are serious, as the social security tax-base has been shrinking much more than employment, due to the flourishing of the informal sector and the under-reporting of wages for tax purposes. Thus, all the ingredients are in place for a vicious circle of increasing contribution rates and a declining tax-base with likely adverse effects on employment. If this scenario materialises, unemployment rates in the region may stabilise broadly at the same levels of the Mediterranean EU countries (thus at 2 to 4 percentage points above the current levels) and be accompanied with a persistent (and sizeable as already is) informal sector.

Too fast accession to the EU may therefore result in a worsening of labour market conditions. The time left before entering the EU should be used mainly to improve the state machinery (and possibly to scale it down) and broaden the tax base. A right design of non-employment benefits may play an important role also in this context. All too often labour supply determinants of the decision to hide economic activities are ignored. For instance, earning-related unemployment benefits offering a wide coverage of the risk of unemployment and low employment protection may encourage workers to fully declare their wages.

In this paper we deliberately focused on labour supply because we wished to show how far we could go by giving to it some role to play in the transition. Our main conclusion is that it is essential to improve non-employment benefits to make the successes so far achieved longlasting or even just to recover from the transitional recession. Although our field of expertise is labour, we are aware that not (quite) everything depends on labour supply and non-employment benefits. When thinking in terms of medium-term scenarios, and the consequences of EU accession what matters is the speed of convergence of these countries to EU GDP per capita levels and this, we admit, does not depend only on labour force participation. Yet, we believe that social policy reforms of the kind of those envisaged in this paper are essential to best prepare for the accession. According to the futurology literature applying growth accounting techniques to transitional economies [29][19], the effectiveness of the state administration and of social expenditure is bound to play an important role in the convergence process. One may or may not believe in these exercises. In the latter case, we offer an additional argument for putting the social policy house in order before joining the EU, which is based on the extent of corruption within the state administration.

Even in the Czech Republic, a country that had inherited from the past a

rather efficient, Prussian-style state administration, corruption among civil servants is pervasive. According to a survey carried out in 1998, only 12 per cent of the population believes that ministerial offices are not corrupt . Significantly, the survey reveals that the share of acts of corruption witnessed by respondents in the state administration increased over time and indeed public administration is unanimously deemed as the most corrupt sector of the economy. Country scores on corruption in the public sector produced by Transparency International on the basis of at least three surveys in each country also reveal comparatively high levels of corruption, which suggest that corruption among civil servants - rather than being related to country-specific institutional features, limits of the political class or, in any event, transient characteristics - is a systemic characteristic of formerly planned economies. The conclusions from a survey of private sector businesses carried out by the World Bank [17] are not dissimilar: they point to corruption among civil servants as one of the top obstacles to doing business in the former Communist regions.

Corruption is closely related to the complexity of the legal framework. These bureaucracies were and still are just trying to capitalise on the specific knowledge they had of the regulatory framework and their discretionary power in deciding upon exemptions. Corruption is often the resultant of the power of bureaucracies. For this reason comprehensive reforms of social policies – rather than reforms of the incremental type, that is, simply adding new regulations to the existing ones – can play an important role in reducing corruption, perhaps even more than stronger repression technologies. Without changing the rules, without reducing the specific knowledge of regulations and discretion of public administrations in enforcing them and hence ultimately the number of civil servants - stiffening supervision can do little about corruption or may even have perverse effects on bribery .

In conclusion, if these countries work hard in improving their legal framework and if the EU understands that the Acquis Communautaire should not be interpreted too literally, as a sort of adding-up exercise, but as an occasion to streamline regulations and cut down bureaucracies, then we are ready to predict a bright scenario for the years to come. Needless to say, this would be the ideal scenario also from the standpoint of the West, so much concerned these days about the social dumping threat coming from its Eastern borders.

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Transition with Labour Supply

Tables and Figures

Table 1 Job losers and job leavers at the early stages of transition

Country	Dates	Job leavers	Job losers
Labour Force Survey data[a]			
Czech Republic	Q2 1993	2.1	1.5
Hungary	Q2 1992	0.8	4.5
Poland	Q2 1992	1.4	2.0
Slovak Republic	Q1 1994	2.6	4.3
Italy	1993-94	0.4	2.3
USA	1991-92	0.9	3.1
EU weighted average	1991-95	1.2	3.2
Data from the unemployment registers[b] (as a % of total separations)			
Czech Republic	1991-92	72.1	27.4
Poland	1991-92	65.7	34.3
Slovak Republic	1991-92	79.2	20.9

[a] Non-employed for less than 6 months with previous work experience by reason of termination of their previous contract as a percentage of LFS employment.

