

# EMU: Economic Growth Leads to Job Creation

Although it was as long ago as 1993/94 that employment in the EMU countries reached its nadir, it is only since 1997 that there has been a perceptible improvement in the labour market situation. And even now, unemployment remains high, so that raising employment levels are still a prime aim of economic policy.

An overall evaluation of the labour market situation requires more than mere analysis of unemployment rates and the employment figures of the various countries. Of greater value is an analysis of the total volume of working hours, which measures the total utilisation of labour as a factor of production. This reveals a close correlation between economic growth and changes in total hours worked. At the same time, the strength of this correlation varies significantly between the EMU countries and is subject to marked fluctuations across the business cycle. One striking finding is that, in the upturn, the employment intensity of economic growth is just as high in the euro zone as in the USA.

The observation period covers essentially the years 1993 to 2000, i.e. the time between the nadir of the last recession to the (provisional) cyclical peak last year. In order to make a more precise analysis of labour market trends and employment policy successes, a longer observation period would be preferable, one that covers the entire cycle from 1989 to 1999. However, the time series data for important labour market indicators prior to 1993 suffer from numerous gaps and breaks in many EMU countries. More generally, labour market statistics are in many ways flawed in terms of quality and international comparability, justifying the calls by the European institutions for improvements in this area.<sup>1</sup> Drawing on data provided by international institutions, but also information provided by national institutes, we have attempted to close the gaps in the time series for the period since 1993. Given that the available information on absolute levels is more uncertain than that on trends over time, appropriate indexed figures were used as a basis for the study. The analysis covers the labour market situation in the EMU area, to which Greece has belonged since the start of 2001.

## Macroeconomic parameters

Can economic growth bring about a decisive improvement in the labour market situation? To answer this

<sup>1</sup> European Commission/Eurostat, Action plan on EMU. Statistical requirements, 25 September 2000, p. 3.

question, it is necessary to look at the macroeconomic parameters. Since 1993 the economic policy of those countries of the European Union seeking to move towards a monetary union has been conditioned by the criteria set out in the Maastricht Treaty. This tightly circumscribed the scope for fiscal policy, in particular, precisely at a time when many countries were just beginning to recover from the EU-wide recession in 1993 and when unemployment reached record levels. At the same time, monetary policy, under the leadership of the Bundesbank, was restrictive. The pressure was particularly severe on those countries that, unlike Germany, the 'stability anchor', still exhibited high inflation rates. Thus, the stance of the two most important macro-economic policy areas was restrictive. It was therefore not surprising that between 1993 and 1997 the average rate of economic growth in the euro zone as a whole was just 2%. With the exception of a brief, although strong, upturn in 1994, the economic expansion was very muted until 1996 (cf. table 1). It was not until 1997 that a sustained upturn set in, one that has since suffered only a brief setback in the wake of the crises in Asia, Russia and Latin America.

Wage growth in the euro zone during this period was thus largely moderate, pay bargainers being concerned primarily with reducing inflation. With the exception of 1995, when wage growth picked up once more, the rates of wage growth fell from year to year until 1999; unit labour costs in the euro zone as a whole remained virtually constant for several years. In macro-economic terms the high degree of wage moderation was reflected primarily in below-average growth of private consumption until 1997. The weakness of consumer demand was only overcome when monetary policy was relaxed and output and employment growth picked up as a result. It is only since then that there has been a substantial fall in unemployment.

## Labour market indicators in the 1990s<sup>2</sup>

### Unemployment rate and unemployment

Overall, the correlation between output growth and unemployment trends in the EMU is a close one. The number of persons registered unemployed and thus also the unemployment rate (standardised rate as calculated by the OECD) have shadowed the business cycle. From

<sup>2</sup> Active labour market policy measures are not considered here. In the long run they do not have a decisive impact on the results presented here. For the EMU as a whole and for most member countries there has been little change in either public spending on such programmes as a percentage of GDP or in participation numbers.

