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Employment in Europe



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# The impact of EMU on European unemployment



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## 1. Introduction

Persistent unemployment is the top social and economic problem of most EU countries. Today, the unemployment rate in most EU countries is above ten percent and, although unemployment has decreased during expansions, the average EU unemployment rate within each cycle has increased since the early seventies. Although unemployment evolutions have been to some extent similar in EU countries, there are some outliers. On the one side, Portugal, Austria, the UK, the Netherlands, and Luxembourg, which have unemployment rates close to or below seven percent, are the “low unemployment” countries. On the other side, Spain, with roughly 20 percent unemployment, and Finland, whose unemployment rate is close to 15 percent, are the extreme examples of the EU unemployment “disease”. Participation rates, the incidence of unemployment among some population groups (the young, females, and low-skilled workers), and the duration of unemployment spells also vary across EU countries. This variation suggests that there may be some peculiarities in the unemployment situation of these countries. However, the overall situation regarding unemployment is that most of these countries are “converging” to unemployment rates close to or above ten percent.

In this situation, most EU countries' governments are under pressure to fight unemployment precisely at the time when they are about to enter a monetary union. The topic that we address in this paper is to what extent Economic and Monetary Union (EMU) will affect the future evolution of European unemployment. At first sight, it may seem that this topic should not deserve much attention. After all, under the traditional macroeconomic paradigm, the question about the impact of EMU on unemployment has a straight answer. In particular, since in the long run unemployment is determined by real factors; since EMU is, in principle, just a change in the monetary regime; and, since monetary policy ought to be neutral in the long run, EMU should have no effects on unemployment over that horizon.

However, in our view, there are at least two reasons to feel uneasy about this proposition. First, we shall not quote Keynes on the relevance of the “long run”, but one thing we have learned about European unemployment over the last two decades regarding the effects of some transitory shocks on unemployment is that the long run can be “very long” (see, for instance, Bean, 1994). Secondly, EMU will not just imply a change in the monetary regime. The entrance into EMU has to be achieved under certain conditions (the fulfilment first of the fiscal requirements laid out by the Maastricht Treaty, and, then, of the Stability and Growth Pact) which have influenced and will continue to influence the European macroeconomic scenario. Furthermore, EMU may bring up some real effects, for instance, on price setting - through the deepening of economic integration -

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*This paper partly draws on Viñals and Jimeno (1996). The views expressed by the authors are purely personal and do not thus necessarily coincide with those of the institutions with which they are affiliated.*

and on wage setting - through changes in the wage determination process - which may have some effects on unemployment.

We organise our discussion of the likely effects of EMU on unemployment in several steps. In section 2, we discuss some empirical evidence that is relevant for the discussion of the costs of forgoing the nominal exchange rate as an instrument for short-term macroeconomic adjustment. First, we estimate the sources of shocks to unemployment across EU countries and disentangle the "common" European component of those shocks from the national/regional component. Second, we survey some evidence on the sources of exchange rate fluctuations. Third, we report some estimates of the degree of real wage rigidity across EU countries in order to gauge the extent to which nominal exchange rate changes translate into real exchange rate changes. Finally, we discuss some evidence on the impact of real exchange rate fluctuations on employment at the industry/regional levels. In section 3, we look at the effects of EMU on macroeconomic policies, with particular emphasis on the Stability and Growth Pact, and on price and wage determination processes, so as to assess the overall consequences for unemployment. The paper ends with section 4, which contains some concluding remarks.

## 2. The costs of a common currency

The early theoretical literature on Optimal Currency Areas reached some clear conclusions on the costs of forgoing the nominal exchange rate as an instrument for short-term macroeconomic adjustment. These costs will be, *ceteris paribus*, smaller when shocks require little movement of the real exchange rate to restore equilibrium (i.e., shocks are "symmetric" rather than "asymmetric" or idiosyncratic), when nominal exchange rates move in response to monetary and financial shocks rather than to address real imbalances, and when real exchange rates are little affected by nominal exchange rates. In this section we present a brief survey of the empirical evidence on these issues. From this evidence we shall conclude that, as far as unemployment is concerned, the short-term costs of forgoing nominal exchange rate flexibility as a tool for macroeconomic stabilisation are likely to be rather limited.

