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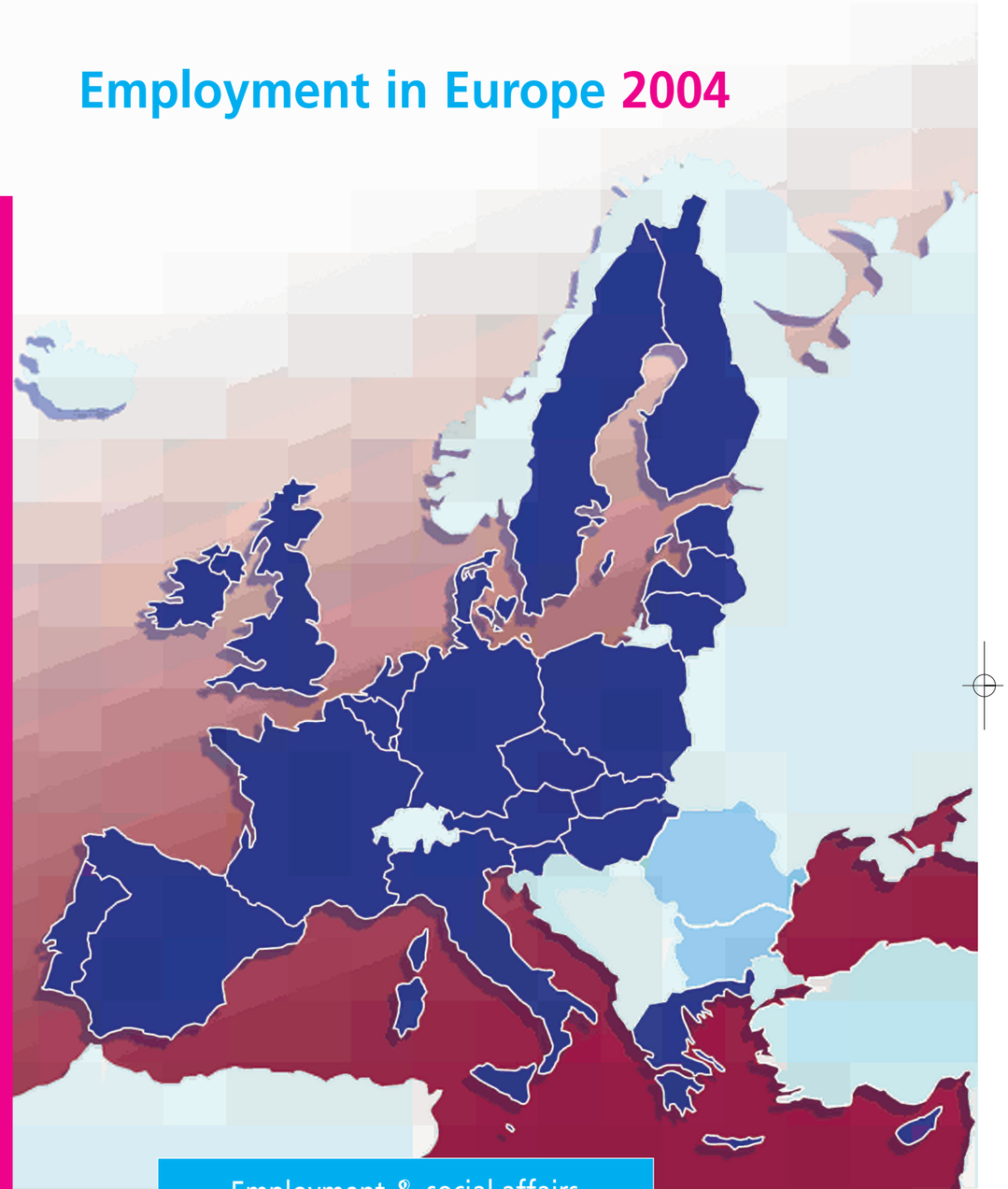

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Employment in Europe 2004

Recent Trends and Prospects

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Note

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Foreword by the Commissioner

The sixteenth edition of the Employment in Europe appears just after the European Union's enlargement to twenty-five Member States in May 2004. This unprecedented enlargement is a milestone in the history of European integration and has led to a united European continent sharing common values, fostering economic growth and social cohesion and strengthening Europe's role in a globalised world.

The most fundamental objective of the European Union, however, remains unchanged: to help raise the living standards and the quality of life of its citizens. This implies improving the growth performance of the EU economy on a sustainable basis; pursuing the way back to full employment in Europe; enhancing productivity and quality in work ("better jobs"); and fostering social cohesion and inclusion.

Achieving full employment and reinforcing social cohesion will largely depend on an appropriate macroeconomic policy-mix and on effective employment and social policies. First, an appropriate policy setting would ensure high levels of business and consumer confidence and thus help maintain buoyant demand levels throughout the economic cycle. Second, effective employment and social policies are key to reducing poverty, social exclusion and regional imbalances, in turn helping to manage properly the social consequences of economic change.

The parallel development of economic and social prosperity is central to the European Social Model. In its diverse forms in the Union, the model has played a crucial role in helping to lift productivity and living standards across Europe. It has also helped to ensure that the benefits are widely shared, recognising that we cannot make our economies stronger by making sections of society poorer.

Against this background, the current report shows that the EU25 is potentially well placed to take advantage of the opportunities provided by enlargement. Following the economic slowdown of recent years, the report also documents some encouraging signs of a global economic recovery which may eventually help put Europe back on track towards the ambitious Lisbon objective for the EU "*to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion*".

The report shows that success will depend crucially on continuing reforms of our financial, labour and product markets; the integration of markets for services; and the strengthening of investments in lifelong learning, education, and research and development, thus helping all Member States to emulate the positive employment dynamics we observe in the best performing countries in the EU. Unless we further change our policies and improve the implementation and coordination of policies at EU-level, however, we are unlikely to achieve the Lisbon targets for higher employment rates.

In particular, the encouraging signs of an upturn in economic growth have not yet been translated into more jobs. Average employment growth in Europe virtually stagnated in 2003 and was negative in nearly half of the Member States. Although there is evidence of continuous improvements in labour market participation of older people across most of Europe, labour market prospects have clearly deteriorated over recent years in other groups, notably young people and people with low skills.

It is clear from the report that Europe must now effect a step change in meeting the challenge of economic growth, competitiveness, full employment and social cohesion. And it is equally clear that partnership and social dialogue are key to ensuring effective implementation of the necessary reform measures on the ground. According to the report, the most important reforms are :

- making labour market institutions such as employment services, benefit systems and education and training more responsive to the needs of individual workers and to changing economic conditions;

- tailoring tax-benefit systems and active labour market policies to the needs of the most vulnerable groups in the labour market, with a view to increasing their employability, employment stability and adaptability to change;

- combining flexibility and security on the job market in a way which helps increase both productivity and the quality of jobs, by guaranteeing security for individual workers whilst at the same time allowing firms the flexibility needed to continue creating jobs;

- exploiting better the job creation potential in the services sector - and in high-skill, high-wage services in particular - by raising investment in research and development, increasing labour market participation of women and older people, and supporting both public and private demand for services;

- encouraging all economic actors to seize the opportunities offered by globalisation, while developing accompanying measures to anticipate short-term shocks and to cope with temporary and local hardships.

I expect the findings of this report to be a useful input into the Commission's thinking on the mid-term review of the Lisbon strategy. But I trust that the report is also helpful in explaining to EU citizens the employment challenges which face the enlarged EU and how the EU can add value in meeting those challenges.

Stavros Dimas

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Executive summary

1. Slow overall economic growth and mixed employment performance in Europe in 2003

Reflecting the slow economic growth in the EU during 2003 …

The global economic recovery continued to gain momentum during 2003, with relatively strong growth in the US and Japan. Indeed, the upturn in the US economy accelerated in the third and fourth quarters of 2003 resulting in 3.1% growth for the year as a whole, compared to 2.2% the year before. Similarly, there has been a sharp turnaround in Japan, resulting in 2.5% GDP growth in 2003 compared to negative growth of 0.3% in 2002. In contrast, economic growth for the enlarged European Union (EU25) declined to 0.8% in 2003, down from 1.1% the year before.

… employment growth in the EU was limited …

Employment growth for the EU25 was limited in 2003. The slowdown in employment growth which began in the first half of 2001 and saw growth reach a standstill by the last quarter of 2002, was followed by only a very moderate recovery over the course of 2003. For the year as a whole employment growth was almost static, at 0.2%, while the unemployment rate rose to 9.1% (EU15: 8.1%), up from 8.8% in 2002.

… with employment growth lower than in the US.

In the US, the labour market showed clearer signs of improvement during 2003 in line with the upturn in its economy. Employment grew by 0.9% in contrast to the declines of the previous two years. However, unemployment continued to rise, averaging 6.0% for the year as a whole compared to 5.8% for 2002. Meanwhile, in Japan the continuing reduction in the working-age population has led to further declines in employment, although at a lower rate than in recent years.

The employment situation has deteriorated for young and low-skilled people, those employed in industry, and the long-term unemployed.

Although, contrary to the US and Japan, overall employment levels in the EU have essentially not shown any decline over the period 2000-2003, the EU labour markets have shown signs of deterioration in certain areas, in particular in industry, for young people, and for the low-skilled. In addition, long-term unemployment in the EU appears to be on the rise again, increasing to 4.0% in 2003 (EU15: 3.3%), a change from the trend of progressive decline observed especially over the period 1998-2001.

In the Member States, labour market performance in 2003 was mixed: negative growth rates in several Member States …

Within the EU25, employment performance in 2003 has been mixed across Member States. Almost half of the Member States saw negative annual employment growth. The employment situation deteriorated in 2003 in the Czech Republic, Finland, the Netherlands and Sweden, with all seeing employment growth turn negative over the course of the year. Furthermore, in Belgium, Denmark, Germany, Poland, Portugal and Slovenia the negative employment growth experienced in 2002 continued into 2003, while employment growth in France had ground to a standstill by the last quarter of 2003.

… contrast with positive employment growth above 1% in others.

On the other hand, ten Member States experienced positive employment growth in excess of 1%. In particular employment growth in Spain remained relatively strong at around the 2% level and showed signs of a

moderate pick-up. Employment growth in Italy remained positive at around the 1% level although it had declined from previously higher levels. Employment growth was also above 1% in Estonia, Greece, Ireland, Hungary, Latvia, Lithuania, Luxembourg and the Slovak Republic.

Employment growth prospects for 2004 and 2005 remain subdued.

Despite the foreseen improvement in overall economic activity, the protracted economic slowdown experienced in Europe in the early 2000s is expected to continue to weigh on the performance of the labour market, implying only limited employment growth prospects for 2004 and 2005. This has to be taken into account when assessing the EU's employment prospects against the objectives and employment rate targets formulated in the Lisbon and European Employment Strategies.

2. The enlarged European Union – (back) on track for Lisbon?

Against the objectives for 2010 laid down in the Lisbon and European Employment Strategies …

Employment performances are a key component of the Lisbon Strategy which aims to make the EU the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion. The Employment Guidelines have fixed three overarching and complementary objectives: full employment; quality and productivity at work; and social cohesion and inclusion. They have also integrated the employment rate targets for 2010 formulated by the Lisbon and Stockholm Councils in 2000/2001: 70% overall, more than 60% among women, and 50% for older people.

… in 2003, the average EU employment rate stagnated at around 63% overall and at 55% for women, while increasing to above 40% for older people.

Against these targets, the overall employment rate in the EU25 stagnated at slightly below 63% in 2003 (EU15: 64.3%). The marginal increase in the employment rate, only 0.1 percentage points in 2003, was much lower than the annual increases observed from the late 1990s until 2001, and was due mainly to continued rises in the employment rates for women, up 0.3 percentage points on average to 55.0% (EU15: 56.0%), while the rate declined slightly to 70.8% for men (EU15: 72.6%). As in 2002, the employment rate for older people aged 55-64 rose more noticeably, up some 1.5 percentage points to 40.2% in 2003 (EU15: 41.7%). On the downside, the labour market situation for young people (i.e. persons aged 15-24) in the EU has generally deteriorated over the last three years.

Low employment rates of women, older people and the low-skilled remain symptoms of structural problems in the European labour markets.

Notwithstanding the increases in the employment rates over the period 1997-2002 and the structural improvements in labour market performance of the late 1990s - as suggested by the reduction in the NAIRU (non-accelerating-inflation rate of unemployment), the relatively strong increases in labour supply and the continued resilience of employment to the economic slowdown – Member States exhibit structural labour market problems. These include low employment rates, in particular for women, older workers and the low-skilled, as well as persistent regional disparities in employment and unemployment rates.

Further progress towards achieving the 2010 employment rate targets will rely heavily on the implementation of further labour market reforms …

Taken together, it seems that the EU is still far short of the Lisbon objectives and targets. Relative to the 2010 employment targets, the 2003 employment rates overall, of women and of older people fall short by 7, 5 and 10 percentage points respectively. Closing these gaps will rely heavily

on the implementation of further labour market reforms to improve the employment prospects notably of women, older people and the low-skilled, and to foster employment creation in the services sector. It is also necessary to combat the recent increases in youth unemployment and in long-term unemployment.

Slow progress towards full employment is matched by disappointing productivity trends and ample scope to reinforce social inclusion and regional cohesion, and to improve quality in work further, as identified in the recent Commission Communication "Improving quality in work". Progress in realising the Lisbon Strategy - and in furthering the knowledge society by increasing R&D expenditures to 3% of GDP in particular - therefore also requires that these reforms support improvements in quality and productivity at work and foster social inclusion and cohesion.

… which are also supportive of improving productivity and quality in work and fostering social inclusion and cohesion.

This year's report confirms that globalisation, technological change and economic integration, on the one hand, and the rapid ageing of the population, on the other, are increasingly affecting the way people live and work in Europe, as well as the way goods and services are produced. The analysis of the report supports the call of the Spring 2004 European Council to Member States to take decisive action in four specific areas highlighted by the European Employment Taskforce chaired by Wim Kok: improving adaptability of workers and enterprises; attracting more people in employment and making work a real option for all; investing more and more effectively in human capital; and improving the implementation for reforms through better governance. Member States must therefore continue to enact policies in line with the Employment Guidelines for 2003-2006 and to implement the related country-specific recommendations.

Key policy priorities in this regard have been identified by the European Employment Task Force and the Employment Guidelines for 2003-2006.

The thematic chapters of this year's report address most of these areas by providing in-depth analyses of: first, the determinants of employment rates and the role of labour market institutions and active labour market policies in particular in determining the evolution of the overall employment rate over time (chapter 2); second, the evolution and nature of the EU-US employment gap in the services sector and the determinants of differences in employment structures across countries (chapter 3); third, the determinants of employment and labour market dynamics and of transitions out of low pay and precarious employment, in particular the role of various forms of human capital investments (chapter 4); and, finally, a discussion of the employment effects of outsourcing, delocalisation and globalisation (chapter 5).

Thematic chapters of this year's report provide in-depth analyses of central interest to these policy priorities:

- *key determinants of employment rates;*
- *cross-country differences in services employment;*
- *transitions out of low pay and precarious employment;*
- *employment effects of outsourcing, delocalisation and globalisation.*

3. Institutions and active labour market policies do matter: a closer look at the determinants of employment rates

Explaining the total change in employment rates over the period 1997-2002:

Among the potential key determinants of labour market performance are: the level of labour taxation; the characteristics of the collective bargaining agreements and the wage-setting mechanism; the unemployment benefit systems; and the level and composition of active labour market policies (ALMPs). An evaluation of such policies calls for a better understanding of the likely interactions between the different sets of institutions and policies – interactions which could either support or offset each other. The results of such an evaluation based on econometric analyses, however, are subject to methodological choice and thus have to be interpreted with caution.

Increases in part-time employment and the intensity of spending on active labour market policies contributed to increasing the employment rate.

While this chapter clearly confirms that openness to trade is a key determinant of employment growth probably through the growth channel, employment policies also matter. Increases in the share of part-time contracts and the intensity of spending on ALMPs (% GDP spent on ALMPs relative to the number of unemployed) are two of the strongest contributors to employment rate increases. Among the different categories of ALMP expenditure, the intensity of spending on youth measures and on public employment services are found to have the strongest positive impact on the employment rate.

While taking into account potential interactions with other policies and institutions, all categories of ALMP expenditures have a positive impact on the employment rate.

However, when one accounts for the interaction between the different categories of ALMPs all appear to have a positive effect on the employment rate, although the impact of spending on public employment services and youth measures is stronger than that of spending on direct job creation and training. If one considers the interaction between ALMP expenditures and the gross replacement rate (a measure of unemployment and welfare-related benefits as a proportion of income from work), the effect of the intensity of spending on youth measures is stronger in countries where the replacement rate is relatively high. In contrast, the positive effect of training is slightly reduced in countries where the replacement rate is high.

Changes in the tax wedge, on the other hand, do not seem to have any long-term effects on employment.

Between 1997 and 2000 the EU15 (un-weighted) average tax wedge declined by about one percentage point. However, while it is likely that for microeconomic reasons the tax wedge on the low-skilled is particularly harmful, changes in the tax wedge overall are not found to have any significant long-term effect on employment performance, possibly because they may hide offsetting changes in the components of the tax wedge, notably the employers' social security contributions, employees' contributions and income tax. Of the individual components of the tax wedge, the employers' social security contributions are found to have an impact on the employment rate.

The employment effects of ALMPs and changes in the tax wedge or the replacement rate also depend on the level of bargaining coordination.

Moreover, the employment response to ALMPs and to changes in policy variables is influenced by the level of co-ordination of bargaining. Where bargaining is either decentralised or centralised, the employment performance tends to be less influenced by changes either in the tax wedge or in the replacement rate, compared to systems where bargaining occurs at the

industry level. For ALMPs, significant effects on the employment rate are found in systems where bargaining is at the industry or centralised level, but not in systems of decentralised bargaining.

To help retain producer and consumer confidence and provide an efficient protection of workers, insurance against unemployment and income risks is needed. Such measures are an important part of the response to today's economic situation but they must reflect the need for more rapid labour market adjustments than in the past.

ALMPs and social insurance must support workers' adaptability.

4. Final demand is crucial … and the main explanation for the EU-US employment gap in services

Another widely quoted symptom of the continued structural weakness of the European labour markets is the employment gap in the services sector compared to the US. While stronger employment performance of services and a less unfavourable employment evolution in industry in the EU has narrowed the EU-US employment gap considerably over the period 1998-2003, the US still shows the highest employment rate in services (55.4%) and the lowest in industry (12.6%), compared with the EU Member States. The EU-US gap in services sector employment which is most acute for women and older workers suggests that there remains significant untapped job creation potential in the European services sector.

The employment gap in services with respect to the US has narrowed, but still suggests the existence of a substantial untapped job creation potential in the EU.

In terms of sectors, the EU-US employment gap is greatest in both the comparatively low-skilled and high-skilled sectors, for example, in low-paying sectors such as wholesale and retail trade and hotels and restaurants, and in high-skilled, high-paying sectors, such as real estate and business services, education, and health and social services. The same observation holds for the EU-US employment gap by occupation: it is highest among services workers and shop assistants, on the one hand, and among clerks, legislators and managers, on the other.

The employment gap occurs both in comparatively high-skill, high-paying sectors or occupations and in low-productive, low- paying sectors or occupations.

