Labour markets in Eastern Europe

Michael Burda

Summary

Unemployment is a major concern in the transforming economies of Central and Eastern Europe. The modern 'flow approach' to labour markets suggests both that unemployment is an important component of the transformation process and that the labour market institutions adopted will influence the rate of unemployment in the long run. To date, Eastern European countries exhibit considerable divergences in several of these institutions; especially in unemployment benefit systems, collective bargaining structures, and active labour market policies.

An aggregate matching function is successfully estimated for data from Czech and Slovak employment offices. Emerging labour markets in the East function not so differently from those in the West. The implied dynamics make both 'big bang' and 'benign neglect' unattractive strategies for transformation: a 'mixed bang' is more appropriate.

Quantitative evidence about the effects on unemployment of different labour market institutions in OECD countries is used to make long-term projections of equilibrium rates of unemployment in Central and Eastern Europe, given the labour market institutions now in place there. With the possible exception of the Czech Republic, high unemployment is likely to be pervasive and persistent.

Unemployment, labour markets and structural change in Eastern Europe

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1. Introduction

The transition to a market economy remains in its infancy in Central and Eastern Europe. Privatization of large state enterprises, a central aspect of transition and a stated goal of most governments, has been painfully slow. Largely, this is because the associated 'restructuring' entails closing factories and displacing large numbers of workers, many of whom may leave the labour force for ever. Some will find jobs in the expanding private sector, but often only after changing occupations, industries, and locations on a scale rarely seen in advanced Western economies.

This paper addresses the mediating role of labour markets and unemployment in the transforming economies. Unemployment is not merely a by-product: it is necessary for the transformation. This is true for several reasons. First, emerging unemployment will offset a growing imbalance in bargaining power of workers over managers in the aftermath of central planning. Unemployment provides the 'disciplining device', as in Shapiro and Stiglitz (1984), to raise effort and productivity

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to Western levels. Second, unemployment may be necessary to check the growth of real wages (Blanchard, 1991). Indeed, open unemployment may be the only effective means to this end in the presence of recalcitrant or nonexistent collective bargaining partners.

A third reason is offered by the new macroeconomics literature on the *matching* or *flow approach* to labour markets, in which job creation is seen as a stable function of the stock of unemployed workers and open vacancies.[1] Unemployment is needed to allow the emergence of a new private sector and to force the acquisition of new skills by workers. More restructuring requires new job matches, which in turn requires more unemployment. At the same time, more unemployment at given levels of vacancies makes the latter 'too efficient', causes labour-market congestion and leads to long-term unemployment. To the extent the firing decision is in public hands, the state can influence this process greatly. Postponing layoffs reduces congestion, but at a cost: less job creation in the higher-productivity private sector. Is there an optimal speed at which to release workers into the unemployment pool?

To manage labour relations and mediate unemployment resulting from the transformation, labour markets need institutions; these must often be developed *de novo* with structures different from those in advanced industrial economies. During radical structural change, what is the correct level of unemployment benefit, severance protection, trade union representation or centralization in collective bargaining? What 'active employment measures' should be offered, or forced upon, unemployment benefit recipients, and under what conditions? How will these programmes be financed?

I examine both sets of questions. First, I confirm the usefulness of the matching function approach, using data from the Czech and Slovak Republics. A dynamic analysis of Eastern European labour markets raises questions about the rate of closure of state firms, many with negative value-added at world prices and incapable of profitable operation. A key finding is that neither 'shock treatment' nor 'go slow' is the best approach: the right policy is a step increase in unemployment to kick-start the matching process in the private sector, then a slow, controlled release of workers into unemployment. This conclusion has parallel implications for the pace of privatization.

Second, I discuss labour market policy and institutional design in Eastern Europe using the experience of OECD countries. Roughly 75% of cross-sectional variance in standardized OECD unemployment rates

[1] For recent reviews see Pissarides (1990) and Blanchard and Diamond (1992). For empirical evidence on gross flows in labour markets, see Blanchard and Diamond (1990) and Burda and

can be explained by three things: the degree of corporatism in collective bargaining, the generosity of unemployment benefits and per capita spending on active employment measures. Similar results obtain for the fraction unemployed in long spells. I use these results to forecast equilibrium unemployment rates in Eastern Europe.

Section 2 summarizes the current labour market situation and the debate on the nature of unemployment in these countries,[2] I stress the importance of the matching function in getting the private sector off the ground. Section 3 analyses equilibrium unemployment and vacancies and interprets their evolution in Eastern Europe in the past three years. Section 4 reviews labour market institutions, making cross-country comparisons. Section 5 explores policy implications. I estimate a matching function with flow data from Czech and Slovak labour markets, then draw these results into a normative analysis: how rapidly should the state sector be shrunk? Finally, I present tentative forecasts for equilibrium unemployment rates and long-term unemployment. Section 6 offers conclusions.

2. The labour market and unemployment during the transformation

2.1. The current situation: recession, supply shock or restructuring?

Table 1 shows that the transformation has been tough going. Measured GDP fell in 1991 and will do so again in 1992 (except possibly in the CSFR). Declines in industrial output were dramatic but independent of the pace of reform (CEC, 1992b). The collapse was a direct consequence of the end of COMECON and the shift of economic activity from a lattice of rigid trading relationships of central planning to a market environment of imperfect information placing value on search and brokering of business contacts. Conventional supply and demand analysis fails to capture this key aspect of economic transformation.

This diagnosis applies *a fortiori* to the labour market. Firms slashed output and, after some delay, began to shed labour. Despite considerable interfirm mobility under communism, labour markets were not ready for unemployment and became very congested. A crude indicator is the ratio of registered vacancies to unemployed shown in Table 2. Despite the common view that 'there is no new job creation in Eastern Europe', labour markets exhibit both job seekers and openings to an

[2] For practical reasons, this study is restricted to the 'Visegrad 5' (Poland, CSFR, Hungary, Romania and Bulgaria). Many of my findings and conclusions are relevant for the republics of the former USSR and Yugoslavia.

Table 1. Economic indicators for Central and Eastern Europe, mid-1992

	1991 % Change in			1992 Unemployment	
	Real GDP	Industrial production	Employment	Change in thousands	% of labour force
Bulgaria	−17	−27.8	−14.5	+210	11.8
CSFR	−16	−21.2	−7.4	+154	5.6
Hungary	−10	−19.0	−6.0	+207	10.1
Poland	−9	−11.9	−5.5	+693	12.3
Romania	−14	−18.7	−11.6	+563	6.2

Source: OECD (1992), CEC (1992a, b), national labour ministries.
Notes: Unemployment change in thousands is year to March (Bulgaria), to May (Hungary), to June (Poland), to July (CSFR and Romania); % of labour force is at June 1992 except Romania (May).

Table 2. Registered vacancies and unemployment in mid-1992

	Month	Vacancies (v) (000s)	Unemployment (u) (000s)	v/u (%)
Czech Republic	June	85.0	142.0	59.4
Slovak Republic	June	13.2	282.3	4.7
Poland	May	31.5	2,228.0	1.4
Hungary	June	25.0	546.7	4.6
Bulgaria	March	12.0	453.0	2.6
Romania	June	3.3	675.0	0.5
For comparison:				
UK	June	128.0	2,678.0	4.8
France	June	59.0	2,753.0	2.1
Germany (West)	June	355.5	1,716.0	20.7
ex-GDR	May	30.2	1,149.1	2.6

Source: National labour ministries and statistical offices; OECD *Main Economic Indicators*, August 1992.

extent comparable with the West; and reported vacancies are only a fraction of available job openings.

Is Eastern Europe in the throes of a recession (OECD, 1992) or a bout of severe structural change? Unemployment has structural aspects that cannot be overlooked. First, the recent sharp rise in unemployment is concentrated in agriculture and heavy industry. Light manufacturing, construction and services will eventually absorb these workers (OECD, 1992; CEC, 1992a). Second, trade in Eastern Europe must be reoriented dramatically towards the West (Collins and Rodrik, 1991; Hamilton

and Winters, 1992; Rodrik, 1992). Third, the practice of labour hoarding still survives from the shortage economy under central planning (Góra and Rutkowski, 1990; Góra, 1992).

Except in Hungary and to some extent Poland, a new private sector must be built from scratch. Siebert (1991) stresses this aspect of the transformation for Eastern Germany, where the private sector, predominantly engaged in services and light manufacturing, is now growing rapidly (Johnson, 1992; CEC 1992a; OECD, 1992). Ladó *et al.* (1991) note that a third of all employment in Hungary is the second (i.e. entrepreneurial) economy.

Eastern Europe's labour markets suffer huge geographic mismatch (OECD, 1992). For example, in the CSFR in June 1992 the registered unemployment rate was 5.8%; yet in Prague it was only 0.4%. Assuming steady-state conditions, the average prospective duration of unemployment was 3.7 months. In Northern Moravia unemployment was 4.3%, the prospective duration of unemployment 6.6 months; in Eastern Slovakia, unemployment was 12.6%, and prospective duration 22.1 months. That's mismatch! Table 3 shows that mismatch also extends to the availability of jobs, and this is evident both where unemployment is low (CSFR) and high (Bulgaria). The within-country variance of the vacancy-unemployment ratio is as high as that between countries; it therefore seems unlikely that measurement error can account for this observed mismatch.

It is often argued that the macroeconomic tools of aggregate demand and supply are sufficient for analysing Eastern Europe. Yet it is hard to imagine that price and wage rigidities, nominal or real, caused a slump in which high and accelerating inflation has been so prevalent.[3] Even if unemployment is the product of a postponed oil shock and a demand contraction (Jackman *et al.*, 1992), the concurrent 'cleansing effects' of recession (Davis and Haltiwanger, 1990) are significant: after four decades of socialism, a severe bout of spring cleaning was sorely needed! I thus focus on the longer-run determinants of average unemployment over the next five to 10 years.

2.2. The key role of the matching function

The dynamic view of labour markets stresses the role of unemployment in job creation: with higher unemployment or more vacancies, more job matches occur. Since most flows into unemployment result from

[3] See Ball *et al.* (1988) for evidence that the sensitivity of output to nominal demand is negatively associated with the level, not the volatility, of inflation in OECD countries.

Table 3. Unemployment and vacancies in Bulgarian oblasts and CSFR regions

	Vacancies (000s)	Unemployment (000s)	v/u (%)
Bulgaria (March 1992)			
Sofia	3.6	40.4	8.7
Burgas region	1.1	44.6	2.4
Varna district	1.0	40.9	2.5
Lovetch	1.0	43.8	2.3
Michailovgrad	0.6	38.5	1.6
Plovdiv	1.2	89.4	1.3
Russe	0.5	39.7	1.4
Sofia district	1.6	60.2	2.7
Haskovo	1.4	55.0	2.5
CSFR (May 1992)			
Czech Republic			
Prague	17.8	3.7	485.0
Central Bohemia	8.8	16.9	52.3
West Bohemia	8.2	9.7	84.7
South Bohemia	4.9	10.3	47.9
North Bohemia	9.8	21.2	46.3
East Bohemia	9.7	19.2	50.7
North Moravia	10.4	48.9	21.2
South Moravia	8.6	39.2	22.1
Slovak Republic			
Bratislava	3.8	19.2	19.6
West Slovakia	2.3	94.2	2.5
Central Slovakia	2.8	83.8	3.3
East Slovakia	3.7	86.7	4.2

Source: Bulgarian Ministry of Labour, Czech and Slovak Federal Ministry of Labour.

involuntary separation, for new jobs to be created others must have been destroyed. Summarizing US evidence, Blanchard and Diamond (1989) write: 'both unemployment and vacancies matter in hiring. The rate of hiring appears to be determined by both sides of the labour market, not only by the demand side, as is often assumed in macroeconomic models.' (p. 29)

The centrepiece of the analysis in the next section is the matching function, the process by which jobs and workers come into contact to form employment relationships. The number of matches x depends both on the unemployment rate u and the vacancy rate v. The matching function $x(u, v)$ captures spatial aspects of the search process, imperfect information, and all types of occupational and industrial mismatch between jobs and workers.[4] It also subsumes potentially endogenous

[4] See Hall (1979) or Pissarides (1979) for examples of derivations of the matching function

search activities of workers and firms. In conventional analysis, x is increasing in both u and v, with a diminishing marginal product for each, capturing the notion of congestion in labour markets. More controversially, it is often assumed to have constant returns to scale: doubling unemployment and vacancies doubles the flow of job finds. While available evidence supports constant returns in matching for industrial countries, the implications of increasing returns continue to fascinate (see Diamond, 1982, 1984; Howitt, 1985). Under constant returns to scale, the vacancy-unemployment ratio v/u is a sufficient statistic for the tightness of the labour market, which determines both the hiring rate $h = x/v$ and the job finding rate $f = x/u$.[5] Job-to-job transitions are not modelled by the matching function (but see Pissarides, 1992; Blanchard and Diamond, 1992). However, job-to-job switching is not very relevant during the hard times of economic transformation and slack labour markets.

3. A simple model of unemployment and vacancies in equilibrium

The matching function gives the per period flow of exits from unemployment to jobs, given a stock of unemployment and vacancies. Both unemployment and vacancy rates are in fact endogenous. The former depends on the evolution of employment over time, itself the cumulated reflection of past matching and other factors. The latter reflects the incentive to firms to create and offer jobs, which depends on the return from employment and the costs associated with posting vacancies. A number of tractable matching models of equilibrium unemployment exist (Pissarides, 1985, 1990; Blanchard and Diamond, 1989). More recently, these models have been applied to such diverse issues as economic growth and regional decline.[6]

The central model of my paper, similar to Pissarides (1985), is set out in the Appendix, but can be represented graphically in Figure 1, whose axes are the unemployment rate u and the vacancy rate v. The labour force is fixed, so u and v also represent the numbers of unemployed and vacancies. The model has two relationships. The first is the downward-sloping UV curve.[7] Given a matching function and a separation rate s (the fraction of jobs terminating each period), the UV curve describes the flow equilibrium between unemployment and vacancies. Unemployment is constant when the inflow into unemployment $s(1-u)$ equals the outflow from unemployment $x(u, v)$. With high unemployment, employment is low and there are fewer workers to lose their job; thus the inflow to unemployment is low. For the outflow from unemployment (matching) to be equivalently low, vacancies must be low. Hence when unemployment is high vacancies are low: the UV curve slopes down.

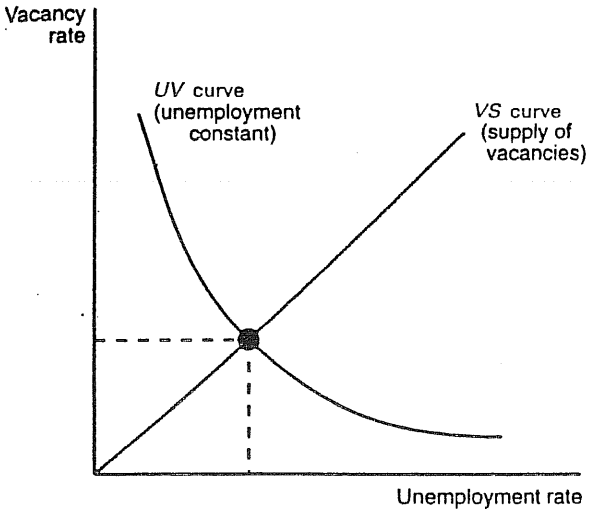

Figure 1. Flow equilibrium in the labour market

The second relationship is the supply of vacancies by firms. Suppose for example that each firm employs at most one worker. When it does, output is y. When it does not, it posts a vacancy at cost k, the constant cost of creating and maintaining an unfilled job. Workers who are unemployed receive benefits b plus leisure with a value l. T is the severance payment to a worker, F the cost then incurred by the firm, which need not be equal.

The supply of vacancies depends on how firms value the job matches that vacancies help generate. This value in turn depends partly on how production and sales revenue is divided between firms and workers. The appendix analyses a Nash bargain between a firm and its worker, and hence determines both the wage rate and the level of vacancies the firm wishes to supply.

Figure 1 displays all this as the upward sloping VS line. Along VS, the expected benefit to the firm of creating a vacancy is equal to its (constant) cost. The higher the unemployment rate, the lower is the bargaining power of workers and the lower the wage the firm wishes

[5] The matching function is potentially subject to the Lucas critique: changes in the policy regime (unemployment benefits, income and indirect taxes, etc.) might affect its properties.

[6] See Aghion and Howitt (1991) and McCormick and Sheppard (1992).

[7] The UV curve should not be confused with the 'Beveridge curve', the negative empirical relationship between vacancies and unemployment. The UV curve is only one blade of the theoretical scissors that generate the observed data.

Table 4. Comparative statics in the matching model

Effect of an increase in:	Effect on equilibrium value of: u	v	v/u
Union power	+	−	−
Unemployment benefit (b)	+	−	−
Net severance burden ($F-T$)	+	−	−
Vacancy cost (k)	+	−	−
Interest rate (r)	+	−	−
Separation rate (s)	−	?	−
Efficiency of match (x)	−	?	+
Value of match (y)	−	+	+

to supply more vacancies. Vacancies create successful hires only through the matching function, in which they run into diminishing returns; so higher unemployment induces only a finite increase in the vacancies it is profitable to supply.

3.1. Comparative statics and institutions

Equilibrium unemployment and vacancy rates occur where UV and VS intersect in Figure 1. Any exogenous change shifting either schedule affects both unemployment and vacancies. Many such changes are institutional. For example, an increase in bargaining strength of workers will rotate VS to the right: it is now less profitable for firms to supply vacancies. From Figure 1 vacancies fall but unemployment rises.

Other interesting and relevant changes are those in government policy, including the level of unemployment benefit b, mandated severance benefits T, or firing costs F. Increases in b and $F-T$ again tilt the wage bargain in favour of workers, reduce firms' incentives to create vacancies, rotate VS, and lead to higher equilibrium unemployment but lower equilibrium vacancies. One might interpret active labour market policies as reducing the cost of vacancies, rotating the VS curve to the left. Changes in the rate of separation s and the efficiency of the matching function affect both curves. I summarize the comparative static effects of these changes in Table 4.

3.2. The rise of unemployment in Eastern Europe

This analysis illuminates labour market developments in Eastern Europe. Before the revolution, firing or quits into unemployment were rare. While there was severe geographic immobility for the unemployed, job-to-job switching was significant, with annual turnover in the labour [illegible] economies often as high as 25% a year. Also, the cost of

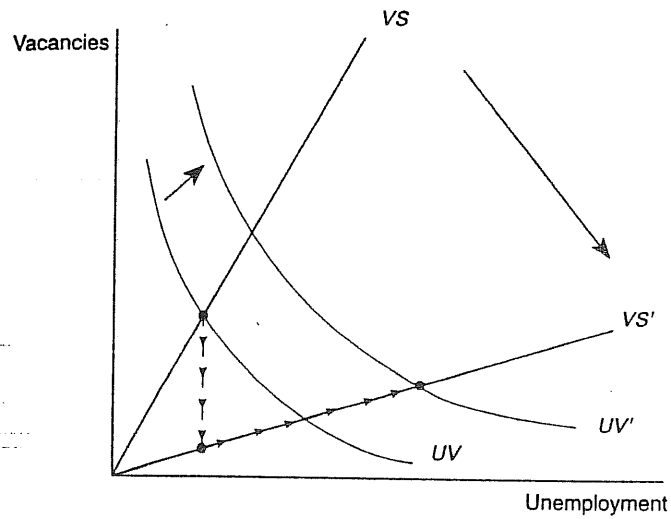

Figure 2. Labour market developments in Eastern Europe

posting a vacancy was quite low relative to the shadow value of having a worker around when scarce supplies arrived. Third, unions in the communist economies generally worked closely with the state to keep wages low rather than to maximize the workers' rents in wage bargains. Fourth, unemployment was actually illegal!

All these changed for the worse after the revolution. Workers discovered their bargaining power *vis-a-vis* employers who turned out to be inadequate stewards of the state's productive capital. Unemployment benefits eased the pain of job loss. The cost k of searching for workers rose. The collapse in demand and change in the terms of trade also reduced the gain to firms from a match; the rise in the interest rate also reduced the value of an employed worker, as in Calvo and Coricelli (1992). All these factors rotate VS clockwise. Involuntary separations rose dramatically as the private sector expanded, but also as state firms began to behave like capitalist enterprises, which also shifted the UV schedule outwards.

Figure 2 shows the outcome: an unambiguous rise in unemployment and an ambiguous change in long-run vacancies (although a decline seems likely). If vacancies adjust immediately, they will decline at the outset, with dynamics for both u and v shown by the arrows in Figure 2.