**The short-term costs of forgoing nominal exchange rate flexibility are likely to be rather limited.**

### 2.1. The sources of shocks to unemployment

In order to infer how symmetric shocks could be under EMU, recent empirical analysis has generally looked at the present situation in the EU and compared it to the US (1). While the evidence is far from uncontroversial (see Viñals, 1994, and 1996 for surveys), the dominant conclusion seems to be that asymmetric shocks are quantitatively more important in the EU than in the US. However, a subset of EU countries known as the "core" - Germany and EU countries which have traditionally maintained closer economic and monetary links with it - are rather similar to the US in this regard (see, for instance, Bayoumi and Eichengreen, 1995). The conclusion that follows is that a "narrow EMU" would work satisfactorily, but that a "wider EMU", including the "periphery", could be ridden by asymmetric shocks and serious national imbalances.

There are several reasons to cast doubt on this conclusion. First, the degree of synchronisation of shocks across EU countries is endogenous, and several papers have shown that the correlation of the business cycles across EU countries have increased as economic and financial integration proceeded (see, Artis and Zhang, 1995, Fatás, 1997, and Frankel and Rose, 1997). This finding contrasts with the view that EMU will result in higher specialisation, regional concentration of produc-

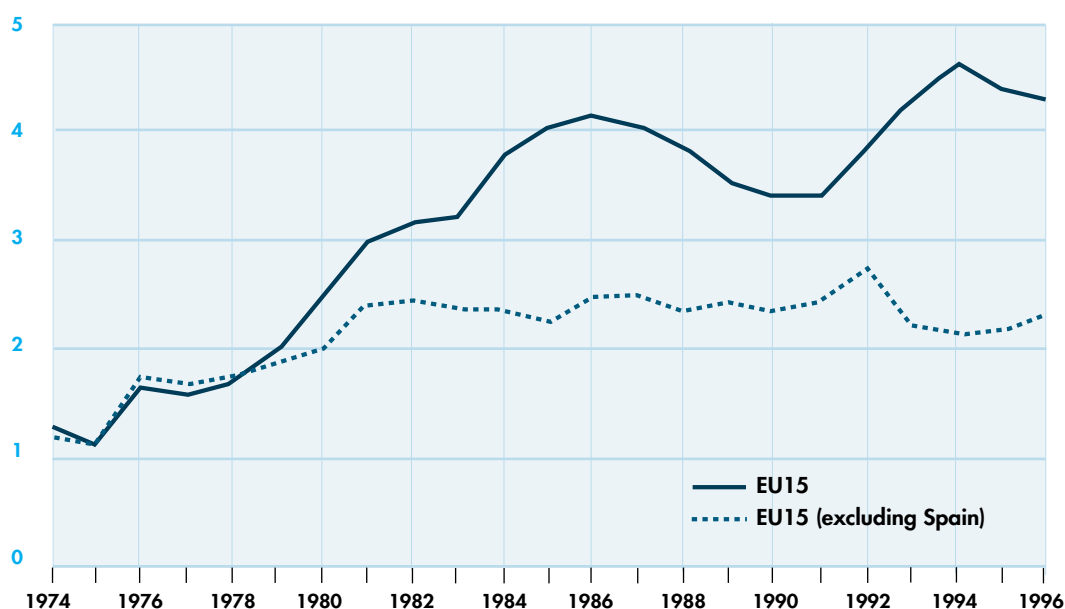
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1) Needless to say, the "Lucas critique" applies here.

tion and, thus, more likely asymmetric shocks (Krugman, 1993). Second, when looking at the evolution of unemployment, the data seem to support the existence of a significant “common component” in the unemployment rates of EU countries, and that both “core” and “periphery” countries are rather similar in this regard. We now turn to present some empirical evidence on the sources of shocks to unemployment rates across EU member countries.

There are several approaches to assessing the relative importance of the different sources of shocks to unemployment in a cross-section of countries or regions. There is the descriptive approach, which consists of measuring the evolution of unemployment dispersion, as indicated by the standard deviation of unemployment in a given sample. Were unemployment exclusively driven by a common shock with the same effects on unemployment in all countries, then this index of unemployment dispersion should remain constant; were the incidence of specific shocks increasing over time, then the index should show an increasing trend (2). Regarding EU countries, the evolution of unemployment dispersion, as measured by the evolution of the standard deviation of unemployment rates, shows an increasing trend in dispersion from the mid-1970s up to the mid-1980s, a mild decreasing trend until 1990, and, again, a surge in the early 1990s (see Figure 1). However this evolution (and, in particular, its rise in the early 1990s) is heavily influenced by the contribution of Spain, which, with almost ten percent of the EU labour force, has experienced very wide fluctuations in the unemployment rate. Thus, when Spain is excluded from the sample, the standard deviation of unemployment rates across the rest of EU countries increases by less up to 1981, and remains more or less constant since then. We have computed a similar index of unemployment dispersion using regional data (at the EUROSTAT NUTS-1 level of disaggregation) and find a similar picture: There is no significant overall increase in the dispersion of regional unemployment rates since the mid-1980s up to the early 1990s, and when dispersion increases in the early nineties, it is mainly due to the contribution of Spanish regions.

