

# The composition of employment growth in the euro area in recent years

*While employment growth rates in the late 1990s were broadly similar to the high rates recorded in the second half of the 1980s, output growth appears to have been significantly more job-intensive. A survey of the stylised facts characterising these recent developments at a more disaggregated level may help to identify the possible impact of the reforms and policies implemented in the past. This article reviews trends in employment growth over the late 1990s, the results of which can be summarised as follows. First, as regards sectoral composition, employment growth in the late 1990s was broadly based across sectors and due mainly to an increase in the number of wage earners, while the contribution of self-employment continued to be marginal. Second, female employment growth was much higher than that of males and employment rates for the youngest and oldest age groups increased significantly in comparison with the second half of the 1980s. Third, the latter findings are partly related to the continuing increase in part-time and temporary employment seen in the late 1990s, which contributed strongly to employment growth among women and the young. Finally, although employment growth in the late 1990s was greatest among those with the highest levels of education, correcting for the development in the relative size of educational groups, the employment rate<sup>1</sup> increased the most among workers with the lowest educational attainment.*

*These positive developments may be linked to a range of factors generally affecting the supply of and demand for labour. Among those, wage moderation, differentiation and flexibility play an important role. A number of labour market institutions also influence employment performance over the medium term. In particular, over the second half of the 1990s, euro area countries strengthened their efforts to promote structural reforms aimed at improving the functioning of labour markets. Since 1997 these reforms have been framed within the European Employment Strategy. This strategy aims to raise employment rates within the European Union to 70% by 2010, as established at the 2000 Lisbon Council, with an intermediate target of 67% for 2005, as set by the Stockholm Council in 2001. Although the extent and implementation of reform have been uneven across countries, the efforts made in recent years appear to have been fruitful in fostering employment growth across most sectors and in aiding those groups facing particular difficulties when trying to enter the labour market, such as women, the youngest and oldest age groups and the lowest educated. Nonetheless, employment rates in the euro area remain below those of other economic areas such as the United States and further reforms, together with sustained wage moderation and a modernisation of the wage bargaining process are required in order to attain higher employment and participation rate levels, as well as lower unemployment rates.*

## I Introduction

High unemployment rates and slow employment growth within the euro area have often been linked to structural factors within euro area labour markets. It has been argued that negative macroeconomic shocks, interacting with overly rigid institutional structures, have prevented the necessary adjustment to changes in the economic environment, thereby slowing employment growth and leading to higher and more persistent unemployment. The employment rate in the euro area, 62% in 2001, was considerably lower than in the United States (around 73%), and employment growth declined in line with the economic slowdown.

The late 1990s saw a prolonged period of sustained employment growth, however, which led to a fall in unemployment despite a strong increase in the labour force.<sup>2</sup> Against this background, an analysis of the main characteristics of past employment developments and their link to labour market reforms implemented in the past may be a useful aid for drawing lessons as regards future challenges for increasing employment.

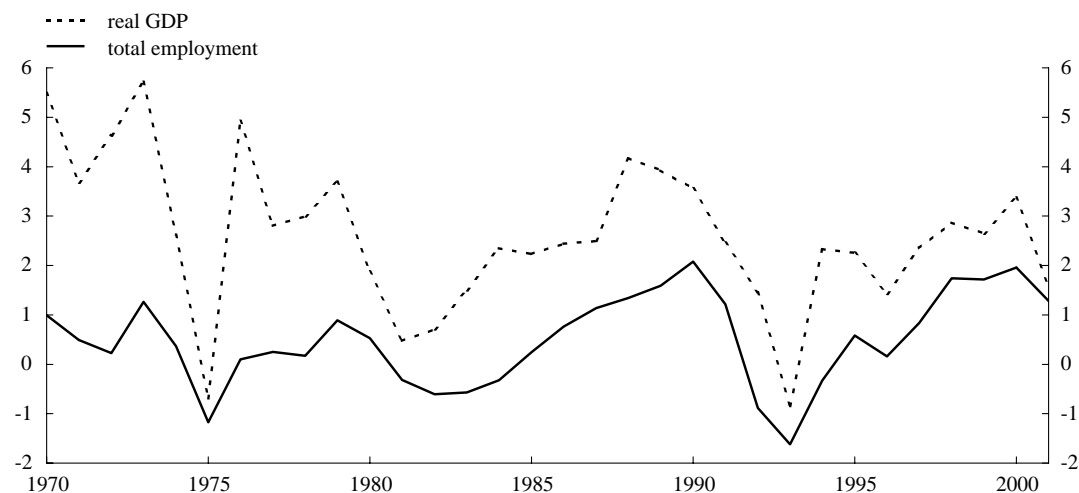
<sup>1</sup> The employment rate for a given group is formally defined as the ratio of employment in this group to the group-specific working age population.

<sup>2</sup> See, for example, the study entitled "Labour force developments in the euro area since the 1980s", Véronique Genre and Ramón Gómez-Salvador, July 2002, ECB Occasional Paper No. 4.

## Chart I

### Euro area employment and real GDP growth

(annual percentage changes)



Sources: European Commission and ECB calculations.

