



STUDIECENTRUM VOOR ECONOMISCH EN SOCIAAL ONDERZOEK

## VAKGROEP MACRO-ECONOMIE

### EMU and UNEMPLOYMENT

**A. Van Poeck\***

report 97/346

April 1997

\* Faculty of Applied Economics, University of Antwerp - UFSIA, Prinsstraat 13, B-2000 Antwerp, Belgium. This paper has been presented at the "Centrale Raad voor het Bedrijfsleven / Conseil Central de l'Economie" and has benefited from the discussion with the members of the Council. I am indebted to Charlotte Van Hooydonk for valuable comments and suggestions. All remaining errors are mine.

Universitaire Faculteiten St.-Ignatius  
Prinsstraat 13 - B 2000 Antwerpen

D/1997/1169/006

## **abstract**

In this paper we investigate to what extent the Maastricht convergence process has affected labour market performance in the EU. Next we speculate on the possible effects of introducing a single currency on labour market institutions, wage behaviour and the natural rates of unemployment in Europe. We conclude that the introduction of EMU as such will not have favourable effects on European unemployment unless it is accompanied by labour market reforms.

**JEL Classification no.: E24, F33**

## 1. Introduction

In the United States, at just over 5%, unemployment today is no higher than it was in the early 1970s. In Japan, although it doubled from 1.5% to 3%, unemployment has never been a serious problem. By contrast, over the past 25 years, Europe's unemployment rate has jumped from 3% to 11% and unemployment has become a major economic policy problem in Europe. It is therefore very important to have an idea whether and how EMU might affect labour market performance in Europe. In this context it is interesting to note that, according to a public opinion poll, in seven out of the twelve European countries that constituted the EC in 1994 'more unemployment' was stated as one of the principal reasons why people fear the single market and EMU (see R. Hamai, 1996)<sup>1</sup>.

There is a wide diversion of opinion on the likely effects of EMU on unemployment in Europe. The Commission of the European Communities e.g. holds a positive view when it states that '*If EMU raises the expectations of business leaders that future investment will become more profitable it could initiate a cycle of increasing investment and lower unemployment*' (Commission of the European Communities, 1990, our italics). According to Martin Feldstein, on the contrary, '*an artificially contrived economic and monetary union . . . would almost certainly increase the average level of unemployment*' (M. Feldstein, 1992). The most clear position is held by Rudy Dornbusch. In his view '*Europe . . . already has mass unemployment (and) EMU will add to it, both on the way there and once the system is trapped in fixed exchange rates across vastly divergent countries*' (R. Dornbusch, 1996).

The last view is particularly interesting because it makes a distinction between the process leading to EMU and the situation once EMU is established. In fact, theoretically at least, the impact of EMU on European unemployment can be split into two parts, viz. the effect of the budget cuts and inflation reduction required to meet the Maastricht

---

<sup>1</sup> Other reasons cited such as 'too much immigration', 'too much competition' and 'an uncertain future' might be closely related to the fear of more unemployment.

convergence criteria, on the one hand, and the effect of introducing the single currency, on the other hand.

In a Phillips-curve framework, the first effect translates into a movement along the short-term Phillips-curve, with a temporary increase of the unemployment rate above the natural rate of unemployment. The second is concerned with the effect of EMU on the natural rate itself. In the standard aggregate demand - aggregate supply framework the Maastricht convergence process is reflected by a decrease in aggregate demand (aggregate demand shock), whereas the introduction of the EMU possibly affects the vertical long-run aggregate supply schedule, shifting it to the left (aggregate supply shock). Standard macro-economic theory tells us that the former shock leads to a temporary decrease of the output level below the long-run potential output level, while the latter implies a change in the long-run output level.

The distinction made by Dornbusch is also used in the present paper. In section 2 we investigate to what extent the Maastricht convergence process has affected unemployment. In section 3 we speculate on the possible effects of introducing a single currency on the natural unemployment rate in Europe. We argue that this will depend to a large extent upon the effect of the new regime on the behaviour of economic agents (section 4) and stress the role of labour market regulations and institutions in this respect (section 5).

It should be stressed, however, that a sharp distinction between the transitory effects of the convergence process and the permanent effects of the new monetary regime is probably an oversimplification. In reality, both effects may be interrelated, particularly in Europe where labour markets are characterised by unemployment persistence (see Alogoskoufis and Manning, 1988; Blanchard and Summers, 1986, Elmeskov and MacFarlan, 1993).