**Figure 1.** Standard deviation of unemployment rates across EU countries, 1974-1996



2) The converse statements are not true, though.

A more rigorous method for assessing the relative importance of different sources of shocks to national/regional unemployment rates consists of using econometric models to break unemployment down into different components: a “common” EU component, and a national/regional “specific” component. This is discussed in more detail in Box 1.

### **Box 1. The decomposition of unemployment rates in EU countries and regions**

Our decomposition of unemployment rates in EU countries and regions is based on the following recursive model:

$$(1) \quad \begin{aligned} u_t^{EU} &= \delta^{EU} + A_1(L)u_t + \varepsilon_t^{EU} \\ u_t^I &= \delta^I + A_2^I(L)u_t^{EU} + B_2^I u_t^I + \varepsilon_t^I \\ u_t^J &= \delta^J + A_3^J(L)u_t^{EU} + B_3^J(L)u_t^I + C_3^J(L)u_t^J + \varepsilon_t^J \end{aligned}$$

where  $\delta$ 's are constants;  $u^{EU}$ ,  $u^I$ ,  $u^J$ , are, respectively, the EU average unemployment rate, the unemployment rate of country  $I$ , and the unemployment rate of region  $J$  in country  $I$ ;  $A(\cdot)$ ,  $B(\cdot)$  and  $C(\cdot)$  are polynomials in the lag operator  $L$  (with  $A(0) = B(0) = C(0) = 0$ ); and the  $\varepsilon$ 's are shocks to unemployment. Under this model, nation-specific shocks have no effects at the EU level, and region-specific shocks have no effects at the national level.

Since the system is recursive and we have different sample sizes for national and regional unemployment rates, we estimate the first two equations to decompose shocks to national unemployment into a “common” EU component and a nation-specific component. The decomposition of shocks to regional unemployment rates is based on the estimation of the three-equation system on a panel of EUROSTAT NUTS-1 regions for each country, controlling for regional fixed effects, and imposing the constraint that the coefficients of the third equation in (1) are the same across regions within the same country. Data on regional unemployment are available from EUROSTAT (REGIO databank) for the 1983-1993 period (except for the new member countries, Greece, Portugal and the Netherlands) (3). Note that this recursive model is a simplification of the following three dimensional vector autoregression (VAR):

$$(2) \quad x_t^I = D(L)x_t^I + v_t$$

with  $x^I = (u^{EU}, u^I, u^J)$ ,  $D(0) = 0$ , and  $v_t$  are innovations to unemployment. We have also estimated this VAR and recovered aggregate, national and regional shocks to unemployment under the identifying assumptions that both the contemporaneous effects of national shocks on the EU average unemployment rate and that the contemporaneous effects of regional shocks on national unemployment rates are zero. Under this maintained hypothesis, we cannot reject the (over-identifying) restrictions imposed on the recursive model.

3) At the NUTS-2 level of disaggregation, the analysis with the EUROSTAT REGIO database is restricted to the indicated sample period for seven countries only due to data availability.

**EU-wide innovations to unemployment seem to play a very important role in driving national unemployment rates.**

The results are presented in Tables 1 and 2. As for national unemployment rates, the “common” EU component of the shocks explains, on average, almost half of the variance of EU member countries’ unemployment rates within a one-year horizon. This proportion increases to 59 percent, 70 percent, 78 percent and 83 percent after one, two, three, and four years, respectively. Thus, EU-wide innovations to unemployment seem to play a very important role in driving national unemployment rates even in the short run (4). This is true for most member countries, except for Italy, Portugal, and Sweden. Apart from these exceptions, our results do not support any clear distinction between the “core” and the “periphery” in this regard. As for regional unemployment rates, we find that region-specific shocks explain around 65 percent of the variance of regional unemployment rates. Moreover, the combination of EU-wide and region-specific shocks leaves only about 20 percent of the variance of regional unemployment rates to be explained by national shocks (with the only exception of Denmark).

In sum, given the relative small role of national shocks in driving unemployment rates in EU countries, the conclusion we reach is that giving up the national currencies under EMU implies rather small macroeconomic costs.

