THE UNIVERSITY of York

*Discussion Papers in Economics*

No. 1999/07

# Monetary Integration and Regional Unemployment in the European Union

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**Abstract**

The European Central Bank will be able to reach its objective of price stability by GDP and inflation forecasts. But price stability will continue to be accompanied by the burden of high and in the case of some disadvantaged regions increasing unemployment which will be the cause of persisting and perhaps widening interregional inequality. This will impose costs from income loss which must be set against the long-term benefits of monetary integration to the disadvantage regions which might accrue by the diffusion of growth and its positive effects on employment. Monetary stability will be more beneficial for the peoples of Europe if it is combined with policies fostering balanced growth with maximum employment. This requires an integrated cohesion strategy encompassing policies for employment and regional development which will induce and accelerate real convergence for all the regions of the countries participating in the European Economic and Monetary Union.

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# MONETARY INTEGRATION AND REGIONAL UNEMPLOYMENT IN THE EUROPEAN UNION

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## 1. Introduction

It is often said that the fundamental task of the central bank is to preserve the value of the currency. Research has shown that central banks can best meet this challenge if they are independent and adopt a low inflation target with some flexibility for price shocks in recognition of the short-run tradeoff between inflation and (cyclical) unemployment. In general, countries instruct their central bank to reach a particular target of inflation and of unemployment. This is represented formally by a loss function that weights the squared deviations of inflation and unemployment from their target values:

$$\mathbf{L = (p - p^*)^2 + b(u - u^*)^2}$$

where p and p* are the actual and desired inflation rates, u and u* are the actual and desired unemployment rates and $b \geq 0$ denotes the weight on the stabilisation of the unemployment level around its long-run target level. If the weight b is zero, there is a single goal of monetary policy: price stability. However, unemployment is considered undesirable because an important factor of production remains underutilised. Consequently, both employment and price stability are necessary for increasing society's economic welfare. Target employment usually means the level of "maximum

employment" which is compatible with "stable prices". When inflation is above its target value, society suffers a loss equal to the squared difference between actual and target inflation.

The standard model is based on the assumption that there is a relatively constant long-run unemployment equilibrium rate, the "natural rate" of unemployment (or the non-accelerating inflation rate of unemployment, NAIRU) which is consistent with stable inflation. Unexpected demand or supply shocks may cause temporary deviations from that rate of unemployment. It is usually believed that in the short run the level of inflation is inversely related to the level of unemployment. Therefore, as a rule policies that lower the inflation rate are expected to result in higher unemployment. When the monetary policies of the central bank are directed towards price stability and reach and maintain their target, the economy returns to the "natural rate" of unemployment. Therefore, if the NAIRU exists and it is steady, the central bank needs only to pursue price stability and labour market and output equilibrium will follow. This implies that the central bank's monetary policy should have just one objective: price stability. In the United States, however, Congress directs the Federal Reserve to aim at two objectives "maximum employment" and "price stability". The statutes of the European Central Bank (ECB) are less explicit[1]. They stipulate that the ECB's primary objective will be "to define and implement the monetary policy of the Community" and "to support the general policies of the Community". A "high level of employment" is included among the objectives of the Community's general policies. Therefore, the promotion of full employment and growth are among the implicit objectives of the ECB which it can pursue but only to the extent that this does not conflict with its primary target of price stability. Moreover, the EU countries have also agreed to implement

[1]The recently concluded Amsterdam Treaty (1997) makes more explicit references to the problem of unemployment.

a European initiative to fight unemployment. But, while the target inflation rate p* will be the primary objective and responsibility of the ECB's centralised policy, the longer-term target of a low unemployment rate u* will be pursued by collaborative action of the member states themselves, coordinated by the Community. Thus, tacitly, the EU countries have attributed the high rate of European unemployment to structural factors specific to each country, and have decided that it is inappropriate to instruct the independent ECB to take the member states' unemployment (or the level of output) explicitly into account when designing its EU monetary policy.

The standard theory maintains that, although the NAIRU may not be fixed, a tradeoff relationship between inflation and unemployment does exist. The "natural rate" of unemployment shifts because it depends on the structure of the economy and on demographic factors and institutional features of the product and labour markets of each country which can change over time. Thus a falling labour force (in the EU, by the ageing population), increasing competition in the product markets (in the EU, by advancing market integration) and slackening of the rigidities of labour markets (in the EU, by institutional reform) reduce the NAIRU. In contrast to the standard model, other schools of thought maintain that the NAIRU does not exist or, even if it exists, its frequent and random shifts render it useless for predicting the inflation rate or for guiding the economy to maximum employment (Galbraith, 1997). The defects of the NAIRU of the countries of the European Union are often overlooked in discussions about the EMU as if the single currency will solve all the problems. Our argument is that if in the European Union the NAIRU exists, besides its volatility, it also is ill-defined because of the wide dispersion of unemployment rates around the mean. This is particularly pertinent at the regional level of measurement. However, this will not prevent the ECB from reaching its target of price stability. In fact, the ECB will inherit a low inflation rates from the compliance of the EMU

participants with the entry criteria. Therefore, the main aim of the ECB in its first years will be to maintain price stability. But besides the institutional aspects of the single currency, the relations of the ECB with the financial markets and the public are also important. The EU is aware that "selling" the euro to a skeptical public means that it must convince the people it will bring prosperity and jobs. But the discipline imposed by monetary union rule means that employment is a low priority target and increasing spending on job creation by the governments of the EU member states is practically overruled. Therefore, the European aspiration for price stability at a minimum level of unemployment may be unattainable in the foreseeable future, despite the rhetoric of the European initiative.

In recent years, there has been a remarkable convergence in the inflation rates of the European countries. But, while inflation has been stabilised at a low level, unemployment has not fallen or in some cases it has risen. There is also a great diversity in the inter-country rates of unemployment. There have been a large number of competing explanations for the rise of European unemployment[2] but in the end what they amount to is that:

- "Different European countries are effectively different labor markets" which "exhibit enormous diversity" (Nickell, 1997, p. 55);
- there is no single and stable European natural rate of unemployment; there may be 15 volatile national NAIRUs one for each EU member state[3];
- there is great diversity and insignificant convergence between these 15 NAIRUs.

