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Employment in Europe



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Contents

	4	Preface by Sir Brian Unwin, President
		Employment in Europe
Christopher Hurst	7	A discussion of the papers and an overview of the role of investment
Jørgen Elmeskov	29	The unemployment problem in Europe: Lessons for implementing the OECD Jobs Strategy
Gilles Saint-Paul	55	Does technical progress create unemployment?
Michael Burda	65	The consequences of EU enlargement for Central and Eastern European labour markets
José Viñals & Juan Jimeno	83	The impact of EMU on European unemployment
Jacques Drèze, Alain Durré & Henri Sneessens	99	Investment stimulation, with the example of housing
Ole Rummel & Thomas Schröder	115	The employment effects of investment projects
Pascale Viala	127	Financing young and innovative enterprises in Europe: Supporting the venture capital industry

Employment in Europe

A discussion of the papers and an overview of the role of investment.



Christopher Hurst
Editor

The problem

Unemployment in the EU now stands at about eleven percent, meaning that there are roughly 19 million people looking for work. In fact, unemployment has remained at unacceptably high levels since the large surge that took place during the early-1980s.

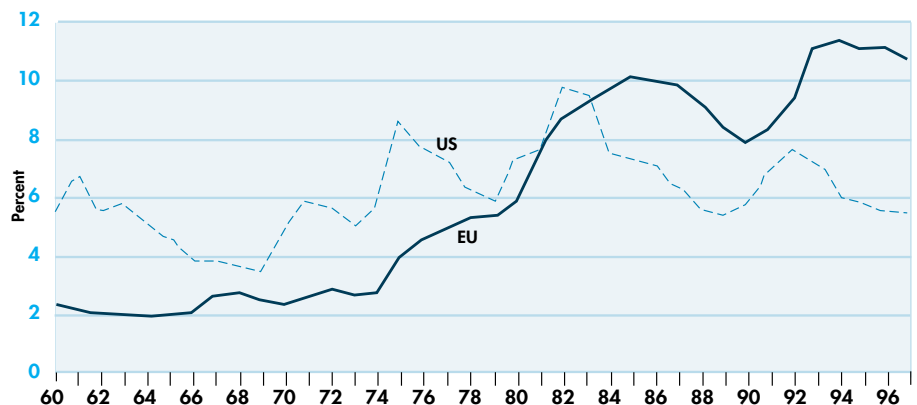
The causes of unemployment in Europe are complex and no one theory is fully convincing. In the EU it does appear that there is a ratchet phenomenon - unemployment goes up in a recession, but it does not go back down again once the economy recovers. Because of this "hysteresis", long-term unemployment has risen to about one-half of the total.

The unemployment picture in the US is strikingly different. While US unemploy-

ment has oscillated over the last four decades, there has been no apparent upward trend (see Figure 1). Thus, while the risk of losing one's job is actually higher in the US than in Europe, the North American unemployed have a much bigger chance of finding new work within a relatively short period.

The disparity between economies at creating jobs is worse than the unemployment figures suggest, since the percentage of the work-age population either in work or looking for a job is linked to the unemployment rate. Typically this "participation rate" is lower when the unemployment rate is higher, because workers become discouraged by long-term unemployment. They get used to their new lifestyles, or start work in the informal sector, and so drop out of

Figure 1. Unemployment rates in the EU-15 and the US, 1960-1997, in percent



Source: European Commission.

Thanks are due to Ole Rummel for his assistance. The views expressed in this article are personal and do not necessarily reflect those of the EIB.

the official labour market. The relatively stable level for US unemployment seen above has been achieved even though the workforce has grown rapidly (see Table 1).

Table 1. Total population and workforce (in million)

	Total population		Total workforce	
	EU-15	US	EU-15	US
1960	299	181	137	67
1995	372	263	148	125
Average annual growth rate	0.6%	1.1%	0.2%	1.8%

Source: European Commission.

There is, however, one similarity: more favourable employment prospects for men between the ages of 25 and 55 years. Typically, about 85 percent of European men in this age range have a job, almost the same figure as in the US (1). This means that other groups, such as women, the young, and the aged, are particularly hurt by unemployment. In the past, having the traditional "bread-winner" in work may have ensured a uniform distribution of employment across households. But the growth of single-parent households, coupled with high youth unemployment, risks creating permanent social exclusion for some sectors of the population.

Another similarity is the important regional dimension to unemployment within countries. Indeed, recent theories from economic geography have emphasised the tendency for growth to be concentrated in certain areas, possibly leaving permanent pockets of high unemployment in regions facing industrial restructuring. The result is that unemployment in the worst zones of any country may be double or even triple that in the best region. It is also interesting to note that migration is low in Europe, and

people do not move in response to these unemployment differentials. This is true not only for migration between countries where cultural and language barriers exist, but also within countries. This can be due to lack of information of job availability elsewhere in the country (job offices usually have a regional focus), but also the cost of housing in economically successful regions and other moving expenses. This regional dimension reinforces the risk of long-term social problems resulting from unemployment.

The policy response

In the influential "OECD Jobs Study" of 1994, a range of policies to deal with unemployment were examined in detail, and a number of specific measures proposed. The paper by **Jørgen Elmeskov** (OECD) looks at the experience of tackling unemployment over the last few years, to see whether any new lessons have emerged in the interim.

In broad-brush terms, the measures proposed to deal with unemployment can be put into two main categories:

- On the supply-side: Make labour markets more flexible so that there is a greater chance of markets clearing at low unemployment. There are complex models of why labour markets may not clear (e.g. too high unemployment benefits meaning that people prefer to stay unemployed, high hiring and firing costs blocking unemployment at an undesirable level, trade unions pushing up the wage of those that have a job at the expense of job seekers, inefficiencies in matching job searchers with vacancies, ...).
- On the demand-side: Pursue macroeconomic stability in order to reduce interest rates, and thus make investment easier, both in physical

1) Not all of the remainder are in the workforce. The unemployment rate for this group in the 1990s has been some eight percent in the EU-15 and five percent in the US.

and human capital. Liberalisation of product markets supports this by introducing greater competition, making industry more dynamic, and encouraging entrepreneurial activity.

The main message from Elmeskov's study is that unemployment can be lowered in a durable way. There have been encouraging developments in Denmark and the Netherlands where the rate of structural unemployment is on a downward path. Looking at the first half of the 1990s, the main successes have been in the UK and New Zealand (where structural unemployment has fallen by more than one percent), with Ireland as the star performer (with structural unemployment down by three percent).

In all cases, success appears built upon a comprehensive set of reforms, ranging from macro-economic stability, to the liberalisation of product markets and measures to improve the efficiency of labour markets. Thus, there are important synergies between the different areas of policy intervention. Indeed, the interaction of labour market institutions with each other, and the problem of mutually supporting rigidities in product and labour markets has also been emphasised by Buti et al. (2).

However, optimism must be somewhat muted, as it may take some considerable time for policies to begin to have the desired effect. The successful countries often started their reforms many years ago, well before the OECD made its policy prescriptions.

Some country specific factors behind the success stories

Of the European success stories, Britain has introduced the most far reaching reforms,

including legislation restricting strikes and secondary picketing, decentralising wage bargaining, liberalising hiring and firing regulations, and reducing the duration of unemployment benefits. Inequality of earnings increased substantially (3). These policy changes have not been accompanied by changes to the tax or welfare systems to address the distributional consequences of the reforms.

Both Ireland and the Netherlands have developed reform programmes with the participation of social partners (employers, trade unions), rather than the employer-employee conflicts that seem integral to the Anglo-Saxon model. In these cases there are a number of country specific factors that are worth recalling.