**Table 1.** Proportion of the variance of national unemployment rates explained by innovations to the EU unemployment rate (in percent)

	Within 1 year	After 1 year	After 2 years	After 3 years	After 4 years
Belgium	61	76	82	85	86
Denmark	58	60	64	68	72
Germany	32	54	70	79	83
Greece	36	48	59	68	75
Spain	52	72	86	92	94
France	65	80	87	91	94
Ireland	46	60	72	80	85
Italy	9	26	46	67	79
Netherlands	48	62	73	80	83
Austria	29	54	72	81	86
Portugal	7	26	44	56	64
Finland	60	62	64	67	65
Sweden	13	15	18	20	23
UK	72	85	90	93	94
EU*	45	59	70	78	83

\* Weighted average

*The result for the weighted EU aggregate is noticeably different from that for the US (cf. footnote 5). However, the difference disappears quickly at the second and third horizon, so that the conclusion about the relevance of EU-wide shocks is still relevant.*

4) As a reference point, we have performed a similar decomposition of US states’ unemployment rates during the 1976-1990 period. We find that US-wide shocks to unemployment explain, on average, 79 percent of the variance of states’ unemployment rates within one year, and around 85 percent between one to five years.

**Table 2.** Proportion (in percent) of the variance of regional unemployment rates explained by:

1. Innovations to the EU unemployment rate								
	Belgium	Denmark (5)	Germany	France	Spain	Italy	UK	EU*
Within one year	2	1	5	19	4	1	24	11
After 1 year	28	3	11	26	17	6	26	17
After 2 years	45	3	11	26	17	6	26	17
After 3 years	45	22	14	26	24	12	21	20
After 4 years	50	49	12	26	27	22	21	20
2. Innovations to the national unemployment rate								
Within one year	26	92	24	10	10	17	48	25
After 1 year	22	86	23	6	6	11	29	18
After 2 years	17	64	22	5	5	15	31	18
After 3 years	15	52	22	4	6	15	28	18
After 4 years	15	52	22	5	5	15	31	18
3. Innovations to the regional unemployment rate*								
Within one year	72	7	71	71	86	82	28	64
After 1 year	50	11	66	68	77	83	45	65
After 2 years	38	14	64	70	70	73	51	62
After 3 years	35	6	64	72	71	67	51	61
After 4 years	35	6	66	70	68	58	47	64

\* Weighted Average.

**Growing openness within the EU makes the use of exchange rates to restore competitiveness increasingly less effective in economic terms, and increasingly more difficult politically.**

## 2.2 Evidence on the sources of exchange rate fluctuations

In the literature on Optimal Currency Areas, the nominal exchange rate is thought to determine - in the short-term - the real exchange rate and thus foreign demand. Therefore, in this framework, exchange rate management helps to smooth short-term economic fluctuations resulting from national (asymmetric) shocks. Nevertheless, in this respect, it has been argued that the growing economic openness among EU countries within the Single Market makes the use of nominal exchange rate to restore or improve competitiveness increasingly less effective in economic terms, and increasingly more difficult in political terms (see, for instance, Eichengreen and Ghironi, 1995, and Viñals, 1996). Furthermore, the evidence of a significant degree of real wage rigidity in European labour markets (see section 2.3 below) suggests that nominal exchange rate movements are not very effective in moving the real exchange rate in the desired direction. Finally, and perhaps most importantly, in a world of free capital movements, where foreign exchange markets are often subject to self-fulfilling speculative crises which move the exchange rate away from where fundamentals suggest it should be during prolonged periods, there is little room for nominal exchange rate management.

Some recent evidence also casts doubt on the effectiveness of nominal exchange rates as a tool for short-term macroeconomic management. In a recent paper, Canzoneri *et al.* (1996) investigate whether European nominal exchange rates actually address real imbalances, or whether they are basically driven by monetary and financial considerations. The authors estimate a structural VAR model on three

5) The results for Denmark in Table 3 do not seem to fit well with the variance decomposition in Table 2. However, Denmark is a small country containing three homogenous NUTS-2 units. It may happen that regions move together, but that, at the aggregate level, EU-wide shocks still explain some of the fluctuations of the Danish unemployment rate.



variables - output, the nominal exchange rate and government spending - where the long-run restrictions come from the well-known Mundell-Fleming model. Making use of these restrictions, monetary and financial shocks are separated from real shocks (both supply and demand), and their relative roles in driving output and exchange rate fluctuations assessed. The quarterly data runs from 1970:1 to 1985:4, the period of "relative exchange rate flexibility", which goes from the end of the Bretton Woods System to the hardening of the Exchange Rate Mechanism (ERM) of the European Monetary System. The variables are in relative terms (taking Germany as the centre) so as to capture potential asymmetric shocks.