4. Labour market institutions in Eastern Europe: an overview

The preceding section established the theoretical relevance of institutions and policies for labour market outcomes. Generous unemployment

benefits, bargaining strength of workers, higher severance costs for firms than severance benefits for workers, or fewer active labour policies all lead to higher u and lower v at any stage of the business cycle. Higher benefits may also shift the UV curve outwards if workers seek fewer contacts after becoming unemployed. I now examine the actual state of these labour market institutions, and attempt to rank the countries, countries, at least on a qualitative basis.

4.1 Unemployment benefits: how generous in Eastern Europe?

The transforming economies quickly adopted systems to protect individuals from the risk of unemployment. All five countries have EC-style systems of unemployment benefits, funded by payroll taxation, based on an insurance principle but not experience-rated, and not means-tested (unlike follow-up social assistance, which is). The criterion of income replacement (as a % of previous net income) determines the amount of benefit, usually with minimal and maximal amounts. Initially, these programmes were quite generous (OECD, 1992; CEC, 1992a, b) especially in the potential duration of benefit; for example, unemployment benefit in Poland was originally available without time limit. More recently, eligibility, duration and income replacement have been tightened after pressure from national finance ministries and international organizations (The World Bank and IMF are now in the labour market policy business!). Details of systems as of July 1992 are provided in Table 5.[8]

The value of unemployment benefits to eligible individuals is hard to assess: systems differ along many dimensions. The last column of Table 5 presents a crude measure developed in Burda (1988): it is the present value of the benefits package for a fully eligible claimant as a percentage of average weekly earnings, which is then multiplied by the coverage ratio, the ratio of insured unemployment to total.[9] The measure ignores taxes (in the Visegrad countries, benefit is taxed but at negligible rates); assumes all recipients of benefit earn the average wage; and assumes the coverage ratio is a good indicator of *ex ante* eligibility.

Despite these problems, the results of Table 5 are revealing. As in Western Europe (Burda, 1988), the generosity of unemployment

[8] Since the systems are changed frequently, the descriptions differ slightly from those in the OECD (1992) and CEC (1992a), written earlier in 1992.

[9] For example, suppose the average worker in Transylvania eligible for benefit was entitled to draw 75% of salary for 26 weeks, and 50% of unemployed were eligible. Discounting at 20% per annum (0.3512% per week), the index would be 930 (930% of weekly salary).

Table 5. Unemployment benefits (as of July 1992)

	Eligibility rules	Effective coverage	Replacement ratio & prospective duration	Burda (1988) index
Bulgaria	Employed > 6 of last 12 months, job losers only; special programme for school leavers	37%	60% of gross AW in last 6–12 months (6 months at 80% of MW for school leavers)	671
CSFR	Employed > 12 months in last 3 years; quitters and new entrants ineligible	38%	3 months at 60%, then 3 at 50% (can be topped up to means-tested 'social minimum')	522
Hungary	All eligible according to contribution (360 day minimum not strict); quitters and school leavers eligible after 90 days unemployment	78%	Duration depends on employment in last 4 years (max 18 months, no min); First 2/3 of duration: 70% of AW over last 4 years; then 50%	3,388
Poland	Employed > 180 days in last year, except school leavers, disabled, mass layoffs; moonlighting permitted in some cases	73%	36% of last quarter's AW, for up to 1 year (recently extended)	1,240
Romania	School leavers ineligible until unemployed 5 months	64%	Depends on service and education: workers 60%, graduates 70%; for up to 270 days (recently extended)	1,286

Source: Interviews with labour ministry officials.
Notes: MW = minimum wage, AW = average wage.

benefits varies significantly across countries, a variation caused more by differences in duration and coverage than in the rate of income replacement. Hungary is by far the most generous, which explains the huge pressure on the government budget and recent criticism by the ILO (1991). At the other end, the CSFR and Bulgaria are pretty frugal: the former by policy design, the latter due to fiscal constraints. Poland and Romania are in the middle of the pack (though both have recently adopted an emergency extension of unemployment benefit not included in the calculations behind Table 5).

4.2. Labour union strength and organization

The trade union movement in post-communist Eastern Europe is viewed with ambivalence. Previously, labour unions

extensions of the communist party; they can seem out of place in a transformation to capitalism. Yet these mammoth organizations managed considerable resources that in part have been retained (Freeman, 1992). Similarly, many union leaders have retained their positions by merit of their organizing skills at the rank-and-file level. Union organization rates and membership figures often mislead by including pensioners and inactive members; membership has dropped sharply in many countries since 1989 (Eberhardt and Heinen, 1992).

In Poland two large confederations (OPZZ and Solidarity) dominate the union scene. Solidarity continues to struggle with its identity as a union and political movement; the ex-communist OPZZ has maintained its membership at roughly twice that of Solidarity (Freeman, 1992). Membership of the two is about 7 mn., nearly 45% of total employment. Inter-union rivalry has enabled the government to get its way in tripartite disputes, although an explicit bargaining structure is lacking. The largest factor influencing bargaining power in Poland is the strength of the works councils, which since 1982 have the power to hire and fire management, making Polish firms in many respects like worker-managed enterprises (Schaffer, 1991).

In the CSFR unions lost credibility by standing by the communists to the bitter end. A state-dominated tripartite commission (seven members each from unions, management and the government) now sets lower bounds for nominal wage growth and decides on indexation of the minimum wage. By law, trade unions only have the right to be consulted on management decisions (c.f. more pervasive rights in other Eastern European countries). Membership is still high at 65–70% but growth of the private sector will erode this. As in Germany, annual branch bargaining sets a further floor on wages which are binding on firms in the same sector. Industrial relations in the CSFR are remarkably peaceful, due largely to limitations on the right to strike. In firms with over 200 employees, a system of codetermination exists by which workers can elect up to a third of the supervisory board. Significantly, works councils remain absent in the CSFR.

In Hungary, Romania and Bulgaria, collective bargaining occurs through multi-union competition for the position held by the dominant communist organizations. In Hungary seven major confederations cut across industry and political lines, the largest (MSZOSZ: National Confederation of Hungarian Trade Unions) having about 2 mn. members. Total membership is nearly 60% of employment. Ineffective employer associations have led to asymmetry in the emerging sectoral-level wage bargaining. Provision for worker codetermination exists as in the CSFR. The burden of wage restraint devolves on the National Council for Reconciliation of Interests, a tripartite body which sets the

minimum wage (and was instrumental in settling the taxi-drivers' strike in October 1990). Considerably weaker workers councils (with consultative rights on dismissals and management of the social funds) have replaced the enterprise councils that had powers similar to their Polish counterparts.

In Romania, labour relations remain antagonistic. There is no effective tripartite relationship. There are 15 major trade union organizations: seven major confederations in the CNSLR (the communists), three of which cut across industry lines, and eight independent breakaway unions. Infighting is common, and in late 1991 the CNCS (National Consultative Trade Union Council) was founded to improve cooperation and improve the bargaining position of organized labour. Total membership is roughly 30–35%. Unions are sufficiently intrusive in the management of enterprises to make works councils unnecessary.

In Bulgaria the Nationwide Commission for Social Partnership, under the Council of Ministers, coordinates the setting of the minimum wage and the degree of indexation. The Confederation of Free Independent Trade Unions is a legacy of the communist regime; Podkrepa was the first liberal, democratic alternative, and has been joined by three other independent unions. Unions represent 90% of the state industrial sector and about 45% of the whole economy, including agriculture. Bulgaria has no system of works councils.

This section summarized factors that influence the strength of workers in bargaining: I judge it lowest in the CSFR, followed by Bulgaria and Hungary, then Romania, then Poland. Section 5 will look at corporatism (the degree to which collective bargaining is managed by groups and institutional structures) and the degree of centralization (the concentration of market power for both unions and employers).

4.3. Severance regulations and prior notice

Discussion in Western Europe has often focused on the employment effects of job protection and severance pay provisions. Lazear (1990) finds that tighter regulations and employment growth are negatively correlated in OECD countries. In the model I develop in the Appendix, what matters for wage determination is $F-T$, the difference between severance costs faced by firm and the severance payments received by the worker: the mere existence of severance benefits *per se* has no effect on equilibrium unemployment and vacancies (see also Burda, 1992). In more general models severance payments reduce both firing and new hiring. Table 6 gives details of these regulations in Eastern Europe: they appear modest by Western standards.

Table 6. Severance benefits and notification requirements

	Severance benefits	Prior notice rules
Bulgaria	2 months' gross pay; or may be increased through collective bargaining	1 month (for bankruptcies or mass layoffs)
CSFR	2 months' gross pay; or may be bargained up to 5 months (extra counts against claim on UB)	Prior notice is means of paying severance benefit
Hungary	Minimum of 1–6 months, depending on service (<3 yrs: 1 month's pay; >25 yrs: 6 months' pay); extra counts against UB claim	Obligatory consultation with elected works councils for mass layoffs
Poland	<10 yrs: 1 month's pay; 10–20 yrs: 2 months; >20 yrs: 3 months	Works councils must be consulted
Romania	None	Not enforced

Source: Interviews with labour ministry and research institute officials.

4.4. Active labour market policies

The experience of Western Europe, especially the high equilibrium unemployment in France, Italy and Spain, has not been lost on policy-makers in Eastern Europe. On paper at least, they understand that deep recessions with poorly planned and passive systems of support for the unemployed can lead to long-term unemployment and politically irrevocable commitments to support these individuals. The buzzword is now 'active employment measures' (AEMs).

In theory AEMs must reduce equilibrium unemployment. First, in Figure 1 they rotate the *VS* schedule leftwards. Public works, soft loans for job creation or self-employment, wage subsidies, tax incentives for private firms, and unemployment benefit conditionality are *VS* rotators. Second, AEMs enhance information exchange and monitoring of unemployed workers' prospects, while retraining programmes eliminate the mismatch between vacancies and unemployed. These yield 'technical progress' in the matching function, shifting the *UV* curve inwards and the *VS* schedule leftwards, as the profitability of vacancies at any given level of unemployment rate increases.

Yet AEMs are now a response to a situation that had already deteriorated: high unemployment has overwhelmed the new labour ministries and employment offices of Eastern Europe. Often without centralized information processing, job matching is managed haphazardly. Benefit recipients often take moonlighting jobs (explicitly legal in Hungary and

of benefit on readiness to accept alternative job offers is rarely enforced except in the CSFR. The dramatic rise in obligations for passive measures (i.e. benefits), inevitably crowds out funds available for active measures. In Bulgaria, for example, ambitious programmes encompassing 35% of the 1992 budget of the 'Fund for Unemployment and Requalification' included a wage subsidy along the lines of the successful Czech and Slovak programme; yet the rapid rise in unemployment in recent months means that 80–90% of these funds will be paid out as unemployment benefits. In Romania, only 3% of the employment budget in the first six months of 1992 was directed at AEMs; a similar situation prevails in Poland. In Hungary, in 1991 a wide range of AEMs was cancelled for budgetary reasons (Frey, 1992). The ILO (1991) advocates benefit conditionality in Hungary; yet compulsory participation in retraining or public works smacks to many of central planning and is often rejected outright.

Table 7 summarizes the state of play in mid-1992. Only CSFR (in both Czech and Slovak republics) has implemented an AEM policy in the Scandinavian mode described in Calmfors and Nymoen (1991). Former Labour Minister Milan Horálek's amusing characterization of CSFR policy as 'a Trabant version of the Swedish system' is too modest; the rapid establishment of labour office districts with dual responsibility for unemployment benefit payment and the processing and transmission of job information made a big impact. The caseload of employment office staff in the CSFR is comparable with that in the West; in Poland and Bulgaria it is at least three times as great (OECD, 1992). In January 1992 the Slovaks adopted the Czech system of employment subsidies for school leavers (at grammer, vocational and university level). Placement rates for university graduates are 85–90%, and the retention rate is high. The CSFR has an ambitious programme of soft loans; a payment of a year's unemployment benefit plus similar advances for hiring others from the unemployment rolls for more than two years. Spending on AEMs has remained relatively constant, about 25% of the budget (OECD 1992).

Conditionality is important in CSFR AEMs. Benefit recipients who are retraining enjoy a replacement rate of 70% rather than 60 or 50%. Considerable funds have also been spent on public works, on which local labour offices actively place those with expiring benefit claims and pay their wages for the first six months. In 1991, 157,000 jobs were created in short-term make-work run by local authorities and longer-term subsidized employment initiated by the private sector. Of the latter, roughly 50,000 jobs were 'Assistent' or 'Praktikant' positions offered to school leavers, paid at minimum wage by the employ

Table 7. Active employment measures (AEMs), 1992

Bulgaria: 35% of Fund for Unemployment aimed at AEMs (unlikely to reach this figure). Public works on an experimental basis. Very limited support for entrepreneurs in 1991. Wage subsidy for school leavers envisaged. Local labour offices computerized but not well manned (1 worker/290 unemployed). % of employment budget outlays in AEMs: 34% in 1991, 17% in 1992.

CSFR: Local public works financed by local labour offices; apprenticeships for school leavers, at minimum wage for 1-year duration, sponsored by local labour offices; active computerized and coordinated employment offices running both job matching and unemployment benefits; incentives for retraining (70% replacement ratio rather than 60/50%). Incentives for entrepreneurial support (12 months' UB up front as 'soft loan' + the same for hiring employees who are unemployed. % of employment budget outlays in AEMs: 23% in 1991, 30% in 1992.

Hungary: Heavily limited by budget problems. Poorly coordinated employment offices, entrepreneurial programme (<1,000 participants) abandoned in 1991. Regional development programme abandoned. Experimental short-time programme in 1991 had 35,700 participants. Roughly 100,000 in retraining programmes. % of employment budget outlays in AEMs: 30% in 1991, 24% in 1992.

Poland: Limited to some public works, entrepreneurs' programmes. Labour offices poorly staffed (over 300 unemployed per caseworker). In 1991, 10,300 received training, 21,400 received startup loans. % of employment budget outlays in AEMs: 18% in 1991, 18% in 1992.

Romania: Wage subsidy programme for school leavers since 1991: for 9 months 60–70% of salary paid by Unemployment Fund. Early retirement programme imposes punitive 'retraining charges' on the gross salary of older unemployed who refuse to retire. About 60,000 in a retraining scheme. For first six months of 1992 expenditures on retraining and wage subsidies nearly 3% of total outlays. Short-time arrangements with unions allowed postponement of some layoffs.

Source: Labour ministry officials, OECD (1992).

begun after some delay; only 24,000 jobs were created in 1991 (Janáček, 1992).

Has the CSFR experience been a success? Despite an output collapse similar to that in other transforming economies, unemployment remains low and exits from unemployment into work high. The CSFR's vacancy-unemployment ratio is the highest in Europe. Even the evidence for Slovakia, where the collapse of heavy industry was steeper, is encouraging: unemployment is falling and job creation is picking up; job finding rates rose in 1992.

4.5. Multiple equilibria and the high unemployment trap

The 'entitlement' aspect of unemployment benefits not only crowds out AEMs, it causes budgetary problems. If for political reasons the

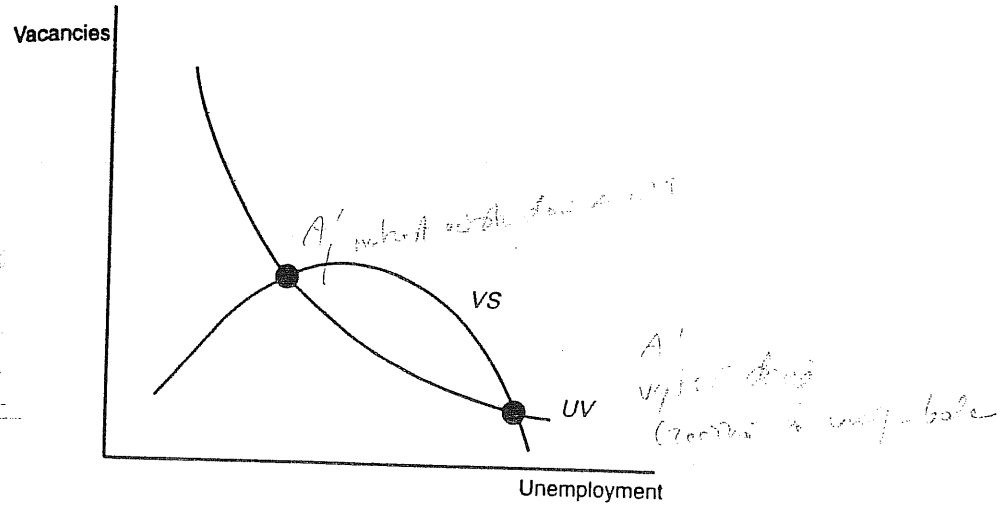

Figure 3. Multiple equilibria

level of benefit cannot be cut, higher unemployment may lead to higher taxes on firms, reducing the value to the firm of job-worker matches. In Figure 1 the *VS* schedule will no longer have a constant positive slope. Instead, as in Figure 3, it is likely that higher rates of unemployment successively reduce the incentive to supply vacancies: beyond some point, further increases in unemployment so increase the tax burden on firms that they actually reduce the vacancies on offer.[10] Figure 3 displays two equilibria when the *VS* curve has this shape.[11] Adverse shocks might drive the economy from the desirable (low unemployment) to the undesirable (high unemployment) equilibrium.[12]

One way to avoid the high-unemployment trap is to index unemployment benefits to productivity; or, more radically, a 'social pact' that fixes taxes on enterprises and endogenizes benefits. The latter transfers from the firm to the worker the burden of fluctuations in the vacancy-unemployment ratio.

[10] This argument is related to 'fiscal increasing returns' in Blanchard and Summers (1987).

[11] Technically, one equilibrium is locally unstable, but richer dynamics could render it saddle-stable as well: for example, the naive adjustment process $dv/dt = \sigma V$, $\sigma > 0$, where V is the steady-state asset value of having an unfilled vacancy derived in the Appendix. Charlie Bean has suggested a 'large firm' model with costs of adjusting vacancies yielding multiple equilibria which are globally or saddle-stable.

[12] In decentralized economies with search or matching, multiple equilibria are possible, and an economy may settle at an inferior equilibrium. This possibility is generally discounted since increasing returns in the matching function (the thin

5. Empirical analysis and policy implications for Eastern Europe

5.1. Does the matching function work in the East? Extimates from the CSFR

My analysis has assumed a stable matching function in Eastern Europe with the same properties as in the West. To test this assumption, I estimate matching functions using monthly registered unemployment and vacancy data from the CSFR, which include gross exits from unemployment to employment during October 1990–May 1992 (with considerable gaps for Slovak data). The data come from 76 Czech and 38 Slovak employment offices. The remarkable quality of these data should not belie the usual limitations of registration data: omission both of discouraged workers and of informal employment of benefit recipients.

I assume the matching function is log-linear: in logarithms, matches depend on a constant, on the number of unemployed and on the number of vacancies (and possibly also on some fixed-effect dummies, for example capturing changes over time). This function was estimated, in different months during 1991–92, on cross-section data from 76 employment districts including Prague, and in a sample of the same districts pooled over the entire period November 1990–May 1992, with and without fixed effects by region and time.[13] The results are shown in the top part of Table 8. In the cross-sections, the hypothesis that the matching function has constant returns to scale in unemployment and vacancies is not rejected by the F-tests, despite the precision with which the coefficients are estimated. In contrast, in the pooled sample constant returns are rejected in favour of decreasing returns. The pattern of the estimated time dummies hints at technical progress (growing efficiency) in the Czech matching function (as well as some seasonality). To the extent that time dummies may be 'overcorrecting'. I therefore place more weight on the cross-section results, which tend to favour constant returns but also suggest that developing a labour market takes time:[14] the sum of the two coefficients is higher than at the outset of reform.

[13] These results resemble findings of Pissarides (1986) and Layard *et al.* (1991, ch. 5) for the UK. The Cobb-Douglas functional form seems acceptable for modelling the matching process; in no case did a CES approximation yield evidence against the Cobb-Douglas specification.

[14] For example, time may be proxying both technical progress in the matching function and a downward trend in reporting vacancies at employment offices. Vacancies are also measured with error, which also biases downwards the estimated coefficient on vacancies. Regional migration or commuting across districts may also help explain the results: exits can occur into other regions, so that high unemployment in one region may affect the matching process in adjacent regions.

