

WAGE FLEXIBILITY AND EMU

European labour markets have been shaped by the social histories each of member country, and still display great heterogeneity today. No European initiative has yet opened the way to any real harmonisation in this field. But this is now a burning issue: does the diverse functioning of European labour markets not risk being a handicap in tackling the cyclical fluctuations within EMU? The answer given to this question here is negative. Though wage flexibility varies across countries, it is not sufficient to lead to national reactions that are strongly asymmetric. It does not therefore constitute a problem for common policies. Nor is wage flexibility a remedy at the national level. Indeed, such flexibility in Europe is insufficient to compensate for the loss of the exchange rate instrument in the face of asymmetric shocks.

■ The Labour Market and EMU

In contrast to goods markets, the labour market has been little present in Europe's strategy for making economic systems converge. Along with social security, this area is still considered as being practically exclusively the responsibility of each Member State. To be sure, the European Council of Luxembourg in December 1997 paved the way for a common strategy to fight unemployment, and recommended the adaptation of labour markets. But as the Council in Cologne confirmed the 3 and 4 June last, harmonisation is still a very long way off.

Yet, the labour market is likely to play an important role in the functioning of EMU. For each country, labour market adjustments may constitute a mechanism for macroeconomic stabilisation, offsetting the loss of national autonomy concerning monetary policy. In comparison at the Community level, the diverse functioning of national labour markets is susceptible to wrong-foot common economic policies.

Indeed, European national labour markets (be they already inside the Euro-zone or not) are characterised by great heterogeneity. This is clearly apparent from a detailed examination of industrial relations, employment and redundancy regulations, the systems of replacement income and the role of active labour market policies¹. From all these points of view, the United Kingdom

stands out clearly compared to the countries of continental Europe. That said, the latter are very far from constituting a uniform model. Although relatively similar in terms of the role played by social partners, the fairly strict regulation of recruitment and redundancy, and replacement incomes, these countries often represent very specific national traits. France, for example, is unique in the nature of its industrial relations: negotiations are highly decentralised, cooperation among social partners is weak and low levels of unionisation all tend to render the French labour market similar to Britain's. The traditional contrast between Europe's Northern and Southern countries is relevant with respect to industrial relations and active labour market policies: yet Sweden is close to Southern Europe in terms of regulatory constraints (redundancy, short-term contracts and working hours), whereas Denmark is more similar to the South concerning the "generosity" of unemployment benefits.

This heterogeneity of European labour markets may lead to two types of problems for European policies. First, it may lead to different levels of so-called equilibrium unemployment, which is associated with the maximum output different countries may obtain without inflationary pressure building up. Some countries could run up against the limits of effectively-available labour

1. See L. Cadiou and S. Guichard, "La diversité des marchés du travail en Europe: quelles conséquences pour l'union monétaire ? Partie I: La diversité des marchés du travail dans les pays de l'UE", CEPII *Working Paper*, 1999, to be published. This study proposes quantitative and qualitative indicators making it possible to classify different countries and identify what makes them different, using techniques of data analysis.

more quickly than others. The European Central Bank would then have to deal with contradictory national needs. Accordingly, any measures that would help bring down the equilibrium level of unemployment are to be welcomed, and labour market reforms are often invoked to this end.

Labour markets also make up another source of asymmetry with EMU. They are likely to produce asymmetric shock directly, such as differing wage claims across countries subject to the nature and organisation of industrial relations. Furthermore, the heterogeneity of labour markets may lead an initially symmetrical shock to have asymmetric consequences, as, for example, companies across different countries will not have the same possibilities for adjusting wages, hours and employment levels.

Should the functioning of labour markets be harmonised among the countries participating in monetary union, in order to reduce such sources of asymmetry? To answer this, it is first necessary to assess to what extent the diversity of labour markets leads to differing degrees of wage flexibility. Next, it must be asked whether such differences actually upset the functioning of EMU.