Since 1997 labour market reforms have been undertaken within the framework of the European Employment Strategy which aims to raise employment rates within the European Union to 70% by 2010. This article focuses on the euro area as a whole,<sup>3</sup> while recognising that labour markets, and labour market policies, remain highly heterogeneous across countries.

The late 1990s reflected a period of relatively strong economic expansion<sup>4</sup> which resulted in significant employment growth. Over the period from 1996 to 2001, total employment growth stood at 1.5% per year on average. Since 1970, as seen in Chart I, this average growth rate is only comparable to that recorded in the second half of the 1980s (1.4%), which was also a period of strong economic growth. However, the ratio of employment growth to real GDP growth indicates that real GDP growth was more job intensive in the late 1990s, at 0.6, compared with 0.4 in the late 1980s.

These developments may be linked to the implementation of labour market reforms in the past, and particularly since the mid-1990s, when the pace of reforms gained momentum,<sup>5</sup> although reforms have tended to differ by type and scope across countries. The upward trend

in the overall tax burden on labour in the early 1990s has, for example, been reversed, with a reduction in the average income tax rate in the euro area of around 2 percentage points between 1996 and 2001. There has been some improvement in job mediation, i.e. in personalised services to help job seekers to find a job. Reforms of benefit systems placed, for example, a greater emphasis on reducing the period of unemployment and so-called "unemployment traps" (i.e. financial disincentives to seek work owing to benefit and tax systems) with some countries tightening the criteria for eligibility to benefits and increasing controls. There has also been a positive trend in educational attainment, and wage bargaining has shifted more towards the company level with an increase in the importance of non-pecuniary forms of pay negotiated between firms and employees. The overall strictness of employment protection, with regard to both regular and temporary employment, was also loosened in some countries in the late 1990s.

3 Greek data have been included in the estimate of euro area series (Greece joined EMU in January 2001).

4 For a more precise picture of business cycles in the euro area see the article in the July 2002 issue of the ECB's *Monthly Bulletin* entitled "Characteristics of the euro area business cycle in the 1990s".

5 See also the Eurosystem report entitled "Labour market mismatches in euro area countries", March 2002.

Although it takes time for the effect of such structural reforms to be felt in the labour market, the increase in the employment intensity of economic growth suggests that reform efforts have gradually started to bear fruit.

In order to identify some stylised facts for the euro area as a whole and to link them, where relevant, to reforms and policies which

were implemented in the 1990s, the main characteristics of recent employment growth are presented in the following two sections. Section 2 describes sectoral employment developments in the late 1990s, distinguishing between employees and the self-employed. Section 3 focuses on employment developments for specific groups (women, young and older workers).

## 2 Employment developments in the euro area at the sectoral level

The increase in job intensity of real output growth outlined in Section 1 may be attributed both to industrial and services sectors. This assessment is confirmed when thinking in terms of hours worked or full-time equivalents, as well as the number of persons employed (see Box 1). In the industrial sector, the job intensity of activity, measured by the ratio of employment growth to activity growth, was markedly higher in the late 1990s (see Table 1). Job intensity did not change in the services sector, but the relative economic size of this sector, which has historically been more job-intensive than the industrial sector, increased.

Employment growth was higher in services than in industry in both the late 1980s and

the late 1990s. However, whilst employment growth in industry registered an increase in the late 1990s compared with the late 1980s, in services it decelerated somewhat owing to a lower value-added growth rate in this sector.

### Employment performance was broadly based across sub-sectors

A more detailed breakdown of economic activities is available in Eurostat's annual EU Labour Force Surveys (LFS) for the period between 1996 and 2001, which corresponds to the statistical classification (NACE Rev.1), as shown in Table 2. The examination of the sub-sectors given here suggests that

**Table 1**  
**Euro area employment and activity**  
(annual percentage changes unless otherwise indicated)

	1985 - 1991	1996 - 2001
<b>Whole economy</b>		
Total employment	1.4	1.5
Real GDP	3.2	2.6
Ratio employment growth / real GDP growth	0.4	0.6
<b>Total industry</b>		
Employment	0.7	0.9
Real value added	2.8	2.0
Ratio employment growth / real value-added growth	0.2	0.5
<b>Total services</b>		
Employment	2.8	2.2
Real value added	3.6	2.8
Ratio employment growth / real value-added growth	0.8	0.8

Sources: European Commission, Eurostat, OECD and ECB calculations.

Note: Total services include non-agricultural and non-industrial activities. For further details see Table 2.

employment growth in the euro area was broadly based across most sectors in the period between 1996 and 2001, although

some displayed a more dynamic pattern of growth than others (see Chart 2).

## Box I

### The relationship between employment developments and the number of hours worked between 1996 and 2001

The continued increase in part-time employment in the euro area between 1996 and 2001 may have had an impact on the measurement of total employment growth, given that the number of hours worked by part-time and full-time workers is different.<sup>1</sup> There are two possible ways of shedding some light on this effect. One is to look at the number of hours worked in the economy, while the other is to construct a measure of full-time equivalent workers (see below). The inclusion of an estimate of the number of hours worked per week in the annual EU Labour Force Survey allows this to be done not only for the total economy, but also at the sectoral level.