To these we add that in the EU:

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[2]See Bean (1994); and Nickell (1997).

[3] In contrast to the European countries for most of which there are no statistically reliable Phillips curves and "natural rate" of unemployment estimates, in the United States there are estimates of a seemingly stable natural rate at around 6 percent unemployment: Gordon (1997).

- there is a wide range of regional unemployment associated with any given rate of inflation;
- there is insufficient labour mobility within and between the EU states.

Therefore, our argument is that the European Central Bank will achieve and maintain its target of price stability. But it will be difficult for the ECB and the governments of the member states to pinpoint a stable rate of low inflation which will be associated with a corresponding stable level of low unemployment. For ECB purposes, there may be no empirical regularity between the target inflation rate which it will pursue, reach and maintain and the unemployment rate which will remain high and probably variable. It is also likely than unemployment would rise further because of the still unresolved regional inequality problems which may worsen by monetary integration. These problems and the associated regional income disparities may have important implications on stability, social cohesion and the progress towards economic integration. Eventually, to decide whether monetary integration is beneficial overall and for all the members of the EMU, the cost of higher unemployment must be compared with the positive gains of price stability.

## 2. Mean Unemployment and Dispersion in the EU

A single currency means that countries can no longer use changes in the exchange rate to cut real wages when labour demand falls. When labour markets are rigid, monetary union makes sense if regional labour mobility can substitute for real wage adjustment to absorb a regional shock. Unemployed workers could migrate to another region, add to its employed labour force, increase its income and demand, and thus undo the effects of the shock. If labour migration is unavailable, regions will be unable to adjust to an asymmetric shock and will have to go through a period of

protracted unemployment until real wages fall to the desirable level. In Europe, both labour mobility and wage flexibility are limited and therefore unemployment is high.

In practice, commodity prices adjust fast and, therefore, at the national level price dispersions are assumed away. In principle, migration should operate in the labour markets to even unemployment discrepancies in a similar equalising way: labour from high-unemployment regions should move to low-unemployment regions. Then by interregional wage convergence regional inequalities and unemployment differentials would be eliminated. However, wide dispersions in the unemployment rates exist and are persistent for reasons associated with the general regional inequality problem. The natural process of adjustment anticipated by the classical model is not only slow but also uncertain because the conditions necessary for 'convergence' are not always satisfied. For instance, capital and labour might not be perfectly mobile and persistent disparities among regions may exist in production technology, economies and diseconomies of scale, obstacles to the market mechanism and the quality and skill of labour supply. Therefore, regional disparities can be self-perpetuating and, in the absence of intervention in support of the market forces, self-reinforcing.

Unemployment rates across EU member states differ widely, ranging from 2.7 per cent in Luxembourg to 22.3 per cent in Spain (April 1995). At the level of individual regions, the disparities across the Community are even wider. They widened for much of the 1980s and by 1990 'unemployment in the ten worst-affected regions averaged 25.3 per cent, seven times higher than in the ten least affected regions where rates averaged just 3.6 per cent' (Com, 1994). In 1995, among the 169 regions of the Community for which harmonised regional unemployment data are available, the unemployment rate ranged from 2.7 per cent (in Luxembourg which makes up one region; or 3.9 per cent in a 'proper' region, Trentino-Alto Adige, Italy) to 33.3 per cent (Andalusia, Spain). Figure

1 shows the frequency distribution of the regional unemployment in the EU in 1993 (U93) and 1995 (U95). Table 1 shows that the ratio of the highest regional unemployment rate to the lowest, which can be taken as a measure of the regional inequality in employment within a country. It ranges from 6.6 in Italy to 1.6 in the Netherlands and Sweden. But at the level of the Community, which after completion of the single market can be considered as one entity comprising the entire set of member states' regions, it reaches 11.3 thus suggesting a very high level of EU interregional inequality. During the period 1983-95, only 16 per cent of the EU regions displayed an unemployment rate lower than 6 per cent. In 1995, the situation worsened with only 10 per cent of the regions in the high employment category. These advantaged regions have remained in the same category for at least 10 years and are clustering in a small number of nearby areas, the south of the Netherlands and of Germany, the north of Italy and the north east and south west of Denmark[4]. At the opposite end of the spectrum 19 regions experienced unemployment above the 15 percent rate in 1995. The disadvantaged regions are at the periphery: they are concentrated in Spain, the south of Italy and parts of Ireland and Finland. With the exception of Finland, these high unemployment regions have remained

[4]Some regions of Portugal and Greece also belong to this category of unemployment. This is partly explained by the weak social security systems of these two countries, which reduce the incentive to register as unemployed, and the high dependence of their population on agriculture, which implies underemployment. In general, official unemployment statistics are suspect. For example, the UK official unemployment rate of 5.2 per cent, which is based on the number of people claiming unemployment benefit, sits oddly with the finding that between one-in-four and one-in-five British families have no wage earner. Eurostat estimates the unemployment by combining the results of the Community labour sample survey with information on the regional structure of the number of registered unemployed (but for Italy, Portugal, Spain, Greece, and the Netherlands: the regional structure of the number of unemployed according to national labour force surveys): Eurostat (1997) Regions, p. XI. The classification of regions is at NUTS2 level.