Table 8. Estimates of the matching function, Czech and Slovak Republics, 1991–92 (Dependent variable: logarithm of exits from registered unemployment to jobs)

	Date	Unemployment previous month, in logarithms		Vacancies previous month, in logarithms		*F* statistic significant at 1% level
		coefficient	*t*-stat.	coefficient	*t*-stat.	
Czech Republic:						
Cross-section,	1/91	0.42	(3.5)	0.44	(3.3)	no
76 districts,	7/91	0.60	(6.4)	0.27	(4.2)	no
including Prague	1/92	0.75	(10.3)	0.24	(4.3)	no
Same districts, pooled over 10/90–5/92, 18 monthly dummies		0.65	(25.1)	0.24	(12.9)	yes
Slovak Republic:						
Cross-section,	5/91	0.61	(3.0)	0.10	(0.9)	no
38 districts	9/91	0.62	(1.9)	0.08	(0.5)	no
Same districts, pooled over 12/90–9/91, 9 monthly dummies		0.53	(6.2)	0.23	(4.9)	yes

Notes: All regressions have intercepts not shown above; *t*-statistics are heteroscedasticity-consistent; *F* statistic tests whether constant returns (two coefficients sum to 1) can be rejected; without pooling, failure to reject occurs at both 1% and 5% levels.

The Czech lands enjoy one of the lowest unemployment rates in Eastern (and Western!) Europe. Do the results for the matching function extend to high unemployment Slovakia? Slovakia has essentially the same policies as in the Czech lands for unemployment benefits, severance, trade unions and AEMs.[15] Estimates of the Slovakian matching function for two cross-sections and the pooled sample for the period December 1990–September 1991 are shown at the bottom of Table 8. The Slovak results are remarkably similar to those for the Czech lands.

5.2. A normative model of closure of the public sector

The existence of a stable matching function can provide guidance for policy design in the transforming economies. Growth of the private sector will require time, and will depend on the efficiency with which workers and firms can be brought together; on how quickly vacancies can be created; and, perhaps decisively, on the availability of labour resources (unemployed individuals).

How rapidly should the state free up that labour? This is a question of how quickly to privatize or close the state sector (still over 90% of

[15] According to anecdotal evidence, Slovakian administration of benefits and severance pay before January 1992 was more generous than elsewhere in the Czechoslovak

employment in Romania and Bulgaria, about 80% in Hungary and Czechoslovakia and 50% in Poland). For political reasons, wages in the state sector are well above the income of the unemployed, so workers are unlikely to quit.[16] This is why unemployment is *necessary* for structural change. Yet too much unemployment carries its own social costs.

Consider how to maximize the present value of social output in an economy with a large state sector with low (constant) labour productivity y^s and a more productive but initially negligible private sector with higher (constant) productivity y^p. Gross hiring is assumed to be nonpositive in the state sector; vacancies there are zero. Public sector employment is a policy variable, private sector employment evolves according to the dynamics of unemployment, vacancies, matching and separations. Given the productivity advantage of the private sector, how rapidly should the state sector be shrunk and to what level? Provided a social cost is attached to unemployment, with increasing marginal cost, it cannot be optimal to have full and immediate closure, for then unemployment, the stepping stone to employment, would temporarily be enormous.

In the Appendix I derive the best policy using optimal control theory. An extra worker employed in the private sector has a shadow value z, the appropriately discounted value of the differential productivity of the two sectors. If productivity levels in both sectors are exogenously constant, z must also be constant at its new long-run equilibrium value $(y^p-y^s)/(r+s)$, where r is the real interest rate and s the separation rate.

The marginal benefit of unemployment is thus $(fz+l-kv)$ where f is the rate of job finds (x/u), l is the value of leisure to the unemployed, and kv the cost of posting vacancies. If $\phi(u)$ is the social cost of unemployment *per se* and $\phi'(u)$ the marginal cost, then social marginal cost of unemployment is $\phi'(u)+y^s$, which also allows for the opportunity cost of not producing in the state sector.

There is a unique (constant) rate of unemployment u that makes the marginal benefit $(fz+l+kv)$ equal to the marginal cost $\phi'(u)+y^s$. Hence the optimal policy begins with an instant shakeout of state employees up to this critical level of unemployment.[17] Thereafter, state employment is wound down just as quickly as the labour market can absorb the unemployed into the new, growing private sector, leaving unemployment constant thereafter. Optimal policy is neither 'big bang' nor

[16] Blanchard (1991) explores the possibilities of bleeding the state sector by freezing public sector wages. The experience in Poland suggests this may not be politically feasible.

[17] The optimality of a constant profile for unemployment depends of course on the simple linearities of the model; in a more plausible model this would no longer be so; however, the

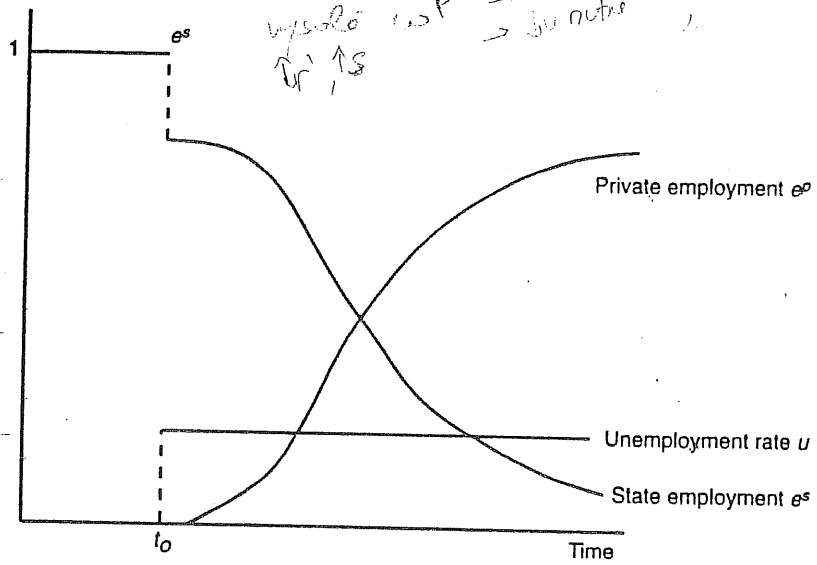

Figure 4. Optimal paths of private and public sector employment

'go slow', but a 'mixed bang' large enough to get to long-run unemployment immediately, but proceeding thereafter only at the rate at which the labour market can match or digest further layoffs. Figure 4 summarizes these conclusions.

What speeds of private sector growth are implied by the matching function? Imposing constant returns in matching, Table 8 implies a matching function like $x=Au^{\alpha}v^{1-\alpha}$. Based on the Czech estimates in Table 8 (including unreported intercepts), I assume $\alpha=0.74$ and $A=e^{-1.3023}$. I also assume unemployment levels and v/u ratios remain constant at the levels shown in Table 2 for each country. I can then compute the implied rate of monthly layoffs from the state sector to keep unemployment constant along the optimal path suggested above; and the corresponding matching and new job creation in the private sector. Results are shown in Table 9. They are comparable to current rates of inflow into unemployment in Eastern Europe, which have already reached Western levels: in the Czech Republic the inflow rate as a fraction of employment was 0.5%; in Slovakia, 1.4% (both June 1992); in Bulgaria 0.9%, and in the ex-GDR, 1.0% (both March 1992). Corresponding monthly rates in the UK, France and Germany in recent years were about 1–1.5%.

This analysis suggests that a 'mixed-bang' approach to the state sector is feasible, but the simplicity of the model ignores several issues beyond the scope of this paper. For example, feedback from layoffs to aggregate

Table 11. Unemployment forecasts for Eastern Europe

	Assumed values, by country				Forecasts	
	UBEN	*CORP*	*CENT*	*AEM*	Unemployment as % of labour force	Long-term unemployed as % of all unemployed
Bulgaria	0.671	Belgium (7)	Belgium (8)	1.13	7.2	28.3
CSFR	0.522	Sweden (3)	Germany (6)	3.03	3.0	26.5
Hungary	3.388	Holland (6)	France (11)	3.42	8.2	42.5
Poland	1.240	Spain (12)	France (11)	1.70	12.2	43.0
Romania	1.286	UK (11)	Canada (17)	0.23	11.6	15.8
Memo: OECD average	3.476	(6.6)	(9.5)	6.5	8.4	35.6

Notes: Penultimate column computed using estimated coefficients (and unreported constants) from first regression in Table 10; final column uses final regression of Table 10.

centralization and its square, severance benefits, and prior notice were insignificant in the presence of these variables. Note that expenditure on active employment programmes is robustly estimated to yield a 0.2% reduction in unemployment for each additional 1% of per employed worker output spent. This coefficient is insignificant when spending is measured as a fraction of GDP, confirming the relevance of expenditures per person.

I examine long-term unemployment, a chronic problem in OECD countries yet with considerable cross-country variation. The results are again shown in Table 10. The Calmfors–Driffill centralization measure is now significant, whereas the AEM variable is now insignificant. One interpretation is that long-term unemployment consists of 'outsiders' alienated from the labour market. Highly centralized and decentralized labour markets may allow swifter reintegration of outsiders in the wage-setting process.

From these OECD estimates and attributed values for the Visegrad countries one can forecast average standardized unemployment rates and the percentage of unemployment in long-term unemployment. To do so, I also have to assign comparator Western countries whose indices of corporatism and centralization can be assumed by Eastern counterparts; necessarily, this matching is subjective. Moreover, exogenous variables we observe today can change, sometimes rapidly and radically (e.g. unemployment benefits in Poland and the CSFR, or the development of collective bargaining in Hungary and Bulgaria). My forecasts must be taken with a grain of salt.

Even so, Table 11 shows my 'best guesses' for the exogenous variables and the associated forecasts of the average unemployment rate and the long-term unemployment rate for the five countries. In general the predictions are not terribly encouraging. The CSFR apart, Eastern Europe has a long period of high unemployment ahead. However, the predictions are often several percentage points below current observed unemployment rates; this deviation can be interpreted as Keynesian unemployment.

High unemployment is usually associated with high rates of long-term unemployment: for both, benefits and corporatism are major determinants. The forecast of low long-term unemployment in Romania is due to a combination of decentralized collective bargaining and low benefits (as in Japan or the US). The simultaneously high unemployment forecast reflects low spending on AEMs and noncorporatist union-management relations.

6. Conclusions

What have we learned from this study of the transforming Central and Eastern European economies? In its labour market institutions, Eastern Europe is moving rapidly towards West European norms, although cross-country differences in unemployment benefits systems, collective bargaining and active employment policies are significant. Labour market institutions influence equilibrium unemployment in theory, and appear to explain much of the cross-country differences within the OECD in practice.

The flow or matching approach to labour markets has concrete lessons for managing the transformation process. Optimal control suggests a mix of shock therapy and go-slow that reflects the time element of the matching function. Estimates of the matching function support the hypothesis that Eastern European economies behave like those in the West and that unemployment will be a necessary ingredient for the transformation. At the same time, conclusions about the optimal rate of privatization or closure of enterprises must be drawn with caution. Portes (1992) has argued that many of the firms in sectors designated as value-added subtractors by Hughes and Hare (1991, 1992) could have proved viable, reorganized by new management. Reestablishing industries after closure may be associated with significant fixed costs. The option value of waiting (Dixit, 1992) may be high, especially given the big variation in enterprise profitability, both at firm and aggregate levels (see Hughes and Hare, 1992; Kolanda and Kubista, 1990). Yet the calibration exercises using estimated parameters for the match-ing function imply that selective slaying of the most inefficient dinosaur enterprises (Siebert, 1991) is feasible and perhaps the optimal policy.

Table 9. Implied rate of layoff for the public sector

	Implied severance rate per month:		Implied job finding rate
	Absolute	% of employment	
Bulgaria	47,900	1.38	0.106
Czech Republic	33,700	0.90	0.238
Hungary	45,200	1.04	0.102
Poland	200,200	1.24	0.090
Romania	46,200	0.42	0.068
Slovakia	34,600	0.90	0.123

Notes: Assuming constant v/u ratio in Table 2; no initial private sector employment; and constant returns matching function estimates. Middle column data for Czech and Slovak Republics as % of combined CSFR employment.

in both sectors, magnified by the multiplier effect on demand. A further problem is related to the multiple equilibria of Section 4.5 which emphasized fiscal effects on the incentive to create vacancies. That discussion should now be generalized: the cost of privatization includes a loss of revenues to the government that would have helped finance unemployment benefits (this effect is stressed in Bolton and Roland, 1992). Third, increases in unemployment may destroy human capital or lead to wage setting that permanently increases the natural rate of unemployment, leading to path-dependence. Even without formal analysis, it seems likely that the existence of multiple equilibria will put more weight on caution and 'go slow' to avoid moving to a high unemployment trap.

5.3. The equilibrium rate of unemployment: lessons from the West

The previous section explored the profile of layoffs in transforming economies, taking the vacancy-unemployment ratio (and hence f, the rate of job finds) as given. A natural extension of the analysis is to address the determinants of v/u within the model itself, and thereby the equilibrium or natural rate of unemployment.

The discussion of Sections 3 and 4 emphasized the role of labour market institutions and policies in determining the equilibrium rate of unemployment. To learn about their relative importance, I estimated a parsimonious model for a cross-section of 18 OECD countries.[18] I regress either the average standardized unemployment rate during

Table 10. Unemployment rates in OECD countries

		Coefficient on:					
		UBEN	*CORP*	*CENT*	*CENT*^{2}	*AEM*	R^2
Dependent variable:							
Average standardized unemployment rate (%) 1986–90	(1)	0.85 (5.0)	0.93 (3.8)			−0.18 (−2.8)	0.79
	(2)	0.95 (1.9)		1.03 (1.3)	−0.047 (−1.0)	−0.24 (−1.9)	0.49
	(3)	0.96 (3.6)	1.06 (3.6)	−0.57 (−1.4)	0.027 (1.4)	−0.20 (−2.6)	0.81
	(4)	1.13 (3.5)	1.10 (3.7)	−0.66 (−1.3)	0.039 (1.4)		0.75
Dependent variable:							
% of total 1988 unemployed in a current spell of over 12 months unemployed	(5)	8.61 (4.8)	3.50 (2.9)			0.04 (0.1)	0.79
	(6)	5.96 (2.8)		12.50 (3.7)	−0.62 (−3.4)	0.09 (0.2)	0.83
	(7)	6.15 (3.0)	2.31 (1.9)	9.49 (2.6)	−0.483 (−2.6)	0.29 (0.6)	0.89
	(8)	5.93 (3.2)	2.20 (2.0)	9.22 (2.6)	−0.479 (−2.6)		0.88

Sources: Dependent variable data from Bean (1992); *UBEN* = Burda's (1988) measure of unemployment benefit generosity (divided by 1,000); *CORP* = Tarantelli's (1986) corporatism ranking (1 = most corporatist); *CENT* = Calmfors and Driffill's (1988) measure of centralization in wage setting (1 = most centralized); *AEM* = spending per unemployed as fraction of output per employee (Jackman *et al.*, 1990).
Notes: Sample: Belgium, Denmark, France, West Germany, Ireland, Netherlands, Spain, UK, Australia, New Zealand, Canada, US, Japan, Austria, Finland, Norway, Sweden and Switzerland. Sample sizes of 18 (regressions 1–4) and 14 (regressions 5–8). Heteroscedastic-consistent t-statistics in parentheses). Estimated intercepts not shown in table.

1986–90 or the long-term unemployment rate in 1988 on unemployment benefit generosity in 1985 (Burda, 1988), Tarantelli's (1986) index of corporatism, Calmfors and Driffill's (1988) measure of wage centralization and Jackman *et al.*'s (1990) measures of expenditure on AEMs. For a somewhat smaller sample, I also included as regressors unionization rates (OECD, 1991) and severance benefit and notice rules (Lazear, 1990).

The results are shown in Table 10. Benefits, corporatism and spending on active employment measures robustly explain 75–80% of cross-sectional variance of average OECD standardized unemployment in

I have made the case that conventional demand and supply factors, despite their importance, are only part of the transformation story. New policies and institutions will be necessary to mediate and accommodate the special aspects of labour markets: search by employers and employees, the special role of information, the highly specialized nature of the 'commodity' that is traded. Some of these institutions which are widespread in advanced Western economies – collective bargaining, unemployment insurance and the social net, regulations and active labour market policy – will have profound effects on the ultimate outcome of the transformation process. Simple regression results from OECD countries suggest that with the exception of the CSFR, high unemployment will be a feature of Eastern Europe well into the foreseeable future, and that long-term unemployment will be an important and durable component.

To counteract this tendency, the new market economies must quickly implement corporatist-style bargaining structures and tighter administration of unemployment benefits, perhaps combined with a concerted effort to save the AEMs from extinction described in Section 4. While the evidence shows that the benefits from active labour markets are fairly high, so are the costs. In this context foreign assistance, at least at the technical level, may have high social returns. Early successes in the CSFR suggest that emphasis on job matching and information exchange, active promotion of entrepreneurial activity, and subsidization of job creation in both public and private spheres may be the right approach.

Discussion

Charles Bean
London School of Economics

This is a very ambitious paper, which as well as containing a vast amount of information about the emerging labour market institutions of Eastern Europe, also seeks to quantify the likely impact of these new institutions on the equilibrium level of unemployment in the medium term. Most economists are reluctant to pin themselves to tight predictions under any conditions, so Burda's willingness to do so in the context of major structural change is bravery (or foolhardiness?) of the highest order. My critical comments below should therefore not detract from what is a very useful paper.

My first worry is the application of the standard matching approach to labour markets, already applied fruitfully to Western economies by Pissarides, Blanchard and Diamond, to the emerging labour markets

of Eastern Europe. While this is likely to constitute a perfectly good paradigm for the post-reform economy, it seems less plausible as a story of how labour markets operated in the ancien régime. The way in which labour was allocated under communism was fundamentally different, and it is not clear that one can really describe the *status quo ante* as being given by the intersection of the lower *UV* curve and the higher *VS* curve in Figure 2, and reform in terms of a few parameter shifts. Surely the labour market did not really exist in any meaningful sense pre-reform, but rather has slowly emerged since the end of communism? This in turn will have implications for the pooled time-series cross-section estimates of the matching function, although the presence of a few time dummies should help to control for it.

My second observation relates to the possibility of multiple equilibria, which here relies on 'fiscal increasing returns' rather than 'thick market externalities', which in any case seem to be empirically unimportant. However, Burda does not give us any idea whether multiple equilibria due to fiscal increasing returns are likely to be any more relevant empirically. It would seem natural, therefore, to use the estimated matching function, together with some appropriate characterization of the supply of vacancies and the tax-benefit system, to identify the likelihood of such high unemployment equilibria emerging.

Third, let me take issue with the analysis of the optimal speed of restructuring. This makes matching functions the only obstacle to structural change, but surely such frictions are a secondary (or even tertiary) issue. The model treats the decision to open a firm and to open a vacancy as synonyms, and assumes that there are no impediments or frictions involved in doing this. In reality, surely, the limited supply of entrepreneurial skills and questions of how the requisite physical and financial capital are obtained, are of much greater significance. I do not see how one can seriously evaluate the optimal speed of restructuring without taking account of these issues.

Finally, let me note that Burda's diagnosis of the structural factors lying behind high unemployment in the OECD is entirely consistent with the work that I and others have carried out. This indeed points to the important role played by the duration of unemployment benefits, the degree of coordination in wage bargaining, and the benign influence of active job market programmes. I am struck by the diversity of labour market institutions in Eastern Europe that is nevertheless emerging, which suggests that perhaps Eastern Europeans have not learned as much from Western experience as they might. It is to be hoped that the transition process, which will be uncomfortable enough, is not exacerbated further by the application of misguided labour market

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This is a timely and competent paper, which consists of three parts: (a) an overview of the main labour market institutions that have emerged in CEE during the transition; (b) a theoretical model of equilibrium with unemployment, vacancies and a matching function between the unemployed and jobs; and (c) an empirical analysis which uses monthly district-level data from the Czech and Slovak republics to estimate loglinear (Cobb-Douglas and Kmenta CES) matching functions.

The main contribution of the paper lies not in its description, which is reasonably familiar, but in its analysis. The author reviews and further develops the macroeconomic literature on unemployment, vacancies and matching in the labour market and he stresses its relevance for the transforming socialist economies. He brings up the important and frequently neglected fact that the transition has brought about significant job creation and not just job destruction. He points to significant mismatch between the geographic location of workers and jobs and he argues that unemployment is a necessary part of the job creation process. The simple theoretical model presented in Section 3 shows how equilibrium unemployment and vacancies are related to institutional variables reflecting workers' bargaining power (e.g. corporatism, laws on trade unions and the presence of workers' councils) as well as government policies (e.g. unemployment benefits, severance pay and firing costs).