## 2. Convergence and unemployment

In the short term, budget cuts and monetary policies to reduce inflation are expected to depress aggregate demand and temporarily increase the actual unemployment rate above the natural rate. The extent to which this mechanism has in reality been operating is an empirical question which is investigated in table 1.

The table shows data on the fiscal consolidation and inflation reduction effort in the EU-countries, and for comparison also in the US and Japan. Fiscal consolidation is measured by the average annual change in the structural balance (as a percentage of potential GDP) from 1993 until 1997<sup>2</sup>. This variable gives an indication of the discretionary change in the stance of fiscal policy after 1992, the year when the Maastricht Treaty was signed. It is clearly seen that all EU-countries, except Ireland<sup>3</sup> and Austria embarked on a process of fiscal consolidation after 1992. Fiscal consolidation was especially pronounced in Greece, Italy, Belgium and Sweden. As is well known, the Maastricht convergence criteria state that the ratio of the government deficit and government debt to gross domestic product may not exceed 3% and 60% respectively. We leave, however, unanswered the question to what extent the process of fiscal consolidation in the EU was enforced by the convergence criteria or whether it resulted from domestic policy shifts because fiscal positions were judged to be unsustainable. The US e.g. also experienced a process of fiscal consolidation in the 1990s, more or less comparable to the average restraint in the EU.

Table 1 further shows data on inflation reduction. This is measured by the difference between the inflation rate in 1992 and 1997. As is known, the Maastricht Treaty requires that for eligibility to join Stage 3 a member state's inflation rate does not exceed the average of at most the three best performing members in terms of price stability by more than 1.5 percentage points. As is the case with fiscal consolidation, inflation reduction has not been restricted to the EU. Contrary to fiscal consolidation, however, inflation reduction has been more pronounced in the EU-countries than in the US. All

---

<sup>2</sup> We use the OECD previsions for 1997 (see OECD, 1996).

<sup>3</sup> As a matter of fact, in Ireland a strong fiscal consolidation took place in the 1980s.

EU-countries, except Finland and Sweden experienced some decline of inflation, the decline being most pronounced in Portugal, Greece, Germany and Spain.

The question to what extent these developments have led to extra unemployment can tentatively be answered by looking at the cumulative increase in unemployment since 1992, which is also reported in table 1. It is seen that the EU as a whole and most EU-countries individually were confronted with a marked rise in their unemployment rates after 1992. The highest unemployment costs were incurred by Spain, Finland, Italy, Portugal, Sweden, Belgium and Germany. This might in fact be related to the demand effects of fiscal consolidation and inflation reduction: Belgium, Italy and Sweden experienced a relatively severe consolidation effort, whereas Portugal, Spain and Germany were subject to a rather strong dis-inflation process. However, the relationship is certainly not clear cut. Greece (characterised by a strong dis-inflation and fiscal consolidation effort) e.g. was able to pursue her macro-economic policy without incurring high unemployment costs. In Denmark, the UK and Ireland (which was not subject to fiscal consolidation) there were no unemployment costs at all. The same holds for the US which were equally able to change the stance of fiscal policy and to reduce inflation without incurring unemployment costs.

Comparing the unemployment rates in 1997 and 1992 further shows that for countries with positive unemployment costs, unemployment in 1997 was still higher than in 1992, suggesting a rather long adjustment period following the shift in macro-economic policy that was undertaken. The same information is given by the last column of table 1 which compares the actual<sup>4</sup> unemployment rates with the estimated natural rates: in most EU-countries the actual rates are still well above the equilibrium unemployment rates<sup>5</sup>.

From the preceding analysis we conclude that after 1992 a majority of EU-countries embarked on a process of fiscal consolidation and inflation reduction. Fiscal restraint also took place in the US. Inflation reduction happened in Europe, as well as in the US and Japan, but was more pronounced in the EU-countries. In most EU-countries this

---

<sup>4</sup> Because the estimates for the natural rate are based on the OECD standardised unemployment rates, the actual rates also refer to this definition. The latest data available for standardised unemployment rates are for 1995.

went hand in hand with a period of increased unemployment (compared to the benchmark year). At the end of the period, unemployment in many European countries was still higher than at the beginning, and higher than the estimated natural rates of unemployment. Nevertheless, the unemployment costs were very different across the European economies. In a few EU-countries and in the US, unemployment even declined.