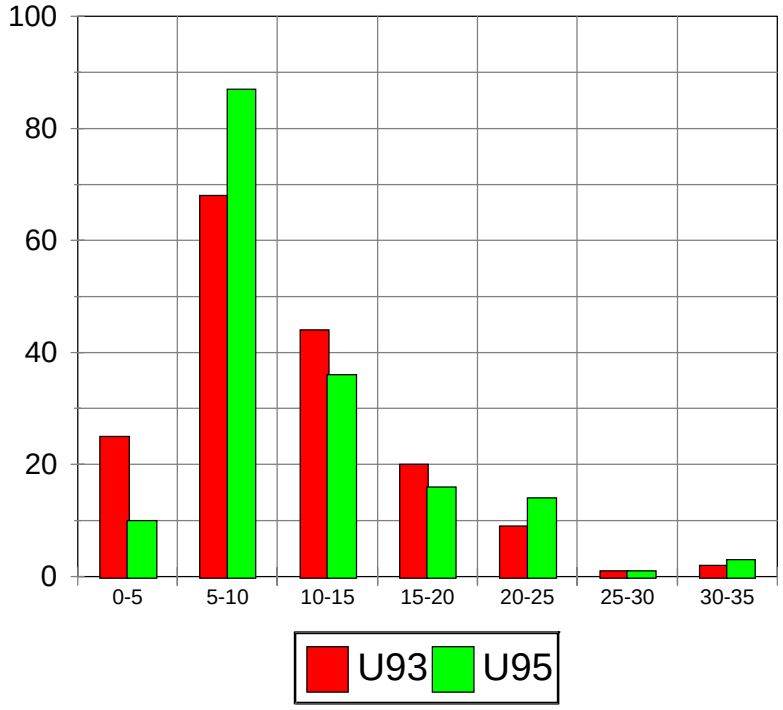


**Figure 1**: Frequency Distribution of EU Regional Unemployment in 1993 and 1995

in the same group for more than 10 years[5]. Therefore, this is not a case of asymmetric shocks causing

[5]The correlation coefficient between the regional unemployment rates of 1993 with those of 1995 is 0.954. In fact, the regression of the unemployment rates of 1995 (U95) on those of 1993 (U93) shows their close relationship and the stability of unemployment over these two years:

$$U95 = 0.769 + 0.973\ U93$$

diverse effects on unemployment but of a permanent pool of persistent regional unemployment imbalances which are invariant to temporary shocks and to cyclical disturbances. The interregional differentials suggest that the problem of unemployment has a regional dimension: many countries exhibit structural inequalities which result in the coexistence of regions with high employment and regions with high unemployment. These problems are regional and cannot be solved by national monetary policies.

Relative to their shares in the Community's GDP, Spain, Portugal, Italy, Greece, Finland, Ireland and the United Kingdom display the worst overall incidence of unemployment among the member states, contributing 57 percent to the Community' s total unemployment (10.2 million out of 17.8 million of total unemployment in the EU in 1995), while they share between them only 37 percent of the EU-gdp. In other words, the rate of unemployment is highest in the countries which are the least able to afford it. Alternatively, the cost of unemployment in terms of income loss is largest where the unemployment is highest. Spain presents the worst performance among the EU countries with its share of unemployment in the EU being about three times larger than its share of GDP: see Figure 2.

The pattern of the regional distribution of unemployment within the Community suggests the existence of poles of development and high employment within the EU as well as the inability of the regional problem to self-correct, and of the regional policy, both national and Community, to solve it. Despite the efforts made, regional disparities in the EU with regard to incomes, infrastructure and levels of employment are still very wide: "by comparison with the 10 most

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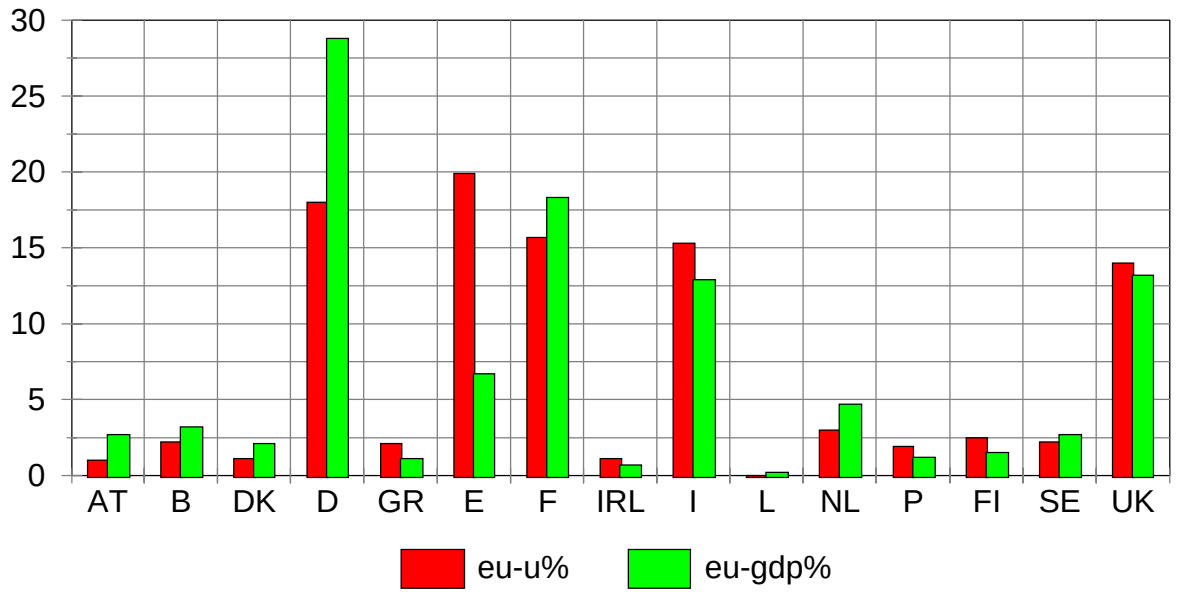
t-values 2.748 41.219
$R^2 = 0.911$, $F(1, 167) = 1698.99$, $\sigma = 1.740$.

prosperous regions of the Economic Union, the 10 poorest regions have an average per capita income which is three-and-a-half times lower and an unemployment rate which is six times higher"




(European

**Figure 2**: Member States' Shares in EU Unemployment and GDP in 1995

Parliament, 1996, p. 4). Market integration with centralisation of monetary policy may very well fortify the centripetal forces within the EU, resulting in higher concentration of economic activity to the established growth poles within the "hard core" of the Community - Germany and its neighbours: France, Belgium, Luxembourg, the Netherlands, Denmark, Austria and Sweden. Therefore, economic activity at the peripheral regions of the Union - Ireland, Portugal, Spain, Italy, Greece, Finland and the United Kingdom - may be affected negatively and disproportionately from the effects of economic

and monetary integration[6].