Table 1  
**GDP<sup>1</sup> of the EMU Countries**  
 Index 1993 = 100

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Belgium	100.0	101.5	100.0	103.0	105.5	106.6	110.3	113.3	116.2	120.9
Germany	98.9	101.1	100.0	102.3	104.1	104.9	106.4	108.6	110.3	113.6
Finland	104.6	101.2	100.0	104.0	107.9	112.2	119.3	125.3	129.7	136.6
France	99.5	101.0	100.0	102.0	103.6	104.8	106.8	110.3	113.5	117.2
Greece	100.9	101.6	100.0	102.0	104.1	106.6	110.2	114.3	118.1	122.6
Ireland	94.2	97.4	100.0	105.8	116.1	125.0	138.4	150.3	165.0	179.9
Italy	100.1	100.9	100.0	102.2	105.2	106.4	108.3	109.9	111.5	114.6
Luxembourg	88.0	92.0	100.0	104.2	108.2	111.3	119.4	125.3	134.8	142.8
The Netherlands	97.3	99.2	100.0	103.2	105.5	108.7	112.8	117.0	121.1	126.0
Austria	98.2	99.5	100.0	102.4	104.1	106.2	107.5	110.6	112.8	116.7
Portugal	98.6	101.1	100.0	102.2	105.2	108.9	113.0	116.9	120.6	124.6
Spain	101.6	102.4	100.0	102.3	105.1	107.5	111.6	116.1	120.4	125.3
EMU-12 <sup>2</sup>	99.5	100.9	100.0	102.4	104.7	106.3	108.8	111.8	114.6	118.5

1 In 1995 prices. — 2 Greece has been a member of the EMU since 1 January 2001.  
 Sources: OECD, Eurostat; estimations and calculations by the DIW.

very different initial levels, unemployment rose sharply in the 1993 recession throughout the EMU, and then remained at a high level; between 1993 and 1997 the standardised unemployment rate in the EMU was in excess of 11% (cf. figure 1 and table 2).

Far below average were the unemployment rates in Luxembourg, Austria, Portugal and the Netherlands; they were only slightly lower than average in Germany and Belgium. In Spain, Italy, France and Finland the unemployment rate was constantly – and in Ireland temporarily – above the average.

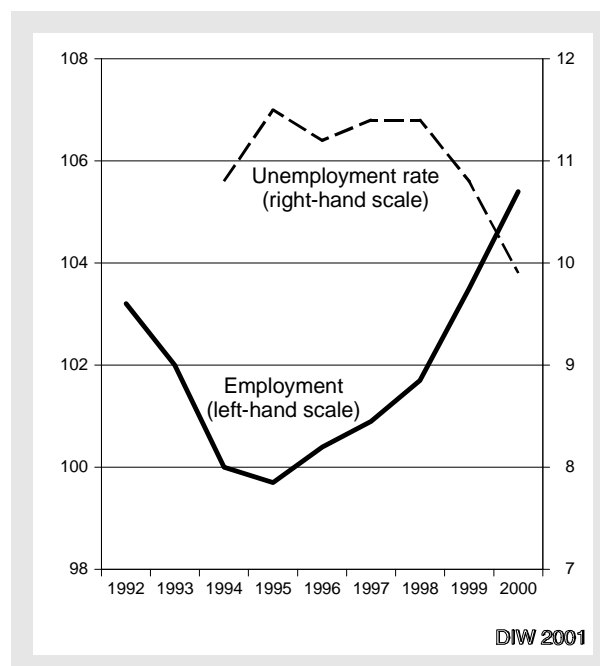
The changes in unemployment rates over time also exhibit substantial differences. Particularly significant progress, from a high initial level, was achieved by Spain, Finland and, in particular, Ireland; the Irish unemployment rate fell from 15% in 1993 to 4.5% in 2000, far below the EU average (8.8%). The Netherlands also achieved very considerable success, recording an unemployment rate of just 2.5%. Italy and Belgium made much less progress in reducing unemployment from its high level, whereas unemployment rates in Germany and France declined to about the same extent as the EU average.

### Employment and vacancies

Albeit with significant time lags, the number of persons in work has mirrored changes in the unemployment figures. At the start of the 1990s employment fell by around 4 million to 115.6 million; subsequently the fig-

ure rose gradually, accelerating sharply from 1998; in total employment increased by 9 million to 124.7 million. Thus, employment is now around 9% higher than the nadir recorded in 1994, and as much as 5% above the

Figure 1  
**Employment and Unemployment Rate in the EMU<sup>1</sup>**



1 Employment EMU-12, unemployment rate EMU-11 (excluding Greece).  
 Sources: OECD, Eurostat; estimations and calculations by the DIW.