Comparing EU labour market performance to the US can help identify the remaining job creation potential in Europe as a whole, however, there are equally positive experiences in several of the EU Member States which can serve as benchmarks. For example, by 2003, Denmark, the Netherlands, Sweden and the UK had overtaken the US in terms of the employment rate. Sweden in particular, but also the UK, have shown – similar to the US - strong employment creation rates for both the high-skilled and the low-skilled, most notably in the high-skilled, high-paying service sectors such as business services, education, and health and social services.

While helping to identify further job creation potential in the EU, the US experience is not necessarily a benchmark for Europe.

The EU-US differences in employment structures are to a large extent structural in that they reflect substantial differences in household consumption patterns and final demand structures. They are explained, most notably, by lower increases in the final demand levels in the EU compared to in the US. The strong increases in demand for services in the US are to a large extent due to the stronger labour market participation of women and older people.

The EU-US differences in employment structures are mostly the result of differences in household consumption patterns and final demand structures …

… while there is no evidence in support of the conventional perception that EU-US differences are due to either better employment prospects of the low-skilled in the US …

Furthermore, there is no clear and binding evidence in support of the conventional perception that differences in employment structures between the EU and the US are predominantly due to either too rigid relative wage structures or more favourable productivity patterns in the EU, which would prevent the low-skilled from accessing the labour market. Information on both formal education credentials and internationally comparable literacy tests indicates that the employment situation of the low-skilled is actually less favourable in the US than in the EU as a whole.

… or to too rigid wage structures in the EU which would restrict the incidence of low-paying jobs in the services sector.

Relative wage structures are also found to be similar across countries and not a significant determinant of employment structures. For the US in particular, while there is evidence that the increases in services employment were matched by strong increases in relative wages there is no evidence of firms lowering employment levels as a response to high-wage levels in a sector. On the contrary, firms tend to respond through other long-term adjustments, resulting in high-wage sectors becoming increasingly more productive. It remains questionable, however, as to what extent the current wage structures act as an adequate incentive for labour supply and support job creation in the services sector, and in high technology and knowledge-intensive services sectors in particular.

Furthermore, there are in general strong spill-over effects of industry demand on employment in services.

Finally, demand in industry and services in the EU are found to have a similar effect on employment in services. In some cases, the evidence suggests that industry demand has a stronger spill-over effect on employment in services than services demand.

A genuine internal market for services, a stronger labour force participation of women and older people and the support of public spending in areas such as education and health and social services will help to better exploit the employment potential in services.

Deepening the internal market for services and breaking down remaining barriers to the further integration of the EU services markets will help create the framework conditions necessary to further develop the services sector in the EU. As a specific reply to the further restructuring of the European economies, the key to increasing employment in services is in the creation of jobs in the comparatively high-paying, high-productive services such as business services, education and health and social services. To this aim, existing spill-over effects from product demand in industry on employment in services need to be exploited, and increases in final demand for services are necessary. In this context, reorienting public spending towards areas such as education and health and social services is crucial. This will contribute to accelerate further increases in the labour market participation of women and older workers.

5. Education and training help: ways out of low pay and precarious employment

It is crucial that the greater flexibility offered by increasing diversity of contractual arrangements …

Diversity in terms of contractual arrangements is an increasing feature of European labour markets as it facilitates access to the labour market. Firms increasingly use temporary employment, either to meet uncertainty and cyclical fluctuations in demand, or to screen employees.

… is also matched by an adequate degree of security supportive of both improved productivity and

However, as highlighted by the European Employment Taskforce, strong variations in access to the labour market or to career prospects may lead to a two-tier labour market, with "insiders" benefiting from a high level of

employment protection and career opportunities, and "outsiders" recruited under competing forms of contract. With a view to both improving productivity and quality in work, and fostering social inclusion, it is therefore crucial that flexibility is matched by an adequate degree of security, in particular in terms of people's ability to remain and progress in the labour market.

quality in work and social inclusion.

An analysis of the dynamics of low-paying and precarious employment reveals a high degree of transitions in European labour markets. Roughly one third of those in temporary employment find a more stable job after only one year. However, it is also true that even after six years - the longest time horizon allowed by the data available - around 16% of those who were initially in precarious contractual arrangements are still in the same situation and, more worryingly, 20% of them have moved out of employment, more than for any other category of workers.

European labour markets are characterised by a high degree of transitions, notably out of temporary employment …

Although the incidence of low pay does not seem to have increased in the EU in the second half of the nineties, it still remains at roughly 15% and it has noticeably increased in Germany and in the Netherlands. The dynamics into and out of low pay are similar to those out of temporary employment, with a higher persistence in low pay than in temporary employment. 44% of the low-paid manage to increase their pay above the low-pay threshold, but only after an average of seven years. In contrast, 30% of the low-paid are no longer working after seven years, a probability of moving out of employment almost 13 percentage points higher than for those that were initially highly paid.

… and out of low pay, although the risk of leaving employment also remains considerably higher in both cases.

There are important variations in 1-year labour market transitions between the Member States. The probability of moving from unemployment or inactivity into employment is particularly low in Belgium, Greece, Italy and Luxembourg while that of leaving employment is relatively high in Germany and Spain. Together with France, Greece and Finland, Spain is also characterised by one of the lowest transition rates from temporary to permanent employment. Moreover, Germany and the UK present the fewest opportunities for those in low pay to move above the low pay threshold. Transitions into employment are relatively easy in Denmark, Finland and the UK, while moves from temporary to permanent employment are more frequent in Austria, Luxembourg, the Netherlands and the UK. It is easier to move out of low pay and into higher paid employment in Belgium, Finland and Portugal.

There are strong variations in transition patterns across Member States.

Women, the low-skilled, older people – and to a certain extent young people – are at risk of having a weaker position in the labour market both in terms of precarious contractual arrangements and low pay, but also have fewer chances to improve their position in the labour market relative to the other groups. While older workers have in general a better position in terms of pay and contractual arrangements than younger workers, when they are in low pay or temporary employment they have the greatest difficulty to remain or progress in the labour market.

Women, the low-skilled and older workers, not only have a weaker position in the labour market at any one point in time, but they also have fewer chances to improve it.

Educational qualifications and training courses are particularly effective to help people move into employment. Concerning in-work transitions, however, on-the-job training is strongly correlated with the likelihood of mov-

Educational qualifications and training are particularly effective to help the unemployed move back

into employment and those in precarious and low paying jobs to avoid unemployment and move up the quality ladder.

ing from temporary to permanent employment. In relation to moving out of low pay, on-the-job training has a stronger effect on one-year transitions than training courses, while training courses have a more important role for longer term transitions, hinting at a better signalling function of training courses that lead to a recognised qualification.

Further improvements in the balance between flexibility and security will contribute to enhance productivity and quality in work as well as social inclusion.

The analysis of this chapter confirms that promoting flexibility in the labour market can only succeed if combined with adequate security for workers in terms of their capacity to remain and progress in employment. Temporary workers and those on low-pay, who are often low-skilled, are more exposed to unemployment, inactivity and the low-pay trap, pointing to a risk of segmentation of the labour market. This chapter also highlights the key contribution that active labour market policies make to facilitate entry and progression in the labour market, in particular public employment services and continuous training.

6. Does globalisation hurt? Costs and benefits of economic integration in a dynamic perspective

Increased integration and accelerating globalisation bring about overall gains.

In the 1990s and early 2000s, the European economies have become increasingly integrated - not least due to this year's enlargement of the EU - and globalisation has accelerated. Globalisation has positive and negative effects, but altogether this process brings about overall gains to workers and consumers, notably in terms of integrated markets, enhanced trade links, increased efficiency, and upgrading of products and skills, all eventually translating into long-term growth prospects.

European integration can be viewed as a 'mini-globalisation' and has had no major impact on employment and wages so far.

Previous enlargements of the EU did not in general affect wages or employment neither did they create substantial inflows of migrants. In the case of the recent enlargement of the EU, trade and factor movements might have an effect on regions immediately bordering the Central and Eastern European countries and on specific sectors that are more exposed to import penetration from those countries. These effects could be further magnified by the lack of labour mobility across sectors, regions and countries. However, the effect on employment and wages is likely to be negligible overall.

However, the increasing importance for employment of ICT and related services might further accelerate restructuring activities and the potential of offshoring.

Restructuring of the manufacturing sector due to increased productivity or technological change is an ongoing and gradual process. It is likely that, in the near future, more sudden and abrupt changes will occur due to ICT and related services, which will somewhat accelerate the pace of restructuring in general and that of offshoring in particular.

The uneven distributional effects of such changes can be mitigated by adequate adjustment policies.

If globalisation is to bring benefits to all, it must be accompanied by adjustment policies that help displaced workers in the short term, as well as strong and continuous investment in human capital and efficient skill-matching mechanisms. Such policies can help to turn the overall feeling of insecurity into a perception of opportunities for developing more diverse career paths at the individual level. Social protection systems also need to be better tailored to the changing economic environment brought about by accelerated globalisation.

The design of such adjustment policies must take account of firms' strategies at the time they opt for offshoring. In particular vertical or horizontal strategies of firm development have different consequences and this should be considered when designing policies targeted at managing change. The focus should be on mitigating the local or regional effects of mass layoffs, while business risks related to the offshoring decision - such as increased costs of coordination and potential repatriation costs - are internalised by the firm in their decision to offshore.

Designing such adjustment policies requires that corporate strategies at the time of the offshoring decision need be taken into account, …

While wage differentiation is one of the reasons behind offshoring, international differences in wages are not the main concern, the more so as they also reflect underlying strong differences in productivity. Increasing productivity and research and development, the continuous upgrading of products and the increased quality of labour are the way forward to improve firms' and workers' adaptability, overall employment performance and competitiveness.

… and to understand that international differences in wages are of less concern in the presence of well-designed policies to facilitate firms' and workers' adaptability.

The EU is a global player and is very well placed to reap the benefits from globalisation, and to harness globalisation to serve social as well as economic goals. Given the nature of globalisation, supporting those most affected has to be dealt with also at European level in a co-ordinated way, including through employment and social inclusion strategies. The European social model has helped the Union to sustain the speed of change and its ongoing modernisation will further improve the EU's capacity to promote change.

Altogether, this will allow Europe to reap the benefits of globalisation, while redistributing these benefits more evenly across society and territory.

7. Conclusions: a vital role for the European Employment Strategy

Overall, despite progress achieved in reforming labour markets, the EU must step up its efforts to tap its human potential and achieve the Lisbon objectives set for 2010. Efficient labour markets delivering equitable outcomes are essential if the remaining challenges are to be identified. The findings of this report emphasise in particular the need to increase participation of women and older workers in employment. This should partly result from, and directly contribute to, creating more employment in services in Europe.

The EU and its Member States must step up their efforts to develop their human potential, and to increase employment ….

The report also underlines the need to pro-actively anticipate, trigger and manage change resulting from economic integration and technological change on a world scale. To promote higher flexibility in the labour market, to enhance employability and mobility, and to increase participation in employment, it is necessary to foster new forms of security and to prevent the emergence of a two-tier labour market. Lifelong learning and active labour market policies, including effective support from public employment services, can play a particularly important role in facilitating transitions and improving overall employment performance.

… through a better balance between flexibility and security in particular, ...

By confronting Member States with their specific strengths and weaknesses, issuing recommendations and linking its financial support more closely to the implementation of the European Employment Strategy as foreseen in the Commission's proposal for the new ESF regulation, the EU can be an effective lever to support progress at national level, and to harness globalisation to serve its economic, social and environmental objectives.

… using the European Employment Strategy as an effective lever.

Chapter 1 Panorama of the European labour markets

1. Introduction

This chapter provides a detailed overview of recent developments in the European labour market and compares them with developments elsewhere in the world, in particular in the US and Japan. The chapter starts with an examination of the current labour market situation and recent trends in the enlarged EU, with a focus on the latest developments in activity, employment and unemployment rates. This is followed by an overview of recent employment trends according to type of employment, a review of the labour market situation with regard to skill levels, and a special focus on recent developments in the labour market situation for young people. Following up the analysis in previous versions of Employment in Europe a review is then presented of the recent employment developments for the EU15 and the new Member States separately. This includes an assessment for the EU15 of whether the resilience of employment to the prolonged economic slowdown continued into 2003, and a close look at labour market developments in the new Member States in the last five years prior to their joining the EU. Further issues reviewed include recent sectoral employment trends especially in the new Member States, as well as a brief overview of the latest demographic developments. The developments reported on in the chapter are based on data available up to mid-June 2004[1], while many tables and charts include data for the EU15 aggregate in order to provide a historical reference.

Table 1 - International Comparison of Key Indicators (2003)

	EU-25	EU-15	USA	Japan
Population (millions)	455	381	284	128
GDP (in 1000 million PPS, current prices)	10180	9302	9980	3227
GDP Growth, at constant prices (annual % change)	0.8	0.7	3.1	2.5
Employment Rate (as % of working age population)	62.9	64.3	71.2	68.4
Employment Growth (annual % change)	0.2	0.2	0.9	-0.2
Unemployment Rate (as % of civilian labour force)	9.1	8.1	6.0	5.3

Source: GDP and employment growth from latest updates to Commission's Spring 2004 Economic Forecasts and QLFD, Eurostat. GDP in PPS from AMECO database, Commission Services. Employment rate from QLFD, Eurostat and OECD data for US and Japan. Unemployment rate from the harmonised unemployment series, Eurostat. Population from demographic statistics, Eurostat.
Note: Employment rates for the EU and Japan refer to persons aged 15-64; US employment rate refers to persons aged 16-64.

2. Recent labour market performance

2.1. Overall EU labour market performance in 2003

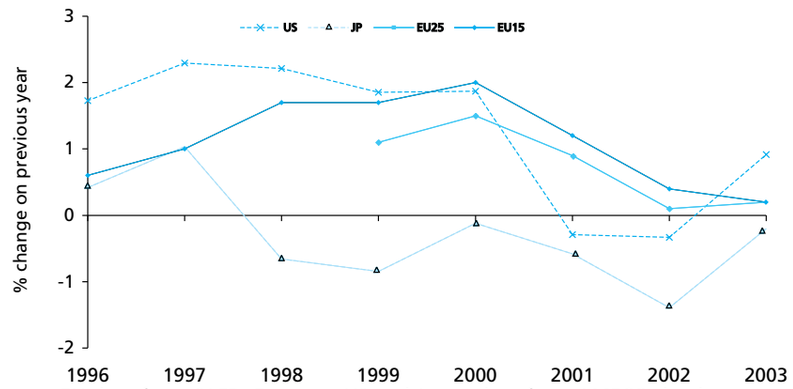
The global economic recovery continued to gain momentum over 2003, with particularly strong growth in the US and Japan. Indeed, the upturn in the US economy accelerated in the third and fourth quarters of 2003 resulting in 3.1% growth for the year as a whole, compared to 2.2% the year before (table 1). Similarly, there has been a sharp turnaround in Japan, which clearly benefited from the dynamism in the rest of Asia and an acceleration in export growth, resulting in 2.5% GDP growth in 2003 compared to negative growth of 0.3% in 2002.

In contrast, economic growth for the EU25 as a whole is estimated to have been a much more limited 0.8% in 2003, down from 1.1% the year before. Reflecting the very modest pace of overall economic recovery in the EU, employment growth in 2003 was almost static, at 0.2%, while the unemployment rate rose to 9.1%, up from 8.8% in 2002.

1 *The figures used in this chapter refer to data available up to mid-June 2004. For most Member States this means the most recent data available is that for 2003, but the following exceptions apply:*

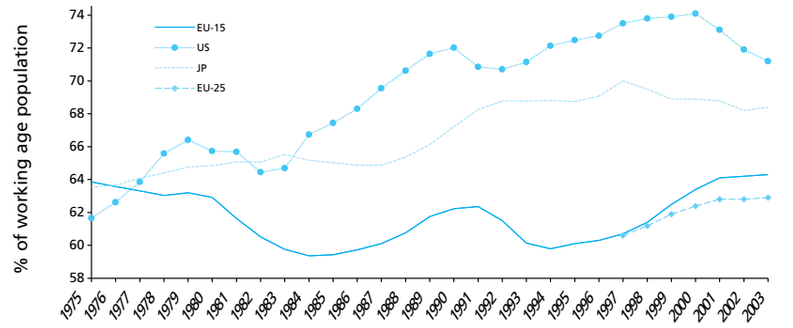
- *LFS and much QLFD data for 2003 was not yet available for Luxembourg;*
- *QLFD data for 2003 was not yet available for Malta;*
- *QLFD data for 2003 for Austria are based on national estimates;*
- *LFS and QLFD data for France are provisional data for 2003;*
- *2003 data referring to ISCED, ISCO and NACE data for the Netherlands were not yet available (data used refer to the year 2002).*

Chart 1 - Employment growth rates in the EU,US and Japan, 1996-2003



Source: EU data from QLFD, Eurostat; US and Japan data from AMECO database, Commission Services

Chart 2 - Employment rates in the EU,US and Japan, 1975-2003



Source: DG EMPL calculation based on long-term trends in employment and population, Commission Services

In line with the strong upturn in its economy, the US labour market showed clearer signs of improvement over 2003, with employment growing by 0.9% in contrast to the declines of the previous two years, although unemployment continued to rise, averaging 6.0% for the year as a whole compared to 5.8% for 2002. Meanwhile, in Japan employment continued to decline further despite the sustained economic recovery which has taken hold there, although at a reduced rate compared to recent years (charts 1 and 2).