The empirical results show that in many EU countries - both large and small, more or less open, and with different economic structures - most of the short-term variation in relative national outputs can be explained by real shocks. These shocks, nevertheless, play a very limited role in explaining movements in nominal exchange rates (see Table 3 for a summary of the results for relative output and nominal exchange rates). As a consequence, nominal exchange rates do not seem to respond much to the asymmetric shocks which create macroeconomic imbalances, thus reducing their value as a tool for macroeconomic adjustment (6). This means that there are further reasons to believe that the costs of EMU will be quite small as a result of forgoing nominal exchange rate flexibility.

**Table 3.** Sources of fluctuations (in percent)

	Relative output		Nominal exchange rates	
	Real shocks	Monetary and financial shocks	Real shocks	Monetary and financial shocks
Austria	94	6	77	23
Netherlands	96	4	67	33
France	96	4	71	29
Spain	92	8	81	19
Italy	95	5	54	46
United Kingdom	90	10	68	32

One-year horizon relative to Germany.

**What matters, as far as EMU is concerned, are the sources of shocks and their transmission through labour markets.**

### 2.3. Real wage rigidity and persistence

Another way of looking at the potential impact of EMU on unemployment in the short-term is to assess how effective nominal exchange rate changes are in leading to real exchange rate changes. In particular, when real wages are rigid, it is to be expected that nominal exchange rate variations will translate very quickly into wages and prices, thus having little or no effect on real exchange rates. Consequently, the higher the degree of real wage rigidity, the smaller the costs from forgoing nominal exchange rate flexibility, even in the face of real asymmetric shocks.

There have been numerous attempts at estimating the degree of real wage rigidity in EU countries. Some of the most-often quoted estimates are from Layard *et al.* (1991). These estimates come from structural estimation of wage and price equations, which are sometimes criticised on identification grounds and on the measurement of relevant regressors. Since what matters, as far as EMU is concerned, are the sources of shocks and their transmission through the labour markets, an alternative approach to estimat-

6) These results apply to "average" shocks, but not to those big real asymmetric shocks which come, say, once in a decade and which may require an adjustment of nominal exchange rates.

### Box 2. Estimating wage rigidity

We take a bare-bones model where it is assumed that there is constant mark-up pricing. Prices are given by:

$$p - w = m + z$$

where  $p$  are prices,  $w$  are (nominal) wages,  $m$  is the mark-up and  $z$  are shocks assumed to follow an  $I(1)$  process, and, therefore, innovations in  $z$  have permanent effects on real wages. Wages are assumed to be negatively related to unemployment, as in the following equation:

$$w - p = -c(u - bu_{-1}) + z^w$$

where  $u$  is the unemployment rate,  $c$  and  $b$  are positive parameters, and  $z^w$  are shocks to the wage equation when  $b < 1$ . A measure of real-wage rigidity is the inverse of  $c(1 - b)$ . The higher is  $c$ , the less rigid real wages are; the higher is  $b$ , the more rigid are real wages. Combining these two equations yields that unemployment is given by:

$$u = m/c + bu_{-1} + (z^w + z)/c$$

Assuming that shocks to the price-setting equation are mostly of a “technological” nature with permanent effects on real wages ( $z = -e^s$ ), that shocks to the wage equation include both technological and (stationary) wage push/labour supply shocks, so that  $z^w = e^s + e^w$ , and that  $b < 1$ , yields that unemployment is stationary and that its initial response to wage push/labour supply shocks is greater the more rigid real wages are. Moreover, the mean lag of the response to unemployment ( $b/(1 - b)$ ) is increasing in  $b$ . Alternatively, if  $b = 1$ , unemployment follows a random walk with drift, and its short-run and long-run responses to wage push/labour supply shocks are decreasing in  $c$ . This simple model suggests that the degree of real-wage rigidity is related to some characteristics of the impulse response of unemployment to wage push/labour supply shocks. In both cases considered ( $b < 1$  and  $b = 1$ ) real wages are  $I(1)$  and wage push/labour supply shocks have no long-run effects on the level of real wages. Thus, the empirical exercise to assess the degree of real-wage rigidities across countries is rather simple. First, assuming that  $b < 1$ , we estimate a VAR composed by the rate of growth of real wages and the unemployment rate and recover the structural parameters ( $c$  and  $b$ ) from the impulse response of unemployment to shocks which have no long-run effects on real wages. Second, assuming that  $b = 1$ , we estimate a VAR composed of the growth rate of real wages and the first difference of the unemployment rate, and recover the structural parameter,  $c$ , from the impulse response of unemployment to the same kind of shocks. It should be noted that the model above suggests that the other type of shocks recovered are technological shocks which increase real wages in the long run and do not affect unemployment.