## 3. High Unemployment Regions and Migration

One of the questions considered by the literature for evaluation of the cost/benefits of EMU is: are external shocks and the exchange rate important for unemployment? If the answer is yes, then the conclusion is that the cost of EMU will be high: countries will be better off by keeping their own currency and national monetary policy. However, this will not be the case if labour mobility, which operates as the shock absorber, is high.

Studies have shown that the contribution of interstate migration in the United States plays a major role in the elimination of regional labour-market disequilibria, dominating that of wage flexibility and labour force participation (Blanchard and Katz, 1992). It seems, however, that in the US the driving force for the large scale mobility of labour is not wage differentials but the interstate movement by firms. Since in the EU the cross-border movements by firms are relatively limited, in the case of country-specific shocks labour migration is unlikely to be a strong force for adjustment. Labour market studies concentrating on the European case have confirmed these conclusions. For example, they have found that in the first three years following a disturbance most of the decline in regional labour demand is met by increased unemployment and reduced labour force participation, that is by workers dropping out of the labour market. Only four years after the shock the impact of migration becomes evident (Decressin and Fatas, 1995). These results suggest that Europe is less

[6]The classification of countries in the "hard core" group and the periphery is based on the degree to which various macroeconomic indicators, e.g. output, real exchange rates, unemployment, etc., are correlated across countries: see Bayoumi and Eichengreen (1994).

suited for monetary union than

**Table 1**: Regional unemployment in the Community - April 1995

| Rates | B | DK | D | GR | E | F | IRL | I | L | NL | P | FI | SE | UK | EU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.Highest** | 15.9 | - | 18.6 | 13.2 | 30.5 | 15.3 | - | 25.9 | - | 9.6 | 11.4 | 21.7 | 12.0 | 13.0 | 30.5 |
| **2.National** | 9.5 | 7.1 | 8.2 | 9.0 | 22.3 | 12.4 | 14.3 | 12.3 | 2.7 | 7.5 | 7.1 | 16.8 | 9.5 | 9.0 | 11.2 |
| **3.Lowest** | 5.3 | - | 4.1 | 4.1 | 12.6 | 7.1 | - | 3.9 | - | 6.1 | 3.9 | 6.2 | 7.3 | 6.7 | 2.7 |
| **4. s.d.** | 3.6 | 2.0 | 3.6 | 2.8 | 5.8 | 2.1 | 0.9 | 7.1 | - | 1.0 | 2.6 | 5.7 | 1.6 | 1.7 | 6.0 |
| **5.Ratio:1/3** | 3.0 | - | 4.5 | 3.2 | 2.4 | 2.1 | - | 6.6 | - | 1.6 | 2.9 | 3.5 | 1.6 | 1.9 | 11.3 |
| **6.Inflation** | 1.4 | 1.7 | 2.2 | 9.3 | 4.9 | 1.7 | 2.2 | 5.0 | 3.5 | 1.4 | 5.0 | 2.7 | 4.1 | 2.4 | 2.9 |
| **7. U%** | 2.2 | 1.1 | 18.0 | 2.1 | 19.9 | 15.7 | 1.1 | 15.3 | 0.0 | 3.0 | 1.9 | 2.5 | 2.2 | 14.0 | 100.0 |
| **8. GDP%** | 3.2 | 2.1 | 28.8 | 1.1 | 6.7 | 18.3 | 0.7 | 12.9 | 0.2 | 4.7 | 1.2 | 1.5 | 2.7 | 13.2 | 100.0 |

Notes: s.d. = standard deviation; U%= national share in the total EU-Unemployment, April 1995; GDP%=national share in the EU-GDP, 1995, in Purchasing Power Parity terms. Inflation rate is the GDP deflator. Regional unemployment data for Austria are not available; Austria's share in EU-Unemployment is 1.0 and in EU-GDP is 2.7.

Sources: Data compiled from: Eurostat (1996), Regions: Statistical Yearbook; and European Economy (1996): Broad Economic Guidelines.

the USA. This conclusion is reinforced by the estimated elasticity of interregional migration with respect to both unemployment and wage differentials which are significantly smaller in the EU countries than in the United States (Eichengreen, 1993). Therefore, despite the *de jure* removal of many of the obstacles to factor movement, labour mobility within and between EU countries remains limited, thus resulting in persistent unemployment which has become the substitute for interregional migration (Thomas, 1994). The low labour mobility between the EU member states is often attributed to cultural and social barriers[7] as well as to the relative inflexibility of European labour markets[8]. Whatever the reason for low labour mobility, the conclusion reached by most studies is that Europe is characterised by low response of migration to region-specific shocks and, therefore, the EU is less suited for monetary union than the United States. But some studies rightly suggest that since the sluggish labour market response to unemployment is as much a problem within member states as across Europe as a whole, monetary union may be no more risky than the *status quo* of national currencies (Decressin and Fatas, 1995). However, these generalisations are not justified by the considerable variation in the relationship between unemployment and migration among the European regions. An explanation for this interregional diversion might be that in several regions the unemployed workers are unskilled (e.g., redundant agricultural labour) or become unskilled during the lengthy period of their unemployment as rapid technological progress (such as information technology) leaves them behind. Therefore, increasing wage flexibility cannot induce migration and therefore on its own it cannot solve the problem of persistent regional unemployment.

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[7]But this explanation ignores the large waves of (mostly but not exclusively) seasonal migration from Southern Europe to Northern Europe in the 1950s and the 1960s which ended after the oil crises of the 1970s.