2.2. General employment and unemployment developments over 2003 and short-term prospects

2.2.1. Employment growth across Member States

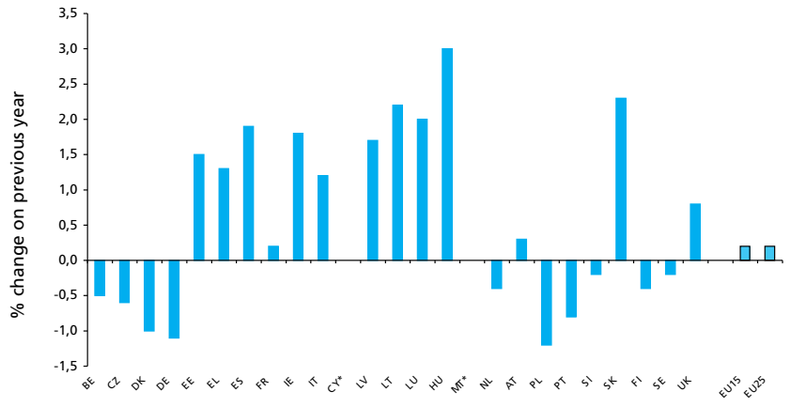
The slowdown in employment growth in the EU, which began in the first half of 2001 and saw growth reach a standstill by the last quarter of 2002, was followed by only a very moderate recovery over the course of 2003. Against this evolution for the EU as a whole, devel-

Table 2 - Annual change in employment growth, by quarter, over 2001 to 2003

	2001Q01	2001Q02	2001Q03	2001Q04	2002Q01	2002Q02	2002Q03	2002Q04	2003Q01	2003Q02	2003Q03	2003Q04
BE	1.9	1.8	1.5	0.7	0.1	0.0	-0.5	-0.7	-0.4	-0.5	:	:
CZ	0.3	0.1	-0.4	-0.3	-0.1	0.8	1.2	1.1	0.5	-0.5	-1.1	-1.4
DK	-0.9	0.7	0.7	0.6	0.8	-0.8	-0.5	-0.9	-1.0	-1.2	-1.1	-0.7
DE	1.0	0.6	0.2	-0.1	-0.2	-0.5	-0.7	-1.1	-1.5	-1.3	-1.0	-0.6
EE	-0.5	0.9	0.7	2.3	1.8	1.0	1.2	1.0	0.2	1.2	2.0	2.4
EL	0.7	0.3	-0.5	-1.9	-1.6	-0.5	0.0	1.3	:	:	:	:
ES	3.4	2.1	1.8	1.9	1.5	1.7	1.4	1.2	1.6	1.8	1.9	2.1
FR	2.3	1.9	1.4	1.2	0.9	0.7	0.6	0.5	0.4	0.2	0.1	0.0
IE	3.5	2.7	2.8	2.5	2.1	1.9	0.4	1.0	1.6	1.6	1.5	2.6
IT	2.5	2.0	1.8	1.6	2.4	2.0	1.5	1.3	1.3	1.5	1.1	0.7
CY	:	:	:	:	:	:	:	:	:	:	:	:
LV	:	:	:	:	:	:	:	:	:	:	:	:
LT	-5.5	-5.3	-3.8	-1.3	-10.2	-5.9	-5.5	-7.5	2.4	3.6	0.8	1.9
LU	6.2	6.0	5.7	4.8	3.9	3.0	2.2	2.1	1.9	2.0	2.2	2.1
HU	1.6	0.7	0.5	-1.1	-0.5	0.3	-0.1	1.4	2.4	3.3	3.3	2.9
MT	:	:	:	:	:	:	:	:	:	:	:	:
NL	2.2	1.9	1.8	1.6	1.3	1.0	0.8	0.5	0.1	-0.2	-0.6	-0.9
AT	0.5	0.5	1.0	0.4	0.0	0.0	-0.3	-0.6	0.0	0.5	0.3	0.4
PL	:	:	:	:	:	:	:	:	:	:	:	:
PT	1.9	1.4	1.1	1.2	0.5	0.9	0.5	-1.2	-0.9	-1.3	-1.1	0.0
SI	1.0	0.7	0.3	0.0	-0.4	-0.7	-0.7	-0.6	-0.2	0.0	-0.2	-0.3
SK	1.6	2.0	0.7	-1.7	-1.5	-1.8	-0.9	0.0	2.4	2.9	2.3	1.5
FI	1.9	1.4	0.9	1.7	1.3	0.9	0.9	0.6	0.1	-0.1	-0.6	-1.0
SE	3.0	1.7	2.0	0.9	0.4	0.3	0.0	-0.1	-0.3	0.1	-0.2	-0.5
UK	1.1	0.9	0.5	0.4	0.3	0.0	0.2	0.2	0.4	0.8	0.9	1.2
EU15	1.8	1.4	1.0	0.8	0.7	0.5	0.3	0.1	0.1	0.2	0.2	0.4
EU25	1.4	1.0	0.7	0.5	0.3	0.2	0.1	-0.1	0.1	0.2	0.2	0.3

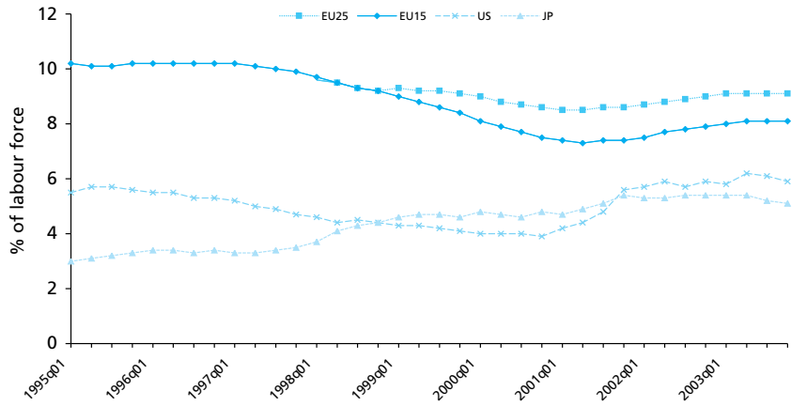
Source: Eurostat, QLFD
Note: No quarterly QLFD employment growth data for CY, LV, MT and PL; LT 2002Q1: break in the time series

Chart 3 - Employment growth for EU,Member States, 2003



*Source: Eurostat, QLFD. *No 2003 data for CY and MT.*

Chart 4 - Evolution of unemployment rates in the EU, US and Japan since 1995 (seasonally adjusted quarterly data)



Source: Eurostat, harmonised series on unemployment

opments at Member State level continued to be somewhat mixed. In Germany, employment contraction continued in 2003, although it appears that the negative growth rate may have finally bottomed out at the start of 2003, with the rate of job losses slowing subsequently. Among the other large Member States employment growth in France ground to a standstill by the last quarter of 2003, while growth in Italy also declined although remaining positive at around the 1% level. On the other hand, the UK experienced a recovery in employment growth during 2003, and growth in Spain remained relatively strong at around the 2% level and also showed signs of a moderate pick-up. Among the remaining Member States, the situation deteriorated in 2003 in the Czech Republic, Finland, the Netherlands and Sweden, with all seeing employment growth turning negative over the course of the year. Furthermore, available figures for Belgium, Denmark, Portugal and Slovenia show that the negative employment growth experienced in 2002 continued into 2003. In contrast, employment growth improved strongly in Estonia, Ireland, Hungary, Lithuania and the Slovak Republic compared to 2002 (table 2).

As a consequence of these developments, the employment growth for the year as a whole has again been somewhat mixed across Member States in 2003 (chart 3). Less than half of the Member States saw negative annual employment growth, while some 10 Member States experienced positive employment growth in excess of 1% in 2003. In particular, strong annual growth (of around 2 or 3 %) was experienced in Hungary, Ireland, Lithuania, Luxembourg, the Slovak Republic and Spain. In contrast, employment contracted by around 1% in Denmark, Germany, Poland and Portugal.

2.2.2. Overall developments in unemployment

The overall unemployment rate for the EU25 remained very stable over the course of 2003, at around 9.1% (chart 4). This follows the moderate rises experienced in 2001 and 2002, after the minimum level reached in the second quarter of 2001. By the last quarter of 2003, unemployment rates in the EU25 ranged from as low as 3.9% in Luxembourg to as high as 19.2% in Poland.

In the US, the unemployment rate peaked in the second quarter of 2003 at 6.2%, following the more-or-less continual rise from the low of 3.9% in the fourth quarter of 2000, before falling below the 6% level in the last quarter of 2003. It nevertheless remained at the sort of levels last observed in the US in the mid-1990s. Rates also peaked in Japan in early 2003, at 5.4%, before declining to 5.1% in the last quarter. As a result of these developments, the gap between the EU25 unemployment rate and those for the US and Japan was close to 3 and 4 percentage points respectively by the last quarter of 2003.

2.2.3. Short-term prospects

According to the latest updates to the European Commission's 2004 Spring Economic Forecasts, the recovery in the EU economy is expected to gather momentum in 2004, with GDP growth for the enlarged EU foreseen to rise to 2.0% in 2004 and to 2.4% in 2005.

Despite the foreseen improvement in overall economic activity, the protracted economic slowdown experienced in the EU15 in the early 2000s is expected to continue to weigh on the performance of the labour market, leading to somewhat limited employment growth also in 2004 and 2005. As a result,

Box 1 - Recent policy developments and strengthening of the European Employment Strategy

In line with the Lisbon strategy, the new European Employment Guidelines established by the Council in 2003 (see Employment in Europe 2003, Chapter 1) set three overarching objectives: full employment, quality and productivity at work, and strengthened social cohesion and inclusion. They consist of 10 specific guidelines and guidance on improving governance of employment policies.

Recent reforms carried out in many Member States under previous employment guidelines have proved their worth in improving labour market performance, as confirmed by the employment growth of earlier years and by the resilience of employment in the recent economic slowdown. However, progress towards the Lisbon 2010 target of a 70% overall employment rate has come to a standstill and it is now clear that the EU will miss the intermediate employment rate target for 2005 of 67%. Without further action the 2010 target will also be missed.

Against the background of the recent economic slowdown and at the request of Heads of State and Government at the Spring Council of 2003, the Commission established a European Employment Taskforce headed by Wim Kok, former Prime Minister of the Netherlands. The Taskforce identified priorities for action of general relevance for Member States and specific reforms needed. The Employment Taskforce's assessment and policy messages were shared by the Commission and the Council. They are fully consistent with the European Employment Strategy, and have been closely integrated in the 2004 Joint Council and Commission Employment Report (JER) to the European Council.

Europe's need to take urgent effective action to improve its labour market performance was underlined by the European Council of March 2004, and, on 7 April, the Commission adopted new recommendations for national employment policies with a view to strengthening the implementation of the European Employment Strategy. The recommendations build on the revision of the European Employment Strategy in 2003 and take into account the findings of the European Employment Taskforce. While the EU-wide Employment Guidelines remain unchanged compared to last year, the shorter, more concentrated and strengthened recommendations should ensure that all Member States are better able to focus action on those issues needing priority attention.

Apart from the country-specific recommendations, there are four common recommendations to all Member States which call on them to give immediate priority to:

- ***Increasing adaptability of workers and enterprises,*** inter alia, by promoting flexibility combined with security in the labour market; by modernising and broadening the concept of job security; by maximising job creation and raising productivity;

- ***Attracting more people to enter and remain on the labour market, and making work a real option for all,*** inter alia, by building comprehensive active ageing strategies; by further developing policies to increase labour market participation; by strengthening active labour market policies, with personalised services to all those seeking employment; by pursuing "make work pay" policies through both financial and non-financial incentives;

- ***Investing more and more effectively in human capital and lifelong learning,*** inter alia, by sharing costs and responsibilities between public authorities, companies and individuals; by broadening the supply of training, in particular for those most in need such as the low-skilled and older workers; and

- ***Ensuring effective implementation of reforms through better governance,*** inter alia, by *building reform partnerships* to mobilise the support and participation of the social partners and various stakeholders; *where appropriate, by defining targets to reflect those set at a European level, and ensuring effective use of public funds; by promoting the role of National Action Plans and increasing their visibility; and by strengthening the role of the country-specific recommendations and developing more effective mutual learning.*

Together, the four common recommendations to all Member States and the country-specific recommendations form a powerful package. Governance will be brought more to the fore of the European Employment Strategy to ensure that, after defining objectives together, implementation follows. The implementation of these recommendations should bring about a more effective European Employment Strategy, one that can contribute to taking the Lisbon process forward with more and better jobs for all.

employment growth for the enlarged EU is only expected to be 0.3% in 2004 before improving to a more substantial 0.8% in 2005, while the unemployment rate is expected to remain stable in 2004 at around 9.0% before falling to 8.8% in 2005. The low employment growth forecast for 2004 reflects the impact of expected delays before improved economic activity is translated into increased employment and the impact of reduction of surplus capacity and cost-cutting in the corporate sector.

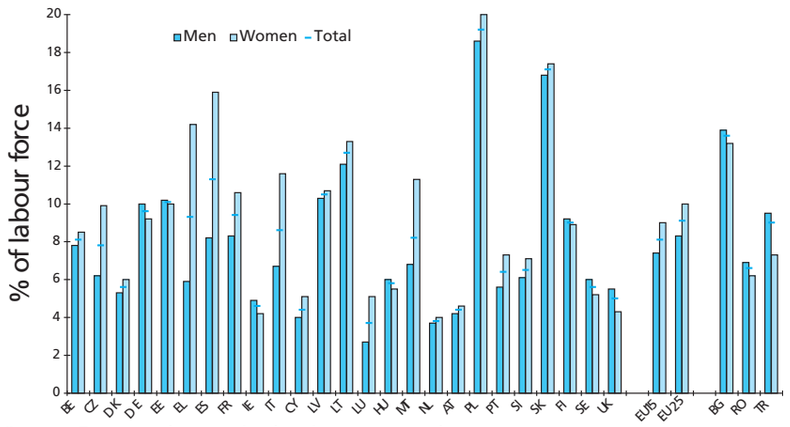
Against the background of these recent developments, and in particular the low employment growth over the last two years, concerted action has and is being taken through the development and adjustment of policies aimed at improving Europe's labour market performance (box 1).

3. Labour market situation in 2003 in the enlarged EU

3.1. Unemployment

The average unemployment rate for the EU25 was 9.1% in 2003, up from 8.8% one year earlier and some 3 percentage points higher than for the US. Looking at developments at the level of individual Member States, rates rose appreciably in 15 Member States between 2002 and 2003, with the largest rises (of 1 percentage point or more) occurring in Denmark, the Netherlands and Portugal, and remained generally stable in Austria, Finland, Spain and the UK. In contrast, rates declined noticeably in Greece, Italy, Lithuania and Poland, and especially strongly in Latvia (down 2.1 percentage points) and the Slovak Republic (down 1.6 percentage points). Unemployment rates in 2003 were particularly high (over 10%) in the three Baltic States and Spain, and exceptionally high in Poland and the Slovak Republic at 19.2% and 17.1% respectively. This compares with annual rates of just below 4% in Luxembourg and the Netherlands (chart 5).

Chart 5 - Unemployment rates by gender, 2003

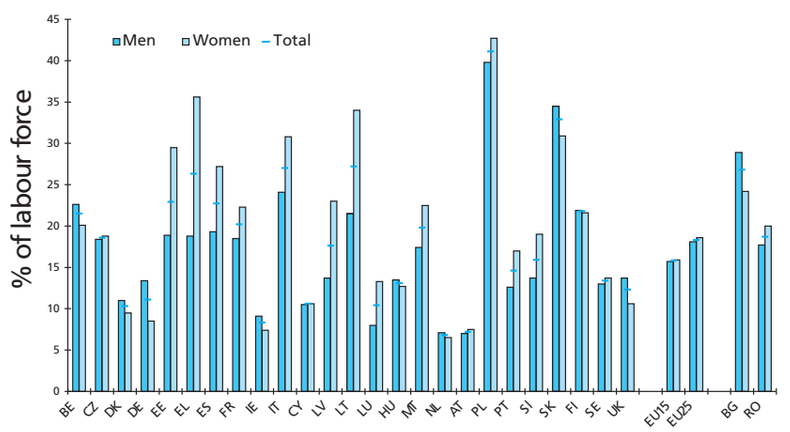


Source: Eurostat, harmonised series on unemployment

Within the enlarged EU, on average women continue to be more susceptible to unemployment than men. Furthermore, the disparity in the average unemployment rate according to gender showed little change between 2002 and 2003, with an unemployment rate of 10.0% for women and 8.3% for men in 2003, compared to 9.9% and 8.1% respectively in 2002. The pattern of higher unemployment rates for women than for men holds in all Member States except Estonia, Finland, Germany, Hungary, Ireland, Sweden and the UK. The largest disparity between men's and women's unemployment rates exists in Greece and Spain, where in 2003 women's unemployment rates were around 8 percentage points higher than those for men, but the difference was also close to 5 percentage points in Malta and Italy.

The youth unemployment rate (which refers to the age group 15-24) in the EU25 rose 0.4 percentage points to 18.3% in 2003 and remains twice as high as the overall unemployment rate. Among the EU25 Member States the youth unemployment rate is particularly high (above 25%) in Greece, Italy and Lithuania, and especially so in Poland and the Slovak Republic, where the rates are around double the EU average at close to 41% and 33% respectively (chart 6). This contrasts with rates as low as around 7% in Austria and the Netherlands. Looking at changes in the unemployment rate between 2002 and 2003, rates rose most noticeably

Chart 6 - Youth unemployment rates by gender, 2003



Source: Eurostat, harmonised series on unemployment

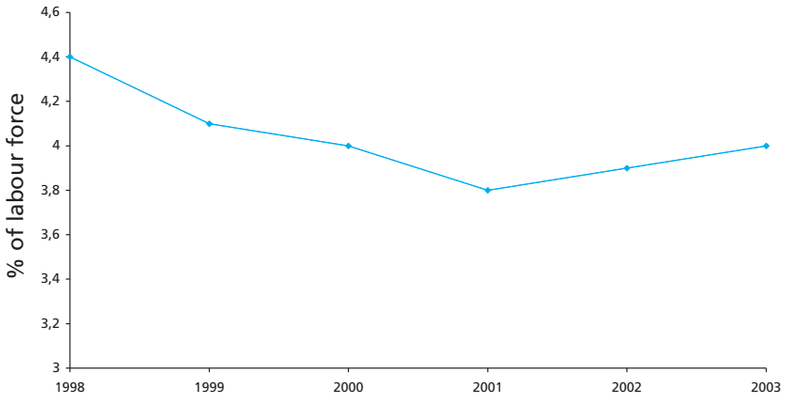
(by between 3 and 4 percentage points) in Belgium, Estonia, Lithuania and Portugal, but declined markedly in Latvia and the Slovak Republic (down by 6.3 and 4.7 percentage points respectively).

In the enlarged EU, long-term unemployment affected 4.0% of the labour force in 2003, marginally up from the year before. For the EU25 as a whole, long-term unemployment had generally been following a gradually declining trend before a marginal upturn in 2002 and 2003 (chart 7). The largest rises between 2002 and 2003 occurred in France, Germany and Portugal, where rates all rose by close to 0.5 percentage points. However, rates declined strongly in the three Baltic States, Italy and the Slovak Republic.

Among the Member States, long-term unemployment is most common in Poland and the Slovak Republic, where around 11% of the labour force, or almost three times the EU25 average, is affected, but it also remains above 5% in Greece and Lithuania (chart 8). In general, long-term unemployment rates are higher for women than men, the average rates for the EU25 being 4.5% and 3.6% respectively. Only in Austria, Denmark, Estonia, Finland, Ireland, Hungary, Malta, Sweden and the UK are the rates for women lower. The greatest disparity between genders is found in Greece, Italy and Spain, the difference in Greece being close to 6 percentage points.

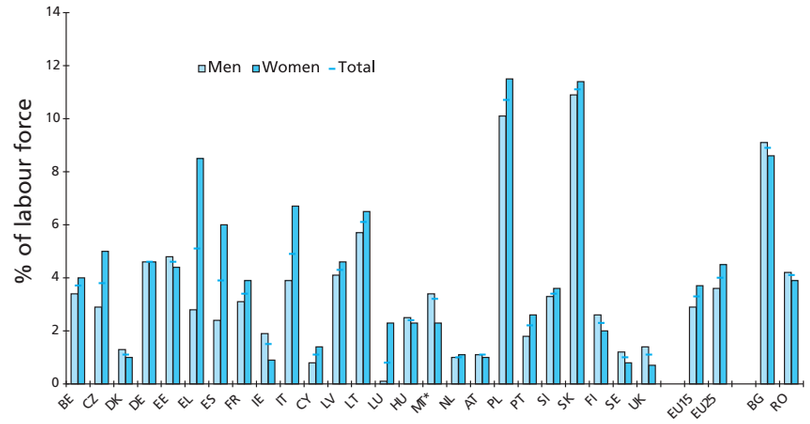
Several countries (Austria, Cyprus, Denmark, Ireland, Luxembourg, the Netherlands, Sweden and the UK) have seen long-term unemployment rates stabilise at around the 1% level in recent years. Others have recently seen noticeable improvements in reducing their rates from relatively high levels, in particular Latvia and Spain almost halved their long-term unemployment rates between 1998 and 2003 to around the EU25 average. However, in contrast to the generally declining trend, rates in the Czech Republic, the Slovak Republic and especially Poland have risen markedly since 1998, in the latter case by almost 6 percentage points.