Though structural employment has been lowered in Ireland in recent years, the Irish participation rate is still among the lowest in Europe (it is 64 percent compared with the EU average of 67 percent, 77 percent in the UK, and a high of 80 percent in Denmark). Ireland also started from a situation of very high unemployment and, at twelve percent, the unemployment rate is still above the EU average. In particular, employment opportunities for women and young people appear limited.

The Irish manufacturing industry has escaped the shake-out that occurred elsewhere during the early-1990s. Indeed, manufacturing employment, supported by foreign direct investment in high-tech sectors, has grown strongly in recent years (the only EU country where this has happened). Service sector employment has also grown particularly rapidly, with the increase of managerial, professional, and skilled sections of the workforce. The expansion of education over the last few

2) Marco Buti, Lucio Pensch and Paolo Sestito of the European Commission prepared a comprehensive study on European labour markets for the conference. It has been published by the EIB as Economic and Financial Report 98/01, "European unemployment: Contending theories and institutional complexities". See the inside back cover for details.

3) The ratio of male wages at the bottom decile of the earnings distribution to those at the top decile dropped from some 40 percent in 1980, to 30 percent a decade later.

decades has certainly supported this, but there have been increasing pressures on the low-skilled, and, at close to one-fifth, the rate of low-skilled unemployment is amongst the highest in Europe. Net migration from Ireland between 1980 and 1993 totalled over 200,000, a very large figure when compared to a labour force of about 1.3 million (4). Though job creation has been strong, emigration has provided an important safety valve for the labour market.

Economic growth in Ireland over the last decade has been several percentage points above the EU average. Paradoxically investment in Ireland is low, at only some 1.5-1.6 per cent of GDP over the last few years. One theory is that knowledge gained by the workforce from investment by foreign companies has been a major factor in supporting general productivity growth. Though measures have been taken to lower marginal tax rates and to reduce the generosity of unemployment benefits, economic growth is an important lubricant to labour markets. The social partnership over reform may not have been so easy to obtain if real wages had not been growing due to productivity gains.

The Netherlands also deserves a closer look. Not only is Dutch unemployment low (6-7 per cent), but structural unemployment has been reduced further in the past few years. This is a significant achievement. However, these statistics hide a specific feature - the withdrawal of a large number of people from the workforce over the last few decades (see Figure 2). Participation rates (at 67 per cent) are close to the EU average, but the increase in skilled workers has been matched by large number of low-skilled people leaving the workforce due to early retirement and disability. In fact, there are more people on disability schemes in the Netherlands than there are officially unemployed.

Reductions to structural unemployment have taken place recently, while the major increase of the "disabled" took place during the 1970s and 1980s, so there has still been real progress. However, recent wage moderation through centralised bargaining, coupled with restrictions on social transfers and a reduction in minimum wages, took place against the back-drop of major government expenditures to support those out of work.

Though there are special features in Ireland and the Netherlands that inflate the results, the overall conclusion remains that a sustained commitment to economic stability and efficiency, coupled with broad-ranging labour market reform, does pay dividends over the long-term. Clearly, this should be pursued. However, by the time unemployment is reduced to acceptable levels in many countries, demographics will have converted at least part of the unemployment problem into a pension problem. The question remains: Is there nothing that can be done to produce results in the more immediate future?

The role of technology and training

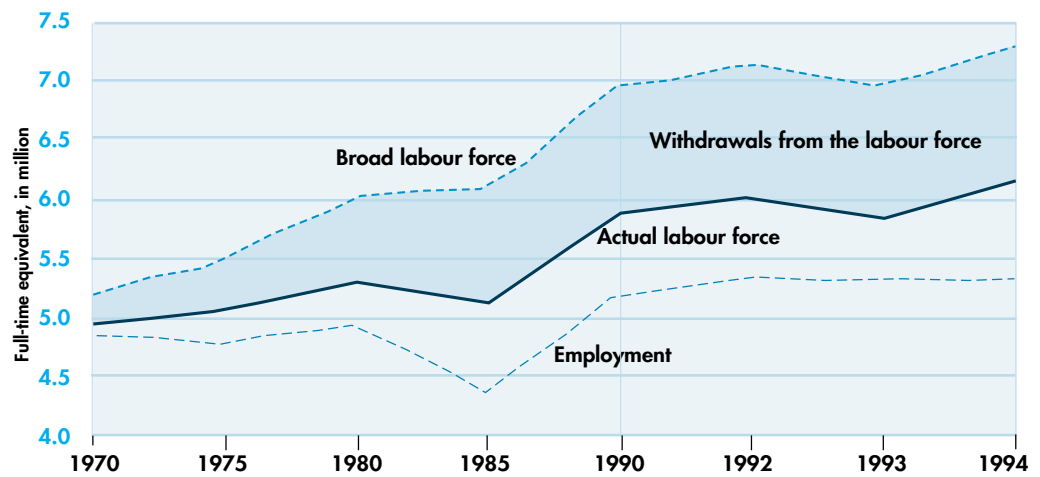
A common feature of the long-term unemployed is their low skill level. This has led some commentators to blame technological advances for the unemployment problem.

Gilles Saint-Paul (Universitat Pompeu Fabra) examines this topic in more detail. He argues that from a macroeconomic view-point there is little reason why technical progress should cause unemployment. Rather the effect should be neutral, since technology affects wage aspirations and productivity equally.

Indeed, there should be a negative relation between growth and unemployment. This is because faster growth reduces the time needed to recover investment costs, including the decision to "invest" in new workers.

4) Ireland is unique in its high level of emigration, no doubt due to the large Irish communities that exist outside the country.

Figure 2. Overview of the Dutch labour market: Labour force and employment



Source: OECD.

Consequently, the incentives to advertise vacancies are greater, which leads to a lower level of equilibrium unemployment. Modelling technological shocks for a range of countries, Saint-Paul finds that positive shocks actually reduce unemployment. This effect disappears over time (completely in the case of the US and UK) as labour markets adjust.

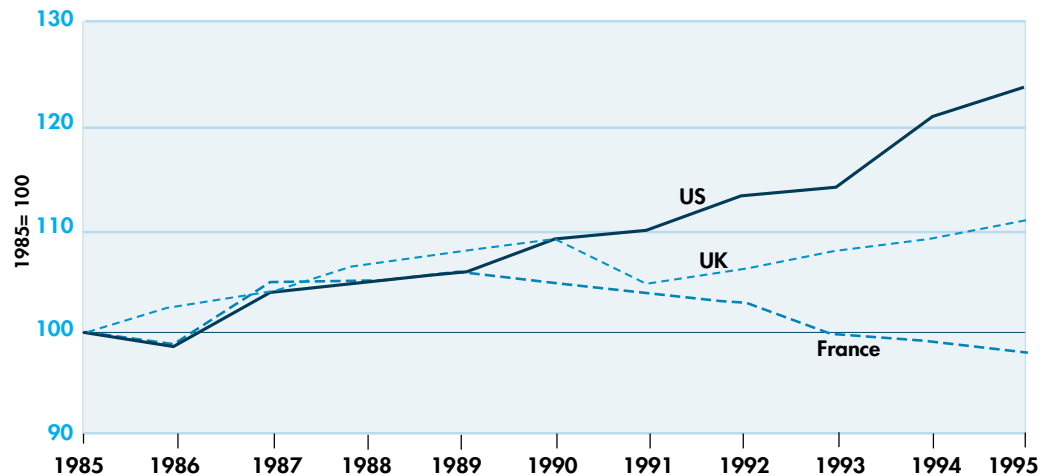
There are sectoral issues to add to the picture. A technical improvement may lower prices and destroy jobs in the sector where it occurs. However, it should generate jobs elsewhere. The drop in prices in the sector concerned means that consumers will be able to purchase more goods from other sectors. The workers who are displaced should end up better off, once a reallocation of resources has taken place, and wages have increased economy-wide.