Table 2

## Unemployment Rate, Employment and Total Hours Worked in the EMU, 1991 to 2000

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Unemployment rate <sup>1</sup> in %										
Belgium	6.6	7.2	8.8	10.0	9.9	9.7	9.4	9.5	9.1	8.5
Germany	4.2	4.5	7.9	8.4	8.2	8.9	9.9	9.4	8.8	7.8
Finland	6.6	11.6	16.4	16.7	15.2	14.5	12.6	11.4	10.2	9.5
France	9.5	10.4	11.7	12.3	11.7	12.4	12.3	11.8	11.3	9.7
Ireland	14.8	15.4	15.6	14.4	12.3	11.7	9.9	7.6	5.7	4.5
Italy	8.6	8.9	10.2	11.2	11.6	11.7	11.7	11.8	11.3	10.6
Luxembourg	1.7	2.1	2.6	3.2	2.9	3.0	2.7	2.7	2.4	2.2
The Netherlands	5.8	5.6	6.6	7.1	6.9	6.3	5.2	4.1	3.3	2.6
Austria	.	.	4.0	3.8	3.9	4.3	4.4	4.5	3.8	3.3
Portugal	4.2	4.3	5.7	7.0	7.3	7.3	6.8	5.2	4.5	4.4
Spain	16.4	18.4	22.7	24.1	22.9	22.2	20.8	18.8	15.9	14.3
EMU-11	.	.	10.8	11.5	11.2	11.4	11.4	10.7	9.9	8.8
Employment, index 1991=100										
Belgium	101.2	100.7	100.0	99.7	100.4	100.8	101.6	102.8	103.8	105.3
Germany	102.9	101.4	100.0	99.8	100.0	99.7	99.5	100.4	101.5	103.1
Finland	114.8	106.6	100.0	99.3	101.5	102.8	105.0	107.5	111.0	112.6
France	101.8	101.3	100.0	99.9	100.8	101.0	101.6	103.2	104.9	107.4
Greece	97.6	99.1	100.0	101.9	102.8	102.3	102.0	105.5	106.5	107.8
Ireland	95.6	98.5	100.0	103.2	108.8	113.0	117.1	129.0	136.5	144.0
Italy	105.4	104.4	100.0	98.4	97.8	98.3	98.6	99.7	100.9	102.4
Luxembourg	95.9	98.3	100.0	102.6	105.3	108.1	111.6	116.4	122.2	127.7
The Netherlands	97.7	99.3	100.0	99.9	102.3	104.3	107.9	111.5	114.8	117.7
Austria	97.3	99.4	100.0	103.7	104.6	103.2	103.3	103.4	104.9	106.5
Portugal	109.1	102.1	100.0	99.9	99.3	99.9	101.7	106.4	108.4	110.6
Spain	106.5	104.5	100.0	99.1	101.7	104.7	107.8	111.5	116.7	121.4
EMU-12 <sup>2</sup>	103.2	102.0	100.0	99.7	100.4	100.9	101.7	103.5	105.4	107.6
Total hours worked, Index 1993=100										
Belgium	.	.	100.0	100.2	101.5	101.1	102.1	104.5	105.4	106.9
Germany	.	.	100.0	99.8	98.7	98.9	98.2	98.3	99.1	100.7
Finland	.	.	100.0	101.4	103.4	105.4	109.2	111.6	114.7	119.4
France	.	.	100.0	99.7	99.7	99.7	99.5	100.8	102.2	103.8
Greece	.	.	100.0	101.2	101.9	101.1	100.6	103.3	104.8	106.6
Ireland	.	.	100.0	102.5	107.5	111.9	113.4	120.9	125.6	130.1
Italy	.	.	100.0	98.4	97.5	98.3	98.1	99.4	100.2	101.6
Luxembourg	.	.	100.0	101.3	103.4	105.4	107.7	111.4	117.3	122.3
The Netherlands	.	.	100.0	99.3	101.7	103.4	106.9	108.8	111.7	115.2
Austria	.	.	100.0	103.7	104.6	103.5	103.9	103.2	104.1	105.6
Portugal	.	.	100.0	98.9	99.1	99.4	98.8	101.6	102.3	103.0
Spain	.	.	100.0	98.6	101.0	103.4	106.5	110.5	115.0	120.2
EMU-12 <sup>2</sup>	.	.	100.0	99.6	99.6	100.2	100.5	101.9	103.4	105.5