The empirical analysis focuses on estimating one component of the theoretical model, namely the matching function that relates the number of job matches created to unemployment and vacancies. As Michael Burda points out, the matching function, like the production function, is a 'black box'. It reflects the spatial and informational aspects of the matching process as well as the institutional features of the labour market and the search activities of workers and firms.

The author concludes that the empirical results point to the existence of a stable matching function and the importance of both vacancies and unemployment in job creation. This leads him to argue that the growth of the private sector will require time and will depend on the speed with which vacancies can be created and on the availability of unemployed individuals. Overall, this is a fine paper with important policy implications. My comments below reflect a concern that future research should attempt to broaden both the theoretical model and the empirical analysis.

A particularly troublesome feature of Burda's approach is that it focuses exclusively on transitions from unemployment into employment and ignores job-to-job switching. While it is true that job-to-job switching was much more important under the full employment communist system that now, it still remains an extremely important phenomenon. Take the example of the districts comprising Prague. The growth of private sector employment has been phenomenal there and yet the unemployment rate has been under 0.5%. New matches have been massive and mostly of a job-to-job nature. From a policy standpoint, this type of labour market transition has great appeal and ought to be facilitated by government policies. There is the additional consideration that, with one-half of large Czechoslovak enterprises having been swiftly privatized in 1992, the most rapid private job creation has involved no job switching or matching.

Analytically, one would also like to see the empirical analysis linked to the theoretical model beyond the simple estimation of the matching function. The matching function is an important building block of the overall model, but it does not capture many of the aforementioned behavioural and institutional features whose empirical estimates would be useful for public policy.

With respect to the econometric work itself, it is worth pointing out that the Slovak cross-sectional regressions have a poor fit and that the estimated coefficients on vacancies are both small and statistically insignificant. In Slovakia, the support for the matching model is weak and stems primarily from the pooled regression. Both here and in the rest of Eastern Europe, the question of how important are issues of matching relative to those of conventional demand and supply factors remains a very open one.

General discussion

Discussion in the Panel focused both on theoretical and empirical aspects of the paper. Olivier Blanchard said that, while sympathetic to the general approach of the paper, he had some concerns about the realism of some of the theoretical assumptions. First, much hiring was done directly from employment to employment without passing through unemployment in between – a criticism echoed by Willem Buiter, who pointed out that on-the-job search would make decreasing returns quite plausible in the matching function. Second, the reductions in employment were often achieved by a hiring freeze, which meant that first-time workers were disproportionately represented in the pool of unemployed. Third, the real bottle-neck in job creation was not the cost of a vacancy, but obstacles to the creation of new firms. And fourth he was concerned that wages should not be conceived as being determined in the same way (as a Nash bargain) in both

given that much of the rent in the state sector would be appropriated by workers. (This point was disputed by the author, who said that rent capture in the state sector did not affect the nature of matching, which was primarily a private sector phenomenon.) Blanchard also wondered whether the quality of the data on vacancies in Eastern Europe was good enough for the sophistication of the exercise in hand.

Willem Buiter added to these observations a concern that a model formulated in levels would not capture non-stationarities that could be important. He was also worried that a partial equilibrium model might be inadequate, given the endogeneity of other variables such as the interest rate and the productivity of a successful job match.

John Flemming was worried by the assumption of constant and uniform productivity of state employees. It was an essential feature of economies in transition that productivity was not uniform, because of changes in relative prices. Then the immediate elimination of value-subtracting sectors, followed by a more gradual convergence to the long-run level, would imply a different, and lower, set of transition costs than that described by the model of the paper. Empirically, he was also concerned that lags in eligibility meant that apparently generous benefits would in fact have been eroded by inflation by the time they were received; this could significantly affect some of the results reported in the paper.

Various suggestions were made for improving the precision of the empirical analysis. Paul Seabright suggested using data on new firm registrations to test whether there appeared to be a new firm bottle-neck effect additional to the cost of creating a vacancy. Georges de Menil said there were a number of other ways of measuring structural change that could be employed to test more directly the competing hypotheses of structural shock and demand-induced recession.

Alan Manning was less convinced than some of the Panel that the effect of trade unions and of benefits had convincingly explained the rise in unemployment in recent years in Western Europe; he wondered why they should be any more significant in the East.

Appendix: Equilibrium unemployment and vacancies, and the optimal closure of the state sector

A.1. Equilibrium unemployment and vacancies

The UV curve in Figure 1 solves $x(u, v) = s(1-u)$. Total differentiation gives $x_u + x_v(dv/du) = -s$, whence $dv/du < 0$. Convexity of the UV curve

to the origin follows from the diminishing marginal rate of substitution between u and v in the matching function. Off the UV curve, unemployment obeys $\dot{u} = s(1-u) - x(u, v)$.

Now for the supply of vacancies. Let J and V denote respectively the values to the firm of employing a worker and posting a vacancy (being without a worker). Assuming risk-neutrality, and letting θ denote v/u, the return in each of these states equals the interest rate r times the value of the state:

$$rV = -k + h(\theta)(J - V) \quad \text{and} \quad rJ = y - w - s(J - V + F) \tag{1}$$

where w is the wage, F a once-off severance cost in the event of a separation which occurs with probability s each period, k the cost of a vacancy and h the hiring rate x/v which itself depends on θ. Thus $J - V = (y - w - sF + k)/(r + s + h)$. A similar calculation can be made for workers. If unemployed they receive benefits b and leisure valued at l. The probability of a job find $f(\theta) = x/u = h\theta$, where $f'(\theta) > 0$. Placing a worker value E or U on states of employment or unemployment, and letting T be the once-off severance benefit for a worker:

$$rU = b + l + f(E - U) \quad \text{and} \quad rE = w + sT - s(E - U) \tag{2}$$

Hence $E - U = (w + sT - b - l)/(r + s + f)$.

Assume a Nash bargain over wages to maximize

$$\psi = (E - U)^{\beta}(J - V)^{1-\beta} \tag{3}$$

subject to the conditions that $E - U$ and $J - V$ are both positive. Clearly $y - sF + k > w > (b + l - sT)$ if a match is to be attractive to both parties. β measures the relative bargaining power of workers. Logarithmic differentiation of (3) with respect to w shows that for $\partial\psi/\partial w = 0$,

$$w = (1 - \beta)(b + l - sT) + \beta(y - sF + k) \tag{4}$$

Entry occurs until the value of a vacancy $V = 0$. (1) then implies

$$J = k/h = (y - w - sF)/(r + s) \tag{5}$$

From (5),

$$h(\theta) = \frac{k(r + s)}{y - w - sF} \tag{6}$$

As $h'(\theta) < 0$, raising w raises $h(\theta)$ and thus lowers θ. Thus for any given w, θ is given. The VS curve is the locus of points with $v/u = \theta$, which is a ray through the origin in $v - u$ space. The comparative statics of

A.2. Optimal closure of the state sector

Productivity in the state and private sectors is y^s and y^p, $(y^p > y^s)$; employment is e^s and e^p. The value of leisure of the unemployed is ul, the cost of posting vacancies is kv or $ku\theta$. The social cost of unemployment is $\phi(u)$ with $\phi'(u)$ and $\phi''(u)$ both positive. The problem is to choose a path for e^s to maximize

$$\int_0^\infty e^{-rt}\{y^s e^s + y^p e^p + ul - ku\theta - \phi(u)\}\, dt \tag{7}$$

subject to three constraints. The first is (6), the private incentive to supply vacancies. Note that (6) implies θ and hence $f(\theta)$ and $h(\theta)$ are all constant. The second is $u = 1 - e^s - e^p$, and the third is

$$\dot{e}^p = u\theta h(\theta) - se^p = (1 - e^s - e^p)f - se^p \tag{8}$$

The Hamiltonian is

$$H = e^{-rt}\{y^s e^s + y^p e^p + (1 - e^s - e^p)(1 - k\theta) - \phi(1 - e^s - e^p) + z[(1 - e^s - e^p)f - se^p]\}$$

where the multiplier z is the shadow value of private sector employment. Necessary conditions for a maximum are:

$$y^s - 1 + \theta k + \phi' - zf = 0 \tag{9}$$

$$y^p - 1 + \theta k + \phi' - z(f + s) = rz - \dot{z} \tag{10}$$

whence

$$\dot{z} = (r + s)z - (y^p - y^s) \tag{11}$$

(9) and (10) also imply both the optimal level of unemployment

$$u = \phi'^{-1}(zf - y^s - k\theta + 1) \tag{12}$$

which on substitution into (8) yields

$$\dot{e}^p = fu - se^p = f\phi'^{-1}(zf - y^s - k\theta + 1) - se^p \tag{13}$$

Figure A.1 draws the phase diagram for (11) and (13) in (z, e^p) space. The saddlepath is the locus along which z is constant at its steady-state value. The jump variable z immediately assumes this value; the state variable e^p is predetermined and converges to its steady-state value according to (13). From (12) it is evident that u jumps immediately to its steady-state value and remains at that level from then on. Finally, from all this we infer the optimal path for the control variable e^s, which shrinks as e^p grows, such that the identity $1 = e^s + e^p + u$ continues to

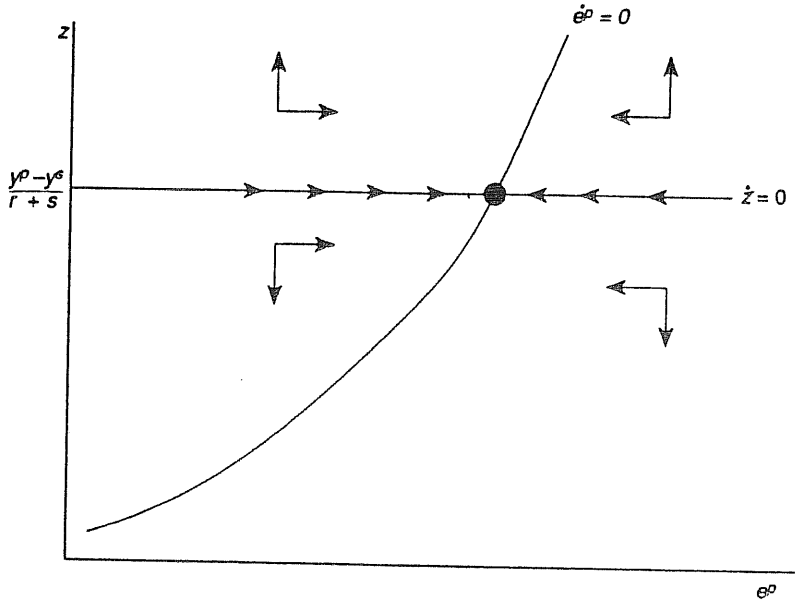

Figure A.1. Phase diagram for z and e^p

values of u and e^p sum to less than unity and the state sector does not vanish even in the long run. Although the private sector is more productive, I have assumed that there are no quits in the state sector: the only separations are optimally chosen layoffs. In contrast, private employers must take into account the prospect of future separations. It is this that allows the possibility of permanent survival of some state sector production.

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25 An innovative suggestion has been voiced recently by Belgium's Finance Minister Maystadt. The goal is to transfer into jobs some of the gains accruing to prosperous firms thanks to the 1995-96 wage freeze. Exceptions to the freeze would be authorised if they took the form of "service-vouchers", usable by households to purchase proximity services (see footnote 18 above). The face value of the vouchers would be treated on par with wages for assessment of labour taxes and income taxes. The vouchers would be tradable. The idea is to generate a demand for proximity services high enough to induce a corresponding supply by non-profit organisations.

26 My views on the fiscal guidelines are given in "1 Market + 1 (tight) Money = 2 Rules of Fiscal Discipline: Europe's Fiscal Stance Deserves Another Look", in *European Economic Integration: A Challenge in a Changing World*, M. Dewatripont and V. Ginsburgh, (eds), North-Holland, Amsterdam, 1994. I touch on some aspects of monetary policy in *Money and Uncertainty: Inflation, Interest, Indexation*, Banca d'Italia, Lezioni Paolo Baffi di Moneta E Finanza, Edizioni Dell' Elefante, Roma.

27 Perhaps against the advice of an impressive group of MIT economists?

28 Under that regime, domestic money creation is subject to 100% reserves in the reference currency.

29 Cf. "Priorité à l'Emploi", a manifesto by 72 French-speaking Belgian economists in January 1987.

3. Preventing Long-Term Unenployment: An Economic Analysis

Richard Layard*

3.1. INTRODUCTION AND SUMMARY

The European Union has set the target of halving unemployment by the year 2,000 (EU, 1994). How can it be done without increasing inflation? The strategy must be to reduce those kinds of unemployment which do little to restrain inflation. The most obvious such category is long-term unemployment.

3.1.1 Effects of long-term unemployment

Let us examine the evidence. In wage equations long-term unemployment is usually found to have a very small (or zero) effect in reducing wage pressure.[1] The reasons for this are obvious: long-term unemployed people are not good fillers of vacancies. This can be seen from data on exit rates from unemployment: exit rates decline sharply as duration increases. Equally, aggregate time-series show that, for a given level of unemployment, vacancies increase the higher the proportion of unemployed who are long-term unemployed.

If long-term unemployment is an optional extra, depending on social institutions, it is not surprising that there are striking differences in its prevalence across countries. As Table 3.1 shows, in the 1980s the majority of countries had between 3 and 6 per cent of the labour force in short-term unemployment (of under a year). But there were huge differences in long-term unemployment. It was under 1 per cent in the US, Japan, Canada and Sweden and over 8 per cent in Spain, Belgium and Ireland.

Clearly some short-term unemployment is necessary in any economy, to avoid the inflationary pressure which would develop in an over-tight labour market. But long-term unemployment is not needed for this purpose.

3.1.2 Causes of long-term unemployment

So how can it be prevented? To consider this we need to know under what conditions it occurs. Figure 3.1 provides a striking clue. It shows on the vertical axis the maximum duration of benefit in each country and on the horizontal axis the percentage of unemployed people in long-term unemployment (over a year). In countries like the US, Japan, Canada and Sweden benefits run out within a year and so unemployment lasting more than a year is rare. By contrast in the main EU countries benefits have typically been available indefinitely or for a long period, and long-term unemployment is high.

The relationship shown in Figure 3.1 is of course a partial correlation. But if one allows for multiple causation, the effect of benefit duration upon the aggregate unemployment rate remains strong and clear.[2]

The effect of unemployment benefit availability upon unemployment is not surprising. Unemployment benefits are a subsidy to idleness, and it should not be surprising if they lead to an increase in idleness. In principle of course the benefits are meant to protect individuals against an exogenous misfortune and there is meant to be a test of willingness to work. But in practice it is impossible to operate a "work test" without offering actual work. So after a period of disheartening job search, unemployed individuals often adjust to unemployment as a different life-style.

3.1.3 Preventing long-term unemployment

What should we do about the situation? One possibility would be to reduce the duration of benefits to say one year and put nothing else in its place. This would be the American-style solution. But we know this only works because people thrown onto the labour market accept an ever-widening inequality of wages.

A much better approach would be to help people to become more employable so that they would justify a better wage. This leads to our central proposal.

After 12 months the state should stop paying people for doing nothing. But at the same time it should accept a responsibility to find them temporary work for at least 6 months.[3]

In return the individual would recognise that if he wishes to receive income, he must accept one of a few reasonable offers. These offers would be guaranteed through the state paying to any employer for 6 months the benefit to which the unemployed individual would otherwise have been entitled.

This would have huge advantages:

(i) After the 12th month, it would relieve the public finances of any responsibility for people who are already in work.[4] It is very difficult to prevent fraud without being able to offer full-time work.

(ii) Between months 12 and 18, people would be producing something rather than nothing.

(iii) But the biggest effect would come after the 18th month. Provided the temporary work had been real work with regular employers, unemployed people would have re-acquired work habits plus the ability to prove their working capacity. They would have a regular employer who could provide a reference - or (even better) retain the individual on a permanent basis. The main justification for the proposal is not that it employs people on a subsidised basis but that, by doing so, it restores them to the universe of employable people. This is an investment in human capital.

That is the central objective of the exercise. Job creation schemes in the past have often failed because the jobs have been marginal and have failed to make the individual more employable thereafter. The job subsidy should therefore be available to any employer (private or public). There should also be the least possible restrictions on the kind of work that could be done. Clearly no employer should be allowed to employ subsidised workers if he was at the same time dismissing regular workers. But there should be no condition (as there was in the UK's former Community Programme) that the work done should be work that would not otherwise be done for the next two years. Such a requirement is a formula for ineffectiveness.

The reason why job creation schemes have so often had these disastrous limiting conditions is the fear of substitution and displacement. This fear is understandable but misplaced.

3.1.4 Substitution and displacement

Most opposition to active labour market measures is based on fears of displacement and substitution. In their extreme form these derive from the "lump-of-labour fallacy": there are only so many jobs, so, if we enable Mr. X to get one of them, some other person goes without work. This is a complete fallacy.

However it is easy to see how it arises. In the most immediate sense, the proposition is true. If an employer has a vacancy and, due to a job subsidy, Mr. X gets it rather than Mr. Y, Mr. Y remains temporarily unemployed. But by definition Mr. Y is inherently employable. If he does not get this job, he will offer himself for others. Employers will find there are more employable people in the market and that they can more easily fill their vacancies. This increases downward pressure on wages, making possible a higher level of employment at the same level of inflationary pressure.

On average over the cycle the level of unemployment is determined at the level needed to hold inflation stable. Active labour market policy

increases the number of employable workers, and thus reduces the unemployment needed to control inflation. Equally, in the short-run a government that has a given inflation target (or exchange rate target) will allow more economic expansion if it finds that inflationary pressures are less than would otherwise be expected.

Many people find it difficult to believe that (inflationary pressure equal) jobs automatically expand in relation to the employable labour force. So we devote the whole of Section 3.2 of the paper to that issue.

3.1.5 Benefits and costs

We can now proceed to sum up the effects of the scheme and its impact on human welfare. In a formal sense it would abolish long-term unemployment. However this is to overclaim since someone who reverts to unemployment after 18 months (after his temporary job) is not really short-term unemployed, even though this would be his classification in the statistics. So let us consider the impacts on the flow of a cohort entering unemployment.

During the first 12 months, some people may, it is true, delay taking a job because their potential employer has an incentive to wait for the subsidy. But more people will take a job who would not otherwise have done so because they would not like to end up on the programme. The hope is that a completely new climate would develop in which neither individuals nor the Employment Service accept the idea that someone should reach the humiliating position of being confronted with temporary work as the only possible source of income. In Sweden in the 1980s typically about 3 per cent of the workforce reached the 14th month of unemployment (when benefit ran out): in Britain the figure was about five times larger.

Going on, between the 12th and 18th months all the cohort is now employed. After the 18th month the proportion employed should be very much higher than it would have been, due to the employability of those concerned.

Thus it is reasonable to suppose that unemployment would fall by roughly the same size as the stock of long-term unemployed, leading to a substantial increase in production. Suppose average European unemployment fell to 5 per cent compared with a counterfactual rate of say 9 per cent. Output would be at a minimum 2 per cent higher.

This is the social gain (not to mention an additional non-income related gain in psychic well-being among those affected). What is the social cost? Very little. The employment service would need more administrative staff, but this is a tiny cost compared with the gain.[5] (The typical EC country spends only 0.1% of GNP on its employment service.)

The balance is also favourable if we focus exclusively on the benefits and costs to the public finances:

(i) After the 12th month the taxpayers stop supporting those who are already fraudulently in work.

(ii) Between the 12th and 18th month, the taxpayers keep paying benefit but now it goes to employers not workers. However an employer who would anyway have hired somebody unemployed between 12 and 18 months will of course claim the subsidy, so that there would on this account be some deadweight - i.e. extra expenditure.

(iii) After the 18th month, there will be major savings on benefits and extra taxes received. On any reasonable estimate the total of all these will be a positive saving to the government, and a saving higher than the extra cost of the Employment Service.

3.1.6 Carrot and stick

Why does this analysis seem so much more cost-effective than most existing active labour market policy? Because it is much more drastic. Job subsidies without compulsion to accept an offer can easily be ineffective.

Consider for example the proposal put forward by Snower (1994) which has inspired a recent British government initiative. The idea here is to make possible the conversion of a person's unemployment benefit into an employment subsidy, but not to make it mandatory. While the social net benefits should be positive, they may well be small. Major falls in unemployment are unlikely down this route. What is needed is a shift of regime.[6]

No one would now design a system like the existing one. But it requires courage and commitment to change it. One thing however is sure. Unless it is changed, we shall be almost as far from the EU's target early next century as we are now.