The estimate of the total number of hours worked is calculated by multiplying the usual number of hours worked per week by the number of workers, both full-time and part-time, and adding the two together. For the estimate of full-time equivalents, the total number of hours usually worked per week by part-time workers is divided by the average number of hours usually worked per week by full-time workers to obtain an estimate of potential full-time workers. The result is then added to the number of full-time workers. As the number of usual hours worked under both forms of contract is quite stable for the period under consideration (around 41.5 and 20 hours for full-time and part-time workers respectively), the growth in hours worked was mainly driven by the rise in the part-time employment rate and the increase in the number of people employed. Thus, the growth in hours worked was very close to employment growth measured in full-time equivalents. A summary of the results is given in the table below. Note that the analysis refers to the usual number of hours worked for the main job only. The proportion of persons employed having a second job remained low and stable at less than 3% of total employment in the late 1990s.

For the economy as a whole, the impact of developments in part-time work on employment growth is estimated to have been 0.3 to 0.4 percentage point over the period between 1996 and 2001. In other words, total growth in terms of hours worked and full-time equivalents was 1.1% and 1.2% respectively in the late 1990s, as compared to 1.5% in terms of people employed. As expected, a continued increase in the part-time ratio results in a lower increase in the number of hours worked, and therefore in full-time equivalents, than in the number of employed itself. Sectoral estimates show that the difference is mainly concentrated in the services sector. This is mainly due to an increase in part-time employment in the services sector, but also to the fact that the usual number of hours worked by part-time workers in the services sector is lower.

### A comparison of recent developments in employment, number of hours worked and full-time equivalents

(average annual percentage change; 1996-2001)

	Employment	Hours worked	Full-time equivalents
Total	1.5	1.1	1.2
Manufacturing	1.0	0.8	0.9
Construction	1.2	1.1	1.2
Services	2.1	1.6	1.7

Sources: European Commission, Eurostat, OECD and ECB calculations.

<sup>1</sup> This effect tends, moreover, to bias the standard measures of productivity used, e.g. a trend increase in part-time employment will imply an underestimation of productivity growth when using standard employment definitions. See Box 3 entitled "Developments in euro area labour productivity", pages 29-31 of the August 2002 issue of the ECB's Monthly Bulletin.

In the industrial sector, employment in both manufacturing and construction grew significantly, at an average annual rate of 1.0% and 1.2% respectively. This implies a contribution to total employment growth from manufacturing of around 0.2 percentage point and of 0.1 percentage point from construction. Mining and utilities both registered a fall in employment growth, possibly related to the restructuring process undertaken in these sub-sectors in recent years. Within market-related services, the employment growth recorded in business services was particularly high. At above 6%, it contributed around 0.5 percentage point to total employment growth. This could in part be related to the development of outsourcing in some industries. Other significant developments were recorded in hotel and restaurant services, transport and communication, and the wholesale and retail trade. Among non-market related activities,

the most significant developments occurred in health and social work, other services and private households with employed persons, with employment growth rates of above 2% per year on average. In contrast, employment continued to decline in the agricultural sector.

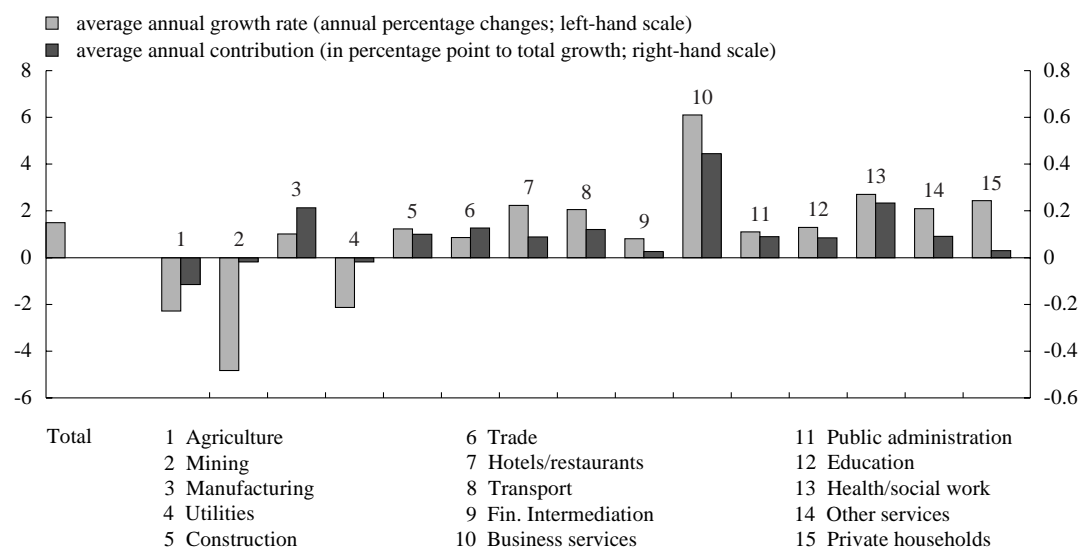
Employment growth in the services sector has become a common trend across industrial countries. More recently, progress in the liberalisation of some services may also have contributed to the strong employment performance in this sector. Given that the incidence of part-time work is substantially higher in the services sector than in the industrial sector (whereas temporary work is more uniform across sectors), the relatively strong growth in this sector may also be linked to policies designed to foster female employment and part-time work (see Section 3).