Problems could occur if wages were above market clearing levels in the sector where the technical change occurred (for example, through a lack of competition in that sector). Thus, displaced workers may find themselves with lower salaries in their new occupations.

This could be exacerbated if technical progress increases the demand for skills at the expense of unskilled workers. Computers are sometimes thought to have been particularly pernicious in this regard. Superficial evidence comes from looking at the forecast evolution of employment by the US Bureau of Labor Statistics (which produces regular projections of employment growth). It shows that the occupations in the US with the fastest job growth will be computer related with more than one million net new jobs over the next decade.

The fact that many of the long-term unemployed have low skills would seem to confirm this hypothesis. However, there are well-known "ladder" and "ranking" effects that mean that the low-skilled are more likely to have problems in finding a job, even for tasks that do not have high-skill requirements. Thus, an increase in unskilled unemployment is likely even when there is an unbiased decline in the aggregate demand for labour.

Figure 3. Earnings gap in index form



Ratio of earnings of high-skilled workers (college degree and above) to low-skilled workers (secondary education and below).

Source: OECD.

Dealing with the problem of the working poor

Whatever the reason for unskilled unemployment, it is hard to avoid the fact that wages for this group are too high for markets to clear. Thus, increased "flexibility" in Europe could also mean declining wages and the creation of a working poor as seen in the US - essentially new employment would be generated in low-pay, dead-end, "Mc Jobs". Indeed, over the past two decades there has been an increase in wage inequality in the US, while average real earnings have stagnated. The result has been a major drop in the real wage for the low-skilled. A similar widening gap, though to a lesser extent, has been seen in the UK during the 1980s. However, in the rest of Europe real wage growth has usually been coupled with a relatively static wage distribution, and increasing unemployment (see Figure 3).

Elmeskov also touches on this topic in his paper. He notes that there may be mobility of individuals over time, so that a low paid job may be the stepping-stone for better employment in the future. This is particularly the case

for young people. For example, in the UK a recent study has found that only eight percent of young men in the lowest fifth of the earnings distribution were still in that category eight years later. Hence the problem of low-pay may be less acute than it appears at first sight. One approach to this issue is to try to bring productivity in line with the desired wage structure through upgrading the unskilled with training schemes. For example, at the beginning of the 1990s the real wage of a person in the bottom decile of the male earnings distribution in Germany was over twice that in the US (on a PPP basis). Yet unskilled unemployment was much the same in the two countries. One explanation could be that the growth of the skilled labour force slowed down in the US, but did not do so in Germany. In other words, the evolution of wage disparities also depends upon the relative supply of skills.

The fact that skill acquisition has slowed in the US could be due to high turnover of workers in that country, since this could reduce investment by the private sector in training. The risk that workers will leave for other employers once

trained is reduced by developing those skills that are firm-specific. The loss due to a departure can be limited by requiring trainees to accept lower pay during the training period. However, firm-specific training is often targeted at the more qualified sections of the workforce (i.e. adapting skills already acquired to the firm's needs). The use of apprenticeships also requires a recognised certification of the skills acquired to make it worthwhile for workers to share the costs of training. In many countries these work-based qualifications may be under-developed for lower skill occupations.

There could, therefore, be a role for the state in providing the unemployed with some basic skills. The difficulty with government training schemes is that they must be standardised, while the needs of business are very varied. It is difficult to assess the effectiveness of such programmes. In general only the cost and the short-term financial effects on the persons that have enrolled are known, and there is great difficulty in assessing the long-term economic benefits. However, the evaluation results that are available do tend to raise questions over the cost-effectiveness of government training. In addition, part of this spending may substitute for private investment in education.

An alternative is to compensate the required drop in wages for the unskilled through labour subsidies of some kind. There are a number of advocates of such schemes, with Edmund Phelps of Columbia University at the forefront. The US government has followed a slightly different approach. It offers a rebate to payroll taxes through the Earned Income Tax Credit -

a negative income tax for low earnings. This approach has a number of drawbacks. Since it is based upon total income during the fiscal year, it does not discriminate between full-time low pay, and part-time high pay. The compensation for work also comes after a considerable delay, possibly diminishing the incentive for the unemployed to take low-paid work.

Labour subsidies would also have to be carefully designed to minimise their inefficiencies (5). The main proposal by Phelps is for a system of graduated subsidies where the hourly subsidy would taper-off as the wage level increases. It would cost between 1½-2 percent of GDP (6). A similar figure could be foreseen for the EU. Though the net effect on the budget will be less as savings will be made on other social expenditures, this is clearly a significant sum.

Future challenges: enlargement of the Union

With the current unemployment problem, how well is the EU placed to face the challenges of the coming years? Looking to the future, two major changes to the economic environment loom on the horizon: the accession of the countries of Central and Eastern Europe (CEE), and EMU.

One of the alarming features of economic convergence between CEE and the EU is the parallel rise of unemployment rates to EU levels of between ten and eleven percent. So, looking at the wider Europe, there are another five million people who are looking for work.

5) These include dead-weight losses, as some people would have been employed anyway; displacement, as subsidised recruits replace incumbent employees; and, substitution, as firms without subsidised workers are forced to close by competition from subsidised firms. The possible problems can be demonstrated with the simple example (admittedly a "straw man"), where the state makes up the difference between the wage paid by employers and the minimum wage. This would be unworkable, since companies would have an incentive to drop the wages they pay to workers presently at the minimum wage. Workers would be indifferent to this since their take-home pay, supplemented by government subsidies, would be unchanged.

6) Drawn from figures presented by Edmund Phelps in his article in *Unemployment Policy*, edited by D.J. Snower and G. de la Dehesa, CEPR and Cambridge University Press, 1997.

The geographic expansion of the Union could affect unemployment through increased competition. Indeed, some commentators have blamed unemployment on greater trade with low-wage countries in general (or "globalisation" as it is often called). Most recent studies have come to the conclusion that trade has played a very small role in the increase of unskilled unemployment (or lower wages in the US). For example, the relative price of low-skilled products has not fallen as would be expected by this theory. Nonetheless, it is true that trade can accelerate technical change with the sectoral problems discussed before.

Enlargement could also affect supply and demand in the labour market through increased migration. It is very difficult to put a figure on the number of people who may leave the CEE for the EU-15. Total EU nationals living in other EU countries average about 1½ percent of the population. The figure ranges from 5½ percent in Belgium to less than ½ percent in Spain (7). Of course, a relatively larger emigration from the CEE to the EU-15 is possible due to the larger income differentials that exist. The Cohesion countries could provide a benchmark, since significant income differentials also existed for these countries. Some nine percent of Portuguese, four percent of Greeks, and 1½ percent of Spaniards live in other EU countries. However, large regional differences in unemployment already exist within CEE countries without stimulating a major internal movement of people. Though this may be due to particularly bad job information systems, poor transport, and acute housing problems, it might also be that comparisons with Southern Europe during the post-war decades would overstate the issue.

To illustrate the case, assume that, over a number of years, several million Eastern workers (out of a total population of some 100 million) migrate Westwards. Given an EU-15 population of 375 million, such a level of migration would be unlikely to cause problems, particularly since migrants will move to economically prosperous areas in search of work, rather than to areas with employment difficulties. For example, the US absorbed as many as five million immigrants over the five years from 1991 to 1996. Most studies in the US have found that the impact of the arrival of immigrants on the wages and unemployment of natives is small and short lived (8).

A different question is the likely impact of EU membership on the new member countries themselves. This is the subject of the paper by **Michael Burda** (Humboldt Universität zu Berlin).