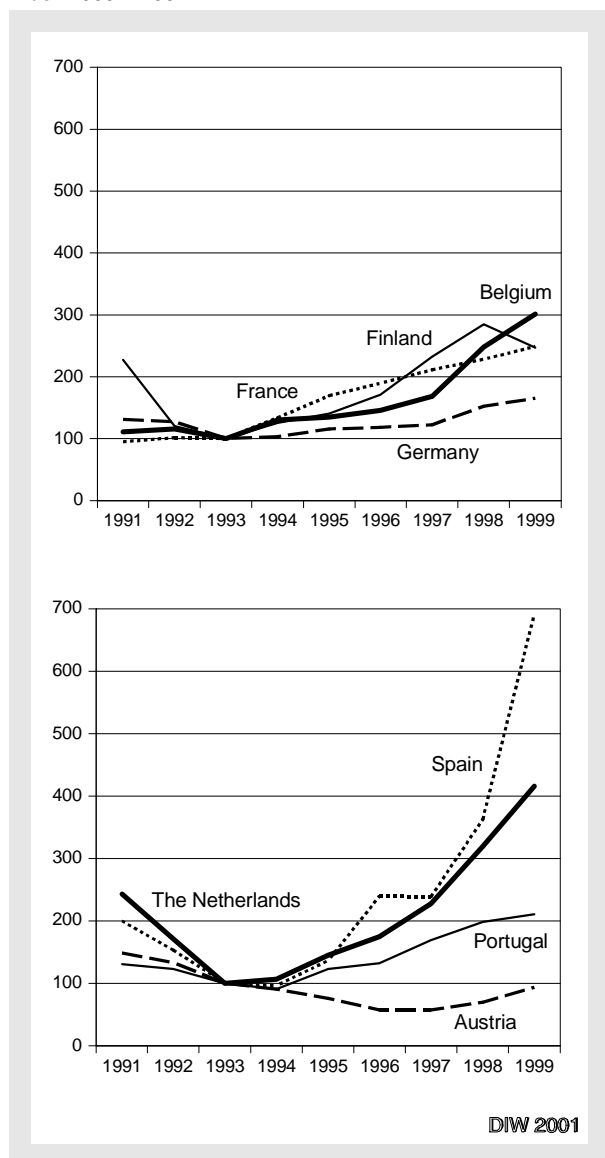
1 Standardised. — 2 Greece has been a member of the EMU since 1 January 2001.  
Sources: OECD, Eurostat; estimations and calculations by the DIW.

level at the start of the 1990s. The rise in employment partly reflects an increase in the size of the working population in the EMU – by around 0.3% per annum in the first half and 0.5% in the second half of the 1990s. The participation rate for the euro zone as a whole, on the other hand, varied little during this period, at around 65%. Employment growth was particularly strong in Ireland, the Netherlands, Spain and Luxembourg. Of the three large economies, only France recorded a perceptible increase, whereas in Germany it was not until 2000 that the employment level at the start of the 1990s was

re-attained, and employment in Italy is still below the level at the start of the decade (cf. table 2).

Alongside the employment figures, the number of vacancies is also an important indicator of the state of the labour market. Unfortunately the data here suffer even more from gaps and lack of comparability. No figures at all are available for Ireland, Italy and Greece. To the extent that data are available, most countries report that the number of vacancies has expanded exponentially since 1993/94 (cf. figure 2). The degree of labour market tension can be depicted particularly well by the

Figure 2  
**Reported Vacancies in the EMU<sup>1</sup>**  
 Index 1993 = 100



<sup>1</sup> For 8 selected countries.  
 Sources: Eurostat; DIW calculations.

so-called vacancy ratio, i.e. the number of reported vacancies as a proportion of the active population (employed plus unemployed). This can be considered as a sort of mirror image of the unemployment rate (cf. figure 3). It is important to point out, however, that the reported vacancies do not reflect total demand for labour, as firms are not obliged to report their vacancies to the employment offices. Moreover, the degree to which vacancies are reported (reported vacancies as a proportion of total vacancies) is not stable; in Germany, at least, it fluctuates anti-cyclically.

As figure 3 shows, in most countries the year 1994 marked a turning point for the vacancy ratio. Reported vacancies rose rapidly after that year as a proportion of the active labour force, while the unemployment rate fell significantly. This trend was particularly pronounced in Spain and the Netherlands, with similar curves emerging for Finland, Portugal and Belgium. In most cases the turning point corresponds to the start of the upturn. It is thus not surprising that such a turning point occurred later in France (1997) and Germany (1998). Here unemployment rates remained at a similarly high level – or even increased further – during the first half of the 1990s.