**Table 2**  
**Sectoral breakdown of euro area employment**

Sectoral breakdown	Percentage <sup>1)</sup>
<b>Agriculture</b>	
(including hunting, forestry and fishing)	5.0
<b>Industry</b>	30.4
- Mining (including mining and quarrying of energy and non-energy producing materials)	0.4
- Manufacturing (including manufacture of food products, textiles, chemical products and transport equipment, etc.)	21.1
- Utilities (including electricity, gas and water supply)	0.8
- Construction	8.1
<b>Market-related services</b>	35.6
- Wholesale and retail trade (including repair of motor vehicles and personal and households goods)	14.9
- Hotels and restaurants	4.0
- Transport and communication (including storage)	5.9
- Financial intermediation (including insurance and pension funding services)	3.3
- Business services (including real estate and renting)	7.5
<b>Non-market-related services</b>	29.0
- Public administration (including defence, compulsory social security services)	8.1
- Education	6.5
- Health and social work	8.7
- Other services (including sewage and refuse disposal services, sanitation services, membership organisation, recreational, cultural and sporting services)	4.4
- Private households with employed persons	1.2
- Extra-territorial organisations and bodies	0.1
<b>Total</b>	100.0

Sources: Eurostat and ECB calculations.

1) Average percentage of employment in each sector with respect to the total between 1996 and 2001.

**Chart 2****Euro area employment growth by sector (1996-2001)**

Sources: Eurostat and ECB calculations.

### The contribution of the self-employed to employment growth remained low, albeit varying across sectors

The breakdown of employment growth between employees and the self-employed by sector points to a very low contribution of self-employment to total employment growth. This is partly explained by the contraction of employment growth in agriculture, since the ratio of self-employed is the largest in this sector, at around 50%. However, there was an increase in the number of self-employed in the construction sector and in most service sectors (such as business services and health and social work), probably in response to the trend to outsource certain activities or to the expansion of some professional services. Even in these sectors, the contribution of the self-employed to employment growth was

much smaller than that of employees. Interestingly, increases in self-employment appear to have been driven entirely by female employment, in particular in business services.

In more recent years a number of measures were taken to simplify administrative procedures, often with the explicit aim of facilitating the start-up of new firms. Evidence suggests, however, that regulations within the euro area continue to pose considerable impediments to business start-ups. Such impediments may offer a partial explanation for the low contribution of self-employment to employment growth in the euro area. The 2002 Broad Economic Policy Guidelines, adopted by the EU Council, stress the importance of removing the remaining barriers to firms entering markets within the European Union.<sup>6</sup>

## 3 Employment developments in the euro area among specific groups

There seems to be evidence that incentives to take up employment have improved in recent years among particular groups of individuals. The number of male and female employed grew significantly during the period

from 1996 to 2001, particularly in the case of women. This reduced the difference between

<sup>6</sup> See Box 4 entitled "The Broad Economic Policy Guidelines 2002", pages 28-30 of the July 2002 issue of the ECB's Monthly Bulletin.

male and female employment rates from 21.6 percentage points in 1996 to 19.4 percentage points in 2001. The growth rate of employment for females, above 2% on average between 1996 and 2001, was more than double that of males, contributing to around two-thirds of total employment growth. The female employment rate rose by more than 5 percentage points to 52.2%, an increase similar to that observed in the late 1980s (see Table 3). The male employment rate grew by over 3 percentage points to 71.6% between 1996 and 2001, compared with an increase of below 1 percentage point between 1985 and 1991.

The breakdown of employment growth by age groups helps to explain these developments. While younger and older workers contributed marginally to employment growth in the late 1980s, these age groups together accounted for half of the total employment growth recorded between 1996 and 2001. Although employment growth rates for the youngest and oldest age groups remain far below those of prime-aged workers (aged 25-49), both groups registered a significant increase in employment rates in the late 1990s. This is especially true for male workers, with the employment rate of men

aged 15-24 increasing to 40.9% and of those aged 50-64 rising to 59.3%, i.e. by over 5 and 2.5 percentage points between 1996 and 2001 respectively. By contrast, the employment rate increased by only 0.5 percentage point in the case of young males in the period between 1985 and 1991, and decreased by 1.5 percentage points for older males. The significant change in the employment pattern among the young is also significant for females.