Unemployment is to be expected in a period of technical change, and transition can be seen exactly as a period of rapid technical adjustment. During this period there should be an acceleration in the number of new businesses being created and of old inefficient companies closing down. Other things being equal, a greater turnover of the labour force between companies would be expected to push up unemployment (since there is always some frictional unemployment when there is turnover in the job market). However, a number of alarming features are emerging in CEE: long-term unemployment has risen to about 45 percent and youth unemployment is very high (typically between ¼ and ⅓, though it is as much as ½ in Romania).

7) The consequences of migration for social security systems is discussed by Martin Kolmar in EIB Papers, Vol. 2, No. 2, 1997. See the inside back cover for details.

8) An extreme case is that of Cuban migration to Florida. On April 20, 1980, Fidel Castro announced that Cuban nationals wishing to move to the US could leave freely by the port of Mariel. By September 1980, about 125,000 Cubans, mostly unskilled workers, had migrated. The Mariel exodus increased Miami's labour force by seven percent, though with no apparent effect on the trend in wages and employment opportunities for Miami's workers.

Burda notes that periods of long unemployment appear to have discouraged many CEE workers, and participation rates have dropped dramatically. Women's participation in the work force has been particularly hit, though it still remains above the EU average. Overall, employment rates are now much more similar to countries of the same per capita income.

An important observation is that most job vacancies in Eastern Europe are filled by job-to-job moves. It seems that being unemployed gives employers a negative signal regarding worker quality, whether merited or not. Therefore, high unemployment does not appear to be a major contributor to restructuring, and we cannot argue that it brings economic side-benefits through accelerating the restructuring process.

The "return to Europe" of CEE countries also has the connotation for many of the adoption of a social market economy. The problem has been that state transfers to the disadvantaged were financed with payroll taxes, as these were easier to collect than VAT or income taxes. As unemployment increased, and the workforce declined, labour taxes had to be increased substantially.

To escape worker protection regulations and high taxes, many small companies have simply gone underground. Indeed, the drop in the size of the workforce noted above is partially the result of significant employment in the informal sector. For example, it has been reported that as many as 30 percent of Poles work illegally. Again, this has shrunk the tax base. Though unemployment benefits have been reduced throughout CEE in recent years, payroll taxes are of the order of 50 percent in many countries. Thus, another EU-like distortion to the labour market has appeared in CEE.

Burda emphasises that EU membership could have a deleterious impact on labour market performance. Looking at past enlargements of the Union, he notes that application to join and accession has been associated with a statistically significant increase in unemployment. Application for membership is the more important event for increasing unemployment than the accession itself, perhaps because restructuring begins at that time.

Of course, the problem with such an analysis is the high probability of establishing a spurious relationship. For example, the two oil shocks happened to coincide with previous enlargements of the Union. Moreover, the liberalisation of product markets, the main restructuring needed for membership, is also a desirable step in its own right. In this sense, the increase in unemployment would have been inevitable, even if the EU had not been a catalyst for change. What is clear, however, is that the implementation of strong social legislation along EU lines could condemn the people losing their jobs as a result of restructuring to long, if not permanent, periods of unemployment.

The consequences of Economic and Monetary Union

A number of commentators have argued that with the launch of Economic and Monetary Union (EMU), policy makers will lose one important tool to deal with unemployment: monetary policy and its effect on the exchange rate.

If a country is hit by a shock that causes a loss of international competitiveness, then domestic prices will have to be adjusted downwards relative to the rest of the world. If wages are not flexible in nominal terms, a simple way to achieve this is with a devaluation of the currency. When this option is removed, and wages do not adjust accordingly, then increased unemployment is likely. This problem can be attenu-

ated for a short period through fiscal measures, but if wage costs do not adapt to the new reality, sooner or later there will be an increase in unemployment. In this case, an asymmetric or idiosyncratic shock to an EMU member country could spell disaster.

Of course, this would be of no concern if such asymmetric shocks did not exist. This would be the case if shocks are sufficiently large and widespread that the European Central Bank eases monetary policy sufficiently that the Euro devalues against foreign currencies. This could happen if several European countries faced the same shock, or if a large country, say Germany, was hit. With economic integration there has been the increased synchronisation of business cycles, and the number of factors that could cause a shock specific to one country has been reduced (9). The biggest risk is for smaller countries with unique industrial structures or trade patterns (10). Looking at the longer term, this problem could be exacerbated if increased competition in the Single Market (a process that will be reinforced by EMU as national price differentials become transparent) were to produce a greater degree of regional specialisation.

The possible impact of EMU on unemployment is examined by **José Viñals** (Banco de España) and **Juan Jimeno** (FEDEA, Madrid). They start with a vector autoregressive (VAR) model that breaks down unemployment into a common EU component, and a national component. The results for nearly all countries show that most of the variance in national unemployment

rates is explained by changes at the EU level, and this is true even in the short-run. In other words there do not appear to be asymmetric national shocks that explain unemployment.

Viñals and Jimeno repeat the exercise at the regional level for those countries where data is available. The results show that regional shocks explain most regional unemployment, followed by EU-level shocks, and finally those at a national level. This confirms the view that moving from a national currency to EMU should not cause additional problems.

Viñals and Jimeno then examine wage rigidity in Europe, again with a VAR (econometric) model. They find a high degree of real wage rigidity. This means that even if nominal wages are lowered with an exchange rate devaluation, the effect will only be temporary. Wages will adjust upwards to the old levels in real terms. While this would mean that there is little cost from entering EMU, another way to put it is that European labour markets are so rigid that the situation is hopeless - nothing can be done to change wage levels.

This may be true today, though the experience of Italy and Britain upon leaving the ERM in 1992 would appear to provide counter examples (11). Consider the case when the path of labour market reform passes from real wage rigidity, to nominal wage rigidity, before finally arriving at greater flexibility. This could be quite likely, since a first step is to eliminate wage indexation. Then, the existence of EMU could mean that there is no advantage to having nominal wage rigidity during the interim

9) Most studies find that only a core of EU countries would be an optimal currency area. However, analysis based on historical data may be misleading if economic transmission mechanisms have changed due to greater integration. This is discussed in more detail in the EIB Papers, Special Issue on EMU, Vol. 1, No. 1, 1996.

10) The inability of Texas to devalue its currency following the collapse in oil prices in the mid-1980s is one example. However, smaller countries also gain most from a single currency (e.g. trade is more important, so the transaction costs of having a national currency are relatively higher). Indeed, such countries often choose to maintain a fixed exchange rate parity with respect to a larger country. The loss in credibility following a devaluation in these circumstances may also have high economic costs.

11) Recent Dutch experience at cutting unemployment has also been attributed to a real devaluation of the Guilder which boosted employment in the tradeables sector.

phase. Indeed, people appear to strongly resist pay cuts in terms of the money of the day, so such nominal wage inflexibility is likely to persist for some time.

Viñals and Jimeno conclude with a discussion of macroeconomic policy in EMU. They argue that the process of fiscal consolidation should actually help employment prospects by creating a more stable environment characterised by lower and less volatile interest rates. This is very much in line with Elmeskov's reasoning.

Too little aggregate demand?

Though most economists would agree that there will be long-run benefits of fiscal consolidation, some would argue that the departure for this goal has been mis-timed. It is true that a few countries have managed substantial fiscal convergence during the 1990s with little impact on unemployment. The example of Portugal is noteworthy. The strong commitment of the Portuguese government to meet EMU convergence criteria has permitted the country

to enter into a virtuous cycle, where falling interest rates have lowered debt service requirements, which has made fiscal consolidation more credible, and interest rates have been further reduced. As a result this country has been able to achieve rapid fiscal improvement at little cost (interest payments on public debt dropped from 8½ percent of GDP in 1991 to only 4½ percent in 1997).