Variations in Wage Flexibility across Countries

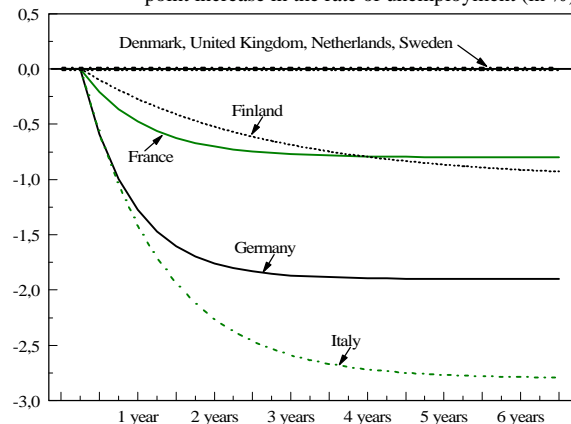
The flexibility of labour markets is often measured by the sensitivity of wages to market pressures (generally taken to be the level of unemployment). To test the flexibility of European labour markets, wage equations were estimated, on a quarterly basis, for eight countries: Germany, France, Italy, the United Kingdom, the Netherlands, Sweden, Denmark and Finland². These estimations relate to the 1990s, just prior to the implementation of the euro. The equations are derived from the WS model, which was popularised by Layard, Nickel and Jackman³. In the short term, variations in wage levels are linked to output prices, labour productivity, the ratio between consumer and output prices⁴, and the rate of unemployment. In the longer term, the wage rate is assumed to be perfectly indexed on labour productivity and may also be sensitive to the rate of unemployment. The speed with which the long term effects make themselves felt is another important

parameter of the model. In order to compare wage setting across European countries, estimates have been carried out simultaneously in all the sample countries⁵. These estimations allow a number of conclusions to be drawn.

The first conclusion is that the behaviour of labour markets in Europe has not been identical across countries, during the 1990s (Graph 1). The Italian and German labour markets have been characterised by rapid and relatively important changes in wages with respect to economic fluctuations. In contrast, wages have been marked by strong inertia in the United Kingdom, Denmark, the Netherlands, and Sweden. In these countries, changes in the rate of unemployment did not have a statistically significant impact on the evolution of wages⁶; in particular the fall in unemployment was not accompanied by a rise in average wages⁷. The results given here indicate that the divergent trends in unemployment, during this period - in Italy and Germany on the one hand, and the United Kingdom on the other hand - cannot be put down to the greater rigidity of wages in the former two countries.

One last conclusion to be drawn is that differences in wage behaviour can easily be related to the institutional characteristics of labour markets. Thus, for example, the hypothesis that the "free-market" regulation of the United Kingdom's labour market should lead to greater wage flexibility is not borne out at the macroeconomic level. Instead, British labour market reforms have, above

Graph 1 - The response of real wages to a 1 percentage-point increase in the rate of unemployment (in %)



Source: author's calculations.

2. Data is not available for other European countries.

3. This Wage Setting model is a macroeconomic interpretation of microeconomic models for fixing wages, which stress labour market imperfections. See R. Layard, S. Nickell and R. Jackson, *Unemployment, Macroeconomic Performance and the Labour Market*, Oxford University Press, 1991.

4. This ratio, which is also called the internal terms of trade, shows up the gap between wages expressed as a unit of production (the cost of labour for companies) and the wage expressed in units of consumption (the purchasing power of wage-earners' wages).

5. More specifically, the wage equations of the different countries are added up, with the constraint that the coefficients must be identical across countries (excepting the constant terms). Subsequently, once they have been tested, the equality constraints are progressively relaxed for the different parameters examined. The detailed results of these estimations are presented in L. Cadiou, S. Guichard and M. Maurel, "La diversité des marchés du travail en Europe : quelles conséquences pour l'union monétaire ? Partie II "Les implications macro-économiques de la diversité des marchés du travail", CEPII Working Paper, 1999, to be published.

6. This hierarchy of countries based on the sensitivity of wages to labour market tensions is fairly close to those found by other authors for different periods, using data of other frequencies, and using different statistical techniques. See for example, T. Tyrväinen, "Real Wage Resistance and Unemployment: Multivariate Analysis of Cointegrating Relations in 10 OECD Countries", *OECD Working Paper*, No 135, 1995, or R. Layard, S. Nickell and R. Jackson op cit.

7. This does not rule out that important wage increases may take place in particular segments of the labour market.

all, led to a greater dispersion of wages and have favoured employment⁸.