Reforms of unemployment benefit systems in euro area countries have focused on reducing the overall level of unemployment benefits and have tightened eligibility criteria and job-seeking requirements. Open-ended or relatively high unemployment or other social security benefits may negatively affect the decision of individuals to look for work or accept jobs. Some reforms of benefits systems were implemented during the 1990s, as shown in Table 4, and will have contributed positively to employment growth. Reforms of pensions and early retirement schemes in some euro area countries may also have contributed to the increase in the employment rate of older workers, but some of the reforms in this area have only been undertaken since 2000 and have not yet

**Table 3**  
**Euro area employment by gender and age group**  
(in percentage points unless otherwise indicated)

	Contribution to annual employment growth		Change in employment rate		Employment rate (as a percentage)
	1985 - 1991	1996 - 2001	1985 - 1991	1996 - 2001	2001
<b>Total</b>	1.4	1.5	3.1	4.2	62.0
15-24 years old	0.0	0.2	1.0	4.8	37.2
25-49 years old	1.2	0.8	4.1	3.9	77.2
50-64 years old	0.1	0.6	1.0	3.8	47.5
<b>Males</b>	0.5	0.6	0.7	3.1	71.6
15-24 years old	0.0	0.1	0.5	5.1	40.9
25-49 years old	0.5	0.2	0.7	2.3	88.0
50-64 years old	0.0	0.3	-1.5	2.5	59.3
<b>Females</b>	0.9	0.9	5.2	5.2	52.2
15-24 years old	0.0	0.1	1.5	4.5	33.4
25-49 years old	0.8	0.5	7.4	5.4	66.5
50-64 years old	0.1	0.3	2.8	4.9	38.1

Sources: European Commission, Eurostat, OECD and ECB calculations.

Note: The employment rate for a given group is the ratio of total employment to total working age population for that given group.

**Table 4****Main developments in benefit systems in the euro area in recent years**

Country	Unemployment benefit systems					(Early) retirement systems	
	Insurance in months	Assistance in months	Gross replacement rates (UI) <sup>(1)</sup>	Work availability requirements <sup>(2)</sup>	Benefit eligibility requirements	Increase in retirement age	Higher disincentives <sup>(3)</sup>
Belgium	No limit	none	=	+	=	+	+
Germany	6-32	unlimited	40% → 38%	+	=	=	+
Greece	5-15	none	=	=	=	=	+
Spain	4-24	6	80% → 70%	+	+	=	-
France	4-60	unlimited	57% → 53%	=	+	=	+
Ireland	15	unlimited	41% → 32%	=	=	=	=
Italy	6-9	none	15% → 33%	+	=	-	+/-
Luxembourg	12-24	none	=	=	=	+	=
Netherlands	6-60	24	=	+	+	=	+
Austria	5-12	unlimited	43% → 36%	=	+	+	+
Portugal	12-30	6-15	=	=	-	+	=
Finland	23	unlimited	54% → 61%	+	+	+	+

Source: ECB publication entitled "Labour market mismatches in euro area countries", March 2002.

Note: The sign "+" ("−") indicates an increase (decrease) in the respective indicator and "=" means that no changes have been recorded.

1) UI = unemployment insurance benefits or, in the countries with no UI, guaranteed income schemes. "Gross replacement rate" is the income of an unemployed worker with a dependent spouse in the first few months of being jobless as a proportion of the income earned when in work.

2) "Work availability requirements" involves tighter requirements for being available for work when offered a job.

3) Disincentives include less favourable taxation of pension benefits, a reduction in pension benefit eligibility, and a lengthening of the contribution period before pension entitlement.

had the time to take full effect. Although the reforms of the benefit systems are a step in the right direction, in most cases they have not been sufficiently far-reaching and early retirement schemes are widely spread across the euro area relative to other economic areas. The employment rate for older workers remains significantly below the employment rate of prime-aged males. The 2002 Broad Economic Policy Guidelines emphasise the need for a range of further measures for adapting tax and benefit systems to make work pay, including reducing incentives for early retirement.

Constraining levels of employment protection legislation may raise the average period of unemployment, reduce labour force participation and slow the adjustment of employment to changing economic conditions. Moreover, it may reinforce the bargaining power of "insiders", that is those who already have jobs, by allowing them to negotiate higher wages and making it even

more difficult for "outsiders", that is those without jobs, to enter the labour market. The overall level of employment protection legislation, in terms of both regular and temporary employment, was also reduced in some euro area countries in the late 1990s, and may have facilitated market entry, in particular for specific groups such as females and young workers. An appropriate balance between employment protection legislation and welfare systems is required to ensure adequate incentives both for employers to hire and employees to work. In the same vein, the 2002 Broad Economic Policy Guidelines mention the need for an appropriate balance between "flexibility" and "security".

Finally, equal opportunities policies should also be mentioned within the context of the increase in female employment growth. Factors such as the lack of affordable childcare, the design of the tax system to tax couples rather than individuals or inflexible

working hours may make work less attractive, particularly for women. Although the degree of implementation of gender equality varies considerably across the euro area, the reconciliation of work and family life is becoming an important area of policy. Almost all euro area countries are increasing efforts towards the provision of childcare and a number of countries are tackling gender segregation and/or gender wage gaps. However, female labour market participation continues to face obstacles and the 2002 Broad Economic Policy Guidelines emphasise the need to remove existing barriers to female labour force participation, for example by extending the provision of childcare and by promoting more flexible working hours.