Chart 7 - Evolution in long-term unemployment rates in the EU25 from 1998 to 2003



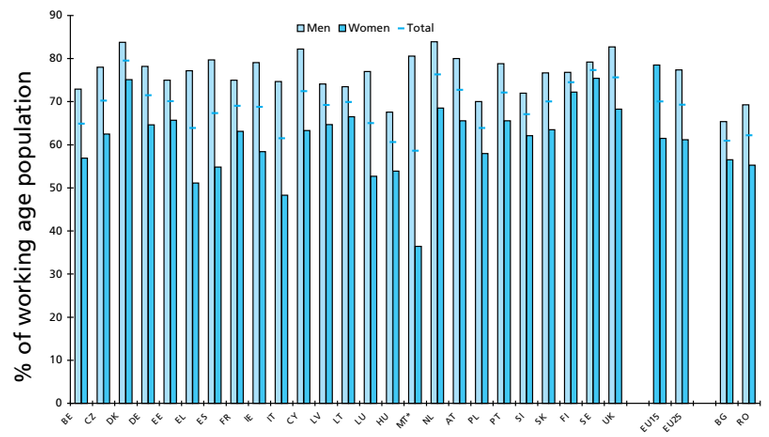
Source: Eurostat, QLFD (Structural Indicators)

Chart 8 - Long-term unemployment rates by gender, 2003



*Source: Eurostat, Structural Indicators. Note: * Data for MT refers to 2002.*

Chart 9 - Activity rates by gender, 2003



*Source: Eurostat, QLFD. Note: * Data for LU and MT refer to 2002*

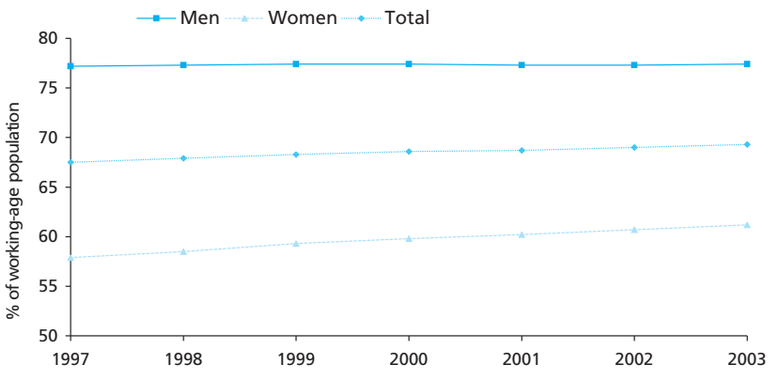
3.2. Activity rates

In 2003, the activity rate (of persons aged 15-64) for the enlarged EU stood at 69.3%, an increase of 0.3 percentage points on one year earlier. Rates for the individual Member States ranged from as low as around 60% in Hungary, Italy and Malta to as high as nearly 80% in Denmark (chart 9). Among the Member States, the strongest increases in participation between 2002 and 2003 occurred in Cyprus and Spain, where activity rates rose in excess of 1 percentage point, while a decline of 0.7 percentage points was recorded in Poland and Slovenia.

The gender gap in activity rates within the EU25 stood at 16.2%, slightly down on the previous year's level of 16.6%, and with the average activity rate for men at 77.4% compared to 61.2% for women. While male activity rates in 2003 remained essentially unchanged from the previous year, those for women rose by a more substantial 0.5 percentage points. This reflects the recent trend at EU level in which activity rates for men have remained more-or-less constant at just over 77% while those for women have continued to increase, rising over 3 percentage points since 1997 (chart 10), and closing the gap with male rates.

The overall decline in the difference in participation rates for men and women at EU level was reflected in the majority of Member States, except, most notably, in Denmark, Finland and Slovenia where the difference rose by around 0.5 percentage points compared to the previous year, mainly driven by declines in female participation. The greatest reduction in the gender gap occurred in Spain and Portugal, where it declined by 1.3 percentage points. Nevertheless, the gap in activity rates remains substantial in several Member States - Greece, Italy, Luxembourg and Spain all have gender differences in participation rates of around 25 percentage points, while in Malta the gap is as high as around 45 percentage points.

Chart 10 - Evolution in EU-25 activity rates by gender, 1997-2003



Source: Eurostat, QLFD

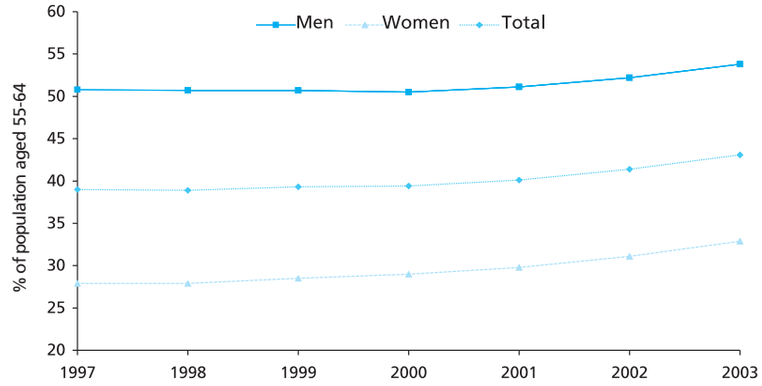
Chart 11 - Youth (aged 15-24) activity rates by gender, 2003

*Source: Eurostat, QLFD. Note: * Data for LU and MT refer to 2002*

In 2003, the strongest increases in female labour market participation within the EU took place in Cyprus and Spain, where rates rose by 1.5 and 2 percentage points respectively. Rates also rose in excess of 1 percentage point in Estonia, Greece and Hungary. In contrast, female participation rates fell by just under 1 percentage point in Slovenia, while Denmark, Finland, Poland and Sweden saw declines of the order of 0.5 percentage points. While female rates rose in the large majority of Member States, developments in male participation rates were rather more mixed, with around half the Member States seeing rates decline, most notably in the Czech Republic, Germany, the Netherlands, Poland, Portugal and Slovenia where rates fell in the order of 0.5 percentage points, while the other half saw rates rise or remain stable.

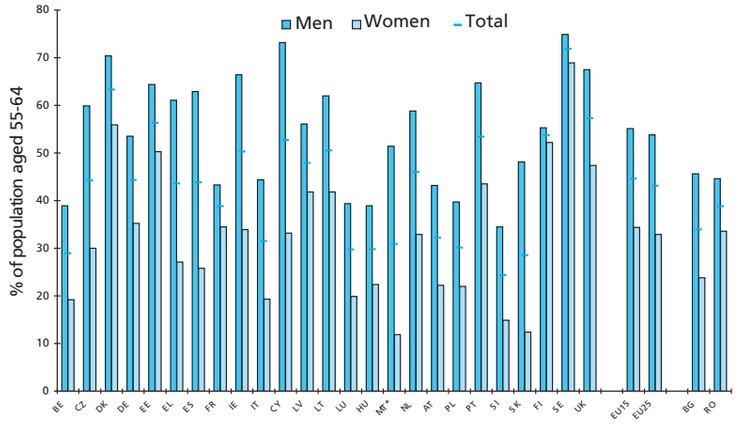
Within the EU25 the average activity rate for the youth age group was 45% in 2003, a decline of 0.6 percentage points on 2002. Across Member States youth participation rates vary from as low as around 30% in Hungary and Lithuania to as high as close to 73% in the Netherlands (chart 11). Only in Malta and the Netherlands are youth activity rates close to the corresponding average activity rate for the working age population as a whole, while in all other Member States youth participation rates are much lower. While the average youth participation rate in the EU25 generally remains considerably

Chart 12 - Evolution in EU25 activity rates for older people (aged 55-64), 1997-2003



Source: Eurostat, QLFD

Chart 13 - Older people's (aged 55-64) activity rates by gender, 2003



*Source: Eurostat, QLFD. Note: * Data for LU and MT refer to 2002*

below the overall activity rate, the gender gap in participation for this age group was the lowest at 7.2 percentage points on average.

Participation rates for older people are generally much lower than those for prime-age workers, averaging 43% for the EU25 as a whole, but are on the rise. Between 2002 and 2003 the average activity rate for the older age group increased strongly by 1.7 percentage points, following on from a 1.3 percentage point increase the previous year, and thus continuing the rising trend in participation of older people observed in recent years (chart 12). At EU level increased participation between 2002 and 2003 was fairly evenly split between older men and older women, and was observed in all Member States with the sole exception of Slovenia, where activity rates declined by 0.9 percentage points. The strongest rises in participation of older people in 2003 occurred in Denmark, Hungary, Lithuania and the Netherlands, all of which experienced increases of around 3 or 4 percentage points. Participation of older women increased in all Member States with the sole exception of Cyprus, where it declined by 0.6 percentage points.

Activity rates for older people vary widely across Member States (chart 13), and are very low, at below one third, in Austria, Belgium, Hungary, Italy, Luxembourg, Malta, Poland and the Slovak Republic, and as low as 24% in Slovenia. In contrast, the rate in Sweden is close to 72% and in Denmark just above 63%. For all Member States the activity rates for older women are below those for older men, with the gender disparity averaging close to 21 percentage points for the EU25 as a whole. This is essentially due to very low participation by older women, whose average activity rate is around 33% for the EU25, but as low as around 13% in Malta and the Slovak Republic. The gender disparity is highest in Cyprus and Malta, where the difference between the activity rates of older men and older women is around 40 percentage points, but also measures over 30 percentage points in Greece, Ireland, the Slovak Republic and Spain. This contrasts markedly with gender gaps of only 3 and 6 percentage points in Finland and Sweden respectively.

3.3. Employment rates and the Lisbon and Stockholm targets

While the structural reforms undertaken over recent years have led to increased resilience of the EU15 labour market to economic downturns (see later section in this issue), the prolonged nature of the recent economic slowdown has raised serious challenges to achieving the Lisbon and Stockholm employment targets (box 2).

3.3.1. Overall employment rate developments and progress in relation to the Lisbon and Stockholm targets

Following on from no change in 2002, the average employment rate for the EU25 rose only by a very marginal 0.1 percentage points in 2003, much lower than the annual rate increases observed from the late 1990s until 2001. The overall employment rate (i.e. of those aged 15-64) in the EU25 reached 62.9%, with the marginal increase due to continued rises in the employment rates for women, up 0.3 percentage points on average to 55.0%, while the rate declined 0.2 percentage points to 70.8% for men (table 3). As in 2002, the employment rate for older people aged 55-64 rose more noticeably, up some 1.5 percentage points to 40.2% in 2003, to

Box 2 – Lisbon and Stockholm employment rate targets

The Lisbon European Council of 2000 set as a new strategic goal for the EU over the 2000-2010 decade "to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion". It specifically stated that the overall aim of employment and economic policies should be to raise the employment rate to as close to 70% as possible by 2010 and to increase the employment rate for women to more than 60% by the same year, not least in order to reinforce the sustainability of social protection systems.

In addition to the 2010 Lisbon targets, the Stockholm European Council of 2001 set intermediate targets for employment rates in the EU in 2005 of 67% overall and 57% for women. It also set a new target for raising the average EU employment rate for older men and women (aged 55-64) to 50% by 2010.

register another substantial step towards achieving the Stockholm target for older workers. The above employment rates equate to gaps of around 7, 5 and 10 percentage points respectively in relation to the overall, female and older people's employment rate targets for 2010.

With nearly zero employment growth in 2003 and limited growth expected in 2004 and 2005, it now seems certain that the intermediate target of an overall employment rate of 67% in 2005 will not be achieved, although the employment rate target for women still remains in reach. Looking further ahead, it is estimated that for the enlarged EU25 some 22 million jobs would need to be created in order to achieve the overall Lisbon employment rate target for 2010. This equates to a net employment creation rate averaging over 3 million per year, similar to the level achieved by the EU15 in 2000, the

Table 3 - Employment Rates in EU Member States in 2003 and progress towards the Lisbon and Stockholm targets

	Total employment rate				Female employment rate				Older workers' employment rate			
	2003	Gap below 2010 target	Change 2002-2003	Change 1998-2003	2003	Gap below 2010 target	Change 2002-2003	Change 1998-2003	2003	Gap below 2010 target	Change 2002-2003	Change 1998-2003
BE	59.6	10.4	-0.3	2.2	51.8	8.2	0.4	4.2	28.1	21.9	1.5	5.2
CZ	64.7	5.3	-0.7	-2.6	56.3	3.7	-0.7	-2.4	42.3	7.7	1.5	5.2
DK	75.1	>	-0.8	0.0	70.5	>	-1.2	0.3	60.2	>	2.3	8.2
DE	64.8	5.2	-0.6	0.9	58.8	1.2	-0.1	3.0	39.3	10.7	0.6	1.6
EE	62.9	7.1	0.9	-1.7	59.0	1.0	1.1	-1.3	52.3	>	0.7	2.1
EL	57.9	12.1	1.2	2.4	43.9	16.1	1.4	3.7	42.3	7.7	2.6	3.3
ES	59.7	10.3	1.3	8.5	46.0	14.0	1.9	10.2	40.8	9.2	1.1	5.7
FR	62.8	7.2	0.0	2.6	56.7	3.3	0.2	3.6	36.8	13.2	2.1	8.5
IE	65.4	4.6	-0.2	4.8	55.8	4.2	0.2	6.8	49.0	1.0	1.9	7.3
IT	56.1	13.9	0.6	4.1	42.7	17.3	0.7	5.4	30.3	19.7	1.4	2.6
CY*	69.2	0.8	0.6	3.5	60.4	>	1.3	6.9	50.4	>	1.0	1.0
LV	61.8	8.2	1.4	1.9	57.9	2.1	1.1	2.8	44.1	5.9	2.4	7.8
LT	61.1	8.9	1.2	-1.2	58.4	1.6	1.2	-0.2	44.7	5.3	3.1	5.2
LU*	63.1	6.9	:	2.6	50.8	9.2	:	4.6	29.5	20.5	:	4.4
HU	57.0	13.0	0.8	3.3	50.9	9.1	1.1	3.7	28.9	21.1	3.3	11.6
MT*	54.5	15.5	:	:	33.6	26.4	:	:	30.3	19.7	:	:
NL	73.5	>	-0.9	3.3	65.8	>	-0.4	5.7	44.8	5.2	2.5	10.9
AT	69.2	0.8	0.0	1.3	62.8	>	0.3	4.0	30.4	19.6	0.7	2.0
PL	51.2	18.8	-0.3	-7.8	46.0	14.0	-0.2	-5.7	26.9	23.1	0.8	-5.2
PT	67.2	2.8	-1.0	0.3	60.6	>	-0.2	2.3	51.1	>	0.2	1.1
SI	62.6	7.4	-0.8	-0.3	57.6	2.4	-1.0	-1.0	23.5	26.5	-1.0	-0.4
SK	57.7	12.3	0.9	-2.9	52.2	7.8	0.8	-1.3	24.6	25.4	1.8	1.8
FI	67.7	2.3	-0.4	3.1	65.7	>	-0.5	4.5	49.6	0.4	1.8	13.4
SE	72.9	>	-0.7	2.6	71.5	>	-0.7	3.6	68.6	>	0.6	5.6
UK	71.8	>	0.1	1.3	65.3	>	0.0	1.7	55.5	>	2.0	6.5
EU15	64.3	5.7	0.1	2.9	56.0	4.0	0.4	4.4	41.7	8.3	1.6	5.1
EU25	62.9	7.1	0.1	1.7	55.0	5.0	0.3	3.2	40.2	9.8	1.5	4.4
2010 Target	70%				More than 60 %				50%			

Source: Eurostat, QLFD
Note: data for LU and MT refer to 2002. The change in column "1998-2003" for CY is 2000 to 2003 and for LU 1998 to 2002.
The column "Gap below 2010 target" is for illustrative purposes only, since the 2010 target is for the EU overall and not individual Member States ">" indicates that the respective target has already been exceeded by the MS concerned.

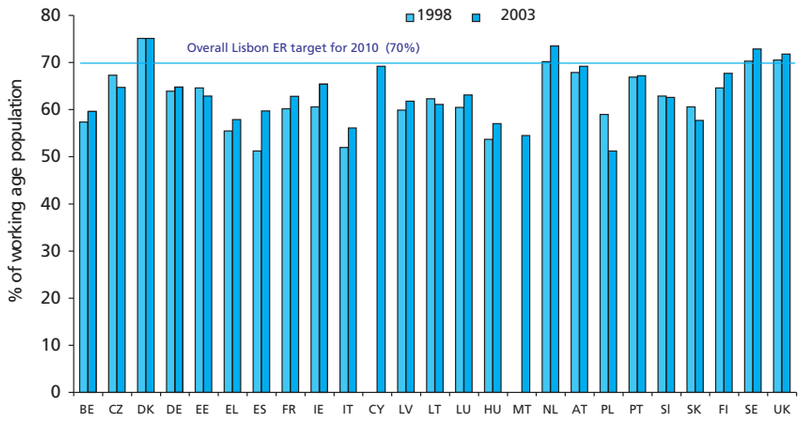
best year for employment creation in recent years. Progress towards achieving the 2010 employment rate targets will rely heavily on the implementation of further labour market reforms such as those identified by the Employment Taskforce, including increasing the adaptability of workers and enterprises, making work a real option for all, removal of disincentives to female participation in the labour force, keeping older workers in the labour force longer and raising skill levels in the labour force by investing more and more effectively in human capital and lifelong learning, as well as better governance to ensure more effective implementation of reforms.

Concerning the situation for individual Member States, only four (Denmark, the Netherlands, Sweden and the UK) currently already meet the EU target for 2010 of an overall employment rate of 70%, and only five others are presently within 5 percentage points of the target (chart 14). Over the last five years, Spain and Ireland have made the biggest advances in raising their employment rates, up 8.5 and 4.8 percentage points respectively, while in contrast the rate has fallen by almost 8 percentage points in Poland, which as a result is currently around 19 percentage points below the EU target.

Eight Member States already meet the 2010 female employment rate target, and eight others are within 5 percentage points (chart 15). However, the gap remains large in Belgium, Hungary, Luxembourg and the Slovak Republic, and especially so - at 14 percentage points and over - in Greece, Italy, Malta, Poland and Spain. However, Spain has improved its female employment rate substantially over the last 5 years, with the rate increasing by over 10 percentage points.

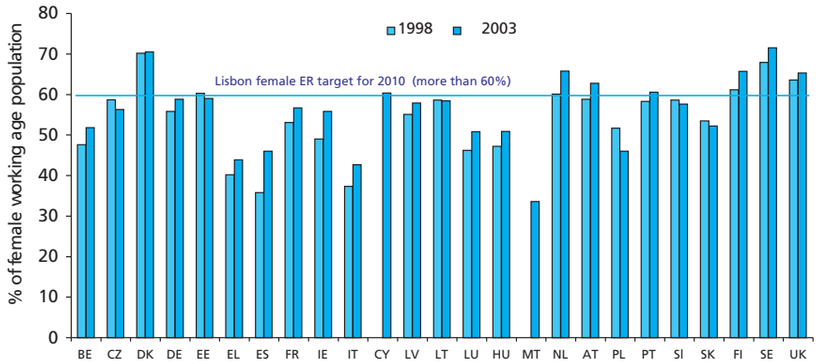
For the older people's employment rate target, six Member States are already at or above the 2010 target, but substantial gaps remain in Austria, Belgium, Hungary, Italy, Luxembourg, Malta, Poland, the Slovak Republic and Slovenia, where in 2003 the gaps were all of the order of 20 percentage points or above (chart 16).