ing the degree of real wage rigidity can provide interesting insights. This approach consists of estimating the dynamic responses of real wages and unemployment to different shocks and inferring from them the degree of real wage rigidity and shock persistence. Under the assumptions of constant returns to scale and constant mark-up pricing, the initial response of unemployment to a transitory wage-push shock is determined by the response of real wages to unemployment, while the mean lag of the adjustment path followed by unemployment after such a shock depends on the response of unemployment to lagged unemployment. A simple model for estimating wage rigidity is set out in Box 2.

The results of this exercise are reported in Tables 4 and 5. In the first case, when unemployment is assumed to follow a stationary process ( $b < 1$ ) (7), we find that the average degree of real wage rigidity in EU countries is almost double that of the US. By countries, only the Netherlands and Ireland seem to be close to the US benchmark. Similarly, the average mean lag response of unemployment to wage-push shocks in EU countries is more than two years higher than in the US. In the second case, when unemployment is assumed to follow an I(1) process ( $b = 1$ ), we find qualitatively similar results, although there are some differences with respect to the previous case across countries.

**The high degree of real wage rigidity - as opposed to nominal wage rigidity - implies that the cost from giving up nominal exchange rate flexibility is likely to be rather limited.**

While a high degree of real wage rigidity - as opposed to nominal wage rigidity - implies that the cost from giving up nominal exchange rate flexibility as a tool for short-run macroeconomic adjustment is likely to be rather limited, it is nevertheless not good news at all for European unemployment, quite independently from EMU. In particular, the higher is the degree of real wage rigidity, the higher is the structural rate of unemployment. For this reason, it is very important to improve real wage flexibility through labour market reforms aimed at enhancing nominal wage flexibility if the costs of EMU are to be still kept to a minimum and progress made in reducing unemployment.

**Table 4.** Estimates of real wage rigidity and persistence

	Estimates from VAR ( $\Delta(w - p), u$ )	
	Persistence	Mean Lag
Belgium	0.77	3.44
Denmark	0.72	2.55
France	0.81	4.20
Germany	0.77	3.30
Ireland	0.74	2.78
Italy	0.82	4.66
Netherlands	0.76	3.14
Spain	0.78	3.56
UK	0.72	2.51
Austria	0.79	3.69
Finland	0.83	5.01
Sweden	0.83	4.92
EU*	0.78	3.61
US	0.60	1.53
Japan	0.65	1.90

\* Weighted average.

7) The salient feature of stationary variables is that a shock to the variable will only have a temporary and transient effect. The opposite is true for non-stationary variables, of which the simplest case is a so-called I(1) variable. Here, a shock to the variable will have a permanent effect. A non-stationary variable can be rendered stationary by differencing.

**Table 5.** Real Wage Rigidity in the EU

	Estimates from VAR ( $\Delta(w - p)$ , $\Delta u$ )
Belgium	1.42
Denmark	1.10
France	1.58
Germany	1.48
Ireland	1.68
Italy	1.00
Netherlands	1.52
Spain	1.94
UK	1.16
Austria	0.85
Finland	1.71
Sweden	1.41
EU*	1.39
US	0.73
Japan	0.89

\* Weighted average.

#### 2.4. Employment effects of real exchange rate fluctuations

The above notwithstanding, even if nominal exchange rates could be set in order to influence real exchange rates, some evidence on the response of employment to the real exchange rate also suggests that forgoing nominal exchange rate flexibility will not be very costly in employment terms. Two recent papers (Burgess and Knetter, 1996, on the G-7 countries, and Dolado *et al.*, 1998, on Spanish regions) are devoted to the estimation of the response of employment at the industry level to exchange rate shocks for the G-7 countries. At the theoretical level, the determinants of this response are mainly the degree of competitiveness of product markets and the regulation of the labour market. The more competitive are product markets, the larger are the changes of production patterns brought on by changes in real exchange rates. However, if firms can adjust mark-ups, then price adjustments may partially offset the need for adjusting employment after changes in real exchange rates. Furthermore, labour market regulation (job protection legislation, say) may reduce the response of employment to exchange rate shocks.