### Part-time jobs – one of the main sources of new employment for women and the young

Until the mid-1970s the basic legal instrument regulating the employment relationship in euro area countries was the indefinite, full-time employment contract. Policy changes over the 1990s contributed to the continuing

importance of part-time and temporary employment.

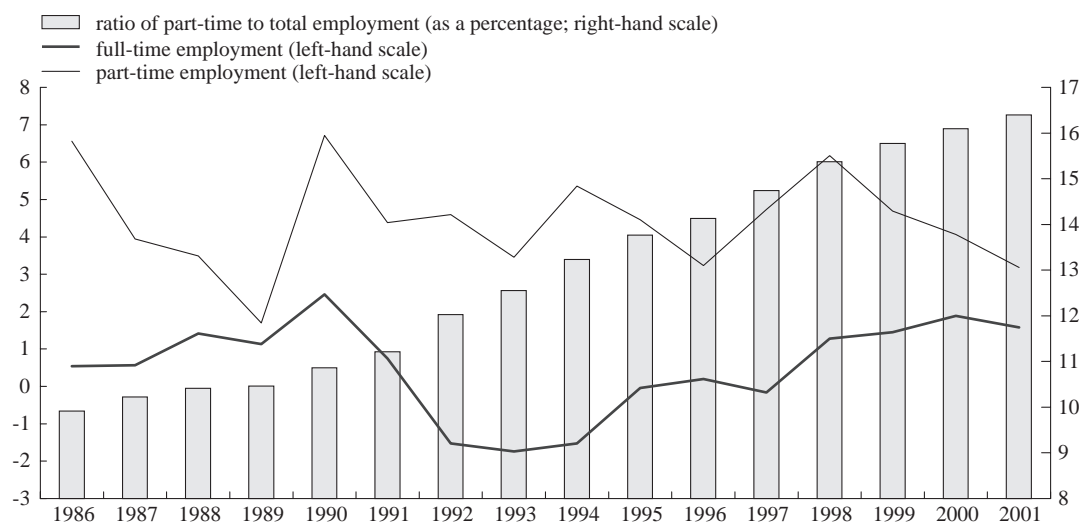
Between 1996 and 2001 part-time jobs made up nearly half of the total increase in employment. The growth rate of part-time employment reached 4.7% per year on average, i.e. roughly similar rates to those observed during the late 1980s, reflecting a continuing rise in the ratio of part-time employment to total employment which actually showed its strongest increase in the first part of the 1990s (see Chart 3). In 2001 the ratio of part-time employment stood at 16.4%. The sectoral contribution of part-time jobs to employment growth appears to vary quite substantially. It was smaller in industry – at around 20% of industrial employment growth – than in the services sector, where it accounted for half of employment growth. The contribution of part-time jobs was particularly relevant in non-market-related services.

Part-time employment growth is significantly greater among women than among men. In the case of male workers, employment growth has remained largely driven by full-

**Chart 3**

### Euro area part-time employment

(annual percentage changes unless otherwise indicated)



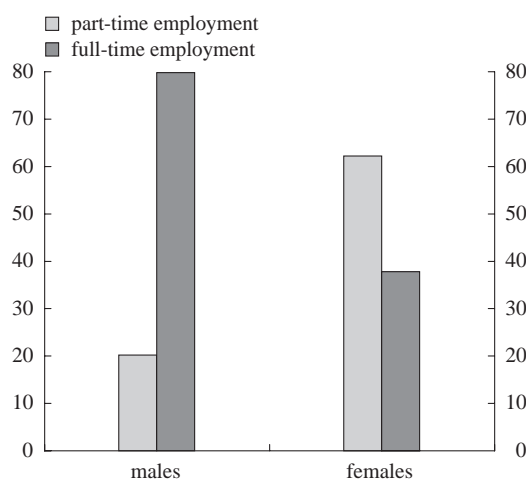
Sources: Eurostat and ECB calculations.

Note: The distinction between full-time and part-time employment is based on the answer given by the respondent to the EU Labour Force Survey and does not correspond to a predefined number of hours worked. Data have, however, been corrected for implausible answers and, on average, full-time work usually starts at about 30 hours per week.

time jobs. Between 1996 and 2001 part-time jobs accounted for around 20% of male employment growth (see Chart 4). Moreover, male part-time employment growth was broadly based across sectors, suggesting that specific sectoral developments had a limited influence on it. Conversely, part-time work appeared to be the main source of employment creation for women (60% part-time versus 40% full-time). At the same time, these developments have been accompanied by a fall in the percentage of both men and women in part-time employment but wishing to work full-time, from 21.0% in 1996 to 16.4% in 2001. This suggests that the dynamism of part-time employment growth also reflects a preferred choice for workers, although this remains less the case for men than for women.

As regards the development of part-time work by age groups, there are also some clear differences in the relative contribution of part-time work to employment growth

**Chart 4**  
**Contribution of part-time and full-time jobs to employment growth by gender**  
(as a percentage of total growth; 1996-2001)



Sources: Eurostat and ECB calculations.