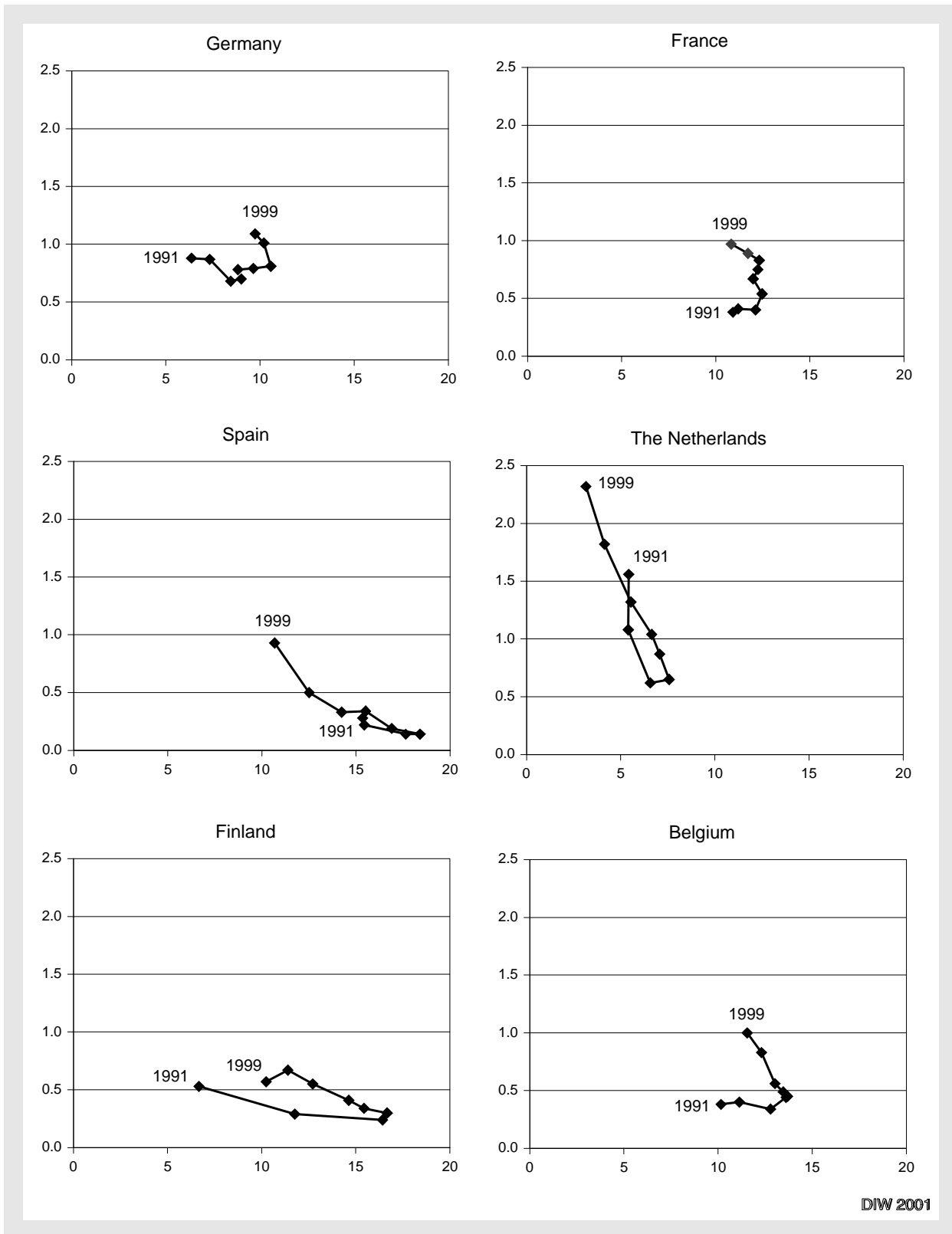
In all countries the vacancy rate rises to a greater extent than the unemployment rate falls. This points to a degree of tension on the labour market: there is sometimes a mismatch between the skills offered and those in demand, not least reflecting the degradation of skills that results from long-term unemployment. Overall, though, the vacancy rate in virtually all countries is still relatively low compared with the unemployment rate. Generally speaking, this contradicts the view that there is a substantial gap between the skills offered and demanded on the labour market. It is only in the Netherlands that both rates are of a similar order of magnitude. Given that here, too, the real number of vacant positions is likely to be substantially higher than the number of registered vacancies, the total vacancy rate is likely to be higher than the unemployment rate. Thus, in the Netherlands, unlike the EMU as a whole, there appears to be a significant shortage of labour.

### Total working hours

In evaluation of the expansion of employment, changes in total working hours are more relevant than movements in the number in employment. This is particularly true at a time when 'standard' employment relations are increasingly declining in importance, enabling – or obliging – people to choose flexible forms of working. An increase in the number in employment does not lead to an increase in total working hours if it is accompanied by a corresponding fall in average hours worked, for instance as a result of an expansion of part-time working (cf. table 3).<sup>3</sup> The statistics on the number of hours worked are inadequate, however. Complete data are not available on the average time worked by employees in the euro zone as a whole. Even so, based on estimates and surveys by the OECD and Eurostat,

<sup>3</sup> This is shown, for instance, by the upwards revision in the number in employment resulting from the better coverage of those in marginal employment in Germany.