[b] Registered unemployed for less than 12 months with previous work experience by reason of termination of their previous contract as a percentage of total inflows from employment into registered unemployment.

Sources: For the Central and Eastern European countries, our estimates based on individual LFS and unemployment register data; OECD, Employment Outlook, 1997 for data on Italy, US and the EU.

Table 1.2. Structural change and labour mobility (average yearly measures)

Country	Year	Measures of structural change				Mobility measures	
		STD[a]	SR[b]	PS[c]	PR[d]	M1[e]	M2[f]
Bulgaria	1991-3	13.5	0.36	*0.30*	0.68	'n.a.'	'n.a.'
Czech Republic	1991-7	11.0	0.71	0.74	0.78	0.08	'n.a.'
Hungary	1991-7	9.1	0.50	0.68	0.66	0.04	0.08
Poland	1990-7	11.5	0.64	0.46	0.73	0.15	0.16
Romania	1991-7	10.3	0.45	*0.11*	0.85	'n.a.'	'n.a.'
Slovak Republic	1991-7	13.5	0.66	0.74	0.60	'n.a.'	0.08
Slovenia	1993-7	13.1	0.73	*0.20*	'n.a.'	'n.a.'	'n.a.'
Other OECD	1990-3	3.1	0.33	0.02	0.09	0.16	0.17

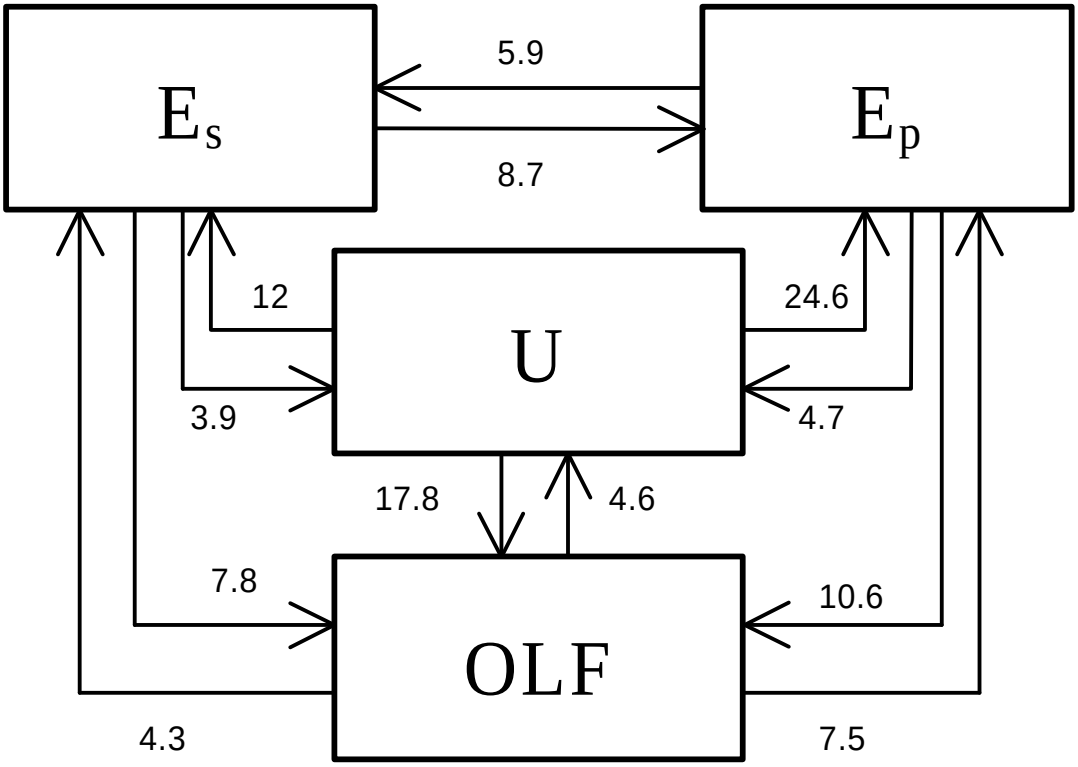
[a] Standard deviation of employment growth rates across 9 sectors (average of yearly standard deviations).
[b] Sectoral Reallocation index calculated over gross employment variations in 9 sectors; see the text for details.

[c] Average yearly change in the share of private employment in total employment, 1988-1997 Bulgaria 1993-97;

Romania 1994-98; Slovenia 1994-97. OECD displays data for USA.
[d] Privatisation Reallocation index calculated over gross employment variations in the public and private sectors; see the text for details.
[e] Mobility measure for transition matrix across 9 sectors (plus unemployment and inactivity); see the text for details.