However, looking at the EU as whole, unemployment has been pushed to new heights in the 1990s. Reduced fiscal deficits on the road to EMU were achieved more by tax increases (of indirect taxes and social security contributions) than expenditure cuts. Interest payments have remained almost constant as a percentage of GDP, as higher debt levels have counterbalanced somewhat lower interest rates. The savings that have been achieved have come from reduced public investment rather than consumption (see Table 2).

A number of commentators have argued that the management of aggregate demand during

Table 2. General government budget in the EU-15 and Portugal, in percent of GDP

	EU-15			Portugal		
	1991	1997	Change	1991	1997	Change
Deficit	4.2	2.6	-1.6	6.7	2.7	-4.0
Income, of which	45.2	46.0	0.8	38.0	40.6	2.6
- indirect taxes	13.5	14.0	0.5	13.7	14.1	0.4
- direct taxes	13.0	12.9	-0.1	9.3	10.5	1.2
- social security contributions	15.1	15.8	0.7	10.3	11.8	1.5
- other	3.5	3.3	-0.2	4.7	4.2	-0.5
Expenditures, of which	49.4	48.7	-0.7	44.7	43.4	-1.3
- interest payments	4.8	5.0	0.2	8.6	4.4	-4.2
- capital	2.9	2.2	-0.7	3.5	4.3	0.8
- consumption	19.0	18.7	-0.3	17.6	18.2	0.6
- transfers	22.7	22.8	0.1	15.0	16.4	1.4

Source: European Commission.

this period has been responsible for deepening the recession of the early-1990s. Though fiscal deficits were also reduced in the United States, short-term interest rates in that country were very much lower than in Europe (see Figure 4). Indeed, by late-1992 the Federal Reserve had lowered the Federal Funds rate to three percent, a 30-year low. Even so, the recovery of US output and employment during the early-1990s was much weaker than after previous recessions (12).

Conversely, monetary policy in Europe was driven by high German interest rates and the goal of keeping fixed exchange rates. Real long-term interest rates have also been high in Europe, perhaps reflecting a risk premium over the likely success or failure of EMU (13). The high risk with recession is the permanent ratchet effect on unemployment (14). This would rather call for a gradualist approach to disinflation, and a rapid loosening of policy in the face of harmful shocks.

Since there is the huge pool of under-utilised resources (the unemployed), a Keynesian solution would be to boost demand in order to accelerate the recovery of the EU economy. The problem is that the Maastricht criteria, though somewhat arbitrary, have taken on a critical short-term political significance. And the Stability and Growth Pact has been necessary to reassure prospective member countries of the future correct functioning of EMU. In any case, continued fiscal consolidation is needed over the medium-term in order to prepare for the pension problem that will emerge during the first part of the next century.

How could one meet the seemingly contradictory goals of stimulating demand with only minor fiscal consequences? Supporting investment has been seen as one possible solution to this dilemma.

First, investment rates have fallen in Europe over the last few decades (15). Second, investment should have long-term economic benefits. Third, by providing relatively modest sums it may be possible to accelerate investment that would take place at a later date, providing substantial leverage to public spending. Finally, supporting investment - which by its very nature must be located somewhere - could be one way of dealing with the regional dimension to unemployment mentioned before.

Interestingly, the same factor could have caused both increasing unemployment and falling investment - high wages. Consider the case when there is a real wage shock (an example could be the introduction of a shorter working week with no change to wages). Wages rise above the productivity of the capital stock, and the economy must adjust in some way. If the adverse wage shock is maintained, the demand for capital will fall, and there will be a period of disinvestment. Productivity will rise to meet wages as unprofitable companies close. The result is that capacity utilisation remains relatively high, but there will be unemployment since there is not enough capital to employ everyone. Figure 5 illustrates how higher capacity utilisation in the US tends to mean lower unemployment, but that no such relation exists in Europe. This provides a convincing explanation for the fact that labour productivity

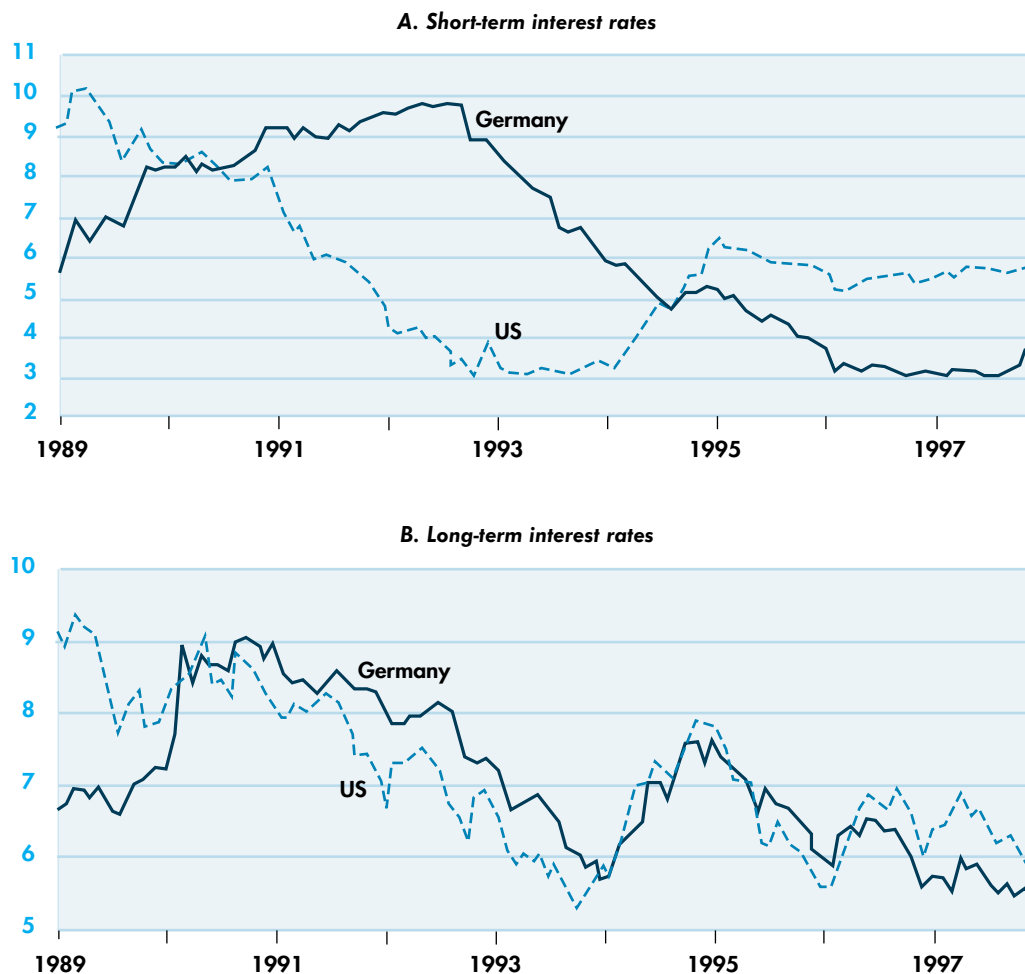
12) Though the recession of 1991 was also less deep than earlier ones.

13) This is discussed by Agnès Belaisch in EIB Papers, Vol. 2, No. 1, 1997. See the inside back cover for details.

14) That is, labour is shed as companies go out of business, while high hiring and firing costs reduce the rate at which new jobs are created elsewhere.

15) Gross fixed capital formation (GFCF) in Europe was 23-24 percent of GDP in the 1960s and early-1970s. Investment rates have since declined, and GFCF has averaged about 19 percent of GDP in recent years. However, European investment levels are still above those in the US (now of the order of 17-18 percent of GDP), and there is no simple relation between investment and employment creation. Note, also, that subsidies for investment can actually make production more capital intensive than it otherwise would be.