Figure 3  
 Vacancy Rates<sup>1</sup> and Unemployment Rates<sup>2</sup> in Selected EMU Countries, 1991 to 1999



<sup>1</sup> Ratio between the number of reported vacancies to the working population (employed plus unemployed). — <sup>2</sup> Unemployment rate according to national statistics.  
 Sources: OECD; DIW calculations.

Table 3

### Part-time Employees<sup>1</sup> as a Share of Total Employment, 1990 and 1999

in %

	1990	1999
Belgium	14.2	19.9
Germany	13.4 <sup>2</sup>	17.1
Finland	7.5	9.9
France	12.2	14.7
Ireland	9.8	18.3
Italy	8.8	11.8
Luxembourg	7.6	12.1
The Netherlands	28.2	30.4
Portugal	6.8	9.3
Spain	4.6	7.9
EWU-10 <sup>3</sup>	11.7	15.0

<sup>1</sup> Part-time workers are considered to be those normally working less than 30 hours per week in their main job. — <sup>2</sup> 1990: West Germany. — <sup>3</sup> No figures for Austria.

Sources: OECD Employment Outlook; DIW calculations.

and information provided by other institutes, it proved possible to make calculations and thus complete the time series for the years 1994 to 2000.<sup>4</sup> Given the different survey methods and definitions used, comparisons between the levels given for the various countries are less reliable than the changes in working hours, on which we focus below. Given the brevity of the period and the low frequency (annual data) of the time series, econometric analyses – which methodologically would really be required – are not yet possible. Consequently the following analysis remains largely descriptive in nature.

Between 1993 and 2000 the total volume of hours worked in the EMU as a whole rose by around 6%, almost all of which growth occurred between 1998 and 2000. This was significantly lower than the rise in the number of persons in employment. Total hours worked increased particularly strongly in Ireland, Spain, the Netherlands and Luxembourg. Growth was particularly strong in Finland, too, but here there was initially the need to make good the drastic loss of employment at the start of the 1990s. In Germany and Italy, the two countries with the lowest average economic growth between 1991 and 2000, the volume of working hours has only just returned to its 1993 level; in these terms performance was substantially below the EMU average (cf. table 2).

<sup>4</sup> The estimate for the year 2000 is based on the DIW's forecast for economic growth for each country and the employment elasticity of economic growth, which is described below.