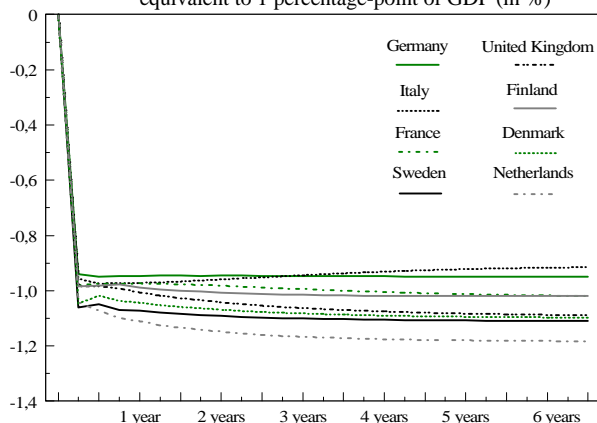
Insufficient Heterogeneity to Create Asymmetry

Do the differences in wage behaviour highlighted above constitute an important source of asymmetric economic responsiveness in Europe? To answer this question, different asymmetric shocks were simulated, using a small model which integrates the wage equations presented above (see Box).

A recession in Europe was simulated first. Faced with a fall in demand, companies react by progressively cutting employment. In the short term, unemployment rises and productivity falls, with both trends bearing down on wages. The impact on wages is all the stronger when they are sensitive to unemployment (Italy and Germany), and when they are strongly indexed to productivity in the short term. Such disparities in wage trends lead to changes in unit labour costs, and hence price competitiveness across countries. Competitiveness improves in Germany and Italy, and to a lesser extent in France and Finland. These countries improve their market shares relative to those where wages adjust less, which in turn limits *ex-post* the fall in activity in the former.

However, varying reactions in labour markets do not lead to significant shifts in the level of national output, across countries (see Graph 2). For example, the deep recession in Europe of the early 1990s was accompanied by a fall *ex-ante* in demand of around 2% of GDP. However, the spread in GDP change across countries never exceeded more than half a percentage point of GDP.

Graph 2 - The response of GDP to a fall in European demand equivalent to 1 percentage-point of GDP (in %)



Source: author's calculations.

BOX - A SIMPLE MODEL OF EMU INTERDEPENDENCIES¹

The model is made up of four equations per country:

- a wage equation, estimated for the 1990s;
- a simple equation for the adjustment of employment to output, estimated over the same period. This adjustment takes between 5 and 9 quarters, depending on the country;
- an unemployment equation, linking change in the rate of unemployment to the rate of employment growth, taking into account shifts in activity rates, which are assumed to be identical in all countries (equal to 0.5);
- a demand equation for national products, taking into account the impact of changes in wages and productivity on the economic activity of each country. This impact is a function of price-competitiveness (measured in unit wage costs - UWCs - of each country relative to those of its partners) and of price elasticity (assumed to be unity).

The model ignores differences in how demand reacts in each country to national price competitiveness, so as to isolate clearly the contribution of labour markets to asymmetry. It is assumed here that the interdependencies of the EU countries are limited, in EMU, to the goods market via price competitiveness. Wages do not directly affect companies' demand for labour, but indirectly through competitiveness losses and the resulting falls in output.

This simple model concentrates on supply mechanisms, in other words the positive contribution of labour markets to European adjustment. It ignores demand effects. Yet, a strong fall in wages and employment is likely to reduce demand, at least in the short term. Thus, the most flexible countries, as defined here, are those in which the fluctuation of demand is potentially the greatest. The model would thus tend to over-estimate the macroeconomic benefits of wage flexibility.