[8]An additional reason might be that once income exceeds a certain threshold people are no longer willing to incur the psychological cost of moving (Faini, 1994). But this does not explain why USA labour, which is relatively well off, continues to be highly mobile.

To examine this proposition we calculated the correlation coefficients between net migration (%) and unemployment (%) at the regional level of each EU member country[9]. Only Germany, Portugal, Finland and Sweden among the EU countries display high and negative correlation between the two rates, implying that regions with high rates of unemployment experience net emigration. It can be argued, therefore, that only in four of the EU countries increasing unemployment might induce labour mobility[10].

For a better understanding of this issue it is more appropriate to examine the regional relationship between unemployment and migration at the EU level. For this we sorted the 169 EU regions in descending order of the unemployment rate. This classification yielded unemployment median equal to 9.2 percent, with the lower unemployment quartile (25% of the sample, that is 42 regions) at 6.0 percent median and 4.8 percent mean unemployment; and the higher unemployment quartile ( 25% of the sample, that is 42 regions) at 13.1 percent median and 18.6 percent mean unemployment. There is no statistically significant relationship between the rates of net migration and unemployment in the 42 highest unemployment European regions which account for about 45 per cent of the total EU unemployment. In contrast, there is a statistically significant relationship between the two rates in the remaining 127 regions (75% of the sample) of lower unemployment rates with estimated elasticity of net migration with respect to

[9]An unresolved issue in this type of analysis is to decide what degree of correlation is sufficiently high to support a proposition. In this case we adopt as benchmark a correlation higher than 0.3. The unemployment data of our study refer to April 1993 and the net migration data to the year 1993. Using the April 1995 unemployment data instead of those of April 1993, the results are similar. Luxembourg, Denmark and Ireland make up one region each, and regional data for Austria are not published. Therefore, for these four countries correlation coefficients cannot be calculated.

[10]Evidence from the UK (McCormick, 1997) and Spain (Antolin and Bover, 1997) confirms that in these two countries unemployment is not a push factor of labour mobility: “individuals do not respond to their own unemployment nor to high unemployment in their regions by migrating” (Antolin and Bover, 1997, p. 230). Therefore, migration does not contributed to a reduction in the pattern of interregional differentials of unemployment.

unemployment equal to -1.05: that is, an increase in unemployment causes an equiproportional emigration from these regions[11].

This result confirms that there is a core of hard hit unemployment regions where the mobility of labour is low. It is this group of regions that keeps the unemployment rate high in Europe and distorts the statistics of labour mobility induced by unemployment. The question is why the unemployed labour of these regions does not emigrate to other regions, within the same country or in other countries, in search of better employment opportunities?

## 4. Persistent Unemployment in the EU

Three explanations for the persistence of high unemployment in Europe in the 1990s have been offered: labour market rigidities, hysteresis and skill-biased technological progress.

The OECD (1994) *Jobs Study* has attributed the high unemployment to labour market rigidities which arise from the welfare state, minimum wage rates and the high cost of legal

[11]For an explanation of regional unemployment see Antolin and Bover (1997). Our analysis is based on correlation coefficients. But, without attempting to explain anything, we also ran regressions of the net regional migration, M93, on regional unemployment, U93, using the 1993 set of data. The estimates for the 42 high unemployment regions (45% of the total EU unemployment) are:

$$M93 = 15.59 - 0.90\ U93$$
$$\text{t-values} \quad 1.44 \quad 1.60$$
$$R^2 = 0.06,\ \sigma = 15.86,\ F = 2.56$$

For the 127 lower unemployment regions (55% of the total EU unemployment) the estimates are:

$$M93 = 9.71 - 0.64U93$$
$$\text{t-values} \quad 6.86 \quad 3.70$$
$$R^2 = 0.100,\ \sigma = 5.19,\ F = 13.76,$$

and the elasticity of migration with respect to unemployment is e = -1.05. Regional heterogeneity could perhaps explain why 'one of the most perplexing problems in migration research was the failure of local unemployment rates to consistently operate in the expected direction' (Greenwood, 1993).

restrictions of hiring and firing employees. Thus, unemployment benefits lower the incentive for job search and increase wage pressure from those in work; minimum wages price the least skilled out of the market; and firing costs deter hiring, reducing labour demand and hampering the economy's ability to deal with uncertainty and structural change. Hence the frequent recommendation for a more flexible labour market. However, the empirical evidence for this explanation is rather weak. In a variant of the labour-market rigidities explanation, the EU takes the line that the persistence of regional unemployment reflects a relatively high inflexibility of regional real wage structures which are set by national wage bargaining and often do not reflect the interregional productivity differentials. The institutional differences in the wage setting process also play a role in the different unemployment rates across the member states. Accordingly, the solution to the problem of regional unemployment is labour market liberalisation, institutional reform and a higher degree of regional wage differentiation in accordance with regional differences in productivity levels.

The second explanation is that temporary shocks have persistent effects on the human capital of the unemployed, their job search effectiveness and the perception of employers about them. A long period of unemployment increases the stock of the long-term unemployed who lose their skills and their work habits. Skill deterioration may lead to wage offers below the reservation wage rate, encouraging the unemployed to drop out of the "effective" labour force, although they may still appear in the unemployment statistics (Bean, 1994). Some also add that generous unemployment benefits and slow response by governments to the problem of unemployment help to turn this situation into a lasting feature of many European economies. Therefore, it is difficult to get unemployment down once it has been allowed to rise. The result is an apparent increase in the natural rate of unemployment. However, although all these points sound possible, the empirical evidence for this track of explanations is ambiguous.