Burgess and Knetter (1996) find that exchange rate fluctuations influence employment at the industry level in the expected manner (a real appreciation leads to a decline in manufacturing employment in most sectors) (8). There are some differences across countries, though. While in the UK, Italy and Canada employment seems to be more sensitive to exchange rate changes than in the US, the contrary happens in Germany, France and Japan. Using their own words, "*the data are consistent with the view that employment in European labour markets ... is much less influenced by demand shocks and much slower to adjust to long run steady states* (p. 17)". In a similar study, Dolado *et al.* (1998) estimate an employment equation using data on 17 sectors and 17 Spanish regions. The specification of their employment equation also includes domestic aggregate demand and exchange rate volatility as regressors. Their results confirm that while real exchange rate appreciations reduce employment in most industries, reducing exchange rate volatility has nevertheless positive effects on employment.

8) About a quarter of their 95 country-industry observations showed statistically significant negative exchange rate elasticities.

To sum up, this section has presented evidence to suggest that common shocks are likely to be prevalent once in EMU; that, in the past in the EU, nominal exchange rate flexibility has not played the "buffer stock" function assumed by the Optimal Currency Areas literature; and that the degree of real wage rigidity in European countries is quite high. Taken together, these bits of evidence suggest that European countries are going to face only very limited costs from not being able to use nominal exchange rates as a short-term tool for addressing macroeconomic imbalances in EMU.

### **3. Impact of EMU on macroeconomic policy and wage-price setting**

In addition to implying a common currency area in which monetary policy will be strongly oriented towards pursuing price stability, the establishment of EMU will also enhance fiscal discipline through the Stability and Growth Pact. In this section we discuss the macroeconomic policies under EMU and the likely impact of EMU on wage and price determination.

#### **3.1 Macroeconomic Policy**

EMU brings with it not only a common currency - the EURO - but also a single monetary policy. In this respect, it is particularly important to note that the single monetary policy will be run by an independent European Central Bank (ECB) with the primary objective of achieving and maintaining price stability. If it is accepted that price stability is a precondition for achieving a better output performance (see Andrés and Hernando, 1997), then the single monetary policy will exert a favourable impact on output and employment conditions in the EURO-zone in the medium-term.

*Fiscal consolidation will improve employment prospects by leading to a more stable environment characterised by lower and less volatile interest rates.*

EMU also comes together with the Stability and Growth Pact, which establishes certain norms of fiscal rectitude aimed at preserving or restoring the sustainability of national fiscal positions and at avoiding an inadequate overall policy-mix in the EMU area as a whole. Given the terms of the Stability and Growth Pact, fiscal consolidation may need to proceed in the future in some countries. An important question, therefore, is how fiscal consolidation measures will affect European unemployment in the next years.

From a short-term perspective, the traditional story on the effects of fiscal consolidation is that it leads to a reduction in the rate of expansion of aggregate demand, which initially has negative effects on unemployment. In addition, insofar as persistence mechanisms are at work, the impact on unemployment could last for some time.

While these effects are generally recognised as being valid to a first approximation, in practice the size of the short-run impact of fiscal consolidation on unemployment will vary across countries and will depend critically on which kind of measures are taken and on how they are implemented. In particular, it may happen that a reduction of budget deficits based on permanent cuts in current government purchases may lead to lower short run unemployment. The reason is that the reduction in aggregate demand derived from a cut in total public spending would (at least partially) be offset by the beneficial effects on private demand of the credible permanent reduction in current government purchases. Private consumption would expand as the public revises upwards its expectations of future disposable income, in the understanding that budgetary consolidation today reduces future taxes to service the debt. Private investment would also increase once real long-term interest rates fall.

Some European countries have already experienced beneficial output and employment effects while pursuing fiscal consolidations in recent years, partly linked to the reduction of the risk-premium implicit on interest rates through the decline of both exchange and default risks. Once EMU is in place, however, these countries should not take further reduction of interest rates for granted.

From a medium-term viewpoint, insofar as present structural budget deficits are too high, and that their reduction is not carried out through tax increases which may raise "wage pressure", the process of fiscal consolidation, which is amplified by the Stability and Growth Pact, should not adversely affect unemployment in the medium-term. Quite the contrary, fiscal consolidation will improve employment prospects by leading to a more stable macroeconomic scenario characterised by lower and less volatile real interest rates. In these circumstances, public investment will pick up, positively influencing output and employment prospects.