In the rest of the paper, we first discuss the issue of substitution and displacement (Section 2). We then in Section 3.3 review the effects of existing work-based policies in Sweden and the US, as a basis for evaluation of our own proposal.

3.2. SUBSTITUTION AND DISPLACEMENT

Programmes to help unemployed people have always been subject to two types of criticism. First, they may help people to do things they would have done anyway. Such expenditure is called "deadweight" since it has no effect but involves a public outlay. The social cost of this public outlay is the excess burden of the tax that financed the outlay. While this can be an important issue, it is not the main criticism.

The second and more serious objection is that, if unemployed workers get jobs they would not otherwise have got, this may not increase total employment but simply deprive other workers of jobs. This can happen either if each firm employs the same number of people as before but just substitutes one lot of workers for another, or if some firms expand employment and output but displace employment in other firms.

3.2.1 No job fund

Such arguments taken to the limit are based on the idea that the total number of jobs is somehow fixed, presumably by the level of aggregate demand. But there is no reason to suppose that demand is ever the main constraint in an economy. The monetary and fiscal authorities can always generate more demand. The constraint is the inflation constraint.

This is illustrated by the Phillips curve A_0A_0 in Figure 3.2. When the employment rate is above $(1-u_0^*)$ inflation tends to rise, and vice versa. Most governments and electorates seem to have some kind of inflation objective. Given this objective, the level of employment depends on u^*. Only policies which alter u_0^* will change the actual level of unemployment. But, conversely, if a policy reduces u_0^*, it will reduce u. This is illustrated by the new inflation constraint A_1A_1.

There is no fixed number of jobs to be done. Given the inflation target, the number of jobs is fixed entirely on the supply side of the economy.

3.2.2 Employability

The main thing that determines the number of jobs is the number of "employable" people in the economy. Economists generally take for granted the idea that ceteris paribus the number of jobs rises in proportion to the labour force, so we will for the moment take that as read. The more difficult issue is the notion of "employability". People clearly differ along a wide spectrum of employability. Near one end is Mr. A: a skilled worker who is willing to take any job and searches every day. Near the other is Mr. B: unskilled worker with an excessive reservation wage who only samples the job market once a month. If there are vacancies, Mr. A will probably be hired soon and Mr. B after a longer spell of unemployment.

More specifically, we can denote the "employability" of an individual c_i and the average employability of all unemployed people c. Then the total number of unemployed people hired in a given period (H) will depend on the number of vacancies (V) and on the number of unemployed people (U) weighted by their average employability(c).[7] Hence

$$H = f(V, cU) \qquad f_1, f_2 > 0 \qquad (1)$$

Thus our concept of employability refers to the capacity to fill vacancies.

How then does the employability of the unemployed affect the number of jobs - for a given inflation path? The path of inflation is given by the wage-price spiral, which we shall depict in the simplest possible form. Prices (p) are a mark-up on expected wages (w^e) so that, using small letters for logarithms:

$$p - w^e = b_0 \qquad (2)$$

Wages (w) are a mark-up on expected prices (p^e), and this mark-up is affected by "inflationary pressure", denoted by ø and defined below. Thus

$$w - p^e = y_0 + \phi \qquad (3)$$

Substituting expected prices from (2) we have

$$w - w^e = \beta_0 + y_0 + \phi$$

If price inflation is perceived as a random walk, then when $w=w^e$ inflation is stable; when $w>w^e$ inflation rises; and when $w<w^e$ inflation falls.

Thus the key determinant of the inflation path is ø. Evidence suggests strongly that inflationary pressure increases with the chances of finding work for an unemployed person of given employability i.e. (H/cU).[8] Thus

$$w - w^e = \beta_0 + y_0 + y_1 (H / cU)$$

If unemployment is constant, hires equal separations i.e. employment (N) times the separation rate (s). So

$$w - w^e = \beta_0 + y_0 + y_1 s / (cU / N)$$

Hence for a given inflation path, unemployment is inversely proportional to average employability (c).[9]

The basic concept of this paper is that cU is a constant. More generally, if U_i is the number of unemployed of type i, $\sum c_i U_i$=constant. Going on, we could for simplicity assume that there are only two types of unemployment, short-term and long-term, and that long-term unemployment causes people to be less employable ($c_L<c_S$).[10] It follows that

$$c_S U_S + c_L U_L = constant$$

From this position we can immediately understand the effect of measures to increase the employability of the long-term unemployed (i.e. to raise c_L). It will be clearest if we simply compare the equilibrium

positions before and after c_L is reduced.[11] After c_L has fallen, this is what we observe:

(i) The inflow into unemployment (sN) is unchanged (and so therefore is the outflow H).[12]

(ii) The exit rate from unemployment for a person with given employability is unchanged, since:

$$H_i / c_i U_i = H / cU$$

Therefore the exit rate from short-term unemployment is unchanged.

(iii) Since (i) the entry to short-term unemployment is unchanged and (ii) the exit rate is unchanged, the stock of short-term unemployment is unchanged. Therefore $c_S U_S$ is unchanged.

(iv) It follows that U_L is lower by the same proportion that c_L is higher. Since the outflow from long-term unemployment is given by

$$H_L / c_L U_L = H / cU$$

it follows that the long-term unemployed are filling exactly the same number of vacancies per period as before. They do not prevent a single extra short-term unemployed person from being hired. What happens is that there are fewer long-term employed but they are being hired at a faster rate. The position is illustrated in Figure 3.3.

Thus there is no substitution or displacement whatever in aggregate terms. Because long-term unemployed are more employable, their numbers fall. Total hirings of long-term unemployed have not increased.

In the transition from one equilibrium to another the hirings of long-term unemployed people do of course increase. But so of course do total hirings, which is the method by which employment increases and unemployment falls.

3.2.3 The proposed scheme

The preceding analysis does not of course reflect in detail our proposed scheme. In Figure 3.3 we assume that all who complete short-term unemployment (STU) enter long-term unemployment (LTU) but that people are helped to leave LTU at double the previous rate. We can now depict our own scheme more exactly in Figure 3.4. In between STU and LTU there is a 6 month period of temporary work. This leads to two extra flows. Some people who complete STU do not take temporary jobs (J). And some who take temporary jobs never reenter unemployment at the 18th month. Total unemployment falls by the fall in U_L.

3.2.4 People cause jobs

Finally we revert to the question of whether in given institutional conditions the labour force determines the number of jobs (taking the cycle as a whole). Economists take this for granted but rarely bother to document it. This is done in Figure 3.5. As the graph shows, there is nothing special about the US or Japan as creators of jobs, as is constantly alleged. They just happen to be good creators of people.[13]

To ram home the point, Figure 3.6 shows that the same applies to "jobs for men" and "jobs for women". These do not go their own merry way. They respond with remarkable precision to the ratios of men and women in the labour force. In almost every country the proportion of men aged 16-64 wanting to work has fallen and the proportion of women wanting to work has risen. This is the overwhelming source of the fall in the male/female ratio in employment, which has tended to occur within nearly all industries.

3.3. RELEVANT EXPERIENCE

What empirical evidence is there that could throw light on the feasibility of our proposal or its effects. We are aware of only two main types of evidence that really help.

First there is cross-sectional evidence of decadal unemployment rates across countries having different ways of treating unemployed people. In Layard et al. (1994) we estimated such a regression which showed that unemployment increases with the duration of unemployment benefit and falls with expenditure on active labour market policy (per unemployed person). Only with these variables is it possible to explain the extraordinarily low rate of unemployment in Sweden throughout the 1970s and 1980s (around 2% on average). Sweden operated and still operates essentially the system we have been advocating.

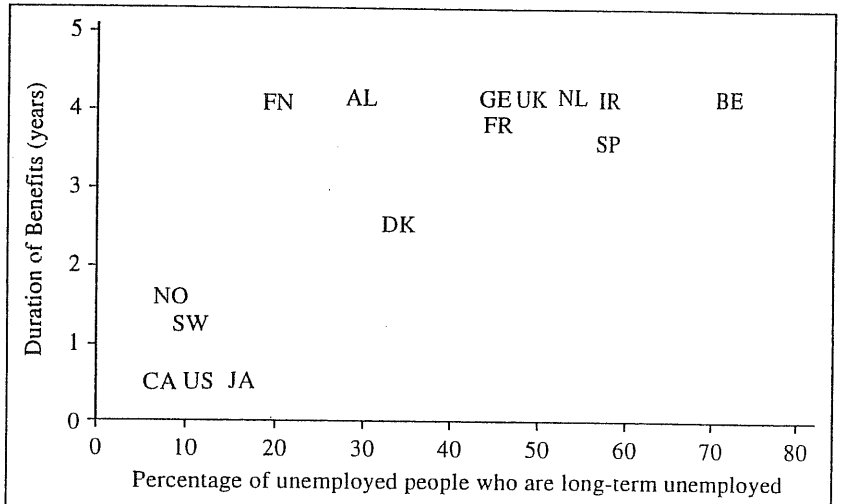
Second, there are the randomised experiments with "conditionality" for recipients of AFDC in the US (Gueron, 1990). These show that AFDC recipients who were exposed to work requirements subsequently became more likely to be in work, and had higher earnings and lower AFDC receipts - adding up to higher total incomes.

Our proposal is, we believe, immune to the criticisms of many training programmes offered to unemployed people. These often show a poor rate of return, especially when those retrained had little previous skill or where the quality of training was poor. For most people whose previous work experience was semi or unskilled the best way to become employable is to work. We believe that only a regime change which makes this the normal course of affairs can make major inroads on European unemployment.

Table 3.1 Short- and Long-Term Unemployment as Percentage of Labour Force (1980s Average)

	Long-Term	Short-Term	Total
Australia	1.9	5.5	7.4
Belgium	8.0	3.0	11.1
Canada	0.8	8.4	9.2
Denmark	2.4	5.6	8.0
Finland	0.7	4.1	4.8
France	3.9	5.0	9.0
Germany	3.0	3.6	6.7
Greece	2.9	3.6	6.6
Ireland	8.1	6.1	14.2
Italy	6.4	3.4	9.9
Japan	0.4	2.0	2.4
Netherlands	4.7	5.0	9.7
New Zealand	0.4	4.1	4.5
Norway	0.2	2.5	2.7
Portugal	2.5	4.7	7.3
Spain	10.1	7.4	17.5
Sweden	0.2	2.2	2.4
UK	4.2	5.2	9.5
US	0.6	6.5	7.1

Sources: OECD, *Employment Outlook* and OECD, *Labour Force Survey*



Source: R. Layard, S. Nickell and R. Jackman, *Unemployment: Macroeconomic Performance and the Labour Market*, Oxford, Oxford University Press, 1991.

Figure 3.1 Percentage of unemployed people out of work over 12 months by maximum duration of benefits (1984)

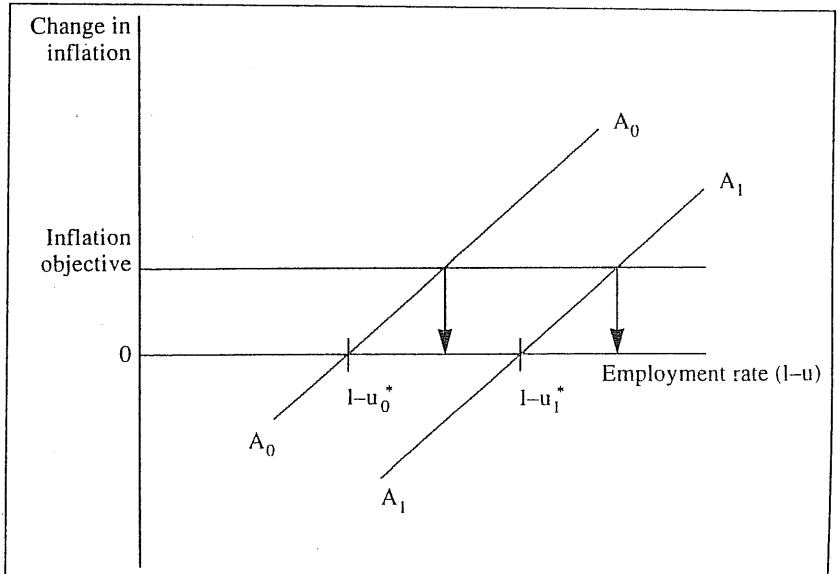


Figure 3.2 The inflation constraint

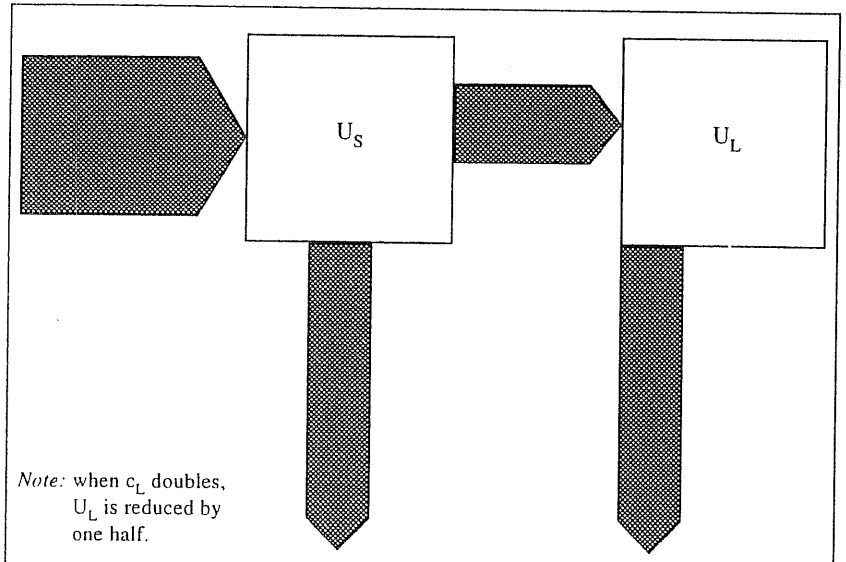


Figure 3.3 Stocks and Flows (Flows are shaded)

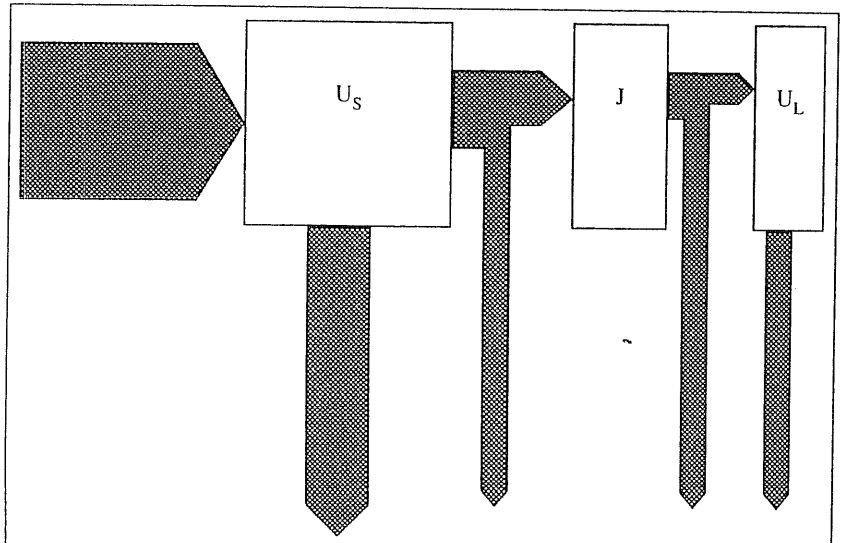
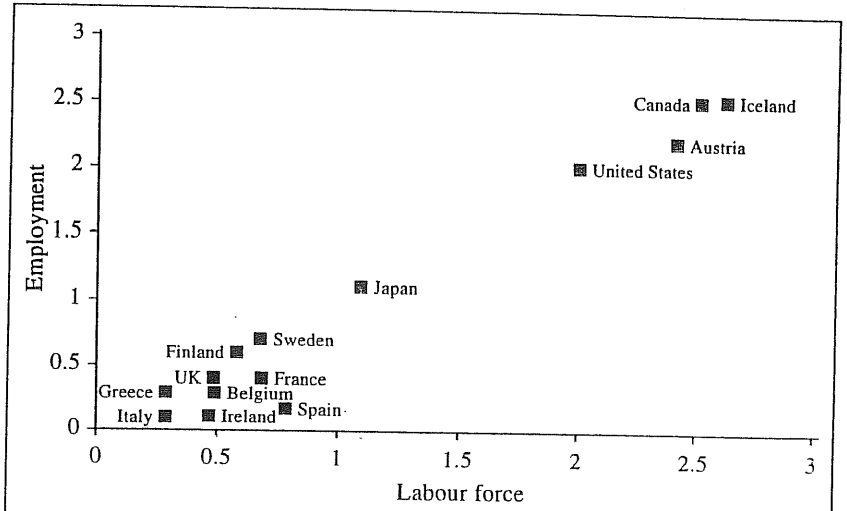
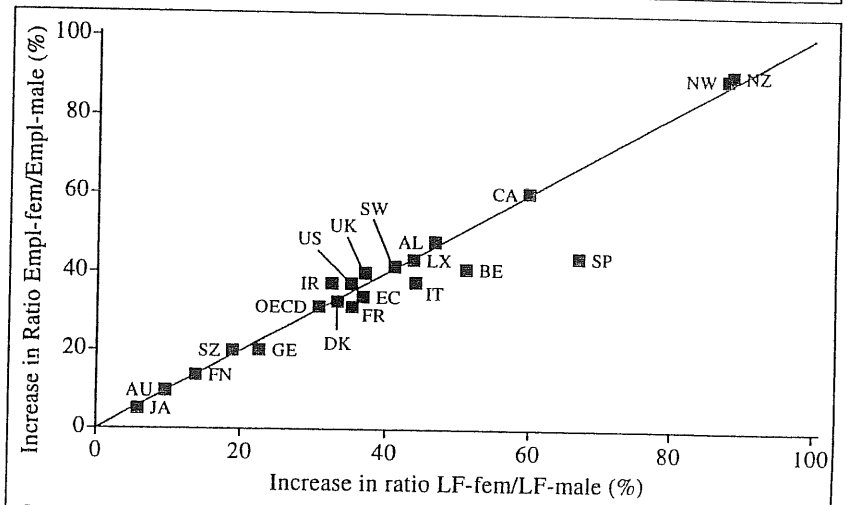


Figure 3.4 Our scheme



Source: OECD.

Figure 3.5 Percentage growth in labour force and in employment, 1960–89 (Annual average % change)



Source: R. Jackman, 'Unemployment and Wage Inequality in OECD Countries', Paper No. 3 prepared for the ILO/UNDP project 'Economic policy and unemployment', ILO, Geneva, June 1944.

Figure 3.6 Change in relative labour force, and change in relative employment: by sex, 1970–90

NOTES

* I am most grateful to Richard Jackman for his generous help and ideas.

1 All remarks in this paragraph are based on Layard et al. (1991), Chapter 4. They apply only to countries which encourage long-term unemployment. The situation is different in the US where there are no unemployment insurance benefits for the long-term unemployed.

2 Layard et al., 1994, p.82. The other causal variables in the equation relate to the replacement ratio, active labour market policy, collective bargaining and the change in inflation.

3 As in Sweden, anyone who failed to find regular work within that period would be entitled to go back onto benefits after 6 months; but re-entry onto benefits would be conditional on having worked at least 15 out of the last 52 weeks.

4 In Sweden 2/3 of those entitled to temporary jobs because their benefits have come to an end do not exercise their right to subsidised work.

5 We personally strongly favour more retraining of skilled workers with obsolete skills but in this paper we focus on a virtually costless proposal.

6 In passing, note that we have not suggested doing anything extra for the existing long-term unemployed. This is deliberate. Helping people who are already LTU is very difficult and can easily fail. Therefore prevent long-term unemployment, and let the existing LTU find their own solutions within the existing programmes, as eventually they will.

7 It is easy to allow for job competition from other employed people but this makes no difference of substance.

8 It may also increase with the duration of vacancies

$$(V / H)$$

But from equation (1) these two variables are positively related. Since (1) must exhibit constant returns to scale (in a large enough market),

and

$$(H / cU) = f(V / cU, 1)$$
$$1 = f(V / H, cU / H)$$

9 In a more fully dynamic context we need to allow for changes in U. Since $\Delta U = sN - H$, $H/cU = (s - (\Delta U)/N)/cU/N$.