One can only speculate as to the possible explanations for these differences in fiscal consolidation cum inflation reduction costs. Likely explanations might include: differences in cyclical position, differences in monetary policy, in the exchange rate regime, in the degree to which other (importing) countries were pursuing similar policies, differences in expectations and in the credibility of the fiscal consolidation and inflation reduction effort as perceived by the financial markets and wage and price setters in the economy (OECD, 1996). Also unemployment costs of fiscal consolidation may differ according to the composition of the fiscal contraction. They may be higher if budget cuts result from tax increases or decreases in public investment, as compared to cuts in current government purchases (Giavazzi and Pagano, 1990).

Monetary policy e.g. was on average more expansive in the US than in the EU, which might have been helpful in the fiscal consolidation process (through its effect on the interest rate), mitigating the unemployment costs. The timing of monetary ease may also have been important. Assuming consolidation is credible, an early easing of monetary policy as in the US, by offering the prospect of a rapid decline in real short- and long-term interest rates, might to a large extent offset the short-run negative domestic demand impact of budget deficit cuts (OECD, 1996, p. 17). In the EU monetary policy was not eased before 1995, whereas in the US monetary policy was already expansive in the period 1992-94.

Differences in the exchange rate regime may also explain the observed differences in unemployment costs. According to the Mundell-Fleming model in a system of flexible exchange rates a restrictive fiscal policy is likely to lead to a depreciation of the currency,

---

<sup>5</sup> We assume that equilibrium unemployment rates have not changed during the 1990s.

which might stimulate net exports and hence depress the negative effects on unemployment (export crowding in effect of fiscal consolidation). Under fixed exchange rates, on the contrary, fiscal restraint may lead to a deficit on the balance of payments and consequently to a loss of exchange reserves. The resulting decline in the domestic money supply may further depress economic activity. These different theoretical effects of fiscal consolidation under fixed and flexible exchange rates may to some extent explain the favourable outcome of the UK, after she suspended her participation in the ERM in September 1992.

### **3. Monetary union and unemployment**

The second question, dealing with the potential effects of EMU on the level of European unemployment after 1999 is much more difficult to answer. As a matter of fact, this question boils down to asking whether the EU is an optimal currency area (OCA), i.e. whether the potential benefits of introducing a single currency in the 15 current member states outweighs the potential costs. The benefits of EMU are usually seen as the elimination of exchange-rate-related transaction costs and of uncertainty about exchange rate developments. This should normally lead to more investment, higher economic growth and more employment. The costs of EMU is that it deprives the member states of the exchange rate and the interest rate as domestic instruments for national economic adjustment. This should normally lead to more unemployment in the case of a nation-specific shock. The OCA-literature points to a number of criteria which have to be met in order for the benefits to outweigh the costs, such as symmetry of shocks, mobility of production factors, real wage flexibility and intensity of trade linkages among the potential EMU-members (see e.g. G. Tavlas, 1993, for a recent survey).

It is now generally accepted that the EU as a whole is not an optimal currency area, and less an optimal currency area than e.g. the US. First, aggregate demand and supply shocks are significantly more idiosyncratic across EU countries than across US regions, which may indicate that the EU countries will find it more difficult to operate a monetary



union (Bayoumi & Eichengreen, 1993)<sup>6</sup>. This can be explained to some extent by the large differences that exist in the mix of products that they produce, in their dependence on imported oil and in the foreign markets to which they sell (M. Feldstein, 1992). Second, Europe has lower interregional labour mobility than the US (Bayoumi and Eichengreen, 1993; De Grauwe and Van Haverbeke, 1993) and with the exception of the new Nordic members a low degree of real wage flexibility, (Alogoskoufis and Manning, 1988). Third, Europe has no federal fiscal system comparable to the US so that the fiscal stabilisers in case of asymmetric shocks are weaker (Sala-I-Martin and Sachs, 1992).

It is more likely that a smaller subset of EU-countries (made up of Germany and her immediate neighbours and perhaps Sweden) more closely approaches an optimal currency area, not so much because they are characterised by more labour mobility or real wage flexibility, but because they experience more symmetric shocks (Bayoumi and Eichengreen 1993; De Grauwe, 1996).