*A stronger degree of economic integration may impose more discipline on wage setters. However, harmonisation of labour legislation could worsen already badly-functioning labour markets.*

In sum, while the differing fiscal positions and macroeconomic structures of the member states suggest that fiscal consolidation efforts over the next few years may have different impacts on their economies, any potential short-term costs of fiscal consolidation on economic activity will be minimised - and even reversed - if budgetary adjustments are carried out in an appropriate and credible fashion, especially, if accompanied by structural labour market reforms. Furthermore, credible progress along fiscal consolidation would contribute to improving the overall macroeconomic mix in the EURO-zone. This will contribute to reducing the constraints that the pursuit of nominal stability places on national monetary policies, and thus to lower real interest rates. Finally, given the state of public finances in some EU countries, the reduction of budget deficits and public debt is not only a desirable policy in its own right, but also a precondition for avoiding financial unsustainability problems which might jeopardise the chances of achieving balanced economic growth.

### **3.2 Effects on price and wage setting**

EMU will deepen economic integration through the consolidation of the Single Internal Market. Furthermore, the elimination of exchange rate uncertainty and the transparency brought up by quoting prices in the same unit will promote the mobility of firms across EMU countries. As a result of enhanced competition, we should expect lower price mark-ups from EMU and, if anything, downward pressure on long-run unemployment. Nevertheless, the size of these effects is uncertain.

It may also happen that the stronger degree of economic integration ends up imposing more discipline on wage setters. Across EU countries, wage setting is mostly done by collective bargaining. Even if the regulation of collective bargaining is unchanged, the wage-elasticity of labour demand will be affected by higher economic integration, and as economies become more open and integrated, wage outcomes will be less sensitive to the bargaining regimes (see Calmfors, 1994, Danthine and Hunt, 1994). However, while accepting that EMU may improve the degree of competition in labour markets over the medium run, we are not very optimistic regarding how significant this effect will be in the short-term. Furthermore, there may also be other effects in the opposite direction.

Indeed, regardless of the peculiarities of the wage determination process in each of the EMU member countries (regulation of collective bargaining, levels of negotiation, etc.), wage moderation should not be taken for granted. The experience of the ERM shows that the discipline effects of further economic

integration on wage determination are, if anything, rather small. Furthermore, there are at least three reasons to expect changes in the wage determination process that may go in the opposite direction. First, the recent experience in Germany following unification suggests that there may even be a perverse “wage catching-up” effect, at least initially and in the relatively backwards countries, resulting in wage pressures and less wage flexibility. Second, there is the danger that unions will not internalise, to the extent that they have been doing when facing their respective national central banks, the reaction function of the new ECB. The ECB will be setting monetary policy in terms of the overall inflation rate in the EMU-area. To the extent that national wage raises will carry less weight for the inflation rate of the whole EMU, national wage setters may perceive that wage increases are less likely to be counteracted by the monetary policy of the ECB. Finally, the development of another leg of EMU, the Social Chapter, also carries some risks. So far, the Social Chapter has not affected much of the labour legislation of EU countries. But it may happen that some harmonisation of labour legislation could worsen the already badly-functioning labour markets of some EU countries.

To sum up, since there is no guarantee that EMU will set forces in motion that would automatically lead to a better functioning of European labour markets, it is of paramount importance that the authorities pursue policies aimed at removing existing structural rigidities in product and - especially - labour markets so as to bring unemployment down.

#### **4. Concluding remarks**

As concerns the impact of EMU on European unemployment, insofar as EMU leads to more stable monetary and non-monetary policies and to a higher degree of economic integration, it may have, if anything, a favourable impact on unemployment across the EU in the medium-term. Nevertheless, since the size of these effects is uncertain, we should stress that - quite apart from EMU - the fight against unemployment must necessarily involve removing the structural obstacles to the good functioning of product and, in particular, national labour markets.

***EMU membership should be accompanied by structural reforms to improve the functioning of markets and, particularly, that of labour markets.***

Thus, fears that EMU may result in higher average unemployment and/or higher national unemployment differentials are grossly exaggerated. In this paper we have provided some basis for this claim:

1. There is a significant common component in European unemployment which may even increase by the enhancing effects of EMU on financial and economic integration. As regards unemployment, in “normal times” common shocks are likely to prevail.
2. The evidence on the very limited role of nominal exchange rates in addressing macroeconomic imbalances, the scant response of real exchange rates to nominal exchange rates, and the small influence of real exchange rates on employment, suggests that the short-run costs of forgoing nominal exchange rates are rather small in employment terms.
3. In the medium-term, what really influences employment creation is sustained, non-inflationary growth. In this respect, it is to be expected that a well-managed EMU and Stability and Growth Pact will lead to more stable macroeconomic policies, which will promote growth.

This notwithstanding, it must be recognised that in those countries with more differentiated economic structures, which makes them more likely to be exposed to asymmetric shocks, EMU membership should be accompanied by structural reforms designed to improve the functioning of goods and factors markets and, particularly, that of labour markets.

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