Figure 4. Interest rates in Germany and the US, in percent



Source: Datastream.

growth has been much higher in Europe than the US (recall that real wage growth has been stagnant in the US). In the context of this discussion, the important point to remember is that over the longer term the capital stock is not an exogenous variable that can be controlled at will by policy makers.

To conclude, there is no obvious market failure at the macroeconomic level that constrains pri-

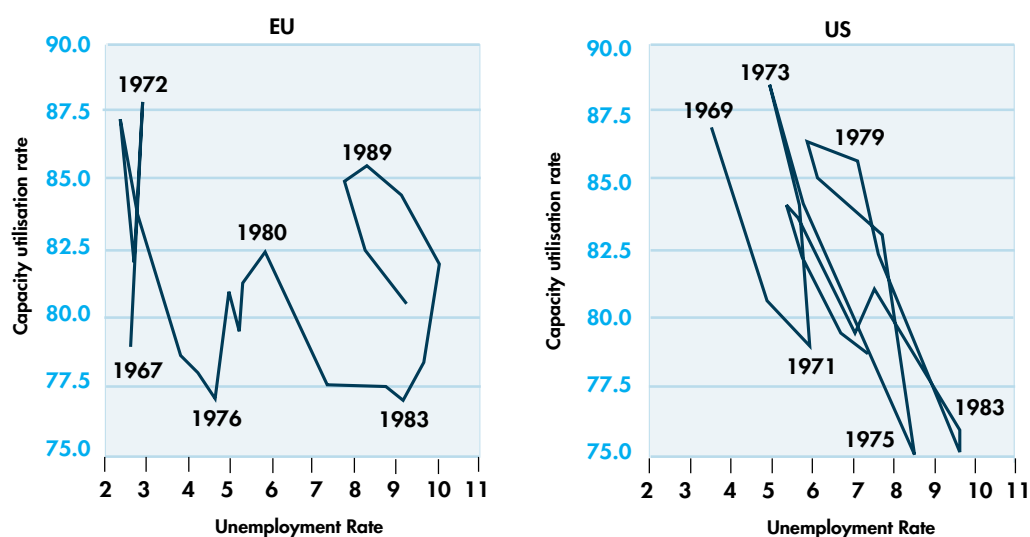
vate sector investment. However, public measures to increase investment, including direct investment by the public sector itself, may be an efficient way to raise aggregate demand (16).

A proposal to stimulate investment

Jacques Drèze, André Durré and Henri Sneessens (Université Catholique de Louvain) propose one scheme to stimulate investment.

16) Public investment has actually declined more rapidly than overall investment, from some four percent of GDP in the early-1970s to 2¹/₄ - 2¹/₂ percent of GDP in the late-1990s. As mentioned, this is in part due to Maastricht inspired fiscal consolidation. However, there may also be legitimate reasons for a relative decline in public investment; for example, if public capital goods have become relatively more expensive with respect to private capital. In any case, boosting public investment may be indiscernible from increased consumption if the projects funded are of poor quality.

Figure 5. Capacity utilisation and unemployment rates, in percent



Source: Charles Bean (17).

The logic, drawing on Belgian data, is as follows:

- There is a large stock of low-income housing that needs upgrading, and a transfer to this group of the poor is justified on grounds of social equity. A subsidy of 25 to 30 percent would bring the cost of new housing within the range of poor households.
- The share of labour costs in the value-added of housing construction ranges from 50 percent (for direct employment) to 70 percent (when indirect labour costs are included). Taking into account payroll taxes, this means that the wedge between private costs and social costs due to labour taxes probably ranges from 20 to 40 percent.
- Therefore, a subsidy to housing equal to the tax wedge on labour would make new housing investment feasible, and so accelerate housing construction and create jobs. Evidence from Belgium suggests that a demand shock to the construction sector would not be inflationary.

- The result could be fiscally neutral, since the labour subsidy would return to the Treasury via payroll taxes. However, co-ordination of these activities at the EU level is desirable, in order to maximise the beneficial effects of the increase in aggregate demand throughout Europe. The simplest way to do this is with some EU financial support for national programmes, possibly through loans from the EIB and grants from the EU Structural Funds.

Drèze et al. note that the example of low cost housing in Belgium serves only as an illustration. Detailed studies on the applicability of this scheme to other countries are needed. There may be other aspects of urban renewal, and sectors such as the environment, which could also be suitable for similar schemes. Drèze et al. conclude by inviting the EIB to study these issues in more detail.

Since the product in the example discussed is housing priced below the market rate, demand will have to be rationed. This poses a problem if private entrepreneurs are involved since,

17) Drawn from his article in the June 1994 edition of the Journal of Economic Literature.

whatever rules are implemented, there would be a risk that they would capture a share of the subsidy. The simplest approach would be for the state, or non-profit housing associations, to manage the scheme, with housing being allocated to low-income families according to existing rules.

A first observation is that some of the difficulties of designing labour subsidies mentioned earlier apply equally to this scheme. For example, Drèze et al. suggest that there should be a flat subsidy per person-year worked. However, this would mean that the direct fiscal consequences would be hard to predict, since there could be little relation between the subsidy and the expected payroll taxes.

Drèze et al. also suggest that, in order to increase the number of low-wage workers that are employed, the total subsidy should be adjusted for each builder. This would be done by calculating a theoretical employment based upon the size of each contract, and the firm's historical average labour costs. The maximum payment to each firm would equal this theoretical employment times the per capita subsidy.

Though it is only an example, this formula does seem to have its difficulties. For example, distorting competitive tendering towards companies with a track record of paying low wages may not lead to an efficient outcome, and the net employment generated by the contract need not be new low-wage hiring. In any case, a large part of any contract may be sub-contracted and it would be difficult to take this into account.

Other rules for allocating subsidies could be designed, but the main question arising from these considerations is why such a focused approach, with the risk of generating a series

of distortions, should be better than labour subsidies for all low-wage workers (18). These could raise incomes to a level so that the poor can afford to upgrade their properties without recourse to a rationed housing market. Indeed, labour subsidies in other sectors could mean that the current capital stock (e.g. buildings in the service sector) could be used to employ more people (e.g. more waiters, shop assistants, etc.) without the need for new investment. Clearly, liberalisation of these sectors (e.g. shop-opening times) would also help create demand for more staff. Perhaps the point is that there may not be the political courage to do this on such a wide scale, though Drèze et al. also doubt that this exists for their own proposals.

Regardless of the local budgetary impact, there is the question of the need for EU funding as an incentive for all countries to participate. This would have to be examined closely. With a constrained budget at the EU level, this could only be achieved by re-directing funds from alternative activities.

Investment and employment

There is also the issue of whether the housing sector is the best sector for these purposes. This, of course, would be analysed in the studies advocated by Drèze et al. However, some insights can also be gleaned from the paper by **Ole Rummel** and **Thomas Schröder** (Chief Economist's Department, EIB). Their paper summarises the results of research done at the EIB, and those of a paper presented at the conference by Charles Bean (London School of Economics).

It is clear, *ceteris paribus*, that increased investment will increase the demand for labour during the construction phase of projects.

18) This point was made a number of years ago by Alfred Steinherr and Beatrice Van Haepelen in their article ("Approche pragmatique pour une politique de plein emploi: les subventions à la création d'emplois") in the June 1985 edition of *Recherches Economiques de Louvain*.

Rummel and Schröder examine the effect of increased purchases of equipment and civil works on the European economy with Input-Output models. This assumes there is slack capacity, and prices do not change as a result of the increased demand. Rummel and Schröder find that an investment of ECU 1 billion increases employment during the building phase by about 20,000 person-years. Although not too much importance should be given to this figure, since significant country differences exist, the analysis leads to two interesting observations:

- The employment generated during a project's construction period is not crucially dependent on the sector in question. In other words an industrial project (which might be mainly the installation of equipment) would generate just as much employment as infrastructure (where only civil works are involved). This is because buying the goods and services of one sector leads to an increase in the demand for the goods and services of suppliers in other sectors, and an increase in demand for these sectors' suppliers, etc. About one-half of the increase in employment could be in this indirect way.
- Much of the employment generated - about one-quarter of the total - is in services. Again, this is due to spillovers to supplying sectors.