Consequently, assuming that EMU would consist of a large group of EU-countries this will affect the natural rates of unemployment in the member countries differently: the 'core' countries whose economic structure is more or less similar might not suffer from an increase in the natural rate, but rather benefit from a decline in it. For these countries the efficiency gains from lower transaction costs and less exchange rate uncertainty would likely outweigh the costs of less macro-economic flexibility. The 'peripheral' countries, with economic structures that are very different from the 'core' countries, might suffer from an increase in their natural unemployment rates. This implies that the labour market disparities between the EU-countries might actually increase in the case of a large monetary union. The fact that some of the greatest enthusiasm for EMU can be found in those countries which according to the OCA-criteria are the least suited for it, raises doubt about their true motivation. According to T. Peters (1995) this might be explained by their fear to receive less financial support from EU structural funds in the case that they are not included in the EMU or by their worries to be excluded from participation in further steps toward European integration.

---

<sup>6</sup> For a diverging view, pointing to similarities between the EU economies business cycles, and hence a more positive opinion on the chances for a successful operation of the EMU as far as business cycles are concerned, see Christodoulakis et al. (1995).

Apart from the effect on the natural rates of unemployment of the member countries, EMU might also affect the cyclical volatility of output and employment in the member states. The statutes of the new European Central Bank specify its independence and preservation of the value of the currency as the primary goal of monetary policy. The promotion of full employment and growth is only permitted to the extent that this does not conflict with the goal of price stability. As shown by Rogoff (1985) an independent (conservative) central bank will lead to a smaller inflationary bias and less variance of inflation at the cost of increased variability in output and unemployment. In this respect it is important to note that the European Central Bank governors will not be accountable to any national authority and that the new central bank attempt to establish inflation-fighting credentials may introduce a deflationary bias in the system, especially at the beginning. On the other hand, a European Central Bank would act more in the interest of the whole union than the Bundesbank currently does<sup>7</sup>. In practice, it is to be expected that an EMU encompassing partners with unequal economic growth will be subject to much conflict about the stance of monetary policy to be pursued by the Union's central bank (Heylen and Van Poeck, 1995). Further, fiscal policy in the member states will be subject to the restrictions laid down in the Stability Pact. All this implies that monetary and fiscal policy might be less geared towards output and employment stabilisation.

#### **4. Endogenous effects**

In the previous section it was argued that the EU consisting of a large group of EU-countries is unlikely to meet the criteria for an optimal currency area and that this might lead to more disparities in European unemployment rates. The traditional OCA-approach however is static emphasising criteria that have to be satisfied ex ante. It does not take into account the possible feedback-effects on the behaviour of economic agents of the new monetary regime created by formation of a common currency area.

---

<sup>7</sup> Barrell and Pain (1996) e.g. show that a monetary policy run by a European Central Bank would have responded better to German unification so that the output loss for the UK would have been much reduced.

One important question here is the effect that EMU might have on the regional location of activities and the likelihood of asymmetric shocks. According to P. Krugman (1991), regional disparities are more likely to grow than to diminish. He emphasises the existence of locational economies of scale, resulting from the concentration of specialised suppliers, a highly skilled labour force, know-how spill-over from neighbouring enterprises or proximity of customers in certain geographical areas. In this view growth poles become self-reinforcing increasing regional disparities and the probability of asymmetric shocks. Another view, however holds that the increased trade between European countries after EMU will take the form of increased intra-industry trade, increasing the likelihood of symmetric shocks. This was confirmed for the case of Austria and Germany. Hochreiter and Winckler (1993) demonstrated that the number of asymmetric shocks that hit Austria, decreased, partly as a consequence of an increase in intra-industry trade with Germany.

Another question is the effect the EMU might have on wage behaviour and real wage flexibility in the member states. In the current exchange rate system, the effects of excessive wage increases on international competitiveness and employment can be mitigated ex post by exchange rate adjustments. This, together with the fact that unions may expect to exert some influence on national monetary policy, may introduce a bias for excessive wage demands. With EMU, however, nominal exchange rates and domestic interest rates can no longer be adjusted between member states. Further, the ECB will be completely independent from national governments or interest groups. One can only speculate to what extent, if any, this new environment will affect union behaviour and wage or price growth in the EMU-member states. An indication of the influence can be found in Austria. According to Hochreiter and Winckler (1993) real wage flexibility increased in the late eighties as a result of the central bank's hard currency policy. In this respect it is interesting to note that there is little empirical evidence for ERM-related effects on wage behaviour, expressed by structural breaks in the wage equations of those countries that entered the ERM (see Egebo and Englander, 1992). But of course, the EMU may be perceived by the social partners as a much more binding constraint than the ERM.