The third strand of research has examined the role of skill-biased technological progress. The argument is that in recent years the demand for skilled labour has risen fast while the demand for unskilled labour has fallen. For example, the skilled-wage premium has risen sharply as a result of technological change that has sifted demand in favour of skilled-intensive sectors. Thus the skilled-biased technological progress has led to increasing unemployment of the unskilled which has pushed up the overall rate of unemployment in Europe (Krugman, 1994). In addition to these problems, the increasing pace of international economic integration has caused unskilled labour to become more easily substitutable across national borders by increased trade and investment flows. According to some studies, the rise of globalisation caused the hourly wages of young low-skilled American workers to drop by 20 percent between 1979 and 1989, while in Europe real wages at the bottom of the skill distribution rose, but unemployment has increased significantly (Freeman, 1996).

Our explanation is based on regional inequality and is an extension of the latter two strands. Long-term unemployment in times of rapid innovation (such as information technology) and advancing globalisation reduces progressively the technological skills of the unemployed and weakens their work habits. Long-term unemployment is a dominant characteristic of some comparatively disadvantaged regions which, because of changes in production and international trade, have been left behind in terms of human and physical capital investment, technological progress and labour skills. Thus, through time, the unemployed of these regions have become unemployable both in the region of their residence and in every other region. Globalisation has, perhaps, accentuated this problem with production requiring unskilled labour moving to less developed countries. Therefore, for the unskilled and unemployed labour of Europe emigration in search of a job is not an option. In contrast to the unskilled labour, the mobility of qualified workers between EU countries is growing in importance, causing concern in some member states

because of the perceived risk that this integration-induced "brain drain" is permanent (Sexton *et al.*, 1991). Therefore, to the extent the bulk of European unemployment consists of the least qualified workers and it is high because of the inherent problems of regional inequality, unbalanced technological progress, labour skill gaps and progressive loss of comparative advantage, the reduction of unemployment and the adjustment to a lower European NAIRU will take a long time[12]. In the shorter-run, the increasing economic integration of Europe may lead to reallocation of employment and production within the EU by widening and deepening the Union over time. While industrial concentration will ignore national borders, monetary integration may lock some regions (and countries) into uncompetitive positions. Therefore, any existing 'cost advantage of "peripheral" regions may become smaller as further economic integration leads to the harmonisation of macroeconomic conditions and upward pressure on wage levels" (Commission, 1994). It can be argued that economic growth will bring the "automatic" adjustment of regional disparities into action. But this process of reinstating equilibrium could take a very long time. Alternatively, it can be equally argued that, if the economy exhibits increasing returns, the reduction of trade barriers could improve the attractiveness of existing centrally located growth poles (Krugman and Venables, 1992), leading to a concentration of economic structure. Industrial agglomeration in one location attracts new investment, offers new opportunities for work and prompts workers to move there. But these will be the skilled workers who have

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[12]The alternative to targeting inflation on the natural rate of unemployment is to target it on the "natural output" level, y. Then the loss function takes the form:

$$\mathbf{L = (p - p^*)^2 + ay^2}$$

where $a \geq 0$ denotes the weight on output stabilisation around the natural output level. However, this approach will also entail problems for the ECB because there is no easy way to estimate the natural output level of Europe. Since the combined contribution of Germany, France and the Benelux countries to the EU-GDP was in 1995 about 55 percent, it can be argued that the ECB could base its policy on the "natural" GDP level of these countries. But this could be regarded as demotion of all other countries and their economies to the periphery.

increased their flexibility and competence by keeping pace with technological developments. The unskilled will remain unemployed in the declining peripheral regions. In the EU, where regional economic policy has remained weak and ineffective, there is no common fiscal policy for alleviating the existing and probably widening differentials between the EU regions (Hitiris, 1996). Without an efficient policy for balance development, the process of economic and monetary integration may deepen the problem of regional inequality and 'migration cannot realistically be expected to play much of a role in reducing current unemployment disparities in Europe' (Begg, 1995).

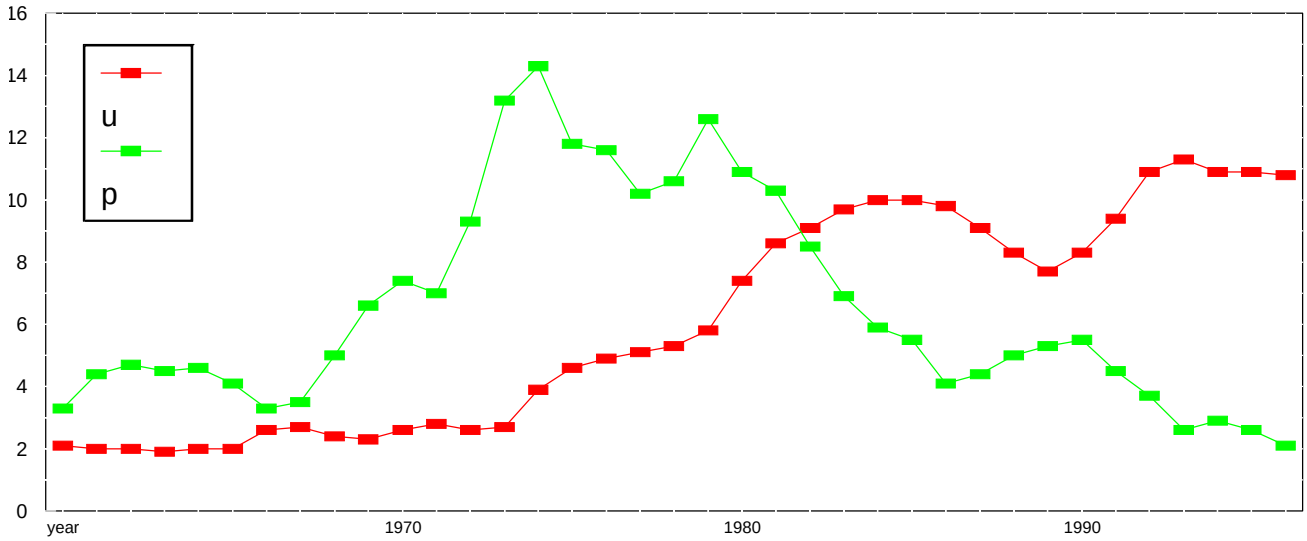
## 5. The ECB's Targets and Policies

The ECB will operate independently under a legal mandate to ensure price stability. This is not an easy task because there is no information about how the European economy behaves and what degree of credibility the ECB will gain from the public. Conditioning the entry to the EMU on the "convergence criteria" means that the ECB will inherit its position with inflation rates in the member states close to its target of price stability. But how this position will be maintained is not known because the ECB will be a new institution without a track record[13]. Therefore, in Europe the credibility of monetary policy will evolve over time and the reputation of the ECB will develop by a process of learning and communicating with the financial markets by greater transparency: clarifying its goals to the public and the links between these goals and its day-to-day