Chart 14 - Overall employment rates for EU Member States, 1998 and 2003



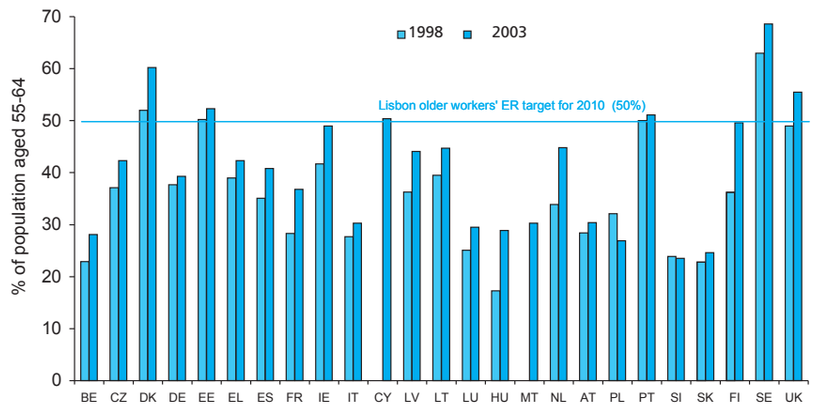
Source: Eurostat, QLFD. Note data for MT refers to 2002 only, CY 2003 only and LU to 1998 and 2002

Chart 15 - Female employment rates for EU Member States, 1998 and 2003



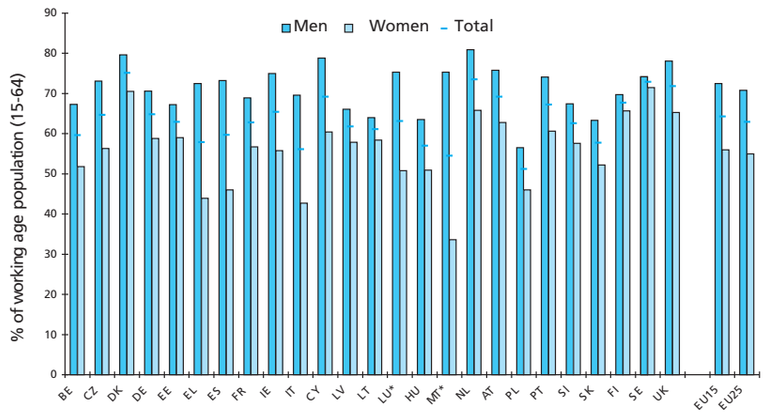
Source: Eurostat, QLFD. Note data for MT refers to 2002 only, CY 2003 only and LU to 1998 and 2002

Chart 16 - Older workers' employment rates for EU Member States, 1998 and 2003



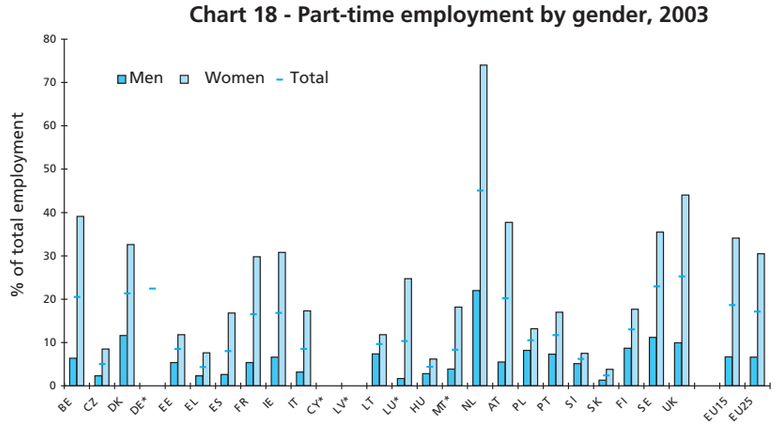
Source: Eurostat, QLFD. Note data for MT refers to 2002 only, CY 2003 only and LU to 1998 and 2002

Chart 17 - Employment rate by gender, 2003



*Source: Eurostat, QLFD. Note: * Data for LU and MT refer to 2002*

Chart 18 - Part-time employment by gender, 2003



*Source: Eurostat, QLFD. Note: * No recent data for CY and LV.*
No gender breakdown for GE. Data for LU and MT refers to 2002.

3.3.2. Employment rate developments at Member State level in 2003

Within the enlarged EU there are large variations in employment rates among Member States, which in 2003 ranged from as low as 51% in Poland to as high as 75% in Denmark (chart 17). While there was essentially little or no change in the employment rate for the EU25 as a whole between 2002 and 2003, several Member States experienced declines in their rates, most notably the Czech Republic, Denmark, Germany, the Netherlands, Portugal, Slovenia and Sweden with declines of between 0.5 and 1 percentage point. On the other hand, Greece, Latvia, Lithuania and Spain saw rises in their employment rates in excess of 1 percentage point, and Cyprus, Estonia, Hungary, Italy and the Slovak Republic rises of between 0.5 and 1 percentage point.

Driven by a marginal fall in the average male employment rate and a slightly stronger rise in the female rate, the gender gap between male and female employment rates in the EU25 declined by 0.5 percentage points between 2002 and 2003, to 15.8 percentage points. Nevertheless, large gaps of 27 to 29 percentage points remain in Greece, Italy and Spain, countries in which the employment rates for women are all well below 50%, while in Malta the gap is exceptionally high at around 42 percentage points due to an extremely low employment rate for women of just below 34%.

Focusing on older workers, the employment rate for the EU25 for those aged 55-64 stood at just over 40% in 2003. The lowest rate for this age group was that for Slovenia, at just under 24%, while in Sweden the rate was almost 69%, far higher than for any other Member State apart from Denmark. Except for Poland and Slovenia, the employment rate for older people has increased over recent years in all Member States, with particularly marked rises (of over 10 percentage points since 1998) in Finland, Hungary and the Netherlands. Between 2002 and 2003 all Member States other than Slovenia experienced rises in older people's employment rates, with these rising by as much as over 3 percentage points in Hungary and Lithuania compared to an average rise of 1.5 percentage points for the EU25 as a whole.

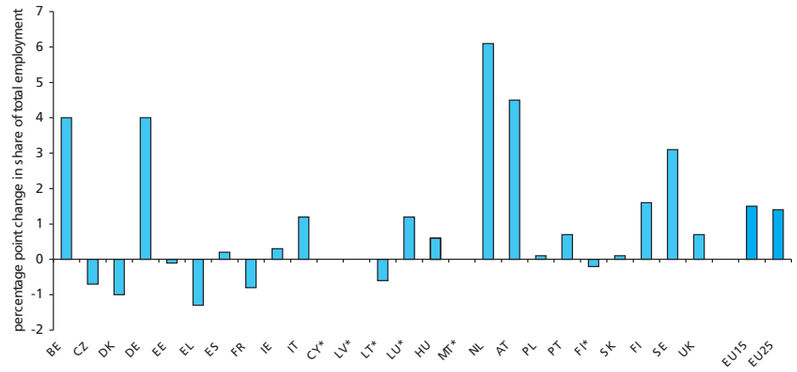
3.4. Recent employment trends according to type of employment

3.4.1. Part-time employment

In 2003, just over 17% of workers in the enlarged EU were in part-time employment, an increase of some 0.4 percentage points on the previous year and continuing the rising trend seen over recent years in the occurrence of this form of employment. Increases of over 1 percentage point compared to 2002 were recorded in Belgium, Denmark, the Netherlands and Sweden, while Lithuania reported a decrease of a similar order.

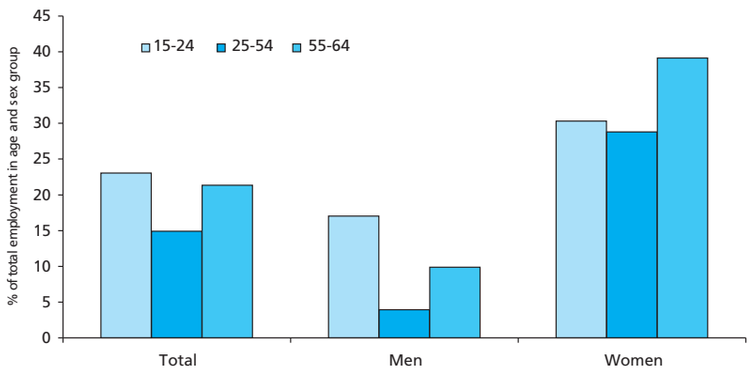
Among Member States, the Netherlands stands out as the country where part-time employment is most common, where it accounts for as much as 45% of total employment (chart 18). The next highest rate occurs in the UK, with 25%, while Austria, Belgium, Denmark, Germany and Sweden all have shares of part-time employment accounting for over 20% of total employment. The rate for the Netherlands is much higher than for any other Member State owing to

Chart 19 - Change in the share of part-time employment in total employment between 1998 and 2003



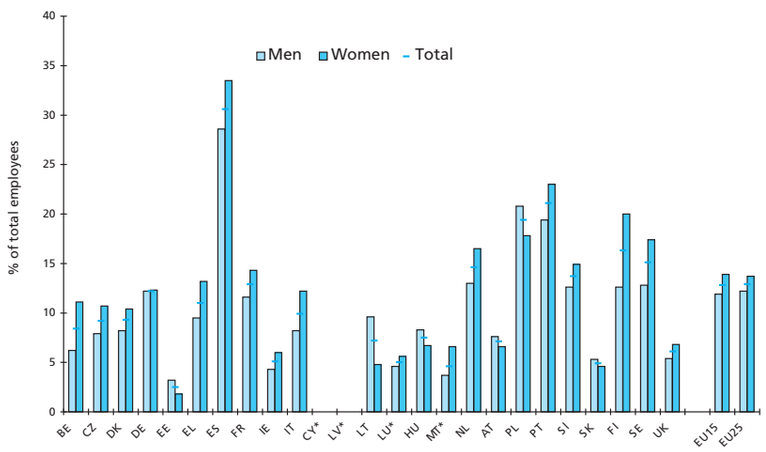
*Source: Eurostat, QLFD. Note: * No recent data for CY and LV.*
Data for LT and Sl refer to 2000 and 2003, and for LU to 1998 and 2002.
No data for MT for 2003 nor prior to 2000

Chart 20 - Share of part-time employment in the EU25 by age group and sex, 2003



Source: Eurostat, LFS, spring results

Chart 21 - Fixed-term employment by gender, 2003



*Source: Eurostat, QLFD. Note: * No recent data for CY and LV.*
Data for LU and MT refers to 2002

the fact that almost three-quarters of female employment in that country is part-time. Indeed, part-time work remains predominantly a feature of female employment, with some 30% of women in employment in the EU25 in 2003 having a part-time job compared to only 6.6% for men.

For the EU25 as a whole, the share of part-time employment rose by 1.4 percentage points between 1998 and 2003. Nevertheless, the proportion of part-time employment remains exceptionally low in the Czech Republic, Greece, Hungary and the Slovak Republic, with shares at 5% or below, and for most having changed little since 1998. Those Member States that have seen the largest rises in the occurrence of part-time employment over the last five years were Austria, Belgium and Germany, where the share of part-time employment rose around 4 percentage points, and especially the Netherlands where it rose around 6 percentage points (chart 19).

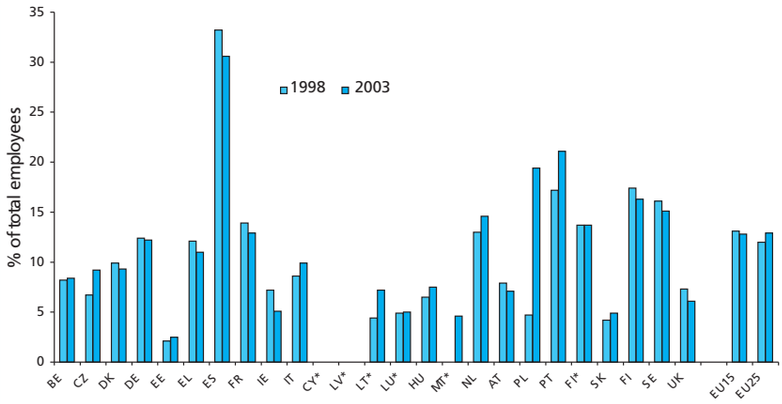
Part-time work is more frequent in some age groups than in others (chart 20). At EU25 level there is a greater proportion of part-time employment among youth (23%) and older people (around 21%) than for prime-age workers (15%). Part-time work is therefore more common at the beginning and end of people's working lives while full-time employment is concentrated in the middle years. There is also a clear gender distinction in the occurrence of part-time work by age. In general, men are most likely to be in part-time employment during their youth, while for women it is during the latter stages of their working lives. Furthermore, while the share of part-time employment for men decreases sharply from youth to prime-age, for women the share remains roughly the same across these age categories.

3.4.2. Fixed-term employment

Fixed-term contracts were held by just under 13% of EU25 employees in 2003. While only 5% or less of employees were employed under such contracts in Estonia, Ireland, Luxembourg, Malta and the Slovak Republic, close to 31% worked under fixed-term employment in Spain and around 20% in Poland and Portugal (chart 21).

Unlike part-time work, fixed-term employment is more evenly spread

Chart 22 - Developments in the share of employees in fixed-term employment between 1998 and 2003



*Source: Eurostat, QLFD. Note: * No recent data for CY and LV. Data for LT and SI refer to 2000 and 2003, and for LU to 1998 and 2002. No data for MT for 2003 nor prior to 2000.*

among men and women at EU level. In 2003, the average share of fixed-term employment for the EU25 was 13.7% for women and 12.2% for men, although more sizeable gender differences do exist in several Member States. Generally the share of women in fixed-term employment is higher than that for men, most notably in Belgium, Spain and Sweden where the gender gap is around 5 percentage points, and in Finland where it exceeds 7 percentage points. Only in Austria, Estonia, Hungary, Lithuania, Poland and the Slovak Republic are larger shares of men employed on a fixed-term basis than women.

In the EU15 the share of fixed-term employment continued to decline marginally in 2003 to 12.8% of all employees, the occurrence of this type of employment having peaked in 2000 at 13.6%. However, the trend for the enlarged EU25 as a whole is still one of an increasing share of fixed-term employment, as it becomes more common in the new Member States. In particular, Poland has seen a dramatic rise in the use of this form of employment, with the share of employees affected rising from below 5% in 1998 to almost 20% in 2003 (chart 22).

3.5. Skills and employment

The skill content of the EU25 working age population continues to rise. In 2003, high-skilled people (tertiary education completed) made up 18.5% of the working age population in the EU25, while the low-skilled (below upper secondary education) accounted for just under 35% (table 4). This compares with 17.8% and 35.6% respectively the year before and reflects the ongoing improvement in the levels of human capital.

Table 4 - Share (as %) of the working age population (15-64) by educational attainment levels in 2003

	Total			Men			Women		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
BE	40.6	34.8	24.6	41.2	34.8	23.9	40.0	34.7	25.3
CZ	18.4	71.7	9.9	15.0	74.0	11.0	21.7	69.5	8.8
DK	24.9	48.0	27.2	24.3	50.4	25.3	25.4	45.5	29.0
DE	23.3	56.2	20.6	20.3	55.4	24.3	26.3	56.9	16.8
EE	21.2	54.1	24.8	23.1	57.9	19.0	19.4	50.5	30.1
EL	45.9	38.8	15.3	45.1	38.8	16.0	46.6	38.8	14.6
ES	56.5	20.4	23.0	57.0	20.1	22.9	56.1	20.7	23.2
FR	38.4	40.6	21.0	37.0	43.2	19.9	39.9	38.0	22.1
IE	39.2	37.6	23.2	41.9	35.9	22.2	36.5	39.4	24.1
IT	53.5	37.3	9.2	53.5	37.4	9.1	53.5	37.3	9.2
CY	37.0	36.9	26.1	35.0	37.7	27.2	38.8	36.2	25.0
LV	26.5	58.5	15.0	30.4	57.2	12.3	22.9	59.6	17.5
LT	22.9	57.5	19.6	25.5	57.8	16.7	20.5	57.2	22.3
LU*	41.2	42.6	16.2	37.2	44.2	18.6	45.3	41.0	13.7
HU	30.3	56.9	12.9	27.5	60.4	12.2	33.0	53.5	13.5
MT	77.9	13.7	8.4	75.9	15.0	9.1	79.9	12.5	7.6
NL*	36.0	42.6	21.4	33.6	43.2	23.3	38.4	42.1	19.5
AT	26.2	59.6	14.2	21.0	63.6	15.4	31.3	55.6	13.1
PL	24.8	63.9	11.3	24.3	65.8	9.9	25.2	62.1	12.7
PT	76.3	14.9	8.7	78.6	14.5	6.9	74.1	15.3	10.6
SI	25.8	59.9	14.4	23.4	64.3	12.2	28.1	55.3	16.6
SK	20.7	69.9	9.4	18.3	72.6	9.1	23.1	67.3	9.6
FI	29.3	43.4	27.2	31.0	45.2	23.8	27.6	41.7	30.7
SE	22.2	53.9	23.9	23.8	55.7	20.5	20.6	52.0	27.4
UK**	16.9	55.9	27.2	15.2	56.9	27.9	18.7	54.9	26.4
EU-15	36.9	43.2	19.8	35.6	43.9	20.5	38.2	42.6	19.2
EU-25	34.8	46.7	18.5	33.6	47.5	18.9	36.0	45.8	18.1

Source: Eurostat, LFS, spring results
*Notes: low (ISCED 0-2: lower secondary), medium (ISCED 3-4: upper secondary), high (ISCED 5-6: tertiary); * LU and NL data refer to 2002; **UK: GSCE levels included under 'medium* LU and NL data refer to 2002.*

There are important variations across Member States in the skills composition of the working age population. Despite the generally improving situation, the low-skilled still account for very large proportions of the working age population in certain Member States. The highest share of low-skilled people is found in Malta and Portugal, with shares of around 78% and 76% respectively, while in Spain and Italy the low-skilled also account for more than half of the working age population. The countries with the largest proportions of high-skilled in 2003 were Denmark, Finland and the UK, all with shares of just over 27%. In contrast, high-skilled people make up less than 10% of the working age population in the Czech Republic, Italy, Malta, Portugal and the Slovak Republic.

The skills composition at EU level is broadly similar for both men and women, although the distribution for the male population shows a moderately higher skills content. The proportion of the working population in the low-skilled group shows the largest gender difference, accounting for 33.6% of men and 36% of women. At Member State level this is most pronounced in Austria, where the share of low-skilled women was over 10 percentage points higher than the share of low-skilled men, although in contrast several Member States, especially the Baltic States, Ireland and Portugal, actually have smaller shares of low-skilled women than men. Similarly, large differences exist in the proportion of high-skilled men and women. For example, in Germany and Luxembourg there is a much smaller share of high-skilled women than men, while in Finland, Sweden and the three Baltic States the reverse situation applies.