Theoretically, several scenarios are possible (T. Peters, 1995). E.g. if EMU leads to more real wage flexibility this will probably have a lowering effect on the natural rate of unemployment. However this is by no means the only possible scenario. The transparency resulting from the single currency will make wage comparisons within the EMU-area easier. National unions may aim at preserving their relative wage position by aligning their wage demands with the highest wage increases in the EMU. Another possibility is that unions in low wage countries seek to match the wage levels of the high wage countries, whether or not this is supported by increases in labour productivity. Finally, one might conceive of a scenario of wage dumping in order to achieve employment gains at the expense of the others. All these scenarios imply different outcomes for labour market performance in Europe.

#### **5. Labour market regulations and institutions**

In the economic literature a lot of attention has been paid to the role of labour market regulations and labour market institutions for wage setting and wage flexibility (see e.g. Bruno and Sachs, 1985; Calmfors and Driffill, 1988). These models suggest the existence of a relationship between wage formation and unemployment on the one hand and certain labour market institutions, such as the expenditures on active labour market policy, the generosity of the unemployment benefit system (coverage, level and duration of the benefit), employment protection legislation, the degree of unionisation, the degree of co-ordination among social partners and the level of centralisation of wage bargaining on the other hand, (see Scarpetta, 1996, for a recent empirical examination confirming the role of these labour market characteristics for labour market performance). It is well known that the EU countries display marked differences in labour market institutions and labour market policies. These differences in labour market institutions give rise to differences in wage formation, in the natural rates of unemployment and the vulnerability to unemployment persistence (Barrell, Pain and Young, 1994; Heylen & Van Poeck, 1995).

As is the case with wage formation, it remains open to question to what extent the new environment created by the EMU will affect the development and eventual convergence

of labour market institutions and policies - particularly collective bargaining processes - in the EU Member States. Take e.g. the degree of centralisation of wage bargaining. According to J. Freyssinet (1996) if EMU-level negotiations should emerge they are likely to take place at the sectoral level (implying the lowest degree of real wage flexibility) because the obstacles to EMU-wide negotiations, although still considerable, are the fewest at this level. In most member states, sectoral bargaining is the current practice. Moreover, at this level there may be a clear common interest on the part of the employees and the trade unions to make the conditions for competition uniform in terms of labour costs. Related issues are whether institutional convergence is needed at all for the smooth working of the EMU and whether there is a need for EU initiatives in this area.

As Eichengreen (1990) has shown for the US, a certain degree of institutional divergence is compatible with the working of an EMU. However, the US economic and monetary union might be more compatible with institutional divergence than the European, because inter-state migration and automatic redistribution through federal income taxes and unemployment insurance benefits are more extended in the US (Ehrenberg, 1994). This being said, a unique set of institutions that minimise the equilibrium rate of unemployment or the unemployment increase after a demand shock probably does not exist. This leaves room for a set of multiple equilibria, each of them leading to the same total labour costs and labour market results which are in some sense optimal or at least satisfactory for society. Next, as put forward by Freeman (1988) there is no guarantee that labour market institutions developed in one country can, with success, be transferred to another.

Further, it remains an open question whether labour market harmonisation should be the outcome of a voluntary process on the basis of national choices, or whether it should be set by community legislation. For example, Padoa-Schioppa et al. (1987) argue that there is a strong case for national experimentation in labour policy areas in the EU, combined with increased dissemination of information and exchange of experience. It is hoped that demonstration effects will gradually produce convergence on the best practices. A similar idea is found in Flanagan et al. (1992) who argue that once a country is open to international competition and possibly also to unhindered mobility of

people and capital, there is no way an inefficient system of rules and regulations can survive for a long time. To use the words of Britton and Mayes (1992), 'convergence of institutions may . . . occur as the natural counterpart of closer economic integration'.

Yet, most economists recognise that institutional changes in voluntary organisations like trade unions or employers' organisations and in wage bargaining systems are very difficult to achieve, institutions having an innate tendency to continuity (vested interests, high social, economic and political costs of change). A long transition period may thus be required, possibly resulting in high unemployment costs for a number of member countries.