[13]However, it is assumed that the ECB, on behalf of the "ins", will follow the successful example of the Bundesbank by adopting an intermediate money target while aiming at a specific inflation rate. Then the "outs" would be expected to stabilise their exchange rates towards the euro. Needless to say that the ultimate target of economic policy is (or should be) the improvement in the standard of living.

actions and responses to temporary economic shocks - that is by establishing a monetary framework. Studies have shown that the recent history of the unemployment rate in Europe would not help the ECB

**Figure 3**: Inflation (p) and Unemployment (u) in the EU-15 countries, 1962-97




to forecast the inflation rate because a European NAIRU does not exist or, if it exists, it shifts often and unpredictably[14], so that the band of statistical uncertainty surrounding it is so broad as to render it useless for the conduct of policy[15]. These conclusions may not be right. Figure 3 illustrates the evolution of inflation (p) and unemployment (u), and Figure 4 the evolution of the 97. Both Figures clearly show that there is a negative relationship between inflation and

[14]This is also confirmed by recent research (for France and the UK) which has found that "the data are consistent with multiple equilibria models where large shocks bring the economy from one equilibrium to another, and also with models with a moving natural rate" (Bianchi and Zoega, 1997).

[15] Shifts in the NAIRU are not uncommon. In the United States, the NAIRU "is estimated to have increased steadily from 3.5 percent in the mid-1960s to a peak of 7.25 percent in 1980, and then to have fallen back to about 5.75 percent in 1988" (Adams and Coe, 1990). There are no reliable estimates of an aggregate European Union NAIRU. This does not mean that it does not exist: it means that the methods employed (mostly regression analysis) failed to detect it.

unemployment in Europe. However, this relationship may not be linear[16] and systematic. One of the many reasons that might have contributed to this performance could be that the rate European unemployment is high and widely dispersed between the regions which display low response to labour market disequilibria[17]. We have argued that a factor contributing to this phenomenon is the relative immobility of labour from high unemployment regions to high employment regions which is the outcome of a vicious circle: long-term unemployment causes skill loss, which makes labour

unemployable and therefore immobile. To brake these conditions, the EU needs to implement concerted action to liberalise the labour markets, accelerate convergence and raise the skills of the unemployed. This will also help the EU to gain a competitive position and comparative advantage in the world markets. But this is a long-term project. For example, in the case of Spain four million jobs are needed to reduce unemployment significantly. This may require drastic deregulation of the labour market accompanied by 5 per cent annual GDP growth sustained over the course of a decade (Bentolila and Dolado, 1994). An *ex post* assessment has also estimated that by 1994 the Single Market Programme generated 600,000 additional employment posts (Commission, 1996), which are very few when the unemployed are 18 million. Economic growth on its own takes a very

long time to solve the unemployment problem. Under plausible conditions and parameters, it may take as long as a quarter century to eliminate by capital accumulation alone an unemployment rate

[16]Indeed, the Phillips curve may be non-linear with an asymmetry in the unemployment-inflation tradeoff. The implication of these properties for economic policy are that unsuccessful policies to reduce the business cycle may induce more unemployment (Debelle and Laxton, 1997).

[17]The long-term unemployment is less variable than the short-term unemployment. Therefore, the tradeoff between unemployment and inflation may exist only with reference to short-term unemployment (Nickell, 1997). Figure 4, which illustrates rates of change, could be considered as a representation of this case.

of 5 per cent (Coleman, 1997). The European Parliament (1996) also notes that: “As things stand at present, a region with GDP of 50% of the Community average will take some 20 years to