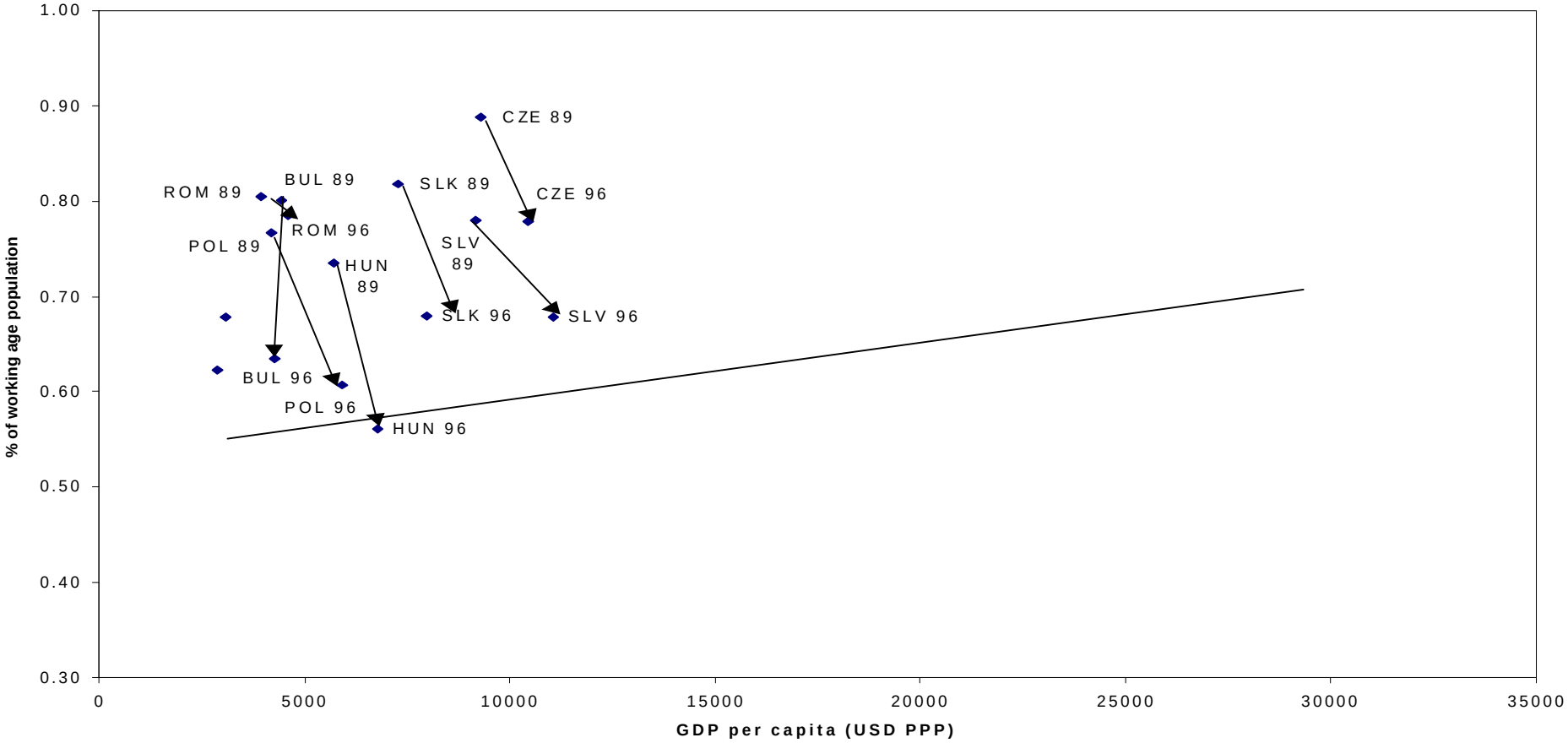
[f] Mobility measure for transition matrix between the public and the private sectors (plus unemployment and inactivity); see text for details.
[g] M1 and M2 display data computed for Italy only.
Notes: 'n.a.' = not available.
Sources: Individual data from National Labour Force Surveys for Central and Eastern Europe; OECD, Labour Force Surveys, for the OECD countries. T. Boeri and C. Flinn (1999).

Figure 1 Yearly labour market flows in Poland 1992-1993 (LFS)



Note: Numbers in the chart denote estimated flows as a proportion of the population of origin.
Source: Boeri and Bruno, 1997: matched records across quarterly LFS waves.

Figure 2b Overshooting the decline in employment rates



a Estimated equation: ER = 52,59 + 0,006*GDP pc R2 =0,25
Source: OCDE Labour Market Database, World Development Tables, from the OECD National Accounts Report.

Figure 2b Overshooting the decline in employment rates