As might be expected, the employment rate is generally greater the higher the educational attainment level (table 5). In 2003, the average employment rate in the EU25 for the high-skilled was 82.5% and for the medium-skilled (upper secondary completed) 68.4%, a difference of just over 14 percentage points. The gap between average employment rates for the medium-skilled and the low-skilled was even larger at around 22 percentage points, the average employment rate for low-skilled being 46.6%. A similar pattern is found with regard to activity rates across skill levels, with only

Table 5 - Employment, unemployment and activity rates by education levels in 2003 (age group 15-64)

	Total. irrespective of education level			High			Medium			Low		
	ER	UR	AR	ER	UR	AR	ER	UR	AR	ER	UR	AR
BE	59.3%	7.7%	64.3%	82.3%	3.8%	85.6%	65.0%	8.0%	70.6%	40.5%	11.7%	45.9%
CZ	64.9%	7.6%	70.2%	85.7%	2.1%	87.5%	72.4%	6.9%	77.8%	24.3%	22.1%	31.2%
DK	75.1%	5.5%	79.4%	84.8%	4.8%	89.1%	78.7%	4.4%	82.3%	57.5%	9.0%	63.2%
DE	64.9%	9.9%	72.1%	82.9%	5.0%	87.3%	69.0%	10.1%	76.7%	42.2%	15.7%	50.0%
EE	62.3%	11.0%	70.1%	79.8%	5.4%	84.4%	67.3%	12.5%	76.9%	29.1%	18.8%	35.9%
EL	58.0%	9.1%	63.8%	80.9%	6.3%	86.3%	58.1%	12.0%	66.0%	50.2%	7.7%	54.3%
ES	59.6%	11.2%	67.1%	78.6%	8.2%	85.6%	60.0%	11.5%	67.8%	53.5%	12.7%	61.4%
FR	62.6%	9.1%	68.9%	77.3%	6.3%	82.5%	69.6%	8.1%	75.8%	47.2%	12.8%	54.2%
IE	65.0%	4.6%	68.1%	84.7%	2.8%	87.1%	70.6%	3.9%	73.5%	47.7%	7.3%	51.5%
IT	56.1%	9.0%	61.6%	81.2%	5.6%	86.0%	64.9%	8.2%	70.7%	45.7%	10.7%	51.2%
CY	69.2%	4.2%	72.2%	87.8%	3.8%	91.3%	73.4%	4.0%	76.4%	51.8%	5.1%	54.6%
LV	61.7%	10.7%	69.1%	80.1%	6.3%	85.5%	69.4%	10.3%	77.4%	34.3%	17.6%	41.7%
LT	62.8%	13.0%	72.1%	84.6%	6.4%	90.4%	69.0%	13.8%	80.1%	28.4%	22.4%	36.6%
LU*	63.6%	2.6%	65.3%	83.6%	1.7%	85.0%	69.1%	1.5%	70.2%	50.8%	4.7%	53.3%
HU	57.0%	5.8%	60.6%	82.4%	1.4%	83.6%	66.6%	5.4%	70.4%	28.4%	12.4%	32.4%
MT	54.6%	7.5%	59.1%	84.1%	3.7%	87.4%	69.3%	7.2%	74.7%	49.0%	8.3%	53.4%
NL*	74.5%	2.6%	76.5%	86.8%	1.7%	88.4%	79.8%	2.1%	81.5%	61.7%	3.7%	64.0%
AT	68.2%	4.7%	71.6%	84.4%	2.4%	86.5%	73.7%	4.2%	76.9%	46.9%	8.8%	51.5%
PL	51.4%	19.7%	64.0%	81.4%	7.1%	87.7%	56.7%	20.9%	71.7%	23.9%	28.0%	33.1%
PT	67.3%	6.6%	72.1%	86.7%	5.6%	91.8%	62.6%	6.9%	67.3%	66.0%	6.7%	70.8%
SI	62.5%	6.6%	66.9%	85.2%	3.8%	88.5%	67.5%	6.3%	72.0%	38.2%	11.2%	43.0%
SK	57.9%	17.2%	69.8%	86.6%	4.4%	90.6%	66.7%	15.9%	79.3%	15.1%	47.1%	28.7%
FI	68.7%	10.5%	76.8%	84.9%	4.2%	88.6%	72.4%	10.9%	81.2%	48.2%	18.6%	59.3%
SE	73.6%	5.6%	77.9%	85.9%	3.5%	89.0%	79.1%	5.3%	83.5%	57.0%	8.8%	62.5%
UK**	71.7%	4.9%	75.3%	87.5%	2.6%	89.8%	77.1%	4.9%	81.1%	51.4%	9.4%	56.7%
EU-15	64.3%	8.1%	69.9%	82.5%	4.9%	86.8%	70.2%	7.7%	76.1%	49.5%	11.2%	55.7%
EU-25	62.9%	9.1%	69.2%	82.5%	4.9%	86.8%	68.4%	9.4%	75.5%	46.6%	12.2%	53.0%

Source: Eurostat, LFS, spring results.
*Note: * LU and NL data refer to 2002, ** UK : GSCE levels included under 'medium'.*

Table 6 - Recent develoments in youth labour market situation in the EU25. EU15 and the group of new Member States								
Developments in labour market indicators for young people (aged 15-24) in the EU25 between 1997 and 2003								
EU25		1997	1998	1999	2000	2001	2002	2003
Activity Rate	Total	45.5	45.8	46.1	46.1	46.0	45.6	45.0
(% of pop aged 15-24)	Men	49.5	49.7	49.8	49.7	49.7	49.2	48.5
	Women	41.4	41.9	42.4	42.6	42.3	41.9	41.3
Employment Rate	Total	36.4	37.1	37.6	38.0	38.0	37.4	36.7
(% of pop aged 15-24)	Men	40.3	40.8	41.1	41.4	41.4	40.5	39.5
	Women	32.5	33.4	34.1	34.5	34.7	34.3	33.7
Unemployment Rate	Total	:	18.6	18.3	17.6	17.5	17.9	18.3
(% of labour force 15-24)	Men	:	17.4	17.2	16.6	16.7	17.6	18.1
	Women	:	20	19.5	18.9	18.3	18.3	18.6
Unemployment Ratio	Total	:	8.4	8.4	8.2	8.1	8.2	8.1
(% of pop aged 15-24)	Men	:	8.5	8.5	8.3	8.3	8.6	8.6
	Women	:	8.2	8.3	8.1	7.8	7.7	7.7
Developments in labour market indicators for young people (aged 15-24) in the EU15 between 1997 and 2003								
EU15		1997	1998	1999	2000	2001	2002	2003
Activity Rate	Total	46.7	47.2	47.7	47.8	47.7	47.6	47.2
(% of pop aged 15-24)	Men	50.4	50.8	51.2	51.3	51.4	51.1	50.6
	Women	43.0	43.5	44.1	44.2	44.0	44.0	43.6
Employment Rate	Total	37.2	38.2	39.4	40.4	40.8	40.5	39.7
(% of pop aged 15-24)	Men	40.8	41.8	42.9	43.9	44.3	43.6	42.5
	Women	33.6	34.6	35.9	36.8	37.3	37.3	36.7
Unemployment Rate	Total	20	18.5	16.9	15.4	14.6	15.1	15.8
(% of labour force 15-24)	Men	18.6	17.2	15.8	14.2	13.8	14.8	15.7
	Women	21.6	20	18.3	16.8	15.6	15.5	15.9
Unemployment Ratio	Total	9.3	8.7	8.1	7.4	7.0	7.2	7.3
(% of pop aged 15-24)	Men	9.3	8.8	8.1	7.3	7.1	7.5	7.7
	Women	9.2	8.7	8.1	7.5	6.9	6.8	6.9
Recent Developments in labour market indicators for young people (aged 15-24) in the new Member States. from 1997 to 2003								
NMS10		1997	1998	1999	2000	2001	2002	2003
Activity Rate	Total	40.3	40.2	39.7	39.5	39.3	37.4	35.9
(% of pop aged 15-24)	Men	45.9	45.1	44.1	43.1	43.1	41.2	39.9
	Women	34.8	35.4	35.4	35.8	35.5	33.6	31.9
Employment Rate	Total	33.2	32.4	30.1	28.3	26.9	25.2	24.3
(% of pop aged 15-24)	Men	38.3	36.7	33.6	31.1	29.7	27.9	27.2
	Women	28.1	28.3	26.6	25.5	24.2	22.5	21.3
Unemployment Rate	Total	:	19.3	25	28.6	31.3	32.1	31.8
(% of labour force 15-24)	Men	:	18.5	24.4	28.1	30.8	31.5	30.8
	Women	:	20.4	25.7	29.3	31.9	32.9	33.1
Unemployment Ratio	Total	:	7.9	10.0	11.3	12.3	12.1	:
(% of pop aged 15-24)	Men	:	8.4	10.7	12.1	13.2	13.0	:
	Women	:	7.5	9.3	10.6	11.4	11.1	:

Source: Eurostat, QLFD and harmonised series on unemployment.

just over half of the low-skilled population in the EU25 active in the labour market compared to nearly 87% of the high-skilled.

The range in employment rates across Member States is most noticeable for the low-skilled, where rates vary by as much as 51 percentage points, from as low as 15% in the Slovak Republic to 66% in Portugal. Except for Cyprus and Malta, which have rates around the average level for the EU15, the countries where employment rates for the low-skilled are exceptionally low (below 30%) are all found among the new Member States, reflecting the generally low level of participation by the low-skilled in these countries. For the high-skilled the variation in employment rates is much less pronounced, ranging from about 77% in France to almost 88% in Cyprus and the UK.

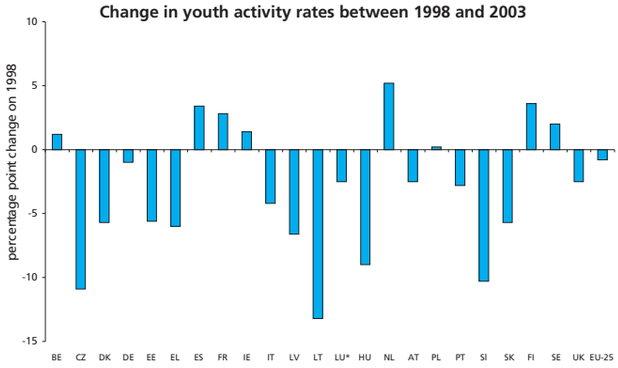
In the EU25, average unemployment rates for the low-skilled are more than double those for the high-skilled. Substantial differences of over 20 percentage points exist between the unemployment rates for the low- and high-skilled in the Czech Republic and Poland, but the most extreme situation is found in the Slovak Republic, where the unemployment rate for low-skilled is 47% compared to only around 4% for the high-skilled. This contrasts markedly with the situation in countries such as Cyprus, Greece, the Netherlands and Portugal where unemployment rates for low- and high-skilled differ by less than two percentage points.

3.6. Developments in the labour market situation for young people

Following a period of rising youth participation and employment and declining youth unemployment between 1997 and 2001, the labour market situation for young people

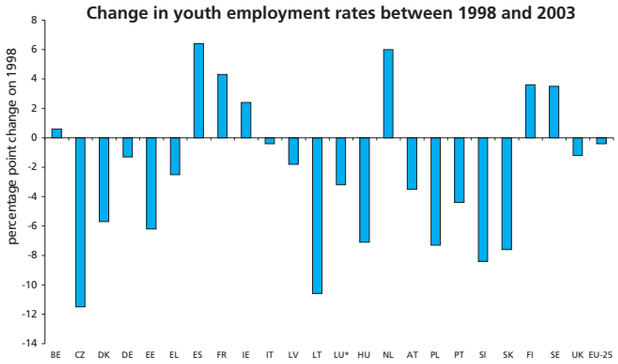
Chart 23 - Developments in the labour market situation for young people (aged 15-24) in the EU15 between 1998 and 2003

Change in youth activity rates between 1998 and 2003



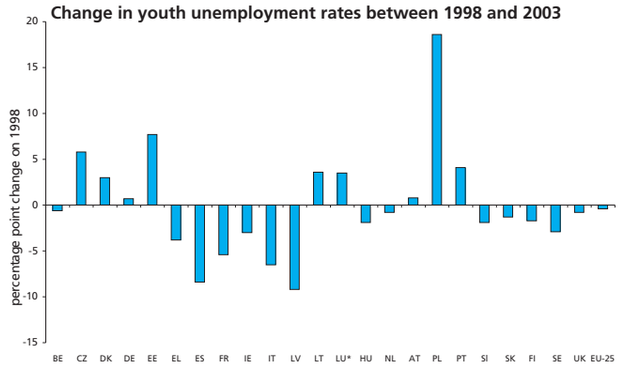
*Source: Eurostat, QLFD. Note: * Data for LU refers to 1998 and 2002. No data for 1998 and/or 2003 for CY and MT*

Change in youth employment rates between 1998 and 2003



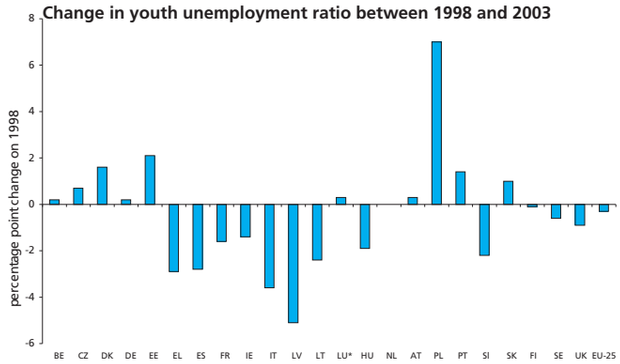
*Source: Eurostat, QLFD. Note: * Data for LU refers to 1998 and 2002. No data for 1998 and/or 2003 for CY and MT*

Change in youth unemployment rates between 1998 and 2003



*Source: Eurostat, QLFD. Note: * Data for SK refers to 1999 and 2003. No data for 1998 and/or 2003 for CY and MT*

Change in youth unemployment ratio between 1998 and 2003



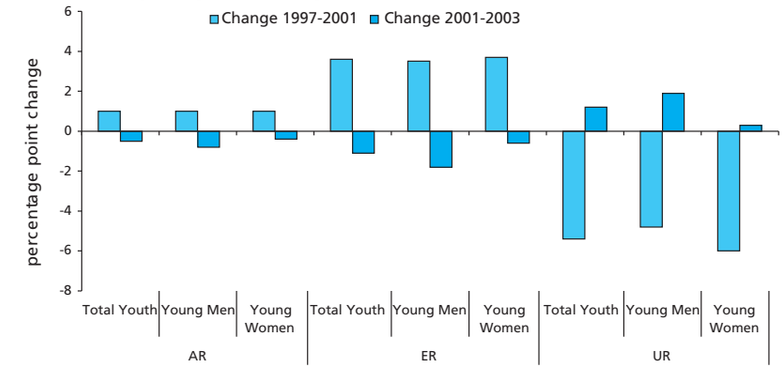
*Source: Eurostat, QLFD. Note: * Data for LU refers to 1998 and 2002. No data for 1998 and/or 2003 for CY and MT*

(i.e. persons aged 15-24) in the EU has generally deteriorated over the last two or three years (table 6). This overall development for the EU25 hides somewhat different trends in the EU15 and the group of new Member States, but recent developments in the labour market situation for youth have generally been negative across most Member States and are of particular concern in countries such as the Czech Republic, Lithuania and Poland.

For the EU15, the labour market situation for youth improved significantly between 1997 and 2001, a period of strong employment growth in general in the EU15, but then deteriorated over the following two years (chart 24). Between 1997 and 2001 the activity rate of young people increased 1 percentage point, but the employment rate rose by a more substantial 3.6 percentage points, with this increase being fairly evenly split between male and female youth. At the same time, the youth unemployment rate in the EU15 declined substantially, by 5.4 percentage points, with young women seeing a larger decrease than young men. As a result, the employment rate for young people in the EU15 peaked in 2001 at 40.8% while youth unemployment dipped to a low of 14.6%. However, developments over the subsequent two years saw the youth employment rate fall to 39.7% and unemployment rise again to 15.8%, while youth participation in the labour market also fell. Young males were the most affected by this downturn, with their employment and unemployment rates falling and rising respectively by close to 2 percentage points.

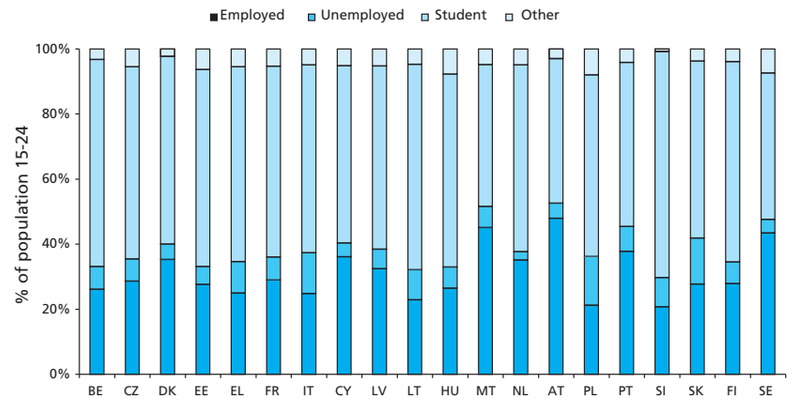
For the group of new Member States as a whole, the labour market situation for young people in 2003 was much worse than in the EU15, with the youth unemployment rate double that of the EU15, and the activity and employment rates some 11 and 15 percentage points lower respectively. This reflects the contrasting development in the group of new Member States compared to

Chart 24 - Developments in the labour market situation for young people (aged 15-24) in the EU-15 between 1997 and 2003



Source: Eurostat QLFD and harmonised series on unemployment

Chart 25 - Share of youth population by declared main status in EU Member States, 2003



Source: Eurostat, LFS, spring results
Note: No detailed 2003 data breakdown by main status for DE, ES, IE, LU and UK

the EU15; in the former the labour market situation for youth has declined continuously from 1997 onwards. While the employment rate for young people in the group of new Member States stood at just over 33% in 1997, by 2003 it had fallen almost 9 percentage points to just over 24%, mainly driven by decreases in employment of young men. At the same time, the unemployment rate jumped over 12 percentage points, from 19.3% in 1998 to 31.8% in 2003. The rise in the unemployment rate was evenly spread between male and female youth, due to a stronger decline in participation of young men (down 6 percentage points) than for young women (down 3 percentage points). Nevertheless, participation remains much higher among young males than young females in the group of new Member States, with the gender gap similar to that in the EU15.

Taking a look at developments over the last five years at individual Member State level (chart 23), the vast majority of Member States experienced declines in youth employment rates relative to the rates observed in 1998, with particularly strong declines in the Czech Republic and Lithuania of over 10 percentage points. Employment rates for youth only rose in seven Member States, most notably in Spain and the Netherlands with rises of around 6 percentage points. Activity rates for youth followed broadly similar developments as the employment rates, with many Member States experiencing declines in youth participation. However, in Poland youth activity rates remained stable between 1998 and 2003, so the decline in the employment rate for young people was reflected through a sharp rise of almost 19 percentage points in youth unemployment, equivalent to a rise in the ratio of youth unemployed to the total youth population of 7 percentage points. While the overall labour market situation for young people has therefore deteriorated in most Member States between 1998 and 2003, developments in Finland, France, Ireland, the Netherlands, Spain and Sweden went against this general trend, with these Member States seeing rises in youth participation and employment rates and declines in youth unemployment.

The position of youth can also be reviewed according to their own perception of their situation. The distribution of young people by self-perceived main status[2] (chart 25) indicates that for all Member States (for which data are available) other than Austria and Malta, the greatest proportion of young people are those whose perceived main status is that of student. The share of this status among young people is generally between 50% and 60%, although as high as nearly 70% in Slovenia. In Austria and Malta, the proportion is greatest for those whose main activity status is employed, where the share is 48% and 45% respectively, while in Sweden the shares of youth with "employed" or "student" as their main status are very similar at close to 45%. "Unemployed" is the main activity status for sizeable shares of youth in Italy, Poland and the Slovak Republic, where 12-15% of youth in these countries declare themselves to be in this situation. For certain Member States there are quite significant shares of youth who are neither in the labour force nor in education. For Hungary and Poland, this share amounts to as much as around 8% of young people, and for most Member States it is in the region of between 3% and 6%.