## **6. Concluding remarks**

The above analysis demonstrates that it is very difficult to establish with any degree of certainty the impact that the introduction of EMU will have on wage formation, labour market institutions and European unemployment. The citations given in the introduction largely reflect personal opinions which are not based on firm analytical ground.

A tentative conclusion might be that the setting up of EMU by itself will not have significant effects on European unemployment. However, EMU does contribute to the competitive environment in which European firms have to operate and consequently puts additional pressure on labour market systems.

In this respect, we agree with Ph. De Villé (1996) that the debate should not be one for or against EMU, but should rather deal with the necessary institutional and regulatory reforms within EMU in order to maximise its indirect contribution to the fight against European unemployment.

## References

- Alogoskoufis, G. and Manning, A. (1988), 'Wage Setting and Unemployment Persistence in Europe, Japan and the USA', *European Economic Review*, March, p. 698-706.
- Barrell, R. & Pain, N. (1996), 'EMU as Job Creator', *New Economy*, vol. 3, no. 2, pp. 97-102.
- Barrell, R., Pain, N. and Young, G. (1994), 'Structural Differences in European Labour Markets', in Barrell, R., *The UK Labour Market: Comparative Aspects and Institutional Developments*, Cambridge University Press.
- Bayoumi, T. & Eichengreen, B. (1993), 'Shocking Aspects of European Monetary Integration', in Torres, F. and Giavazzi, F., *Adjustment and growth in the European Monetary Union*, London, CEPR and Cambridge, Cambridge University Press.
- Blanchard, O. and Summers, L. (1986), 'Hysteresis and the European Unemployment Problem', NBER Macroeconomics Annual.
- Britton A. and Mayes D.(1992), *Achieving Monetary Union in Europe*, London, National Institute of Economic and Social Research.
- Bruno, M. & Sachs, J. (1985), *Economics of World-wide Stagflation*, Cambridge (Mass.), Harvard University Press.
- Calmfors, L. & Driffill J. (1988), 'Bargaining Structure, Corporation and Macroeconomic Performance', *Economic Policy*, no. 6, pp. 14-61.
- Christokoulakis, N., Dimelis, S.P. and Kollintzas, T. (1995), "Comparison of Business Cycles in the EC: Idiosyncrasies and Regularities", *Economica*, February.
- Commission of the European Communities (1990), 'One Market, One Money', *European Economy*, no. 44.
- De Grauwe, P. (1996), 'The Economics of Convergence: Towards Monetary Union in Europe', *Weltwirtschaftliches Archiv*, vol. 132, no. 1, p. 1-27.

De Grauwe, P. and Van Haverbeke, W. (1993), 'Is Europe an Optimum Currency Area?: Evidence from Regional Data', in Masson, P. and Taylor, M. (eds.), *Policy Issues in the Operation of Currency Unions*, Cambridge, Cambridge University Press.

De Villé, Ph. (1996), 'Collective Bargaining, Wage Policies and European Monetary Integration', in O. Jacobi and Ph. Pochet (eds.), *A Common Currency Area - a Fragmented Area for Wages*, Düsseldorf, Hans Böckler Stiftung.

Dornbusch, R. (1996), 'Euro Fantasies', *Foreign Affairs*, September-October.

Egebo, Th. and Englander, A.S., 'Institutional Commitments and Policy Credibility: a Critical Survey and Empirical Evidence from the ERM', *OECD Economic Studies*, no. 18, pp. 45-84.

Ehrenberg, R.G. (1994), *Labour Markets and Integrating National Economics*, Washington, D.C., Brookings Institution.

Eichengreen, B. (1990), 'One Money for Europe? Lessons from the US currency Union', *Economic Policy*, no. 10, pp. 118-87.

Elmeskov, J. and MacFarlon, M. (1993), 'Unemployment Persistence', *OECD Economic Studies*, no. 21.

Feldstein, M. (1992), 'Europe's Monetary Union: the Case against EMU', *Economist*, 13 June.

Flanagan, R., Hartog J. and Theeuwes, J. (1992), *Institutions and the Labour Market: Many Questions, Some Answers*, Paper presented at the 4th Annual EALE Conference, University of Warwick.

Freeman, R. (1988), 'Labour Market Institutions and Economic Performance', *Economic Policy*, no. 6, pp. 64-80.