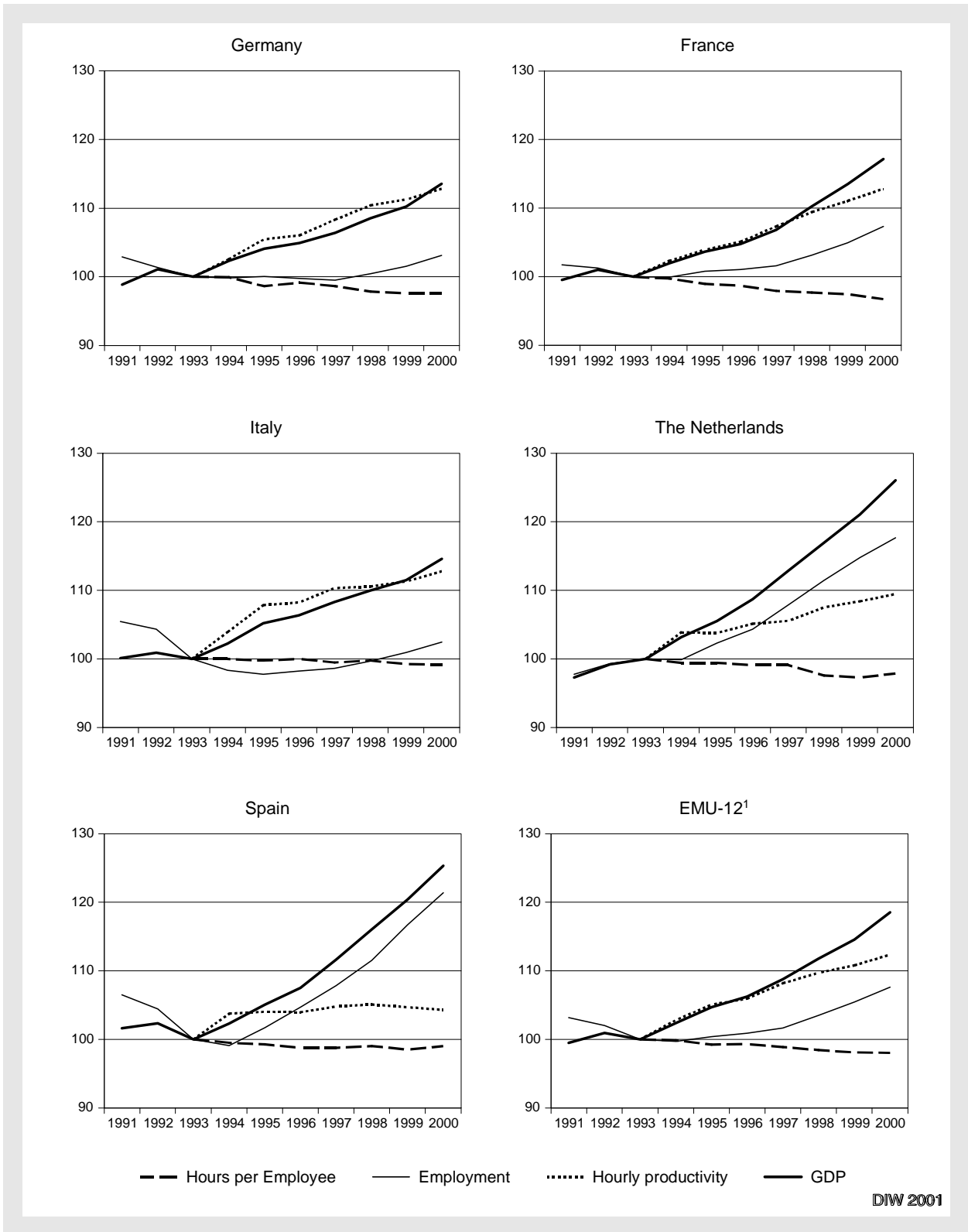
## The employment-intensity of growth

It is frequently argued that economic growth can at best only partially solve Europe's labour market problems. Rather, continued structural changes are necessary if full employment is to be achieved. This claim is based on the view that the employment-intensity of economic growth in the EMU, because of institutional rigidities, is too low, especially compared with the USA. The extent to which economic growth is associated with higher employment (total working hours) – the employment-intensity of growth – can be depicted as the quotient of the rate of change in total hours worked and that of real GDP. It must be borne in mind that this relation is neither constant over time nor linear with respect to growth. Immediately after a recession, when the economy begins to recover, jobs are still being shed although growth is positive (albeit slow); thus, the employment elasticity is negative. It is only after a considerable time lag that the employment threshold is crossed and the elasticity becomes positive. As the upturn takes hold, firms become increasingly confident about their sales prospects, and employment elasticity rises further as investment is increasingly oriented towards expanding capacity rather than rationalisation. The closer the labour market is to being cleared, the greater the incentive for firms for turn once again to labour-saving forms of production, as labour is difficult to come by. Elasticity falls once more.

These trends are well exemplified by comparing the recovery phase between 1993 and 1997, when economic growth in the euro zone was still relatively weak, with the years 1998 and 1999, when the upturn had taken a firmer hold. The pattern that emerges is broadly the same for all the EMU countries. During the recession and in the recovery years, each percentage point of economic growth created less employment (total hours worked) than from 1997 on, when the upturn was well established. With the exception of Austria, in all the EMU countries elasticity in the first period was lower than in the second period (cf. figure 5). This shows that a sustained growth period is required to achieve lasting employment success. The Austrian case is a good example in this respect, because its economy was not in a recession in 1993 and growth was already slightly above average by 1996. As a result its elasticity was already relatively high in this phase.