1. For a more detailed presentation see L. Cadiou, S. Guichard, and M. Maurel (1999) *op. cit.*

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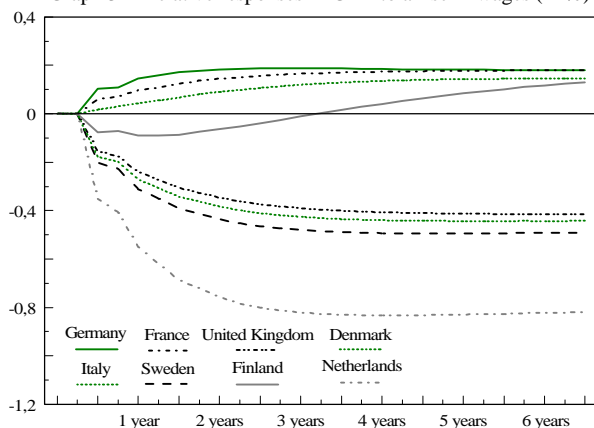
Next, a symmetrical shock with a positive impact on wages was simulated. This would occur following a depreciation of the euro, for example, which would lead to a fall in purchasing power, which employees would seek to offset by a pay rise. The shock simulated was based on a 5% increase in nominal wages⁹. The initial shock is quickly absorbed in countries in which the indexing of real wages on productivity is rapid (Germany, Italy, France and Finland). These countries therefore increase their market shares relative to those in which wage rigidity is greater (Sweden, the United Kingdom, Denmark and the Netherlands). Germany, Italy and France also get by better, relative to their European partners with whom their price competitiveness has improved (Graph 3). The Netherlands is in the most unfavourable situation. However, it should be noted that spreads between countries are moderate given the size of the shock envisaged (with a maximum impact of 1% of GDP after three years, or the equivalent to about 0.3% growth per year over the same time)¹⁰.

8. See M. Fouquin, S. Jean and A. Sztulman, "Le marché du travail britannique vu de France", CEPII Working Paper, No 98-11.

9. The shock was calibrated so that the *ex-ante* impact on wages was 5%. This corresponds to a depreciation of the euro of about 50%, given the indexation of wages on the terms of internal trade, and the degree of openness of the countries included in the simulation.

10. If the euro is assumed, more reasonably, to depreciate by 10% (as has been the case since the beginning of the year), then the maximum spread in output growth between the two countries is only 0.2%, after three years.

Graph 3 - Relative responses in GDP to a rise in wages (in %)



Source: author's calculations.

Note: this graph represents the spread in GDP trends for different countries with respect to the European average, following a shock to the terms of internal trade (equivalent to an *ex-ante* shock to wages of 5%), for the whole of the EU.

Insufficient Flexibility to Absorb National Shocks

The two simulations presented here throw light on the asymmetries created by the functioning of different European labour markets. The same small model of EMU interdependency may also be used to answer another question alluded to above: can labour market adjustments provide the mechanism for national macroeconomic stabilisation to compensate for the loss of the exchange rate instrument?

Assuming that a single country in the Union is affected by a recession, then the fall in production and employment will lead to a rise in the rate of unemployment. Yet, no matter the country, this rise would not have a sufficient impact on moderating wages for the country to increase its market shares relative to its EU partners. Indeed, in the countries where wage flexibility is quite strong (Italy and Germany), the impact of the rate of unemployment on wages is far too small for the labour market to be able to stabilise the business cycle. In Italy, for example, one tenth of the initial shock is offset by wage adjustments.

The Implications for Economic Policy

The results presented here lead first of all to the conclusion that the harmonisation of labour markets is not necessary for the proper functioning of a common monetary policy. In the face of common shocks, the reactions of wages and employment in the countries participating in the euro do not lead to divergences in economic performance that are sufficiently important to limit the relevancy and effectiveness of the European Central Bank's policy.

Secondly, when only one country is affected by a shock, wage flexibility is insufficient across the euro-zone to compensate for the loss of purely national instruments used to regulate the business cycle. This fact may constitute important grounds for concern about the functioning of EMU, but this is a problem affecting all countries in the euro-zone and it is not a problem of differences across these countries. That said, any attempts to strengthen the macroeconomic flexibility of wages through labour market reforms could be a hazardous exercise: such flexibility seems to be largely independent of the institutions and regulations of the labour market. Real wage rigidity is a stylised fact at the macroeconomic level, which has continued to be important during the 1990s, despite the labour market reforms undertaken in various countries¹¹. The hopes placed in greater wage flexibility as a means of improving the functioning of EMU should not therefore be overestimated. The lack of flexibility in European labour markets reinforces, above all, the need for national fiscal policies to be autonomous.

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11. Furthermore, a comparison with the United States suggests that American wage flexibility at the macroeconomic level is comparable to that of Europe.

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