**Chart 5**  
**Contribution of part-time and full-time jobs to employment growth by age group**  
(as a percentage of total growth; 1996-2001)



Sources: Eurostat and ECB calculations.

(see Chart 5). In particular, for those aged 15 to 24 years, the growth in part-time jobs clearly exceeded that of full-time jobs, so that part-time employment contributed just over 65% of overall employment growth for the young. For those aged 25 to 49 years, the relative contribution of full-time versus part-time employment to total employment growth was broadly similar, while the contribution of full-time jobs clearly outweighed that of part-time jobs in the case of the oldest age group.

The wider use of flexible types of employment contract in European labour markets has increased their adaptability. The possibility of moving between full-time and part-time jobs allows employees to work more in line with their private needs, drawing people into the labour force who were previously unable or unwilling to consider full-time work, such as women or the young, and gives firms greater flexibility in terms of adjusting their employment levels in response, for example, to changes in demand.

### Temporary jobs contributed substantially to employment growth, particularly among the young

Typically, temporary contracts<sup>7</sup> facilitate the adjustment of labour demand to business cycle fluctuations through the creation of short-term jobs in response to temporary needs. Moreover, temporary jobs may facilitate the screening of workers by firms, enhancing labour demand. Thus, for workers facing greater difficulties entering the labour market, in particular the young, temporary jobs may also facilitate labour market entry and offer a stepping stone to more permanent employment.

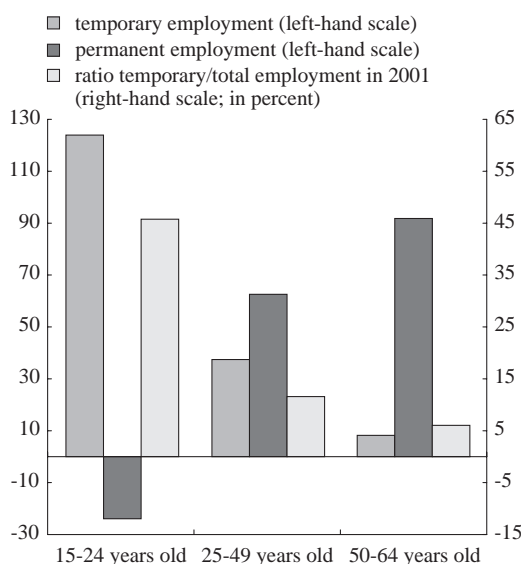
During the late 1990s, temporary jobs continued to contribute significantly to job creation, accounting for around one-third of the increase in the number of employees, a slightly lower proportion than in the late 1980s. This led to an increase in the ratio of temporary employment to total employment – 15.0% in 2001 compared with 12.8% in 1996. The contribution of temporary employment was more prominent in industry, especially construction, while permanent employment was the main contribution in most services, both market and non-market-related. Although the share of temporary work increased to 13.7% among males and to 16.0% among females, permanent jobs remained the main source of employment growth for both genders.

Looking at age groups, the impact of temporary jobs on employment growth has been very different. For those aged 15 to 24 years, temporary jobs were the main source of net job creation, on average, since 1996, although since 1999, permanent jobs have also contributed to employment growth. In the case of prime-aged workers (aged 15 to 49 years) and those aged 50 to 64 years the only source was permanent jobs, although for the prime-aged, temporary jobs also made a significant contribution (see Chart 6). The ratio of temporary workers among the young rose by more than 5 percentage points to 45.8% between 1996 and 2001. By comparison, the share of temporary

**Chart 6**

### Contribution of permanent and temporary jobs to employment growth and ratio temporary/total employment

(as a percentage of total growth between 1996 and 2001, unless otherwise indicated)



Sources: Eurostat and ECB calculations.

employment rose by less than 2 percentage points among prime-aged workers (to 11.6%), and was stable in the oldest age group (6.0%).

### Employment growth improved in relative terms among the low-skilled

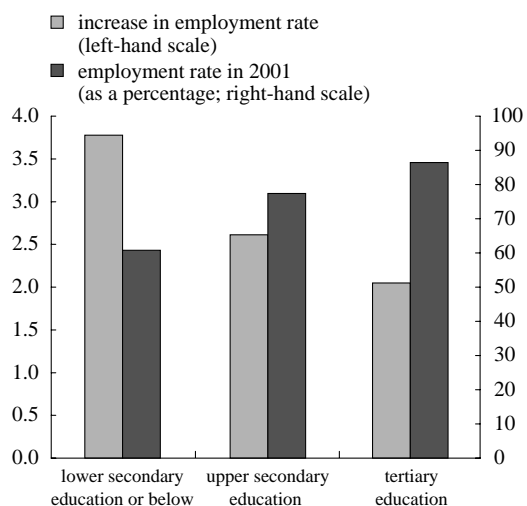
Empirical investigation of skill-specific employment faces the problem that skills are difficult to measure. A satisfactory indicator could combine levels of education with information on occupation. However, owing to a lack of aggregate data for the euro area, this section focuses on levels of education. Three categories of education are distinguished in the Labour Force Survey: tertiary education (university level), upper secondary education and lower secondary

<sup>7</sup> According to the definition used in the Labour Force Survey, temporary jobs are those for which the termination of the job is determined by objective conditions, such as reaching a certain date, completion of an assignment or return of another employee who has been temporarily replaced. Generally, temporary jobs and part-time work constitute two distinct kinds of flexible contract. Although some temporary jobs are also part-time, around 77% of temporary jobs in 2001 were full-time.