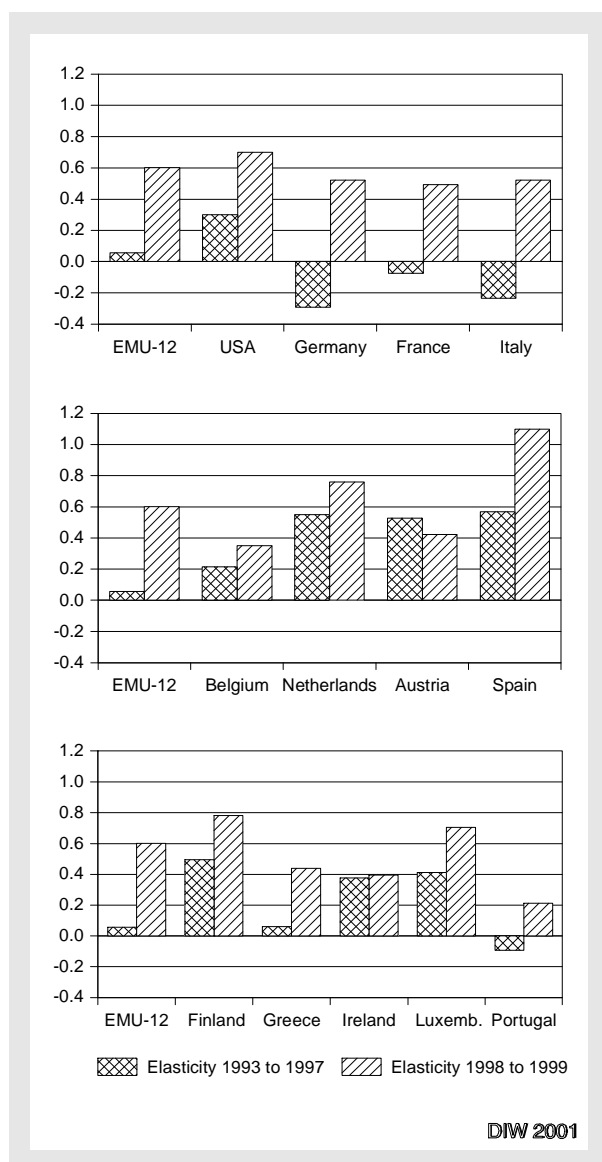
In those countries that have recorded the greatest success in terms of employment, particularly Finland, the Netherlands and Spain, economic growth was markedly higher than the EMU average. This ignores, however, the country with the fastest growth rates in the euro zone: Ireland. Compared with its high growth rates, the employment elasticity was substantially lower. This

Figure 4  
 Growth, Employment and Productivity in the EMU and in Selected Countries  
 Index 1993 = 100



<sup>1</sup> Greece has been a member of the EMU since 1 January 2001.  
 Sources: OECD, Eurostat; calculations by the DIW.

Figure 5  
**Employment Elasticity<sup>1</sup> in the EMU Countries<sup>2</sup>  
 and in the USA<sup>3</sup>**



1 Quotient of the rate of change in the total hours worked and real GDP. — 2 Greece has been a member of the EMU since 1 January 2001. — 3 Employment elasticity for the USA 1989 to 1993 and 1994 to 1999. Sources: OECD, Eurostat; estimations and calculations by the DIW.

may partly reflect the fact that bottlenecks have already arisen on the labour market, following the very rapid growth, and have reduced recruitment.

One striking fact is that during the recovery phase to 1997 the three large EMU economies all recorded negative elasticity with respect to working hours. This is particularly true of Germany, but also applies to France and Italy. In these countries economic growth was also slower than in the smaller economies. In France, though, a strong upturn began in 1997. The reason for the job-

less growth in Germany and Italy clearly lies in the weakness of that growth: between 1993 and 1997: economic growth in Germany and Italy was the lowest in the EMU by a substantial margin. Moreover, the composition of this growth was different than in the other EMU economies. Private consumption expanded hardly at all: its rate of increase was only about half that in the EMU as a whole. Government consumption, moreover, did nothing to offset this; indeed, it declined more sharply than in all the other EMU countries. On top of this, construction investment – which is employment intensive – was in decline in Germany between 1995 and 1997, whereas in the EMU it increased by an average of 2%. Thus, during this period the expansion of domestic demand in Germany and in Italy was consistently under that of the EMU as a whole. All this almost certainly helped to ensure that economic growth there was less employment intensive than in other countries, as productivity growth in the export-oriented sectors tends to be higher. As can be seen from figure 4, Germany was the only country in which productivity growth was constantly significantly higher than output growth in the years 1995/97, and even in 1998. Now that the upturn has taken a firmer hold in both Germany and Italy, the picture has changed. Economic growth in both countries is now almost as strong as the EMU average.

#### Comparison with the USA

In attempting to compare changes in the elasticity of the volume of working hours in the EMU as a whole with that in the USA, it must be taken into account that the business cycle there has followed a very different course, and that the upturn has been maintained in the USA since the start of the 1990s. Consequently, for the purposes of comparison, the period 1989 to 1993 was chosen as the recovery phase in the USA and the period 1994/1999 for the 'entrenched' recovery period. For the USA during the first period – in which the cyclical weakening was less pronounced than in the EMU – the elasticity was 0.3, considerably higher than in the EMU. The reason must almost certainly be seen in the far stronger recovery than in the EMU. In the 'entrenched' upswing period, on the other hand, the elasticity, at around 0.7, is broadly in line with that in the EMU. This indicates that, given secure sales expectations, the EMU as a region is also able to achieve a lasting improvement in its labour market situation. The institutional factors that have been the subject of so much criticism do not constitute an obstacle to such an improvement. This finding is conditional, however, on stabilising the upturn in the euro zone over an extended period and preventing it from coming to an untimely end.

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