10 There are also of course selectivity reasons why LTU have lower exit rates than STU. But Layard et al. (1991) provide powerful evidence that LTU also causes lower employability.

11 During the transition the possibility of substitution and displacement is even less since $H > sN$ while unemployment falls.

12 If s is constant there is a second-order rise in sN and H, due to the rise in N.

13 If the population of working age is used on the horizontal axis, the diagram still works well.

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the multidisciplinary approach of IESE to business education was reflected in the conference.

This gathering took place in Barcelona in the autumn of 1994 and brought together economists, philosophers, sociologists and business leaders from several countries to discuss policy proposals that could aid in the generation of employment, particularly in Europe. Some of the papers presented at the conference are collected in this volume.

This introductory chapter will discuss four common fallacies about the difficulties of generating employment in industrialised countries. It does not pretend to constitute a survey of all that is known about employment creation.[1] Rather, it looks at a few common misunderstandings about the factors that contribute to job creation, as a motivation for presenting the papers included in this volume.

Three of the myths to be examined are directly or indirectly discussed in detail in the chapters that follow. We will thus place the contributions of this book in a broader context. The fourth myth, which refers to the relationship between employment and trade, is not covered in this volume, and will therefore be the subject of a more complete discussion. This last section can be seen as a selective survey of a topic which is currently the subject of hot debate.

1.1. EMPLOYMENT AND TECHNOLOGICAL CHANGE

There has always been a misunderstanding of the impact of technological change on employment. This erroneous perception was already present during the industrial revolution and has been recurrent in periods of rapid technological progress. Our first myth can be stated as follows:

Myth 1. Given the current trends in technological change, there are not going to be enough jobs for the whole population. The citizens of industrial societies will have to accept "technological" unemployment and adapt to an increase in leisure time.

The fears of technological unemployment are widespread, particularly among European citizens, as they witness that each new economic expansion over the last 20 years has been unable to bring unemployment back down to the level attained in the previous cyclical peak.

It is certainly true that Western societies will have to adapt to a reduction in work time. However, this is nothing but the continuation of a long-established trend and a reflection of the augmented well-being of society. This betterment stems precisely from the total factor productivity increases which technological change has brought about. This growth in real income has in turn led to an increase in the value that citizens attach to leisure.

But despite these arguments, the main problem with this first fallacy is that it constitutes a well-known but still common misconception. It is based upon the idea that the total amount of jobs is fixed, determined by what is required in order to produce the goods and services demanded in the marketplace. If technological change allows the satisfaction of this demand with a diminished use of workers, the story goes, then these are jobs that are lost.

Of course, this argument is wrong. As Professor Layard points out in his contribution to this volume, aggregate demand is not the main constraint on job availability. If necessary, monetary and fiscal authorities can always transitorily generate more demand. Moreover, technological change - with the subsequent increase in total factor productivity - generates real returns, either in the form of lower final prices for goods or in increased wages and profits. These are increases in real income which in the end result in higher demand. Although technological change may be the direct cause of job losses in a particular sector, the increase in income heightens the demand for labour elsewhere in the economy.

Indeed, jobs cannot be created simply by artificially increasing the aggregate demand of the economy. The true constraint for employment creation is the inflation constraint. The inflation target determines the level of aggregate demand, but the number of jobs compatible with that inflation level is determined entirely by the supply side of the economy: what Professor Layard calls the "employability" of the labour force.

A worker's employability depends on her willingness to accept a job and on her adequacy to the job market's requirements. A more "employable" labour force will make a higher level of employment compatible with a given inflation target. The explanation is simple. When aggregate demand peaks up, the employable workers limit the reappearance of inflation since they are able to compete for the new jobs. Non-employable workers cannot bid for the new jobs, and the expansion of aggregate demand may lead to wage inflation. In his paper, Professor Layard exploits the notion of employability to design a plan to reduce long-term unemployment. This kind of unemployment is the natural target for measures that attempt to reduce the number of unemployed without increasing the rate of inflation, since long-term unemployed workers exert no downward pressure on labour markets.

The notion of employability is intimately linked to the implications of technological change for labour markets. Rapid technological change displaces workers with outdated abilities and creates demand for workers with a different expertise. Technological change does not create aggregate unemployment; it triggers profound changes in the structure of labour demand. The difficulties for employment arise due to the inability of the labour supply to adjust quickly to the new demands of the labour market so that enough employable workers are available. The decline in

This will lead to a slow employment reaction in recoveries and to an excessive persistence of high unemployment levels. Other persistence mechanisms are the result of the dual structure of the labour market, with insiders and outsiders exhibiting different behaviour in terms of wage negotiations and attitudes toward work.

Recent claims that demand policies should be used in the fight against unemployment (see for example Blanchard et al., 1994 and Alogouskoufis et al., 1995) can therefore be justified on several counts from a theoretical perspective. This, however, is still not a predominant view among practitioners, particularly in terms of the policy prescriptions of most international organisations. Their recommendations grant clear priority to fiscal consolidation and the fight against inflation. While recognising that it is dangerous to advise policy makers to engage in fine-tuning and that there can be no long-term trade-off between inflation and unemployment, the proponents of active demand management emphasise the high costs in terms of employment and output which may result from the combination of sharp drops in aggregate demand and the hysteresis effects pervasive in employment markets.

1.3. EMPLOYMENT AND THE STRUCTURE OF LABOUR MARKETS

A consensus appears to be taking shape among the major international organisations with regard to the need to liberalise labour markets in order to improve the employment situation in industrialised countries.[2]

This view has been greatly influenced by the relative employment performances of the US and the EU over the last 20 years. As Dr Viñals points out in his essay, both areas grew at an average annual rate of 2-2.2% over the period, but the US was able to increase employment yearly at a rate of 1.6%, whereas Europe managed only 0.5%. If the Spanish case is worth examining at all, it is because not only did Spain fail to create employment, it actually destroyed it, at a rate of -0.4% per year.

General political trends, as well as the development of new thinking in economics, have contributed to the increasing popularity of the deregulation of markets, and in particular of the labour market. Although it is true that prices set freely by private economic actors tend to clear markets (as does, in principle, the wage), I believe that the present state of opinion has led to the development of a third myth, which can be stated as follows:

Myth 3. The deregulation of labour markets, in terms of both wage-setting procedures and contractual conditions, will facilitate the creation of employment and thus contribute to an overall improvement in living standards.

The fundamental problem with the deregulation of labour markets is not that it might fail to generate employment. It would probably succeed. The key issue is whether such deregulation would lead to employment creation's ultimate goal: namely, the improvement of living standards for a broad majority of the population.

There are at least two reasons to doubt that a thorough deregulation of labour markets constitutes the right strategy if one seeks to create jobs that will lead to a widespread improvement in the standard of living.

The first argument is based upon the observation of employment trends and real earnings in the United States. Professor Richard Freeman sets it out clearly when he observes that fully employed American workers with low wages have living standards below those of similar workers in Europe, despite the fact that the US enjoys a higher overall standard of living. The strong US performance in employment creation has been accompanied by an increase in wage inequality among workers with different skills, and by an actual decline in real wages for the low-skilled. Concomitantly, US society has shown disquieting indicators of the growth of a permanent underclass, with sharp increases in poverty rates and in crime (this point is also put forward by Professor Drèze in his paper). As Professor Freeman writes, "Countries that maintained the earnings of the less skilled seemingly 'paid' in terms of high unemployment; while the US 'paid' for its growth of employment through falling real earnings."

The second reason to question full deregulation has to do with the imperfect nature of labour markets. Although it is probably true that most labour markets in Europe are overregulated, it does not follow that the appropriate policy is to dismantle all regulations. There are some sound reasons to regulate certain features of the labour market. Reforms should scrap unnecessary rigidities and restrictions but preserve those regulations that attempt to correct the imperfections of the market.

Professor Drèze argues that full labour market flexibility would subject workers to excessive income uncertainty. On the one hand, this could lead to inefficient levels of volatility in aggregate demand. On the other, more fundamentally, workers invest in human capital which cannot be diversified away as easily as other forms of wealth. This may justify a reduction of income volatility through some degree of rigidity in real wages.

There are other possible justifications for some degree of regulation in labour markets. Prominent among these are the existence of an asymmetrical distribution of information in that market and the problem of time inconsistency in the contractual relationship.[3]

Asymmetrical information can be significant to the extent that workers may have difficulties in assessing the characteristics of the jobs being offered (e.g., in terms of health and safety), whereas employers are likely to be much better informed.

The problem of time inconsistency refers to the acquisition of firm-specific knowledge by workers. Once this know-how has been acquired,

there is no incentive on the part of the firm to provide the workers with an appropriate reward and the worker, anticipating this, might be reluctant to invest in socially profitable firm-specific training.

A clear assessment of the cases in which some regulation of the market is justified in terms of efficiency is a helpful exercise, because it provides a benchmark for labour market reform. Although full deregulation should not be the objective, the previous account of the main reasons behind regulation makes it clear that some markets are in need of substantial changes to approximate an optimal level of state intervention. This is, of course, the case of the Spanish market.

The papers by Dr Viñals and Professor Sebastián included in this volume provide a complete analysis of the large number of distortions prevalent in the Spanish labour market. Discussion of these suggests that few of the regulations improve market efficiency. Quite the contrary: they have lain at the root of its extremely poor performance over the last two decades.

It is useful to classify the distortions of the Spanish labour market under two headings. First, we have restrictions on the nature of contracts in terms of their duration and the costs and flexibility of starting and finalising the contractual relationship (for example, temporary versus indefinite contracts, severance pay, part-time contracts). Second, there are restrictions on the nature of the working conditions that may be established in contracts (for example, mobility across production centres and professional categories, flexibility in pay structure, flexibility of working time).

In principle, these limitations constitute restrictions on a firm's choice of the optimal use of its labour. Of course, they exert an indirect effect on price. More specifically, they lead to real wage inflexibility. This is particularly true of restrictions on types of contracts. Such limitations have generated an insider/outsider structure in the Spanish labour market which, apart from considerations of fairness, leads to profoundly negative macroeconomic effects through the reinforcement of real wage inflexibility. Adjustments to changes in the economic cycle take place via quantities rather than wages.

These consequences in terms of the imperfect adjustment of the labour market are, of course, very important, since they imply a higher rate of unemployment compatible with non-accelerating inflation. Viñals argues that rigidities in markets other than labour worsen the situation,[4] so that the non-accelerating inflation rate of unemployment (NAIRU) in Spain is as high as 19.5%.

Other market distortions affect the process of wage formation. These include: 1) the presence of a significant tax wedge which adversely affects the relative price of labour, in particular low-skill labour; 2) the availability of unemployment benefits, which negatively affect the willingness to engage in a job search; 3) the minimum wage level; and 4) the rules that govern collective bargaining.

The fact that the Spanish labour market is full of government interventions does not mean that all of these should be eliminated. As we have argued before, labour markets are far from perfect markets, and some degree of regulation might indeed be desirable, if it adequately corrects the imperfections.

Although most of the interventions in the Spanish labour market might in theory respond to or correct some sort of market failure, the discussion by Viñals and Sebastián shows that the extent of intervention is leading to extremely counterproductive effects in terms of employment. Viñals and Sebastián consider that the most harmful features of the Spanish labour market are the differentiation between temporary and indefinite contracts, the extreme rigidity of contract conditions, the collective bargaining system, the high tax wedge and the favourable conditions of unemployment benefits.

Clearly this calls for a very ambitious agenda for action. Other recent contributions on this subject (see Blanchard et al., 1994) have narrowed down the list of urgent reforms, arguing that most of the employment-destruction features of the Spanish labour market can be attributed to a few of the distortions (the report by Blanchard and his colleagues focuses on the insider/outsider problem and on collective bargaining). Focusing on certain aspects of reform is undoubtedly necessary when one is attempting to achieve political and social acceptance. Nonetheless, selecting the components of the institutional system which need to be adjusted is no easy task. Some of the essays in this volume point out the need to look carefully at the "fit" of the new labour regulations with other labour market institutions and even with other aspects of a society's institutions and culture.

A related issue is the extent to which, in seeking to reform the Spanish (or European) labour market, one may draw upon the experiences of other labour systems which have been more successful at the creation of employment. In this regard, the contributions to this volume by Professors Freeman, Alvarez and Whitley sound a note of caution with respect to the transferability of labour market institutions across national boundaries.

Richard Freeman offers a starting point for the development of a conceptual framework. His contribution goes beyond the basic idea that by importing the US labour market and social institutions into Europe one could only be exchanging less unemployment for more inequality and poverty. According to Freeman, labour markets and the whole labour relations system are complex, dynamic systems with many independent yet interrelated actors. The effectiveness of alternative institutions is not independent of the whole set of existing labour relations.

Freeman provides an interesting example of the complexity of the interactions between labour market institutions. A few years ago, both Spain and Germany introduced contracts of limited duration, but with quite different results for their respective labour markets. Germany's well-

2. Employment in Europe

Jacques H. Drèze*

2.1. UNEMPLOYMENT, EUROPE'S NUMBER ONE PROBLEM

Unemployment is unmistakably Europe's number one problem. With more than 18 million unemployed (Eurostat definition) in the European Union today, the record rate of 11.6% of the labour force prevails. This also means that unemployment rates for the young, the less skilled or the less prosperous regions exceed 20%, and even more where there is a combination of these unfavourable features. The persistence of that situation raises doubts about the prospects for a return to full employment. Many refer to a structural break, not a temporary recession. Social exclusion and despair, but also confused prospects, breed excessive or even extreme reactions, which threaten our economic and democratic institutions.

And yet: between 1987 and 1990, nine million jobs were created in the European Union, on a net basis (net increase in employment); in terms of full-time equivalents, the increase still exceeds eight million. That result has been achieved through a revival of growth, reaching an average (over four years) 3.5% per year for the GNP of the EU 12, and 1.4% for employment. A slight increase of the population of working age, a somewhat faster increase of the labour force kept the rate of decline in employment to 0.7% per year, or 2.8% over the four years. Europe's unemployment thus fell only to 8% - but nine million jobs had been created, and youth unemployment was receding markedly.

Had growth continued at the same pace between 1990 and 1994, today's unemployment rate in Europe would be below 5.5%, less than half of what we observe. Our outlook on economic conditions, on the performance of our economies, and on the prospects for European integration, would be markedly different. It sounds like a dream - but it is not science fiction. It could have happened, and should be our goal for tomorrow.

I wish to stress at the outset my firm belief that progress in our societies calls for reducing unemployment, hence for creating jobs; that jobs come from growth; and that growth is possible, in economic as well as

ecological terms. The concern for employment is fully consistent with the concern for the environment. But balanced growth is always fragile; it requires consistent economic developments, social cohesiveness, and protection from external shocks. It requires today concerted action mobilising economic, social and political forces at the European level. The prospects for such concerted action are unfortunately slim.

Eliminating our excessive unemployment will require a full decade of sustained growth. We know by now that growth of output must be at least 2% for non-declining employment and 3% for declining unemployment. Thus, we must grow for ten years at a rate regarded by some as close to our potential. (I am personally more optimistic about our ability to invest and grow.) There is no miraculous short-term solution. The objective can only be reached after following a narrow path for ten years. We cannot neglect medium-term policies, with effects spreading over time. The problem will not be solved before these effects materialise. Medium term, unfortunately, is also the horizon over which economic analysis is least informative.

2.2. THE WEAKENED POSITION OF UNSKILLED LABOUR

One cannot discuss European unemployment today without stressing that it is largely concentrated among low-skilled workers.[1] We had sensed it for a while, we know it today: the market position of less-skilled workers has deteriorated, in the US and Europe alike, over the past ten years.[2]

The main reasons are:

(i) First and foremost, skill-biased technological change, largely linked to computers. The implications for employment gain momentum as the new technologies invade services, which account today for two jobs out of three.

(ii) Competiton from low-wage economies, whose quantitative impact is still modest, but growing inexorably. In Western Europe, the pressure from the East, where wage costs are lower by a factor of 1 to 6 or sometimes even 10, is mounting and bound to become quantitatively significant.

(iii) Decline of blue-collar employment in manufacturing, previously a source of well-paid but largely accessible jobs, now less abundant due to high productivity and international specialisation.

In the US, the deterioration shows up mostly in wages. Wage inequality has increased markedly during the eighties, the number of low-paid workers is growing, poverty is spreading. In 1990, over 30% of US workers earned less than two-thirds of the median wage - as opposed to

10% in Europe (5% in Belgium). Europe has not followed the American model which in this respect is entirely unappealing. Minimum wages and social protection prevent wages from falling to the low US levels, but a price has to be paid in the form of high unemployment rates. Still the root cause is the same, and the phenomenon will expand. Corrective action is much needed.

2.3. THE TWO PILLARS OF GROWTH

Balanced growth rests fundamentally on two complementary pillars: demand growth and realistic wage developments. When these two conditions prevail, the benefits of growth pervade the economy. In particular, public deficits can be controlled and objectives of budgetary restraint, as listed in the Maastricht treaty, become realistic.[3] On the contrary, insufficient demand and excessive wage pressure are the proximate causes of unemployment.

I will develop these two themes (demand and wages), which are the key to sustained and sustainable growth. I will relate them to the persistence of unemployment, then to medium-term macroeconomic policies.

2.3.1 Aggregate demand

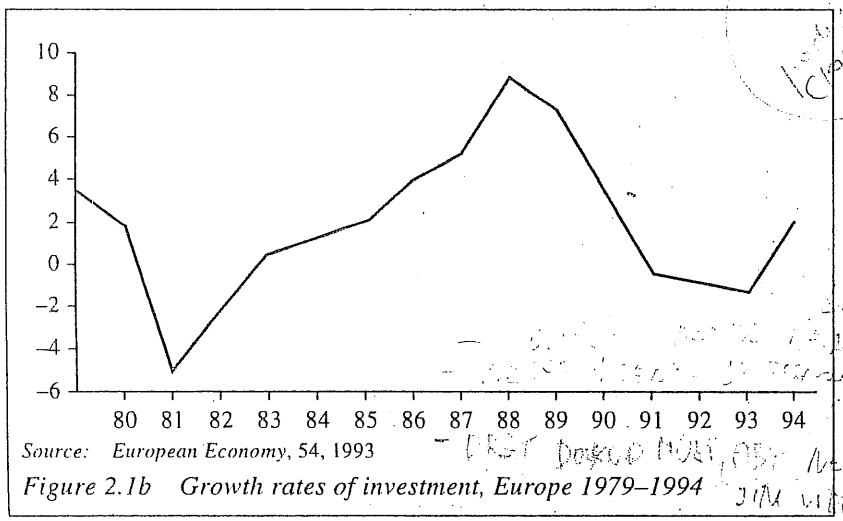
Volatility of aggregate demand is a recurrent weakness of decentralised market economies.The main body of evidence to that effect comes from econometric work.[4] More transparent illustrations are easy to give.

Often, acceleration or reversal of growth can be traced directly to demand movements. Illustrations include the 1984 boom in the US following the Reagan tax reform; the 1986 investment boom in Europe induced by the single market prospects; or the 1990 turning point both in Europe, and then in US where economists impute it to an unexplained slowdown in private consumption (most naturally understood as a change in expectations, perhaps due in part to the Gulf War).[5] The role of investment, notoriously volatile, was stressed forcefully by Keynes; it is illustrated in Figures 2.1.a and 2.1.b for Europe.

Other accidents originate elsewhere, but get transmitted to output and employment through the demand channel. Thus, the first oil shock, by nature a supply shock, did affect aggregate demand through the temporary sterilisation of oil revenues which were not immediately turned into real spending, and through the postponement of investments, pending clarification of the size and persistence of the oil price hike. The second oil shock similarly affected demand through investment and through the restrictive monetary policies aimed at forestalling a (partly unavoidable) surge of inflation. These demand contractions in turn depressed output and employment.

These observations are not new - even if the importance of aggregate demand is curiously neglected by "new classical" macroeconomists, or by "natural unemployment" theorists, of which there are many. Whereas "new Keynesian" macroeconomists are mostly concerned with alternative explanations of the frictions which slow down adjustment towards equilibrium, I pay special attention to the persistence of demand effects.