Freyssinet, J. (1996), 'The Impact of the European Monetary Union on Pay Policy and Collective Bargaining', in O. Jacobi and Ph. Pochet (eds.), *A Common Currency Area - a Fragmented Area for Wages*, Düsseldorf, Hans Böckler Stiftung.



Giavazzi, F. and Pagano, M. (1990), 'Can Severe Fiscal Contractions be Expansionary? Tales of Two Small European Countries', in O. Blanchard and S. Fischer (eds.), *NBER Macroeconomics Annual 1990*, Cambridge, MIT Press, pp. 75-111.

Hamai, R. (1996), 'Why People Fear the European Single Currency? A Comparative Analysis of Public Opinion', *Banca Nazionale Del Lavoro Quarterly Review*, special issue March 1996, pp. 69-81.

Heylen, F. and Van Poeck, A. (1995), 'National Labour Market Institutions and the European Economic and Monetary Integration Process', *Journal of Common Market Studies*, vol. 33, no. 4, pp. 573-595.

Hochreiter, E. and Winckler, G. (1993), *The Advantages of Tying Austria's Hands: The Success of the Hard Currency Strategy*, Working Paper no. 9307, University of Vienna.

Krugman, P. (1991), *Geography and Trade*, Cambridge (Mass.), MIT Press.

OECD (1996) 'The Experience with Fiscal Consolidation in OECD Countries', *Economic Outlook*, December.

Padoa-Schioppa, T. (1987), *Efficiency, Stability and Equity: A Strategy for the Evolution of the Economic System of the European Community*, New York, Oxford University Press.

Peters, T. (1995), 'European Monetary Union and Labour Markets: What to Expect?', *International Labour Review*, vol. 134, no. 3, pp. 315-32.

Rogoff, K. (1985), 'The Optimal Degree of Commitment to an Intermediate Monetary Target', *Quarterly Journal of Economics*, vol. 100, no. 4, pp. 1169-89.

Sala-I-Martin, X. and Sachs, J. (1992), 'Fiscal Federalism and Optimum Currency Areas: Evidence for Europe and the United States', in M. B. Canzoneri, V. Grilli and P.R. Masson (eds), *Establishing a Central Bank: Issues in Europe and Lessons from the U.S.*, Cambridge, Cambridge University Press, pp. 195-219.

Scarpetta, S. (1996), 'Assessing the Role of Labour Market Policies and Institutional Settings on Unemployment: a Cross-Country Study', *OECD Economic Studies*, no. 26 , pp. 43-98.

Tavlas, G.S. (1993), 'The "New" Theory of Optimum Currency Areas', *The World Economy*, November.

**Table 1. Fiscal consolidation, inflation reduction and unemployment costs**

Country	Code	Average change in structural balance	Inflation reduction (1)	Cumulative change in unemployment	$u97 - u92$	$u95 - u^*$
Austria	A	-0.02	2.7	4.1	1.2	3.0
Belgium	B	1.24	1.6	11.7	2.2	2.5
Denmark	DK	0.34	0.7	-4.2	-2.7	3.0
Finland	FIN	0.04	-1.1	19.9	2.4	12.5
France	F	0.34	0.8	9.1	2.2	3.8
Germany	D	0.24	4.3	10.1	2.7	4.2
Greece	EL	1.52	7.5	6.2	1.6	
Ireland	IRL	-0.20	1.4	-11.8	-3.7	-0.2
Italy	I	1.32	1.9	13.9	3.4	6.8
Netherlands	NL	0.44	0.1	7.0	0.8	-0.8
Portugal	P	0.52	10.1	13.0	2.9	
Spain	E	0.48	4.0	23.3	4.0	7.8
Sweden	S	1.00	-1.4	12.7	2.1	6.8
United Kingdom	UK	0.36	2.4	-6.9	-2.5	0.8
European Union	EUR	0.54	2.6	8.6	1.7	
Japan	JAP	-0.28	1.2	4.0	1.0	1.0
United States	USA	0.44	0.6	-8.1	-2.1	-0.9

(1) A minus sign indicates an increase in the inflation rate

Source: based on OECD, Economic Outlook, No. 60, december 1996.

The data for  $u^*$  are taken from Layard, R., Nickell, S., Jackman, R. (1991), *Unemployment: Macroeconomic performance and the labour market*, Oxford, Oxford University Press. and are averages for 1980-1988