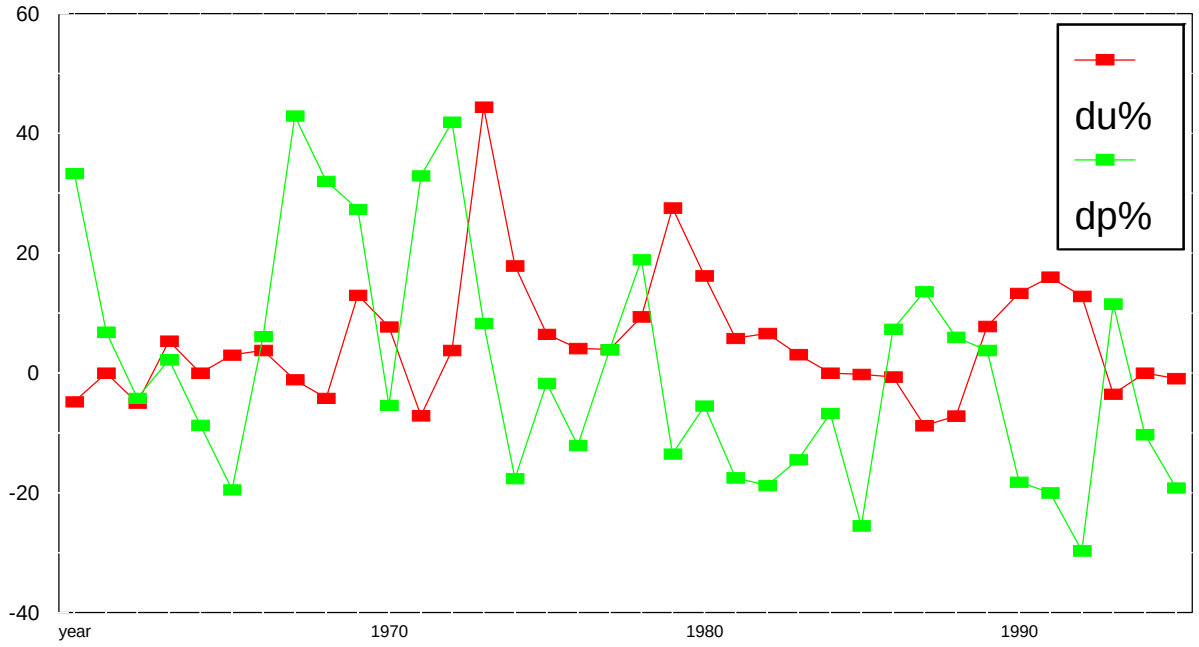



**Figure 4**: Changes in Unemployment (du%) and Inflation (dp%) in the EU-15, 1962-95

increase that figure to 70%”.

The reduction of unemployment is not among the explicit targets of the ECB or of any other centralised institution of the EU. It is one of the objectives left to the national governments of the member states which have agreed to collaborate to achieve it. At a special summit at Luxembourg in November 1997 the European leaders hailed a new strategy for tackling the

unemployment crisis with an agreement on new common guidlines for job creation and helping the young and the long-term unemployed. The proposed policies will be coordinated at the centre but will be based on the EU member states which will have to submit national action plans to cut unemployment once a year. Among the measures proposed to ease the problem of unemployment in the next 5 years uneder the "employment guidelines" are included the following:

- the European Investment Bank would raise an extra Ecu 10 billion to finance small and medium-sized businesses, new technology ventures and job-intensive projects in service sectors including health and education
- all unemployed persons under 25 would be offered a new start before being out of work for six months
- older unemployed persons would also be offered a new start within a year
- member states would have to simplify rules on small businesses, to develop more flexible markets, and to reverse the long-term trend towards higher taxes and charges on labour.

Although these are moves in the right direction, the unemployment problem cannot not be solved within 5 years[18]. The point is that the existing high unemployment in Europe should not be seen as the price we have to pay for monetary stability. The results presented here, which are suggestive rather than definitive, imply that monetary policy for price stability can be achieved but unemployment will continue to be high. If monetary integration results in more regionally specialised production, which could increase the magnitude of idiosyncratic regional shocks, then

[18] The European Commission had earlier called for quantifiable and verifiable targets, such as "cutting the unemployment rate by 7% by creating 12 million jobs in 5 years", to strengthen the credibility of the fight against EU unemployment. But on 7 October 1997 employment and social affairs ministers from the 15 EU countries expressed concern that the adoption of headline targets would raise false expectations that could lead to a popular backlash if these ambitious objectives are not met. In other words, they doubted whether the Commission's targets and the timetable for the proposed solution of EU unemployment were realistic.

the cost of monetary unification in terms of unemployed labour will rise. The policies of the ECB should take into account the balance of costs and benefits for all the countries and regions of the Community.

## 6. Summary and Conclusion

The European Central Bank's primary objective is the maintenance of price stability while the objective of full employment is left to the member states which under the European initiative have agreed to coordinate their policies to fight unemployment. It is usually assumed that in the short-run there is a tradeoff between inflation and unemployment while in the long-run monetary policy can achieve price stability with unemployment settling at its "natural" rate**.** The problem for the ECB is that in Europe: (i) the relationship between unemployment and inflation is not stable; (ii) the "natural rate" of unemployment is high; and (iii) at the interregional level the response of labour mobility to unemployment is low.

In the EU member states inflation is low while the unemployment rate has remained high and widely diverging between regions and across countries. One contributing factor to this phenomenon is the relatively low labour mobility. This is manifested especially at the regional level where significant regional unemployment differentials persist while labour from high unemployment regions does not migrate in search of jobs to other regions within the same country or other EU countries. This suggests the possible existence of a vicious circle: long-term unemployment causes skill loss, which makes labour unemployable and therefore immobile. To brake these conditions, the EU countries must raise the skills of the unemployed by concerted action, which is a long-term project that will help reduce the natural rate of unemployment. In the meanwhile, if the timing of demand and supply disturbances differs across regions and EU

member states, labour market adjustment cannot be the equilibrating mechanism necessary for coping with shocks.

Through time, region-specific shocks may become more frequent as a result of the effects of the completion of the single market and of monetary integration on comparative advantage, regional specialisation and reallocation of production and demand. Accordingly, it is often argued that the low responsiveness of migration to unemployment means that Europe is not suited for monetary union. This argument is based on the assumption that in the EU regional business cycles are fairly pronounced and can be stabilised by exchange rate changes. However, the existence of interregional differentials within countries suggests that the problem of European unemployment has a regional dimension: many countries exhibit structural inequalities which result in the coexistence of regions with high employment and regions with high unemployment. These problems cannot be solved by national monetary policies. Therefore, although the problem of regional disparities is important for economic welfare, it does not seem to be particularly relevant for monetary integration.

The European Central Bank (ECB) has no track record to rely upon and, therefore, it has to establish its reputation and credibility. Our conclusion is that the ECB will be able to reach its objective of price stability by GDP and inflation forecasts. But price stability will continue to be accompanied by the burden of high and in the case of some disadvantaged regions increasing unemployment which will be the cause of persisting and perhaps widening interregional inequality. This will impose costs from income loss which must be set against the long-term benefits of monetary integration to the disadvantage regions which might accrue by the diffusion of growth and its positive effects on employment. Unemployment is undesirable because a scarce resource, labour, is underutilised. Both, unemployment and inflation reduce society's overall economic welfare. Therefore, monetary stability will be more beneficial for the peoples of Europe

if it is combined with policies fostering balanced growth with maximum employment. This requires an integrated cohesion strategy encompassing policies for employment and regional development which will induce and accelerate real convergence for all the regions of the countries participating in the European Economic and Monetary Union.

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