## Chart 7

### Increase in employment rates by level of education

(in average annual percentage points between 1996 and 2001, unless otherwise indicated)



Sources: Eurostat and ECB calculations.

Note: Data refer to the population aged 25 to 59 years.

education or below (i.e. up to the end of compulsory education).

Given changes in the educational composition of the working age population, the employment rate by level of education provides useful information regarding the probability of finding a job. In the late 1990s, the employment rate increased most among those with lower secondary education or below – by 3.8 percentage points to 60.8%, compared with an increase of 2.0 percentage points to 86.5% among those with tertiary education and 2.6 percentage points to 77.4% among those with upper secondary education (see Chart 7). Although employment growth continued to be negative among those with lower secondary education or below (-0.5% on average between 1996 and 2001), the situation for this group improved compared with the first part of the decade when employment in this group declined by over 1% on average.

At the sectoral level, compared with the early 1990s, the improvement in employment growth among those with lower secondary education or below came mostly from the

industrial sector in the late 1990s. Between 1996 and 2001, while the number of those with the lowest levels of education continued to decline strongly in agriculture (-3.0% per year), their number decreased only very slightly in services (-0.1%) and increased in industry (0.3%). The rise in the employment rate for this group, albeit more pronounced in the case of women, was a common feature among both men and women.

In view of the problems that low-skilled workers have faced in entering the labour market in the past, many governments are increasingly implementing labour market reform measures aimed at enhancing the employment prospects of persons with low incomes. The 2002 Broad Economic Policy Guidelines stress the need for strengthening active labour market policies targeted towards disadvantaged groups. Almost all euro area countries have, in recent years, introduced policies directed at the low-paid, a group of workers which is often closely associated with being low-skilled. Although national approaches differ significantly, current policies are generally based on the following:

- *Reductions in tax rates* for persons at the lower end of the wage distribution (undertaken by almost all euro area countries in recent years). Lower take-home pay owing to higher income tax rates or social security contributions can make work less attractive. The average level of income tax and social security contributions as a percentage of labour costs for low-wage earners in the euro area decreased from an estimated 44% in 1996 to 41% in 2001.
- *Employment-conditional benefits* paid directly to employees upon taking up employment in a full-time or part-time job. These benefits effectively increase the net income from work and the difference between in-work and out-of-work incomes, thereby creating a stronger incentive for workers to become less dependent on benefits.

- *Payroll tax rebates, reductions in employers' social security contributions and/or subsidised employment (e.g. wage subsidies designed to reduce the costs to employers of employing the targeted group of workers).*

There has been a decline in indirect labour costs, such as social security payments by firms, which have fallen back to the levels seen in the early 1990s.

## 4 Concluding remarks

Given the fact that output growth was more job-intensive in the late 1990s than at the end of the 1980s, this article has identified some stylised facts which could be linked to labour market reforms implemented in the 1990s. Among these facts are the continued significant growth in female employment, which is much higher than that of males, and the increase in employment rates in the youngest and oldest age groups and among those with a lower level of education. For some groups, this improvement has been mainly due to the increasing use of part-time and temporary contracts.

Despite evidence of improved employment performance in the euro area in the late 1990s in comparison with the late 1980s, the average employment rate in the euro area (about 62% in 2001) is still considerably lower than in the United States (about 73%). Furthermore, employment rates of particular groups of workers, such as women, the youngest and oldest age groups, and the low skilled, remain relatively low and there is still a long way to go before the employment targets set at the Lisbon and Stockholm Councils are met.

The design of policies to tackle structural problems within euro area labour markets depends on the specific nature of the problems in each country and is principally a matter for the relevant national governments

and social partners. The progress made so far differs considerably across countries, and overall, for the euro area, it still remains insufficient. In particular, the implementation of structural reforms has not been proportionate to the magnitude of labour market problems, and the pace of reform seems to have slowed since 2001.

Looking ahead, in line with the 2002 Broad Economic Policy Guidelines, further comprehensive labour market reforms are needed. Policies to improve the efficient allocation of workers across sectors, regions and skill groups and to raise the incentive compatibility of tax and benefit systems are of particular importance. There is also a need to raise the incentives for firms to hire workers, for example through the reduction of labour costs and a better matching of workers skills to job requirements.

Such a reform agenda, together with sustained wage moderation, differentiation and flexibility, as well as a modernisation of the wage bargaining process, should be conducive to fostering employment growth, to increasing the growth potential of the euro area and to reducing unemployment over the medium term. It should also enable the euro area to weather external shocks better. In all these respects, there is a challenging agenda ahead.