These results may be due to the level of aggregation used. For example, all construction is treated as one sector, while there are obviously great differences between filling holes in roads, and laying tracks for high speed trains or building state-of-the-art bridges. Nonetheless, it is important to remember that sectoral spillovers might balance the differences that could exist in the sector where the direct demand shock occurs.

Rummel and Schröder also look at the permanent employment generated once an investment is up and running. It is extremely difficult to say much about the long-term employment impacts of investment. For example, a successful investment in one location may result in the closure of a competing company elsewhere. Some investment may actually reduce employment if it is part of a rationalisation programme, but the jobs that remain will be competitive and sustainable (Saint-Paul's comments about technical progress could be re-emphasised at this juncture). Building the counter-factual case requires so many assumptions as to completely undermine the objectivity of any calculation of employment creation.

Looking simply at the ratio of employment to the capital stock, Rummel and Schröder use a vintage capital model to examine average employment multipliers. They find that capital stock of ECU one billion in the manufacturing sector is associated with about 10,000 jobs (or, alternatively, there is a capital stock of ECU 100,000 for every employee). There has been strong convergence of this figure between European countries over the last few decades.

Rummel and Schröder also attempt to extract the marginal capital-labour ratio for new investment, based on the very strong assumptions that labour and capital are complements, and that they stick together in fixed proportions throughout the life of a particular investment. They find that new investment of ECU one billion is associated with an average of about 6,500 jobs (or ECU 150,000 per job). Obviously, such general observations do not go very far towards identifying the employment impact of individual investments.

Public investment poses a particular challenge. Direct employment is very low, but there can

be important economic benefits through the enhanced productivity of private sector investment. One methodology is to use an econometric analysis to assess the dynamic impact of public investment on a range of key variables. Charles Bean uses this approach with a structural vector autoregressive (SVAR) model of the Spanish economy. He finds that every ECU one billion of Spanish public investment has "crowded-in" several ECU billion of private sector investment, and as a result significant employment has been created. Indeed, from his simulations one can calculate an employment multiplier for public capital: it is of the same order as that for the manufacturing sector capital stock mentioned above.

The problem with such an approach is that it must rely on historical data, and it may be misleading to apply the same relationships to new investment. For example, building the first major trunk road in a region may have a large economic effect, but building another road alongside the first is unlikely to be equally beneficial. Moreover, there is always the risk in such an analysis of leaving out factors that are important in explaining the economic results and so attributing an excessively large benefit to investment. This means that while Bean's analysis gives insights into the benefits of investment, it is risky to use the same coefficients to quantify the impact of a particular investment.

Market failures for young and innovative enterprises

Government intervention is best justified when there are market failures that need correcting. Pursuing this logic leads the policy discussion to an area of key importance for employment generation - investment by small and medium-scale enterprises (SMEs).

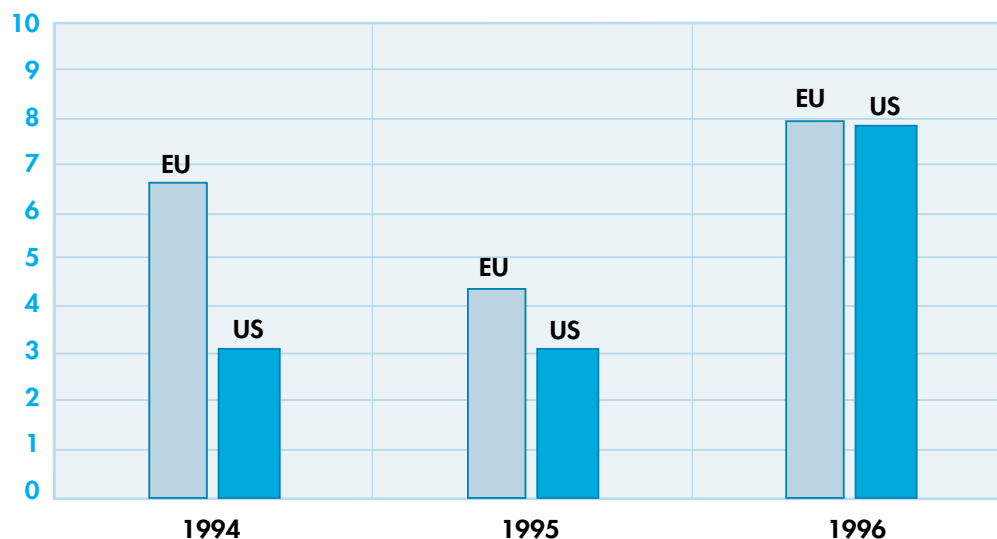
These businesses account for the vast majority of new job creation in the Union. For example, from 1988 to 1995, job creation by SMEs exceeded job losses in large companies. Over this period, enterprises with fewer than 100 employees generated an average of 260,000 net new jobs per year, while companies with more employees lost about 220,000 jobs annually. A particularly large contribution to employment creation comes from young but high-growth businesses.

There is a considerable literature showing that investment by firms is liquidity constrained. Thus, there is a direct link between increasing the supply of finance, and subsequent capital expenditures (19).

The venture capital industry has developed to deal with the particular financing problems of young companies. **Pascale Viala** (Chief Economist's Department, EIB) looks at this industry to see what additional role there could be for the public sector. Total commitments to the European venture capital industry were of the order of ECU eight billion in 1996 (see Figure 6). The conventional wisdom is that the European industry is underdeveloped. However, annual commitments in Europe are similar to those in the US, the oldest and most developed venture capital industry in the world (20). This apparent contradiction is because of major regional disparities in Europe. Venture capital is very highly developed in the UK, but very small in most of the rest of the EU. Its volume is particularly low in Germany (at only some ECU 200-300 million per year). Two significant differences with the US are the much higher share of later-stage financing (such as management buy-outs), and the greater focus on traditional sectors (e.g. retail, transportation, construc-

19) A recent empirical analysis of the financial structure of European SMEs is given by Roman Arjona, Pascale Viala and Rien Wagenvoort in Economic and Financial Report 98/03. See the inside back cover for details.

Figure 6. Venture capital commitments, in ECU billion



Source: Venture Economics for the US and EVCA for the EU.

tion) instead of innovative industries (e.g. computer-related, biotech, etc.).

The public sector as a venture capitalist?

Public support for venture capital financing of SMEs can come about through a range of tax incentives and regulatory changes. Although these should be pursued, the overall low level of external financing of SMEs vis-à-vis the financing potential gives scope for more direct public involvement.

Many earlier attempts by the public sector at providing loans and guarantees for the financing of young and innovative SMEs have had limited success. While loans do protect outside investors in the case of a liquidation, they have other disadvantages.

- They limit the influence and the control that the outside investor can have on the development of a company. This is a major problem since the involvement of venture capitalists in management decisions is one of the key factors for success.

- Given the great uncertainty of cashflows, loans can trigger the early liquidation of venture-backed companies. Equally, by changing the risks and pay-offs of the parties involved, they can increase the extent to which entrepreneurs "gamble" with the future of their companies.

Thus, it is not simply the supply of funds that is at issue, but also the relations between the firm and the provider of capital, and the incentives that each party has to act in a desirable way. Successful venture funds are built upon the careful structuring of deals (e.g. the use of hybrid financial instruments) and the venture capitalist's expertise. For this reason, participation by the public sector with equity or quasi-equity in established venture funds appears the most logical approach.