2 *Main activity status concerns each person's self perception regarding his/her activity status; for instance, students with small jobs will in general classify themselves as students.*

4. Focus on specific developments in the EU15 and the new Member States

In order to provide a degree of continuity with the analysis presented in preceding versions of *Employment in Europe*, the following sections present separate reviews of developments in the EU15 and the new Member States up to the year 2003. This is necessary in order to provide a coherent follow up to the analysis in last year's report on the resilience of employment in the EU15 as well as to give a special focus in this year's report on the situation and trends for the new Member States, and in particular present a review of sectoral employment developments in these countries similar to that presented last year for the EU15.

4.1. Continued overall resilience of the EU15 labour market to the recent slowdown, but concerns in specific areas

In contrast to the strong economic growth in the US and Japan, economic recovery in the EU15 continued at only a very modest pace over 2003, with GDP growth estimated to have been a limited 0.7% in 2003, slightly down on the previous year's growth of 1.0%. Among the EU15 Member States, GDP growth remained particularly weak in Denmark, France, Germany and Italy, and turned noticeably negative in the Netherlands and Portugal. Despite the low average growth in 2003, the EU15 economy ended 2003 on a more upbeat note than in recent years. The slowdown which the EU15 economy had experienced since 2000 finally seems to have come to an end in mid-2003, with the economy picking up gradually over the second half of the year.

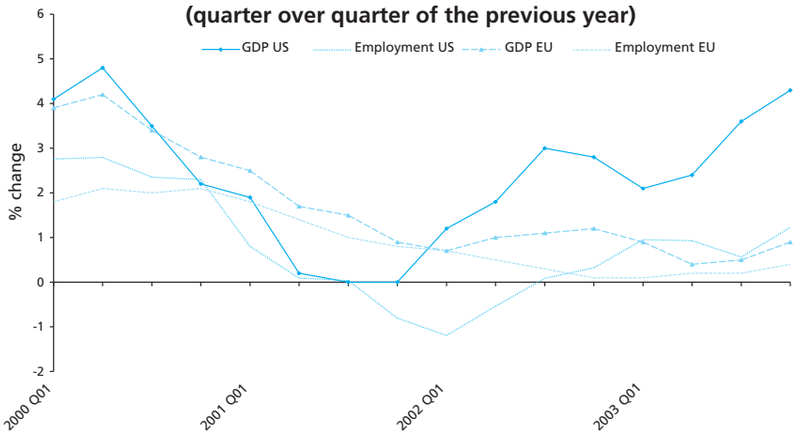
As reported on in last year's *Employment in Europe*, until the end of 2002 the EU15 labour market had shown only moderate reaction to the recent world-wide economic downturn, with employment showing greater resilience than in previous economic slowdowns. This resilience also continued into 2003, with the EU15 unemployment rate essentially remaining stable at around 8.1% over the course of 2003, while employment growth, albeit very subdued over 2003 at 0.2%, remained positive (chart 26). Consequently, overall employment levels have continued to show no decline since the beginning of the slowdown. Nevertheless, although employment remained resilient overall, the labour market situation in certain sectors and Member States, and for certain elements of the labour force, has shown clear signs of a deterioration. Among the EU15 Member States, employment performance clearly declined in Finland, France, Italy, the Netherlands and Portugal, and remained weak in Belgium, Denmark and Germany. In addition, long-term unemployment in the EU15 appears to be on the rise again, increasing from 3.1% in 2002 to 3.3% in 2003, a change from the trend of progressive decline observed over preceding years.

4.1.1. Overall developments and comparison with developments in the US

Focusing in more detail on developments since the start of the latest slowdown, GDP growth (compared to the same quarter of the previous year) for the EU15 declined over the period from the second quarter of 2000 until the first quarter of 2002. Although growth subsequently picked up, this was only temporary as by the second quarter of 2003 the rate had fallen back to around 0.4%. GDP growth then rose only slowly over the remaining quarters of 2003 to end at 0.9%, well below the growth rates in the US and Japan. In line with the continued sluggishness in GDP growth, employment growth in the EU15 remained at a virtual standstill for most of 2003, having fallen steadily over 2001 and 2002 from the peaks of 2000. Nevertheless, overall employment has not declined at any point since the slowdown began, and employment growth remained positive and even picked up moderately over the course of 2003.

In contrast, GDP growth in the US bottomed out with zero growth in the second half of 2001 but then experienced a strong and sustained recovery from early 2002 onwards. Indeed, the US has maintained growth levels above 2% since mid-2002, with the last two quarters of 2003 seeing GDP growth accelerating strongly to 3.6% and 4.3%. US employment growth reacted in close synchrony with the slowdown in GDP growth, declining strongly from the end of 2000 onwards and becoming negative from the last quarter of 2001 until the second quarter of 2002. However, employ-

Chart 26 - Employment and GDP growth in the EU15 and the US, 2000-2003 (quarter over quarter of the previous year)



Source: Eurostat (QLFD and national accounts) and US BLS

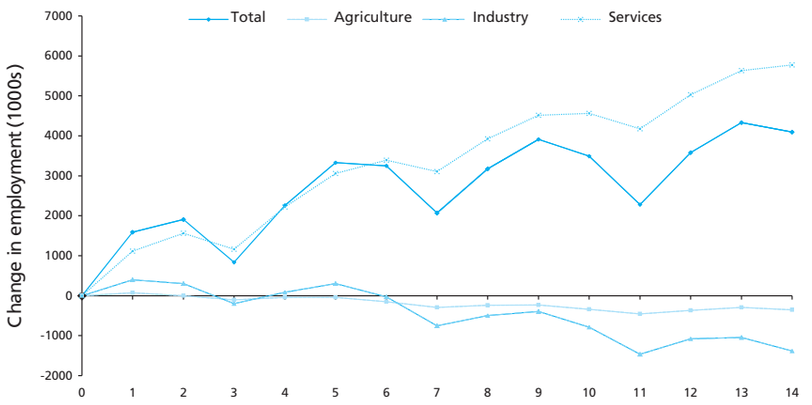
ment growth has also shown such close synchrony with the strong pick-up in GDP growth at the start of 2002, with positive growth resuming soon after (some 2 quarters) to reach levels of around 1% over 2003.

Looking at overall changes in employment since the slowdown began, comparison of developments in total employment in the EU15 and the US between the second quarter of 2000 and the fourth quarter of 2003 shows that much greater employment creation occurred in the EU15 over the whole period (table 7). For the EU15, employment grew by 4.1 million while in the US it rose by a more limited 1.5 million. However, over the year to the fourth quarter of 2003, employment creation was larger in the US, with employment growing 1.7 million compared to 0.6 million in the EU15, reflecting the more advanced stage of the pick-up in economic activity in the US.

4.1.2. Sectoral employment developments

Sectoral employment developments continue to show that the services sector remains the driver behind the continued, albeit moderate, expansion in overall employment in the EU15. Employment in this sector has followed a generally rising trend, increasing by around 5.8 million since the start of the slowdown and by 1.2 million between the last quarter of 2002 and that of 2003 (chart 27). While the services sector has seen continued growth, employment in both agriculture and industry has declined from the levels seen at the start of the economic slowdown. Between the second quarter of 2000 and the first quarter of 2003 employment in the agriculture sector declined by around 0.46 million, but then recovered slightly over the rest of 2003 to end only around 0.36 million down from the start of the slowdown, and more-or-less stable with regard to the same quarter of the previous year. Developments in the industry sector have been more marked. Employment declined rapidly between the third quarter of 2002 and the first quarter of 2003 (down around 1.1 million), and had not recovered significantly from this fall by the last quarter of 2003. Indeed, the decline in employment in industry over the 12 months to the fourth quarter of 2003 (0.6 million) was about the same as that over the entire previous two and a half years, highlighting the impact of the prolonged slowdown on this sector in particular.

Chart 27 - Evolution in EU15 employment levels from the cyclical peak in 2000q2



Source: Eurostat, QLFD

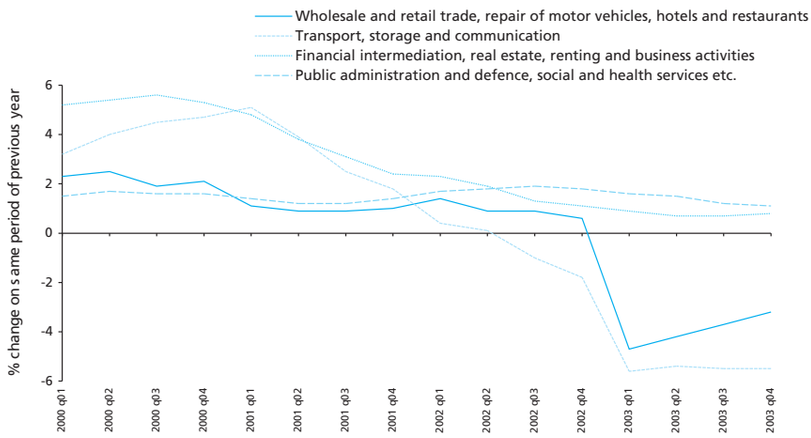
Even though employment growth in services remained positive overall, there were significant differences in developments within subsectors. Both the "wholesale and retail trade, repair of motor vehicles, and hotels and restaurants" and "transport, storage and communication" sectors saw dramatic declines in employment growth in the first quarter of 2003 and have not recovered substantially since (chart 28). Employment in the "transport, storage and communication" sector has been hit especially hard, remaining around the negative 5.5% level throughout 2003, partly in reaction to the impact of events in Iraq and the continued threat from terrorism. Only in the "financial intermediation, real estate, renting and business activities" and "public administration and defence, social and health services etc." sectors has employment growth remained reasonably stable over 2003, but even here at levels generally down on those of the previous year. Nonetheless, the continued growth in overall employment in the EU15 was essentially due to the resilience exhibited by these particular two sectors.

Table 7- Comparison of the evolution in employment since 2000Q2 in the EU15 and USA (employment in millions)

	Total Employment			Change in employment	
	2000Q2	2002Q4	2003Q4	Change 2000Q2 to 2003Q4	Change 2002Q4 to 2003Q4
EU15	167.4	170.9	171.5	4.1	0.6
USA	137.2	136.9	138.6	1.5	1.7

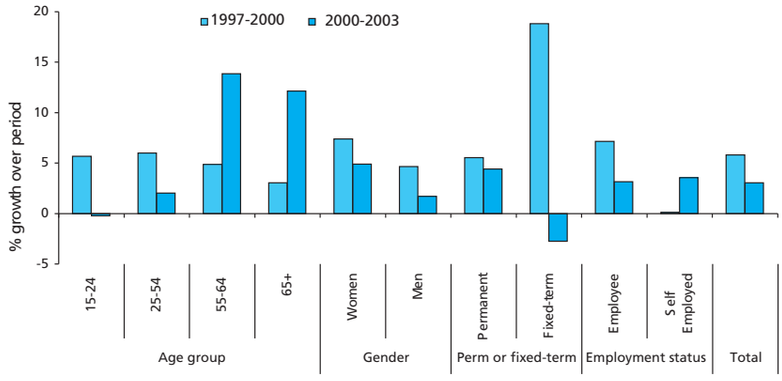
Source: Eurostat QLFD for EU15 data, OECD Quarterly Labour Force Statistics for US data.

Chart 28 - Employment growth in the main service sectors in the EU15, 2000-2003



Source: Eurostat, QLFD

Chart 29 - Comparison of relative change in employment in the EU15 over the two periods 1997-2000 and 2000-2003



Source: Eurostat, LFS. Notes: estimated based on LFS, spring results

Table 8 - Relative employment changes 1997-2000 and 2000-2003 by age group, gender and type of employment

	Relative change in employment between 1997 and 2000 (as % of 1997 employment level)	Relative change in employment between 2000 and 2003 (as % of 2000 employment level)
By age group		
15-24	5.7	-0.2
25-54	6.0	2.0
55-64	4.9	13.9
65+	3.0	12.1
By gender		
Women	7.4	4.9
Men	4.7	1.7
By permanent or fixed-term employment		
Permanent	5.5	4.4
Fixed-term	18.8	-2.7
By employment status		
Employee	7.2	3.2
Self Employed	0.1	3.6
Total		
	5.8	3.1

Source: Eurostat, LFS; Note: estimates based on LFS, spring results.

4.1.3. Employment developments by age-group, gender and type of employment

Comparing the evolution in employment in the EU15 over the two periods 1997-2000 and 2000-2003 (corresponding to respective periods of relatively strong economic growth and economic slowdown) reveals important differences in terms of employment growth according to type of employment, gender and age group (table 8 and chart 29). During the period 1997-2000, growth across all age groups was positive and at broadly similar levels, with growth slightly stronger for young (15-24 years) and "prime-age" workers (25-54 years) than for older workers (55-64 years). During the subsequent period of slowdown, however, while overall employment growth slowed to around half, the impact was not evenly distributed across age groups. Employment of older people expanded even more strongly than during the 1997-2000 period (although this partly reflects the ageing of the population, since employment rates for older people have changed less markedly, from 36.4% in 1997 to 37.8% in 2000, and to 41.7% in 2003), while employment growth for prime-age workers slowed significantly, and for young people employment even declined marginally. In terms of gender, employment of women continued to grow strongly during the period of slowdown, while for men growth slowed more noticeably.

Fixed-term employment grew substantially (around 19%) between 1997 and 2000, but it is this form of employment which was most affected by the subsequent slowdown, falling by around 3% between 2000 and 2003. In contrast, growth in permanent employment remained relatively strong and did not decline dramatically from the growth achieved over the period 1997-2000. Finally, while self-employment did not expand noticeably during the years of strong economic growth, there was a more marked increase in this form of employment during the period of slowdown, when it grew by 3.6%.

The results shown in chart 29, and those shown for developments at Member State level indicate that while overall employment levels in the EU15 remained resilient during 2003, different sectors, groups and countries have been affected to differing degrees during the slowdown, with some having experienced a clear deterioration. Perhaps of most concern are the recent developments regarding employment in the industry sector and specific sub-sectors in services, as well as the labour market situation for youth in general.

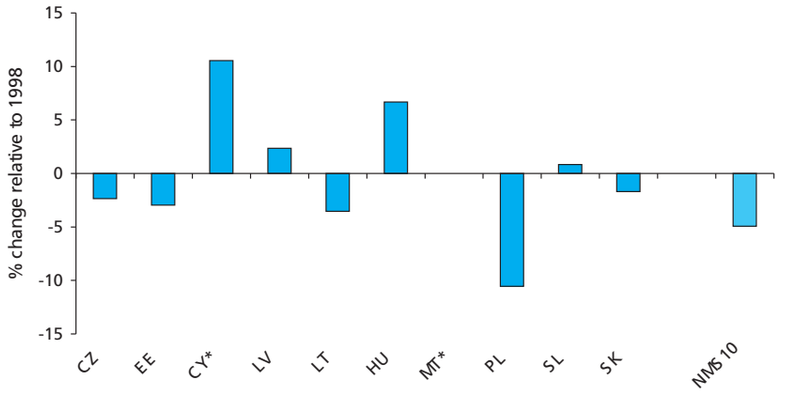
Looking ahead, there are now clearer signs of a recovery, albeit gradual, in the EU15 economy, which point to a likely improvement in the labour market over 2004. Economic sentiment and consumer confidence generally seem to be rising, with employment expectations improving against the background of stabilisation in the unemployment rate. However, while there is no clear obstacle to increasing employment as the economy picks up, there may be a risk that the labour market displays the same moderate reaction to the upswing as occurred during the downturn, with firms replacing labour with capital and raising productivity to meet the rising demand.

4.2. Labour market developments in the new Member States 1998-2003

4.2.1. Developments in 2003

In contrast to the weak economic growth in the EU15 in 2003, strong private consumption in the group of new Member States helped their economies to grow by 3.6% on average, up from 2.4% in 2002. Despite their strong overall economic growth, employment in the group of new Member States remained more-or-less static on average in 2003. This relative stability in employment for the group of new Member States is nevertheless an improvement compared to the situation in the preceding years and could mark an end to the long period of declining employment experienced in these countries as a whole. Similarly, developments in unemployment in the new Member States were positive on average, with the unemployment rate declining to 14.3% from 14.8% in 2002.

Chart 30 - Relative change in total employment of the working age population (aged 15-64) between 1998 and 2003



*Source: Eurostat, QLFD. Note: * Data for CY refer to 2000 and 2003, no 2003 data for MT*

4.2.2. Longer term developments in the labour market

Looking at longer term labour market developments in the new Member States from 1998 until 2003, the final year before their accession as members of the EU, reveals that progress has been mixed. In terms of overall employment of the working age population, the Czech Republic, Estonia, Lithuania, the Slovak Republic and especially Poland have experienced a deterioration in their labour markets, with employment in the latter falling by more than 10% over this period (chart 30). In contrast, employment of the working age population rose in Hungary, Latvia and also marginally in Slovenia between 1998 and 2003, as well as in Cyprus (based on data from 2000 to 2003). As a result, for the group of new Member States as a whole, overall employment of those aged 15-64 fell by close to 5% between 1998 and 2003, equivalent to a net decline in employment of the working age population of just over 1.5 million.