Figure 2.1a Growth rates of real GDP, Europe 1979–1994



Source: European Economy, 54, 1993

Figure 2.1b Growth rates of investment, Europe 1979–1994

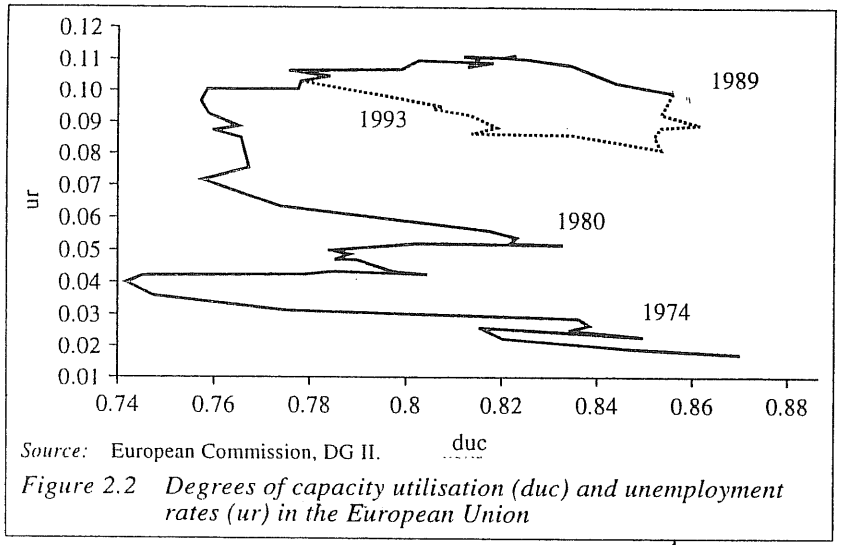
The persistence is due, in my opinion,[6] to two limitations inherent in the functioning of a decentralised market economy: first, the absence of simultaneity in the clearing of markets for a myriad of goods and services; and second, the absence of markets for forward or contingent transactions on these goods and services.[7] These two limitations entail coordination failures which cannot be overcome by existing markets or by initiatives of individual agents. There results a multiplicity of equilibria (with no self-correcting tendencies) and persistent inefficiencies.[8]

I will explain, starting with the absence of simultaneity. In decentralised market economics, most prices (not all, a majority) are set by firms, who then meet demand within the limits of their profitable capacities. Price-making is decentralised - in contrast to what happens on a stock exchange, where equilibrium prices for a range of assets are determined simultaneously.

At the prevailing prices, excess supply can prevail simultaneously on many markets - markets for goods, where excess capacities prevail, and markets for labour services, where unemployment prevails. This has indeed been the typical situation in Europe over the past 20 years, as revealed by Figure 2.2. Excess supply persists, because it corresponds to a non-cooperative, or Nash, equilibrium. Firms do not hire due to lack of demand; the unemployed do not buy, due to lack of income. And yet, there exist other equilibria, with more output and employment, at the same prices and wages. These equilibria could only be reached through coordinated increases in quantities - sales and hirings. But the basis of the required coordination is wide. It is wider than one firm, one region or even one country - all of which are too open for domestic demand to reconstruct the wage bill (for Say's Law to operate).

That superior equilibria exist, at the same wages and salaries, is true as a close approximation. I do not mean at exactly the same price for each specific good or the same wage for each specific labour qualification. I mean rather at the same overall level of prices and wages. There are enough firms operating under decreasing average costs and non-increasing marginal costs to offset the opposite cases.[9] This is also the main reason why unused capacities do not lead firms to lower prices, as hoped by Pigou and after him a generation of macroeconomists. (Why wages do not fall is taken up below.)

The absence of markets for forward or contingent transactions reinforces the persistence of equilibria with excess capacities and unemployment. An analogy is instructive. It comes from the theory of peak-load pricing, i.e. pricing of periodic demand. Electricity is the standard example. Efficiency calls for prices equal to marginal, i.e. variable, cost at times of excess capacity (low demand). All the costs due to capacity investment, or fixed costs, are covered thanks to the higher prices charged on peak demand (when capacity is fully used). The same logic applied to macroeconomic fluctuations calls for recouping investment costs through a high mark-up



Source: European Commission, DG II.

Figure 2.2 Degrees of capacity utilisation (duc) and unemployment rates (ur) in the European Union

in the case of full use of capacity, while covering variable costs alone in the case of excess capacity.

Because we are now considering mutually exclusive uncertain paths, the solvency of firms in recessions would require financial contracts transferring a share of the excess margins in states of full activity to the states of under-activity. Equity financing can do that - but it applies to a small share of investment flows.[10] Retained earnings and fixed debentures instead lead firms to maintain solvency by collectively charging prices in excess of variable costs even in recession, which limits downward price flexibility and accounts for the persistence of under-activity with excess capacities.[11] Of course, excess capacities are eventually removed by non-replacement, in contrast to excess labour supply, which explains the pattern of Figure 2.2: successive returns to high rates of capacity utilisation have been associated with successively higher rates of unemployment.

One might hope that business firms be relieved, at least partly, of their financial burdens during recessions. The social cost of additional output is then lower than at future times when excess capacities will have disappeared, so that real interest rates should be negative. But nominal interest rates cannot become negative. Hence, negative real rates call for anticipated inflation exceeding nominal rates. But monetary authorities react to inflation forecasts by raising nominal rates, and thus bar the road to financial relief.

I conclude that demand stabilisation policies are needed, in decentralised market economies. Such policies are met with justified scepticism, when they aim at fine tuning: our tools for measurement and

control are not fine! But I am not advocating fine tuning. I am advocating support of growth over a decade to reduce mass unemployment by 7 or 8%. Demand stabilisation policies, however, must be pursued at a European-wide level. Europe is sufficiently closed to make such policies effective, since foreign trade accounts for only 9% of EU 12 GDP (a percentage that will decrease further with the entry of new members). Demand stabilisation on a narrower basis is illusory, as was revealed for instance by the German "locomotive experiment" after 1978 or by the French isolated expansion after 1981.

2.3.2 Wage moderation

I turn now to wage developments. The level of real wages matters on three counts:

(i) The first count is capital-labour substitution - the engine of long-term growth, but a form of waste under unemployment. In gross terms, i.e. ignoring the labour content of capital equipment, this substitution reduces employment in Europe (but not in the US) at the rate of roughly 1% per year. It is likely - though not documented econometrically, to my knowledge - that this process boils down in large part to substitution of skilled labour for unskilled labour. (In small countries, it also amounts to substituting imported capital goods for domestic labour.)

(ii) The second count is international competitiveness. High wages curtail exports and encourage imports. That aspect is very important for small open economies like Belgium, much less so for relatively closed areas like Europe.

(iii) The third count is profitability, without which investment stalls and reorganisations with negative employment consequences are carried out.

These three effects would seem to overpower the positive contribution of wages to consumer demand stabilisation.

Next to the level of real wages, their evolution matters: any sign of wage inflation triggers - rightly or wrongly, meaning sometimes rightly and sometimes wrongly - restrictive monetary policies; these discourage investment, curtail profitability and induce pessimistic expectations, with further negative effects on consumption and investment.

The contrast between wage and employment developments in Europe and in the US is striking, as illustrated by Table 2.1 or Figures 2.3.a-2.3.b.

Table 2.1 Comparisons Europe 12 – United States

Growth rates 1960–1990	%	
	Europe	United States
Real GDP	3.3	3
Employment	0.3	2
Real wages	3.0	1

Source: *European Economy*, 54.

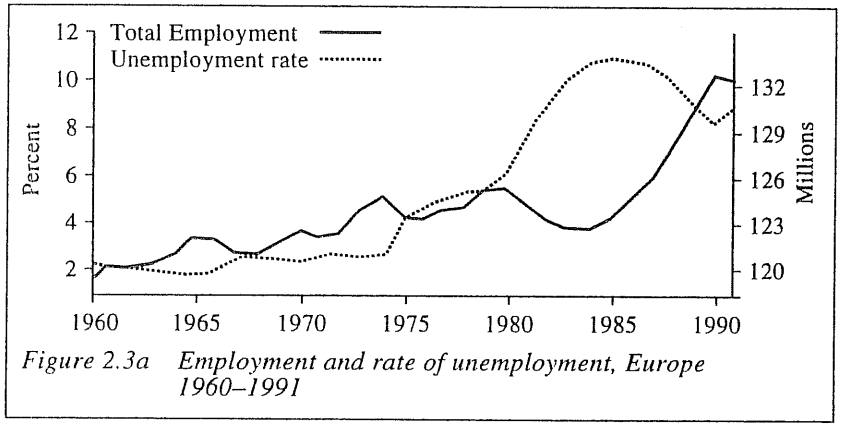
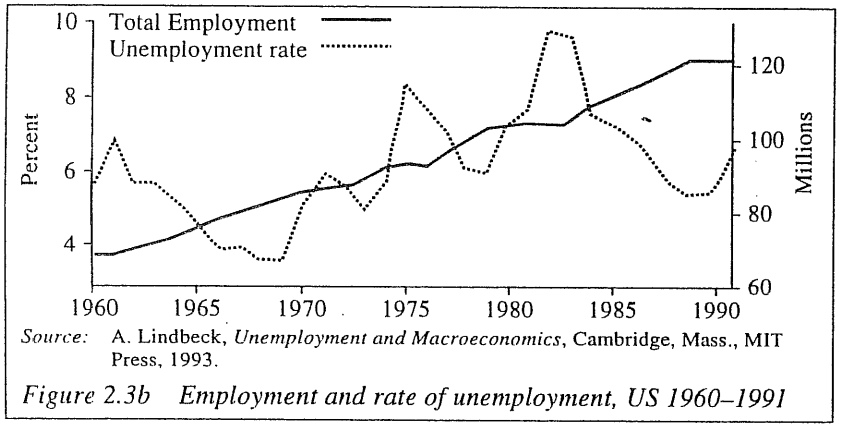


Figure 2.3a Employment and rate of unemployment, Europe 1960–1991



Source: A. Lindbeck, *Unemployment and Macroeconomics*, Cambridge, Mass., MIT Press, 1993.

Figure 2.3b Employment and rate of unemployment, US 1960–1991

Wage formation in Europe has witnessed some errors - like the rise of real wages in 1974-76 (over 10% for EU 12, 14% for France, 16% for Belgium), at a time of collective impoverishment through terms of trade deterioration. There is also a statistical error. Wages in Europe (but not in the US) incorporate rapidly and almost fully gains in gross average productivity (value added per worker), without regard for the fact that these productivity gains: (i) reflect in part capital-labour substitution induced by the wage increases - which creates a spiral: wages-productivity-wages-prices-wages;[12] (ii) reflect in some cases scrapping of older idle equipment and not technological or managerial advances.

How do we explain the resistance of real wages in the face of persistent unemployment? We need to look separately at different labour markets. At the low end of the skills ladder, where unemployment is most severe, the wage floor comes from unemployment benefits and minimum wages (either legal or negotiated). This floor has no counterpart in the US, where benefit payments last at most six months while minimum wages are either non-existent (in some states) or ineffective. In Europe, the wage floor seems to reflect a broad social consensus, a collective desire to guarantee to every worker a minimal income, still not generous for families with no other source of income.[13] In most European countries, the wage floor has prevented the rise of poverty witnessed in the US. We must maintain that kind of income protection for low-skilled workers, while continually trying to find more efficient schemes.

At the upper end of the skill ladder, on the other hand, wages and salaries are geared to equilibrium of supply and demand. True, markets remain imperfect; salary differentials between firms exceed plausible compensating differentials; but there is no evidence of either upward or downward bias, except for narrowly defined jobs where wages come closer to a contest outcome than to a competitive outcome.

Between these two extremes, there is a broad range of intermediate qualifications, where long-term unemployment is rare, but work below qualification is frequent, especially among young workers. In that range, where wages are to some extent lifted from above and propped from below, negotiations between employers and trade unions play the major role.

The recurrent plea for flexibility is presumably addressed primarily to that middle range. It should however be stressed that full wage flexibility is inefficient, when aggregate demand is volatile and long-run labour contracts are limited in scope. If the wages did adjust continuously to clear all labour markets, the resulting income volatility and uncertainty would be a hardship to workers, who cannot diversify risks on their human capital to the extent made possible for non-human wealth by investment funds and related assets. That income uncertainty must be curtailed, all the more so as it would exacerbate demand volatility. Constraining real net wages, both upward and downward, is more efficient.[14] It also follows that

some resistance of real wages in the face of persistent unemployment is justified on efficiency grounds.

From a positive viewpoint, the dominant opinion among macroeconomists is that wage inflation is negatively related to unemployment: the Phillips curve.[15] Under that relationship, a fall in unemployment automatically triggers some wage inflation, unless the process of wage formation is tampered with. That viewpoint, which underpins the plea for structural flexibility, seems hardly convincing at unemployment rates approaching 12%. Yet I have heard serious macroeconomists advertise - *horresco referens!* - an equilibrium rate of unemployment of some 10% in Europe today. A more reasonable, and widely accepted, viewpoint suggests leaving out of these calculations the long-term unemployed and low-skilled workers. This provides yet another reason to concentrate on creating low-skill jobs.

To conclude: persistent unemployment is accompanied by a major distortion of the price system. The wage costs of firms do not reflect correctly the scarcity of low-skilled labour. The wedge between private and social costs includes all labour taxes[16] (social insurance contributions and income taxes), plus some unemployment benefits. Two-thirds of the labour costs saved by a firm that does not replace a retiring worker are borne by public budgets. Our economies operate with a fundamental price, the low-skilled wage, which is grossly biased relative to the underlying reality. That blatant distortion must be corrected, knowing that a return to full employment is ten years distant, at best.

2.4. POLICIES FOR GROWTH

How can we bring about a decade of employment-generating growth? By bringing about sustained growth of aggregate demand and reasonable wage developments. Is that possible? Does that correspond to the current orientation of macroeconomic policies in Europe? Let us take a look.

2.4.1 The recommendations

In the current publications of international institutions, for instance the OECD jobs study or the annual report of the European Commission, three lines of action are stressed:

(i) Budgetary restraint and inflation control, as per the guidelines of the Maastricht treaty, should pave the way for lower interest rates, and for realisation of the European Monetary Union. Lower interest rates will then stimulate investment demand.

(ii) Labour market flexibility should spur employment. A long list of proposals covers flexible wages and hours, part-time work, elimination or flexibility of minimum wages, lower social insurance contributions, especially on low wages, firm-level rather than higher level wage bargaining and so on.

(iii) Education, training and active labour market policies should increase the employment prospects of low-skilled or long-term unemployed workers.

These recommendations are generally well-founded (with some exceptions, like elimination of minimum wages). But they fall short of target. I am of course in favour of lower interest rates, but I do not think that monetary policy alone can stimulate and stabilise aggregate demand (due in particular to the non-negativity constraint on nominal rates). Flexibility stimulates hirings in a growing economy, but it stimulates firings during recessions, as was confirmed recently. The link between labour market flexibility and wage moderation remains indirect and perhaps tenuous. Flexibility is not the universal remedy which is sometimes advertised. Training and active labour market policies bring their beneficiaries closer to the head of the queue of job-seekers, but they do not reduce the overall length of the queue - not until full employment is in sight, as might hopefully be the case in 7 or 8 years.

The White Paper on *Growth, Competitiveness and Employment* of the European Commission is more ambitious. It does not diverge from the above recommendations. But it introduces some specific targets - like a lowering of social insurance contributions on low wages amounting to 1 or 2% of GDP by year 2000, with substitute funding coming from a European-level tax on energy (CO_2) or a uniform withholding tax on interest income. The White Paper also contains some investment proposals, extending the Edinburgh growth initiative. These concern in the first place transeuropean networks for transportation, energy and information. They concern new investments related to environmental protection, to reconcile growth and ecology. They also concern - in less specific terms, unfortunately - investment in urban renewal, low-cost housing, urban transportation, and so on. These programmes are not motivated by a demand stimulation goal, but rather as contributions to the growth potential or to social welfare.[17]

Needless to say, my quotations from these documents are a biased selection. I read them in the wake of the attempt by a group of a dozen economists, convened by Edmond Malinvaud and myself,[18] to define the scope of a European growth and employment initiative. That attempt has led to a consistent set of policy proposals,[19] ranging through lower interest rates, budget restructuring and wage moderation, with special emphasis on two essential medium-term policies: lower wage costs for unskilled labour, through elimination of employers, social insurance contributions on minimum wages (with substitute funding from a tax on

energy or interest income, or from VAT); and demand stimulation through investment programmes in urban renewal, low cost housing, urban transportation and transeuropean networks, with employment subsidies (relief from labour taxes) on the labour content of the investments. We are back to the two pillars of sustained growth: wages and aggregate demand.

2.4.2 Investment

Regarding investment, I do naturally deplore the lack of concern for demand stabilisation in the OECD study and in the White Paper. The current state of macroeconomic thinking is reflected there. And I regret the vagueness and lack of instruments in the presentation of the White Paper - except perhaps for transeuropean networks and environmental protection. In these two areas, the list of projects is impressive. It adds up to 574 billion ECUs over the period 1994-99,[20] or some 1.5% of GDP over the six years. This would undoubtedly make a significant contribution to aggregate demand. The order of magnitude is similar to that advanced by our group before seeing the figures in the White Paper. Our proposal puts more emphasis on projects using extensively low-skilled labour, while meeting unfilled needs - namely urban renewal and low-cost housing.

I realise that our proposal to subsidise the labour content of investments calls for preparations, hence delay. But it provides the needed correction to the two price distortions noted above, namely wages and real interest rates. This is in the spirit of second-best theory. It may be hoped - subject to verification - that employment subsidies with neutral budgetary implications would suffice to bring forward in time, and make financially viable, investments with adequate social returns.

The growth rates for the coming years are highly uncertain. We need a portfolio of investments from which to draw in order to stabilise aggregate demand, if it falls short of what is needed to reduce unemployment. Preparing the portfolio is an urgent task, to be undertaken at once. That is the agenda on the demand side.

2.4.3 Wages

Regarding wage costs, we were gratified by the attention paid by the Community services to our proposal. The Directorate for Economic and Financial Affairs (DG II) speedily produced econometric simulations of the impact of cutting labour taxes on low wages with substitute funding from the energy tax already under consideration by the Commission.[21] The simulations suggest gains in employment, after 4 or 5 years, exceeding 2% of the labour force - but also 6% of the low-skilled labour force, which is the order of magnitude of supplementary unemployment for that group. The result is achieved with a slight budgetary improvement. The merits of that proposal are thus substantial.[22] I am pleased to find the proposal reflected - though less ambitiously - in the White Paper and also to some extent in the OECD study. A first step toward implementation has been taken in Belgium. Elsewhere, the virtues of targeting on low wages are not yet fully appreciated.

Over the past year, I have looked more carefully at the deterioration of the market position of low-skilled workers.[23] I have come to fear that labour tax exemptions - a once for all measure - may prove insufficient to reconcile decent incomes for all with full employment. Minimum wages and unemployment benefits will remain a major policy instrument in Europe. Perhaps we shall need some day to proceed further, through an "earned income tax credit" or subsidies for low-skilled employment. It is urgent that we look more deeply into the logic and consistency of suitable policies.

More generally, it should be realised that policy proposals, including our own, are more explicit about the objective of wage moderation than about ways of attaining it. We propose the objective of negotiating constant real wages[24] - expecting a wage drift of some 1% per year, well within the margin of productivity growth. Is that objective realistic? Most - not all - members of our group think that the objective would be fostered by a more equitable tax treatment of property versus labour incomes. This would also restore the effective labour share. But the contribution to wage moderation is highly indirect. The question raised here is difficult. To what extent could unemployment abatement favour wage moderation - contrary to the theory of equilibrium unemployment (Phillips curve) mentioned above? The main difficulty is to link wage moderation to job creation in terms credible to labour unions, which are little inclined to sign blank cheques. The notion of a "pact", reflecting a broad social consensus to favour employment over wages, remains abstract. Wage moderation is a challenge that we might be unable to meet.[25]

2.5. EUROPE AND EMPLOYMENT

At the end of this broad presentation, centred on macroeconomics, I wish to come back to my opening statement: "Unemployment is unmistakably Europe's number one problem". I have attempted to sketch some paths along which the problem could be met. Will Europe follow these paths?

The question is broader than just economics. It concerns the political consensus needed to tackle macroeconomic stabilisation at the European level, and the social consensus needed to favour employment over wages. The twin consensus should emerge simultaneously in the European Union and in member states.

I see two stumbling blocks at the European level. First, Europe's

responsibilities towards a growth and employment initiative remain ambiguous. Second, that middle-term objective must be fitted into the long-term integration programme, of which the next step on the agenda is Monetary Union.