Viala notes that the involvement of institutional investors in venture funds has strengthened the already existing bias toward late-stage financing. This is because institutional investors require documented results at regular intervals, and the best

20) Though these data do not include the so-called "angels", individuals who contribute capital on a personal basis. There may be significant differences between the EU and the US in the volume of these funds.

way for the managers of venture funds to prove that they are performing well is to go into later-stage financing. Similar distortions to incentives could arise with the participation of public bodies in venture funds. Since the biggest economic gains, and the largest market inefficiencies occur with young firms, this suggests that direct provision of capital in venture capital funds should take the form of minority investments in diversified funds. The sum used for this purpose must be in scale with the overall size of the European venture industry. With respect to the public funds currently allocated to support the enterprise sector in total (some 2³/₄ percent of GDP, or ECU 150 billion per year), this will be a minute figure.

Implications for supporting investment — some concluding comments

The overall conclusion of this discussion is that a broad and deep reform of labour markets is needed to deal with the unemployment problem. Indeed, this appears a necessary condition if there is to be a substantial increase in job creation. Steps to deal with the possible resulting wage inequality include training and subsidies.

Labour market reform must be complemented with measures that support sustained economic growth. When discussing unemployment, it is important to remember that overall economic growth raises the average standard of living, and thus the ability to support transfer payments from workers to the more disadvantaged (including the financing of training schemes).

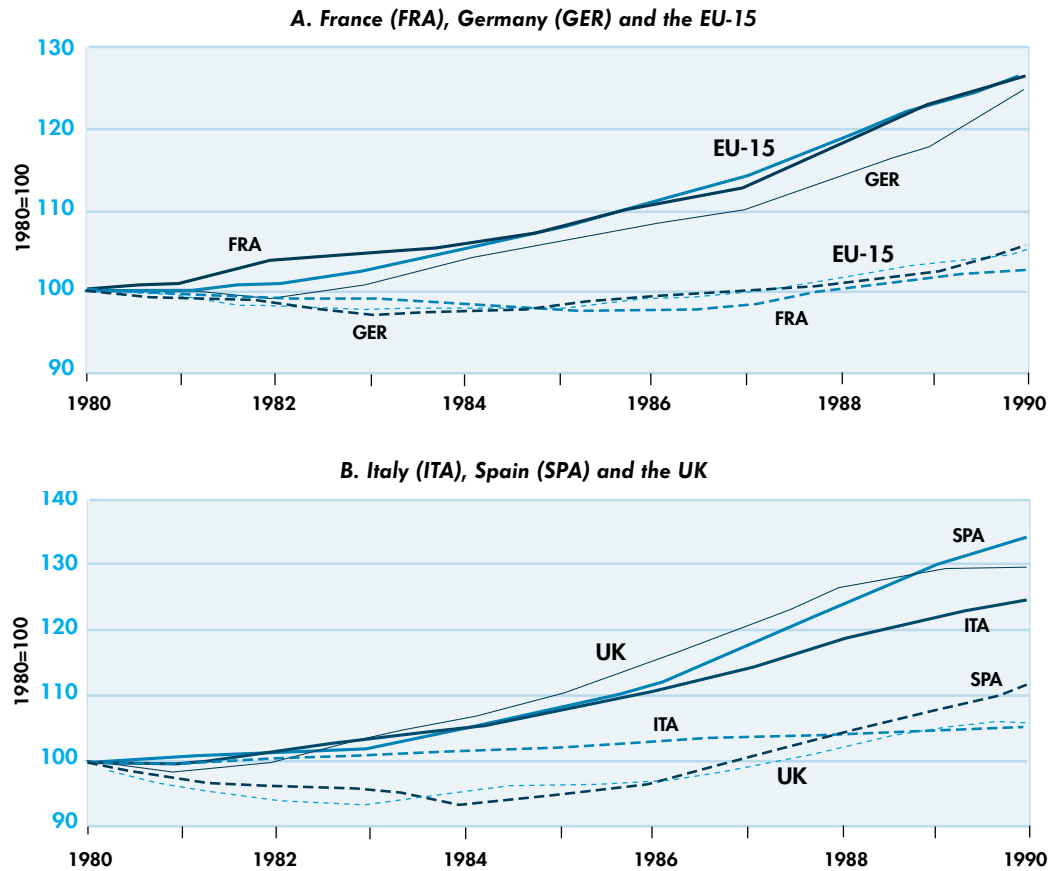
In the short-run, there might be some scope for stimulating aggregate demand. Regrettably, one should not build too much hope on this option. Aside from the constraints on fiscal policy from EMU, short-term demand management policies would only have the desired Keynesian employment repercussions when the hiring decisions of firms are less sluggish than

prices and wages, in other words when a higher demand for products converts directly into higher demand for labour. Though this may occur in deep recessions, recent experience suggests that this link may be less robust during other periods. For example, when Europe emerged from the recession of the early-1980s, product markets picked-up as early as 1982. However, with the notable exception of Italy, employment did not start to grow until several years later in most EU countries (see Figure 7). This delay is too long to be explained by normal production lags or the depletion of inventories.

This being said, supporting investment can complement the macroeconomic, competition, and labour market policies that are required to deal with unemployment. Such support can either be direct, through increasing public investment, or indirect with incentives for the private sector. In this case, there are a number of more detailed comments that can be made:

- The complex spillovers from one sector to another illustrate that supporting investment may be a blunt tool for generating unskilled employment if that is the only goal. Projects also require skilled labour and other inputs (cement, steel, etc.). Therefore, resources may be wasted if investments are not also sound in their own right. In other words, **employment generation is the beneficial side-product of successful investments.**
- Spillovers may also mean that **relatively broad-based support for investment makes sense** - focused programmes of public works may not be more efficient at generating employment. Of course, a very simple model has been used to arrive at this conclusion (including the Keynesian link we have just raised doubts over) and the issue should be explored further.

Figure 7. Occupied population and real GDP in index form



The solid line is output, while the dashed line is occupied population.

Source: European Commission.

- Spillovers may be regional as well as sectoral though probably less so. Thus, a large share of job creation may still take place in the affected region. This means that **there may be scope for using investment to address the regional dimension to unemployment.** However, if approached too enthusiastically it risks being an expensive solution, as there may be greater uncertainty regarding the long-term profitability of investment projects in lagging areas, and so a greater risk of "white elephants" if politicians are involved in the choice of investment.
- While policy makers would obviously like to know how many jobs are created, the logic for **supporting investment must to a large degree be based upon economic reasoning.** Hard proof in the form of **the exact number of jobs created cannot be provided.**
- The justification for **public intervention is strengthened if there are externalities or market failures of some kind that would reduce investment below socially optimal levels.** As mentioned by Drèze et al., environmental improvement is an obvious candidate. Investment in education facilities provide another example.

- *Small and medium-scale enterprises have a predominant role in job creation. Newly created companies also play a key role in technological innovation and, as a consequence, in economic growth. There is also a clear market failure in financing these companies. Thus, **special attention should be given to supporting investment by SMEs.** Though more mature enterprises can be funded by long-term debt, there are unique problems in financing start-ups. Tax and regulatory regimes should be adjusted to increase both the demand for finance (through encouraging entrepreneurial activity) and the supply of funds (via the venture capital industry). There might also be a role for the state to inject cash into venture funds, if this is done in a carefully controlled way.*

The problems of SMEs highlight the fact that financial market imperfections can constrain investment. This is also true on a broader scale, and the completion of the Single Market in Financial Services will provide important support to the overall EU strategy to deal with unemployment. The launch of EMU and the development of European capital markets can be expected to be a catalyst in this process. In the meantime there appears to be a role for EU institutions to strengthen financial development and integration, and to support investment. However, to paraphrase Elmeskov, it would be hard to imagine someone at the EIB coming to any other conclusion.