That Europe is not prepared to accept operational responsibilities toward growth and employment is clearly illustrated by the White Paper, which culminates in a "Call for Action", where we read:

"As for Community action proper, it is proposed to impart a new impetus or give a new form, but only in accordance with five priorities:

- Making the most of the single market;
- Supporting the development and adaptation of small and medium-sized enterprises;
- Pursuing the social dialogue that has, to date, made for fruitful cooperation and joint decision-making by the two sides of industry, thereby assisting the work of the Community;
- Creating the major European infrastructure networks;
- Preparing forthwith and laying the foundations for the information society."

There is no consensus on the energy tax or the uniform withholding of interest income - which still require a unanimity decision and are blocked by those opposing any new tax instrument. The very idea of "cooperative expansion", which prevailed in the mid-eighties, has fallen into oblivion. The problems of "growth, competitiveness and employment" are perceived, but the agenda is different. The current priority goes to Monetary Union, at the price of deflationary fiscal guidelines and of measures inspired by extreme inflation-aversion.[26]

Clearly, Monetary Union promises major benefits: it is the only definitive way to forestall competitive devaluations which export but do not reduce unemployment, to free national policies from the consequences of exchange rate overshooting, or to stabilise relative prices across regions of Europe.

Under present circumstances, however, these benefits should be weighed against job creation, the number one priority, relative to which Monetary Union comes second. Unfortunately, such arbitrage is not a realistic prospect, under the political constraints surrounding the construction of Europe. It would appear counterproductive to attempt improving the terms of a treaty which in itself was a laborious accomplishment, requiring unanimity from 12 partners with asymmetrical objectives (regarding unemployment and inflation, for instance), asymmetrical views about economic mechanisms, and asymmetrical strategies regarding European integration - not to mention asymmetrical real circumstances.

It would be tempting - but unproductive - to conclude that economic and

monetary integration comes after, not before political integration. Political integration is required to overcome the unanimity rule, to permit expression of socio-political forces at the European level, and to place at that single level the call for political consensus and for social consensus. But there is little scope for reversing a historical trend - one can only hope that relations with Eastern Europe may speed up the process of political integration. In the meantime, it seems more fruitful to call on research and imagination toward reconciling the middle-term growth priority with the agenda of Monetary Union. We now have an explicit proposal of two-speed Monetary Union, with France and Germany in the hard core. It will be the responsibility of France to indicate whether or not it wishes to go that way.[27] The stakes are high. Does a fully credible alternative exist? In order to clarify their reaction to a potential two-speed development, other major countries, like Italy and Spain, should study carefully the risks linked to an audacious reaction; namely, tie their own currency formally, under the "currency board" regime,[28] to the ECU (or possibly to the new European currency) which would acquire the status of domestic legal tender. This would de facto speed up the Monetary Union, at no risk for the hard core countries. The risks, born by the "currency board" countries, would concern ability to control inflation and to raise the overall efficiency of the public sector - two real problems worth attacking in any case. Research on this avenue is needed, urgently so, because it is important to eliminate as soon as possible the institutional uncertainties about monetary Europe.

This last suggestion is highly speculative. I take the liberty of concluding in such terms, because recent experience has confirmed my belief that the tempo and orientation of economic research do matter. Over the past few months, the idea of partially correcting the distorted price of unskilled labour has progressed substantially. Seven years ago,[29] that idea was not considered seriously. In the meantime, it has been further specified and documented. I like to think that the more positive response today is linked to the strength of the arguments. At the same time, the idea of macroeconomic demand stabilisation has regressed into near oblivion. It is kept alive by a minority, though a qualitatively outstanding minority, in the US as well as in Europe. That idea also needs to be specified and documented anew, so as to persuade. Patience as well as research energy are needed. The time has come to broaden our frame of thoughts on Monetary Union. A research effort is called for in that direction as well.

Appendix 1

Unemployment Rates by Level of Educational Attainment

Country	Pre-Primary and Primary	Lower Secondary	Upper Secondary	Higher Education Non-University	Higher Education University	Total
United States	8.5	9.1	4.6	3.3	2.2	4.4
Japan	–	7.0	6.5	7.7	2.3	4.4
Germany	–	13.8	6.8	3.7	4.5	7.3
France	11.8	10.5	6.6	3.4	3.0	8.1
Italy	5.9	6.8	7.7	–	4.8	6.6
United Kingdom	–	10.0	5.6	2.7	2.4	6.4
Canada	10.3	9.8	6.8	5.0	3.6	6.7
Australia	8.1	7.0	4.2	4.6	3.7	5.4
Austria	–	3.6	2.4	–	1.1	2.7
Belgium	14.0	9.2	4.7	2.7	2.0	7.5
Denmark	–	12.1	7.1	4.0	3.4	8.3
Finland	–	4.1	3.1	1.6	1.7	3.0
Ireland	25.8	15.1	6.6	3.9	2.6	13.9
Netherlands	13.6	7.6	4.8	4.6	5.0	6.5
New Zealand	9.3	4.7	4.9	5.1	2.9	6.0
Portugal	6.0	5.8	6.4	6.0	6.1	6.0
Spain	12.7	15.6	13.1	–	10.7	12.9
Sweden	–	1.4	0.9	0.9	1.0	1.0
Switzerland	–	1.4	0.6	0.3	0.8	0.8
Simple average	10.9	8.4	5.7	3.9	3.4	6.3

* Adult population aged 25–64 in 1989, except Japan (1987), Denmark (1988), New Zealand (1990) and the Netherlands (1990).

Source: CERC (1991), 'Les bas salaires dans les pays de la CEE', *La Documentation Française*, 101, 3–86.

Appendix 2

Minimum Wages in Western Europe

Country	Year	System	Level (ECU's per month)	Ratio to median wage (%)	Exceptions
Belgium	1988	economy-wide at age 21	783	66	–7.5% per year of age below 21
Germany		negotiated at sectoral regional level			
Spain	1991	economy-wide at age 18	399	54	–39% at age 17 –61% below age 17
France	1987	economy-wide at age 18	556	61	not applicable below age 18
Greece	1988	economy-wide private sector public sector	 332 418	 67	depends upon marital status and seniority
Ireland		no minimum wage			
Italy		negotiated at sectoral level			
Netherlands	1988	economy-wide at age 23	898	72	–10% per year of age below 23
Portugal	1985	economy-wide at age 18	148	73	–25% below age 18 –17% for domestic services
UK		no minimum wage			

Source: CERC (1991), op. cit.

Appendix 3

Social Insurance Contributions (SIC) and Income Tax at Average Earnings (blue collar workers), 1991

	SIC Rates		Average Income Tax Rate	Wedge as % of Private Cost
	Employer	Employee		
Belgium	41.9	12.1	11.6	46.2
Denmark	0.0	2.5	36.0	38.5
France	43.8	17.1	1.0	43.1
Germany	18.2	18.2	8.7	38.1
Ireland	12.2	7.8	16.4	32.4
Italy	50.1	9.0	14.2	48.9
Netherlands	10.8	10.7	32.5	48.8
Portugal	24.5	11.0	0.9	29.2
UK	10.4	7.6	15.5	30.3
Unweighted mean	23.5	10.7	15.2	39.5
US	7.7	7.7	11.3	24.8
Japan	7.6	7.0	2.4	15.8

Source: OECD, *Economic Perspectives*, January 1993.

Appendix 4

Sources of new jobs

The scope of job creation depends largely on the existing structures and services in each country, lifestyles, and tax rules.

However, several estimates agree that some 3 million new jobs could be created in the Community, covering local services, improvements in the quality of life and environmental protection.

Examples

Local services

- Home help for the elderly and handicapped, health care, meal preparation and housework
- Minding pre-school-age children and schoolchildren before and after school, including taking them to and from school
- Assistance to young people facing difficulties, comprising help with schoolwork, provision of leisure facilities, especially sports, and support for the most disadvantaged
- Security in blocks of flats
- Local shops kept in business in rural areas, and also in outlying suburban areas

Audiovisual

Provision of leisure and cultural facilities

Improvements in the quality of life

- Renovation of rundown areas and old housing with a view to increasing comfort (installation of bathrooms and noise insulation) and safety
- Development of local public transport service, which should be made more comfortable, more frequent, accesible (to the handicapped) and safe, and the provision of new services such as shared taxis in rural areas

Environmental protection

- Maintenance of natural areas and public areas (local waste recycling)
- Water purification and the cleaning-up of polluted areas
- Monitoring of quality standards
- Energy-saving equipment, particularly in housing

Source: Commission of the European Communities, *Growth, Competitiveness, Employment;* White Paper, p. 17, 1993.

Appendix 5

Budgetary and Institutional Implications of Proposed Measures

Section	Measure	Budgetary implications	Level of responsibility
3	Lower short-term interest rates	Lower cost of servicing public debt, with country specific quantitative impact	Central banks
4.3	ESIC exemption on minimum wages	Uniform exemption would cost about 3% of GDP, degressive exemption about 1.2% with substantial country differences	National governments, typically in concertation with labour unions and employers' organisations
4.4	CO_2 tax	As currently considered, would bring 1% of GDP or more	Under consideration at EC level
5.5	Targeted investment programmes	Might deserve wage subsidies up to 1% of GDP	Programmes to be defined by national governments (housing, urban renewal or transportation) or possibly by EC instances; wages subsidies to be decided by national governments; funding involves specialised intermediaries
7	Welfare programmes	In some but not all countries aim should be to reduce expenditures by 1 or 2% of GDP	National governments, typically in concertation with labour unions and employers' organisation
8	Withholding tax on interest income	Could bring in 1% of GDP or more	EC decision subject to unanimity rule
8	Wage moderation	Neutral for public budgets except through inflation and interest rates	Wage bargaining institutions, country specific

Source: J. H. Drèze and E. Malinvaud, 'Growth and Employment: The Scope of a European Initiative', *European Economic Review*, 1994, 38, 489–504.

Appendix 6

Investing in the Competitiveness of Europe*

The Commission's analysis of the trans-European networks and large environmental projects and their financing requirements can be summarized as follows:

1. Transport and energy - ECU 250 billion by the year 2000 (ECU 95 billion priority projects)

These networks of transport infrastructures will enable our citizens to travel more quickly, more safely, and more cheaply, thus improving competitiveness. They will also form links to Eastern Europe and to North Africa. In total some ECU 400 billion of investments in the transport and energy trans-European networks will be required in the next 15 years, of which some ECU 250 billion by 1999.

Article 129b of the Treaty makes clear how to proceed. The Community[1] establishes a set of guidelines that identify projects of common interest. It then supports the financial efforts of the Member States (feasibility studies, loan guarantees, interest rate subsidies). It can also contribute to the coordination of the Member States' policies and cooperate with third countries.

The principal guidelines of the networks (master plans) have been proposed by the Commission or adopted by the Council and the Parliament. The Commission has identified a series of priority projects for the next five years - 26 transport projects (ECU 82 billion) and energy projects (ECU 13 billion).

2. Telecommunications - ECU 150 billiion by the year 2000 (ECU 67 billion priority projects)

A system of information highways for the Community will provide the best means to create, manage, access and transfer information. It involves:

- the creation of infrastructures (cable and land or satellite based radio communication), including integrated digital networks,
- the development of services (electronic images, data bases, electronic mail),
- promoting applications (teleworking, teletraining, linked administrations).

The amount of investments that could be put into effect by the end of the century has been estimated at ECU 150 billion. A series of priority projects to the value of ECU 67 billion has been identified by the Commission for the period 1994-99.

3. Environment - ECU 174 billion on large environmental projects by the year 2000.

The environment is an integral part of the trans-European networks, for example concerning combined transport networks designed to get traffic off the roads onto rail.

The Commission also has environmental programmes of sufficient size to merit eligibility for financial support from the Community. By way of an indication, these projects concern water control, urban waste water treatment, renovation of water supply distribution systems, and Mediterranean and Baltic Sea clean-ups at an estimated cost of ECU 314 billion in total over 12 years or ECU 174 billion by the end of the century. The Community could help finance some ECU 25 billion in this area of environmental concern over the period 1994-99.

4. Financing the trans-European networks and large environmental projects

The major portion of finance for these investments will be raised at the level of Member State, either through private investors (especially in the telecoms sector) or via public enterprises. The Community can, however, play a role, as foreseen in the Treaty, by supporting the financial efforts of the Member States and mobilizing private capital.[2] This requires a panoply of financial instruments, as set out in the Table below, some of which exist already and two of which are new ("Union Bonds", "Convertibles"). The new instruments are needed for projects specifically included in the Master Plans and complement the lending of the European Investment Bank, which is more general. The budgetary elements remain within the Edinburgh ceilings. National budgets would not be required to support additional financing. In the case of the new instruments, the capital and interest would be repaid by the promoters of the projects, with the Community budget available to back the repayment of the Union Bonds and the capital of the European Investment Fund available in the case of the Convertibles. There would be no risk of destabilizing the capital markets given that the amounts concerned represent less than 1% of the Eurobond and bank credit markets.

Community financing of the trans-European networks

(average financing per year 1994-99)

Source:		Amount in ecus
Community budget: of which		**5.3 billion**
Trans-European networks (TENs):		0.50 billion
Structural Funds	(TENs):	1.35 billion
	(environment):	0.60 billion
Cohesion Fund	(TENs):	1.15 billion
	(environment):	1.15 billion
Research and development	(telecoms):	0.50 billion
	(transport):	0.05 billion
European Investment Bank (loans):		**6.7 billion**
Union Bonds[3] (esp. transport and energy):		**7.0 billion**
Convertibles[4] **guaranteed by EIF** (esp. telecoms):		**1.0 billion**
Total		**20.0 billion**

New facilities

"Union Bonds"

"Union Bonds" for growth would be issued on tap by the Union for long maturities to promote major infrastructure projects of strategic interest covering the trans-European networks plus cross-border projects with EFTA, Central and Eastern Europe and North Africa. The beneficiaries would be project promoters (public sector agencies, private companies) directly involved in TENs. The EIB would be invited to appraise and advise the Commission on the overall structure of the financial arrangements and act as agent for individual loan contracts.

"Convertibles" guaranteed by European Investment Fund

Bonds issued for long maturities by the private or public company promoting the project, guaranteed by the European Investment Fund. These would be either:
- convertible wholly or partly into shares or investment certificates; or
- be accompanied by subscription warrants giving the holder the right to buy shares at a certain price; or
- performance-related through a share in the profits of the company or venture concerned.

The maturities of the bonds and of the exchange terms would be coherent between the expected returns of the project and the exercise period of the option. The EIF would create a special window for this type of guarantee, especially for major projects linked to telecommunications networks.

* **Source:** Commission of the European Communities, *Growth, Competitiveness, Employment*, White Paper, p. 17, 1993.

1 The Council decides by qualified majority in co-decision with the European Parliament (Article 189b); guidelines and projects of common interest which relate to the territory of a Member State require the approval of the Member State concerned.

2 In addition the EIF can guarantee up to a total of ECU 6 billion of private loans for large infrastructure projects, averaging 1 billion per year to 1999.

3 See below.

4 See below.

NOTES

* I am grateful to Michel Mouchart for his helpful comments.

1 Appendix 1 illustrates that point for the (relatively favourable) year 1989.

2 Cf. J.H. Drèze and H. Sneessens, "Technological Development, Competition from Low-Wage Economies and Low-Skilled Unemployment", *Swedish Economic Policy Review*, 1, 185-214, 1994.

3 The budgetary cost of today's unemployment is evaluated by the European Commission at 4% of EU 12 GDP, whereas budget deficits exceed by 2.5% the Maastricht guidelines.

4 Including J.H. Drèze and C. Bean, "Europe's Unemployment Problem: Introduction and Synthesis", in *Europe's Unemployment Problem*, J.H. Drèze, C. Bean, J.P. Lambert, F. Mehta and H. Sneessens, (eds), MIT Press, Cambridge, Mass., 1990.

5 Cf. O.J. Blanchard, "Consumption and the Recession of 1990-91", R.E. Hall, "Macro Theory and the Recession of 1990-91", *American Economic Review*, 270-74 and 275-79, 1993.

6 The argument to follow is partly original, with the informal presentation here anticipating the necessary formalisation. But most elements are well-known. A related formulation (still distinct in several important respects) can be found in J. Tobin, "Price Flexibility and Output Stability", *Journal of Economic Perspectives*, 7, 1, 45-65, 1993.

7 Contingent transactions make delivery conditional on future events, hence contingent; contracts for contingent deliveries are more similar to insurance contracts than to options.

8 Multiple equilibria pose a genuine challenge to empirical (econometric) research.

9 The indeterminateness of equilibrium, at competitive prices and wages, is established explicitly for the case of constant returns to scale by J. Roberts, 'Equilibrium without Market Clearing', Chap. 6, pp. 145-158 in *Contributions to Operations Research and Economics*, B. Cornet and H. Tulkens, (eds), MIT Press, Cambridge, Mass.,1989. Constant returns to scale in the long run (with an adjusted capital stock) imply in the short run fixed costs, that is a cost structure similar to that characteristic of increasing returns. An equilibrium concept covering these situations is proposed in J.H. Drèze and P. Dehez, "Competitive Equilibria with Quantity-Taking Producers and Increasing Returns to Scale", *Journal of Mathematical Economics*, 1988, 209-30. Using that equilibrium concept, one can extend the analysis of Roberts (where a zero profits condition plays a central role) to the case of increasing returns, which is the more typical in my opinion. A further extension of the argument is needed to encompass diminishing returns as well. The analysis of Roberts demonstrates unambiguouly the multiplicity of allocations decentralised by competitive prices and wages, and provides a convincing argument for the stability of output prices. The downward rigidity of wages requires an additional argument, of which several versions exist.

10 Cf. J. Corbett and T. Jenkinson, "The Financing of Industry, 1970-89: An International Comparison", CEPR Discussion Paper 948, 1994.

11 The impact of interest payments on business profitability, stressed by I. Fisher in his book *Booms and Depressions* (Adelphi, New York, 1932), has recently received renewed attention, for instance in the Presidential Address by M. King, "Debt Deflation: Theory and Evidence", *European Economic Review*, 1994, 419-45. But the implications of financial fixed costs for the pricing policies of firms have not been spelled out, because theorists are reluctant to entertain equilibria under increasing returns.

12 Cf. J.H. Drèze and C. Bean, op. cit.

13 Appendix 2 contains some information about minimum wages in Europe.

14 This point is unambigouously established in J.H. Drèze and C. Gollier, "Risk Sharing on the Labour Market and Second-Best Wage Rigidities", *European Economic Review*, 37, 1457-82, North-Holland, 1993, and in the references given there.

15 Empirical work in which I have been involved - cf. J.H. Drèze and C. Bean, op. cit. - suggests instead a long-term relationship between unemployment and the share of wages in value added, rather than wage inflation. Recent microeconometric work links conclusively individual wage levels to local unemployment rates; see Blanchflower and A. Oswald, *The Wage Curve*, MIT Press, 1995.

16 Appendix 3 reveals their magnitude, but also substantial differences between countries.

17 The White Paper also contains a specific recommendation - formulated more precisely in the summary chapter than in the supporting chapter; namely, the promotion of "proximity services", seen as an answer to unfilled needs, but also as a source of potential jobs. (See Appendix 4 for details.) The specific suggestions even include "service-vouchers", a French innovation meant to spur demand for proximity services through price rebates; and subsidies to non-profit organisations apt to organise the supply.

18 Cf. J.H. Drèze and E. Malinvaud with Paul De Grauwe, Louis Gevers, Alexander Italianer, Olivier Lefebvre, Maurice Marchand, Henri Sneessens, Alfred Steinherr and Paul Champsaur, Jean-Michel Charpin, Jean-Paul Fitoussi, Guy Laroque, "Growth and Employment: The Scope for a European Initiative", *European Economy (Reports and Studies)*, 1, 75-106, 1994; "Croissance et emploi: l'ambition d'une initiative européenne", *Revue de l'OFCE*, 49, 247-88, 1994.

19 They are summarised in Appendix 5.

20 The overview in the White Paper is reproduced as Appendix 6.

21 The Commission evaluates the cost externality of private transportation (pollution, accidents, congestion) at 3 or 4% of GDP. There lies a main justification of the energy tax.

22 These merits are also spelled out in the book *Pour L'Emploi et la Cohésion Sociale*, written by A.B. Atkinson, O.J. Blanchard, J.P. Fitoussi, J.S. Flemming, E. Malinvaud, E.S. Phelps, R.M. Solow, Fondation Nationale des Sciences Politiques, Paris, 1994.

23 Cf. Drèze-Sneessens, op. cit.

24 The Belgian government has in the meantime imposed constant real wages for the years 1995 and 1996.