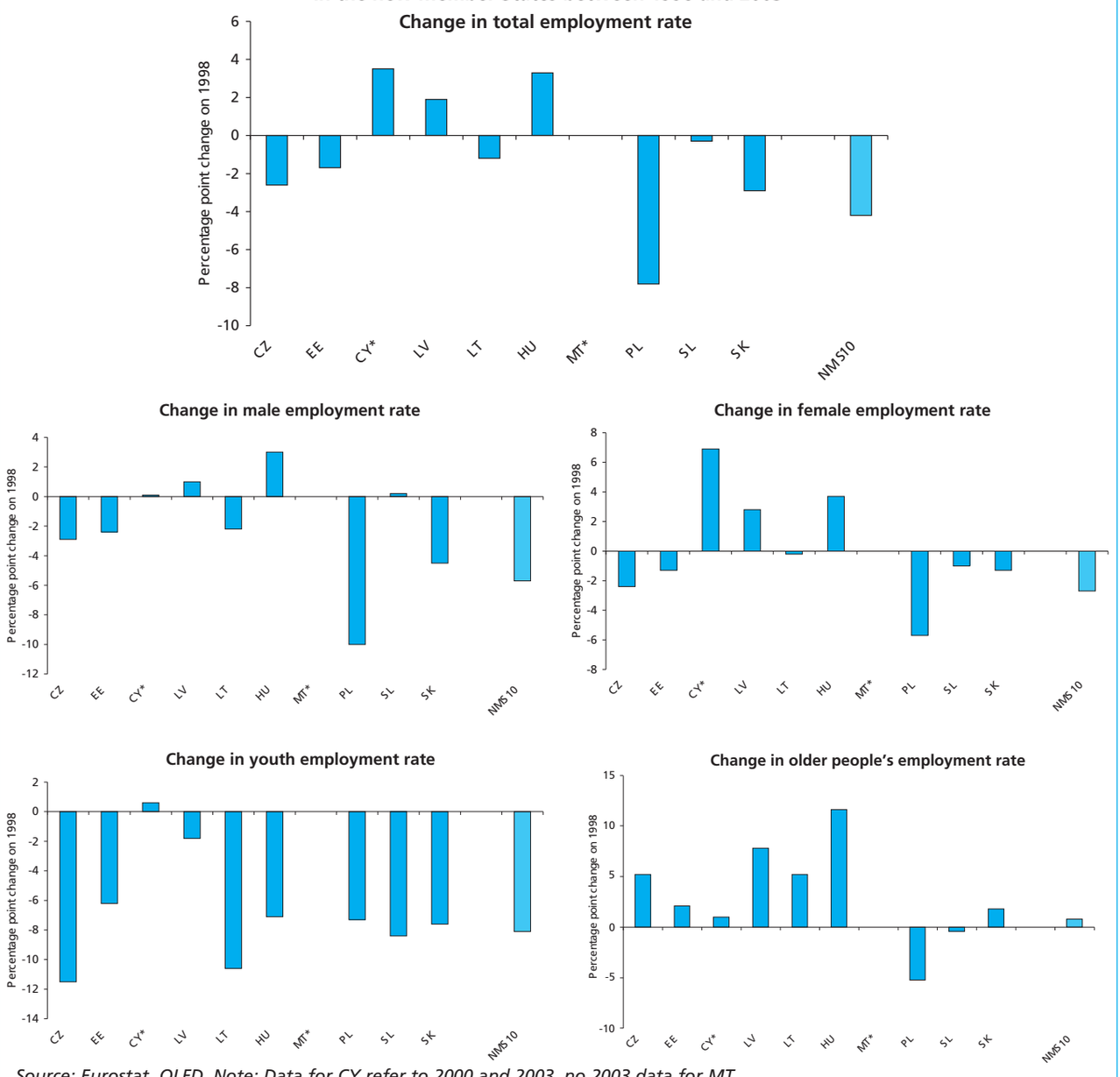
Generally in line with the developments in overall employment, employment rates declined in six of the new Member States (table 9 and chart 31), most notably in Poland which experienced a decrease of almost 8 percentage points. Only Cyprus, Hungary and Latvia saw rises in overall employment rates. As a result, and against the background of recent rises in the employment rate for the EU15, the difference between the average employment rate for the new Member States as a group and that for the EU15 increased from 1.4 percentage points in 1998 to 8.5 percentage points in 2003, mainly driven by the developments in Poland which in 2003 had an employment rate 13 percentage points below the EU15 average. By 2003, only Cyprus and the Czech Republic had employment rates above the EU15 average, compared to five of the new Member States in 1998.

In all the new Member States, except Slovenia, the recent developments in employment rates for women, although declining in many new Member States, have been better than those for men. For the group of new Member States as a whole, the employment rate for women declined 2.7 percentage points between 1998 and 2003, compared to a 5.7 percentage points decline for men. The largest differences were in Cyprus, where between 2000 and 2003 rates for

Table 9 - Employment rate developments in the new Member States between 1998 and 2003										
	Total ER		Male ER		Female ER		Youth ER		Older People's ER	
	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003
CZ	67.3	64.7	76.0	73.1	58.7	56.3	41.5	30.0	37.1	42.3
EE	64.6	62.9	69.6	67.2	60.3	59.0	35.5	29.3	50.2	52.3
CY*	65.7	69.2	78.7	78.8	53.5	60.4	37.0	37.6	49.4	50.4
LV	59.9	61.8	65.1	66.1	55.1	57.9	33.3	31.5	36.3	44.1
LT	62.3	61.1	66.2	64.0	58.6	58.4	33.1	22.5	39.5	44.7
HU	53.7	57.0	60.5	63.5	47.2	50.9	33.9	26.8	17.3	28.9
MT*	:	54.5	:	75.3	:	33.6	:	51.0	:	30.3
PL	59.0	51.2	66.5	56.5	51.7	46.0	28.5	21.2	32.1	26.9
SL	62.9	62.6	67.2	67.4	58.6	57.6	37.5	29.1	23.9	23.5
SK	60.6	57.7	67.8	63.3	53.5	52.2	35.0	27.4	22.8	24.6
NMS10	60.0	55.8	67.3	61.6	52.9	50.2	32.4	24.3	30.9	31.7

*Source: Eurostat, QLFD. Note: * Data for CY refer to 2000 and 2003, and for MT to 2002*

Chart 31 - Employment rate developments in the new Member States between 1998 and 2003



Source: Eurostat, QLFD. Note: Data for CY refer to 2000 and 2003, no 2003 data for MT

women rose by close to 7 percentage points while those for men remained static (but at already high levels), and in Poland, where male rates dropped 10 percentage points between 1998 and 2003 compared to 5.7 percentage points for women.

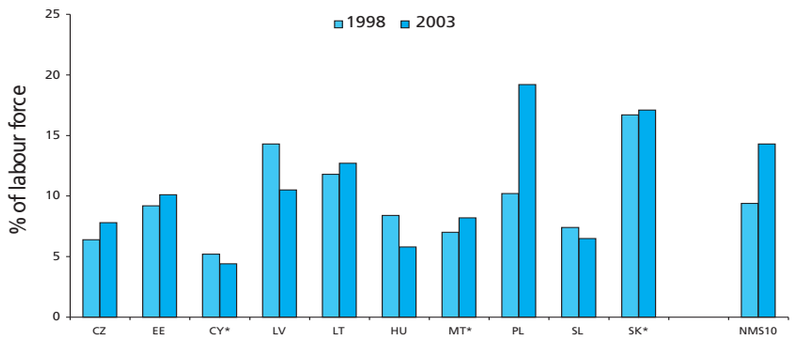
Apart from Cyprus, youth employment rates fell noticeably in all new Member States between 1998 and 2003, with marked declines in Estonia, Hungary, Poland, the Slovak Republic and Slovenia, and especially strong decreases in the Czech Republic and Lithuania, which both saw declines of over 10 percentage points. As a result, other than for Cyprus and Malta, youth employment rates in the new Member States in 2003 were well below the average for the EU15, and almost 19 percentage points below in Poland. For the new Member States as a whole, the difference between the average youth employment rate and that of the EU15 increased from around 6 percentage points below in 1998 to over 15 percentage points below in 2003.

In contrast to the generally declining rates for other groups in most new Member States, employment rates of older people (aged 55-64) have mainly improved between 1998 and 2003. All new Member States other than Poland and Slovenia experienced rises in these rates, with a particularly strong rise of around 12 percentage points in Hungary, albeit starting from a very low rate of just over 17% in 1998. While half of the new Member States have employment rates for older people above the EU15 average, rates nevertheless remain relatively low (below 30%) in Hungary, Poland, the Slovak Republic and Slovenia.

Developments in unemployment have also been mixed for the new Member States (chart 32). The unemployment rate for the group as a whole rose from 9.4% in 1998 to 14.3% in 2003, a rise of almost 5 percentage points, and reached as high as 14.8% in 2002. The majority of new Member States have experienced increases in the unemployment rate over the last five years, with the largest rise occurring in Poland, where it almost doubled between 1998 and 2003. In contrast, rates have fallen quite significantly in Hungary and Latvia, by 2.6 and 3.8 percentage points respectively, and more moderately in Cyprus and Slovenia. In 2003, the unemployment rates in the three Baltic States and especially Poland and the Slovak Republic were significantly above the EU15 average, while for the new Member States as a whole the average unemployment rate has risen from parity with the EU15 average in 1998 to more than 6 percentage points above it in 2003.

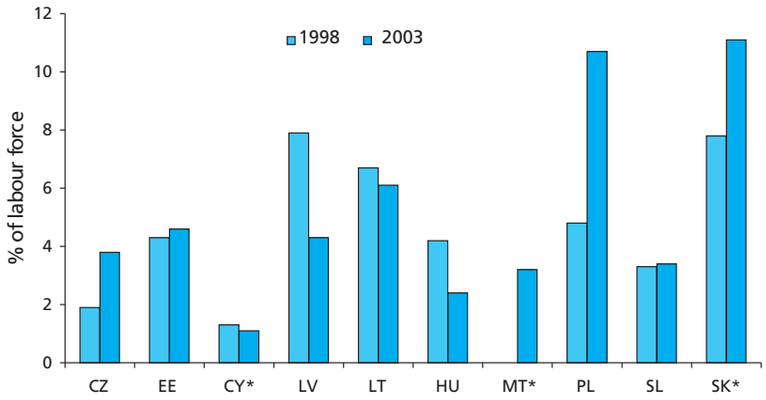
Long-term unemployment rose markedly in the Czech Republic, the Slovak Republic, and especially Poland, up around 2, 3 and 6 percentage points respectively between 1998 and 2003 (chart 33). Only in Latvia and Hungary have the rates declined substantially since 1998. As for overall unemployment, long-term unemployment was exceptionally high in Poland and the Slovak Republic in 2003, where rates exceeded 10%.

Chart 32 - Developments in unemployment rates for new Member States, 1998-2003



Source: Eurostat, harmonised series on unemployment.
*Note: * Data for CY and MT refer to 2000 and 2003, for SK to 1999 and 2003*

Chart 33 - Developments in long-term unemployment rates for new Member States, 1998-2003



Source: Eurostat, Structural Indicators.
*Note: * Data for CY refers to 2000 and 2003, for MT to 2002 and for SK to 1999 and 2003*

5. Sectoral employment structure and trends

5.1. Sectoral employment structure in the EU25 in 2003

5.1.1. Comparison of employment structure in the EU25, EU15 and new Member States

In 2003, the sectoral employment structure[3] of the enlarged EU25 consisted of 5.3% of total employment in agriculture, 28.3% in industry and 66.4% in services (table 10 and chart 34). Comparing the sectoral employment structure of the group of new Member States with that of the EU15 reveals that as a whole the new Member States have a substantially larger proportion of employment in agriculture (12.4% versus 4.0%), a higher share in industry (31.9% versus 27.6%), and a markedly lower share of employment in services (55.6% versus 68.3%). Within the industry sector it is employment in manufacturing which accounts for most of the difference, as the employment share in construction is broadly similar. Within services, all sub-sectors within the group of new Member States are less developed in terms of employment share compared to the EU15, except in "transport, storage

Table 10 - Employment structure in 2003 (% of total employment 15+)

Sector (NACE rev1 description)	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK
Agriculture. fishing and forestry	5.3	4.0	12.4	1.7	4.5	3.3	2.4	6.3	16.3	5.6	4.5	6.4	4.7	5.2	14.6	18.7	2.0	5.4	2.5	2.9	5.5	18.2	12.9	8.4	6.0	5.3	2.5	1.2
Mining and quarying	0.4	0.3	1.3	0.1	1.1	0.2	0.4	0.9	0.3	0.4	0.2	0.4	0.3	0.1	0.4	0.4	0.1	0.4	0.7	0.1	0.2	2.0	0.3	0.6	0.8	0.2	0.2	0.4
Manufacturing	19.1	18.7	21.9	17.8	27.8	15.8	23.0	22.0	12.8	17.8	17.1	16.0	22.4	11.0	16.4	18.0	10.3	23.6	19.3	13.9	19.3	19.2	20.1	29.7	26.2	19.0	16.2	14.9
Electricity. gas and water supply	0.9	0.7	1.7	0.7	1.6	0.5	0.8	1.6	0.9	0.6	0.8	0.7	0.8	1.1	2.5	1.6	0.7	1.7	2.3	0.5	1.0	1.8	0.7	1.0	2.1	0.9	0.6	0.7
Construction	7.8	8.0	7.0	6.4	9.4	6.6	7.2	6.6	7.9	12.1	6.7	10.8	8.3	10.7	7.6	7.2	9.1	7.8	7.6	6.5	8.2	5.6	11.8	5.8	9.0	6.6	5.6	7.6
Wholesale and retail trade. repair of motor vehicles. motorcycles and personal and household goods	14.6	14.7	14.2	13.7	13.4	15.4	14.0	13.1	17.0	15.7	13.3	14.2	15.8	18.3	14.6	15.0	12.4	14.2	14.0	15.8	15.9	14.5	14.9	13.3	12.7	12.1	12.2	15.5
Hotels and restaurants	3.9	4.1	2.7	3.1	3.5	2.4	3.4	3.0	7.0	6.3	3.1	6.5	4.1	8.8	2.7	2.1	4.3	3.7	8.3	4.0	5.7	1.7	5.1	4.1	3.6	3.3	2.8	4.2
Transport. storage and communication	6.3	6.2	6.8	7.9	7.4	7.2	5.6	10.0	6.3	6.1	6.7	6.3	5.3	5.3	9.4	6.4	6.9	7.7	8.8	6.1	6.5	6.1	4.2	6.7	6.9	7.0	6.4	7.1
Financial intermediation	3.2	3.4	2.0	3.6	2.1	2.8	3.8	1.5	2.5	2.4	2.9	4.1	3.1	5.0	1.3	0.9	10.7	1.8	3.6	3.7	3.5	2.1	1.7	2.4	2.0	2.1	2.1	4.5
Real estate. renting and business activities	8.8	9.4	5.6	9.4	6.1	9.1	9.1	8.2	5.6	8.0	10.2	8.7	8.0	6.9	4.6	4.1	8.2	6.8	5.4	12.7	8.4	5.1	4.7	6.0	4.9	11.0	13.0	11.2
Public administration and defence. compulsory social security	7.5	7.7	6.6	9.7	6.6	5.7	8.0	6.1	7.4	6.5	9.4	5.1	8.5	7.5	6.3	4.9	11.3	7.4	9.2	7.6	5.8	6.4	6.2	5.6	7.6	5.0	5.7	6.9
Education	7.1	6.9	7.7	8.5	6.2	7.4	5.7	9.3	6.4	5.7	7.0	6.5	7.3	6.5	7.2	9.5	7.0	8.2	7.8	6.6	6.2	7.9	5.5	7.0	7.4	6.8	11.1	8.5
Health and social work	9.5	10.0	6.2	12.9	6.3	18.3	10.9	5.8	4.3	5.9	11.4	9.5	6.0	4.4	6.3	6.7	7.9	6.9	6.5	15.0	8.6	5.9	5.8	5.3	6.7	14.8	16.0	11.3
Other community. social and personal service activities	4.6	4.7	3.8	4.0	3.9	5.0	5.3	5.4	3.9	4.1	4.1	4.5	4.5	5.3	5.6	3.9	3.8	4.5	4.0	4.5	4.6	3.4	2.9	4.2	3.6	5.7	5.4	5.5
Private households with employed persons	1.0	1.1	0.2	0.3	0.1	0.1	0.3	0.1	1.3	2.7	2.7	0.5	0.9	3.3	0.6	0.4	1.5	0.0	0.1	0.1	0.3	0.1	3.2	0.0	0.3	0.2	0.0	0.5
Total Agriculture. fishing and forestry	**5.3**	**4.0**	**12.4**	**1.7**	**4.5**	**3.3**	**2.4**	**6.3**	**16.3**	**5.6**	**4.5**	**6.4**	**4.7**	**5.2**	**14.6**	**18.7**	**2.0**	**5.4**	**2.5**	**2.9**	**5.5**	**18.2**	**12.9**	**8.4**	**6.0**	**5.3**	**2.5**	**1.2**
Total Industry	**28.3**	**27.6**	**31.9**	**24.9**	**39.9**	**23.1**	**31.4**	**31.3**	**22.0**	**30.8**	**24.8**	**27.8**	**31.8**	**22.9**	**26.8**	**27.2**	**20.1**	**33.4**	**29.9**	**21.0**	**28.7**	**28.5**	**32.9**	**37.1**	**38.1**	**26.7**	**22.6**	**23.5**
Total Services	**66.4**	**68.3**	**55.6**	**73.1**	**55.6**	**73.4**	**66.1**	**62.5**	**61.7**	**63.6**	**70.7**	**65.8**	**63.4**	**71.2**	**58.6**	**54.1**	**77.9**	**61.2**	**67.6**	**76.1**	**65.6**	**53.2**	**54.2**	**54.4**	**55.8**	**68.0**	**74.8**	**75.2**

Source: Eurostat, LFS, spring results. Note data for NL and LU refer to 2002

3 by main employment, resident concept

and communication" and "education". The most noticeable differences in employment shares within services are those in the "real estate, renting and business activities" and "health and social work" sub-sectors.

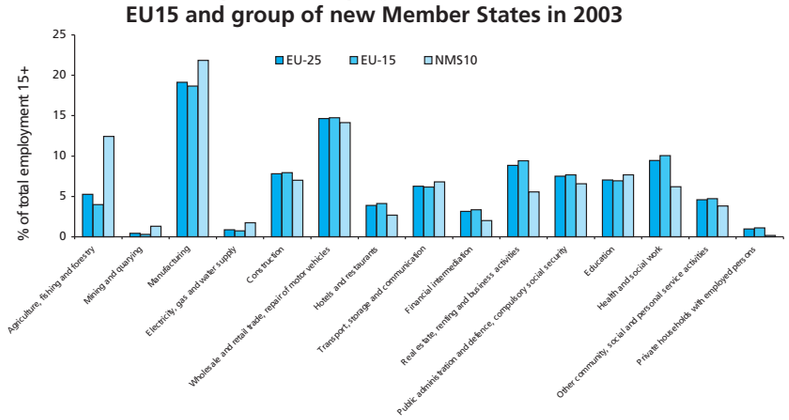
Noticeable differences remain between individual Member States in terms of the relative importance of employment shares within main sectors (chart 35). For example, in Poland and Lithuania the agriculture sector still accounts for more than 18% of total main employment, and over 12% in Greece, Latvia and Portugal, compared to as little as 1.2% in the UK. The proportion of employment in the industry sector ranges from 20% in Luxembourg to just under 40% in the Czech Republic, while employment in the services sector ranges from 53% in Poland to 78% in Luxembourg.

5.1.2. Sectoral developments in the EU25 in 2003

Between 2002 and 2003, employment growth in the enlarged EU25 continued to be driven by developments in the services sector (chart 36). Growth in this sector stabilised over 2003 at around 1%, following the previous decline from a level of around 2.5% in mid-2000. In contrast, employment in the agriculture and industry sectors continued to contract in 2003. Annual employment growth in the agriculture sector declined strongly to -3.5% in the first quarter of 2003 before recovering over the rest of the year to a lower rate of decline. Employment growth in industry recovered somewhat from the high negative growth of the previous year but remained at around -1.5% over the course of 2003.

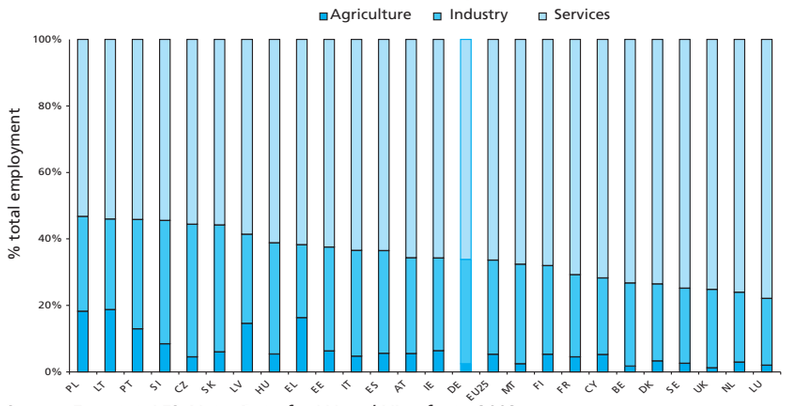
Looking at sectoral developments in the four largest Member States (chart 37), these generally experienced contracting employment in agriculture, and most in industry, while all but Germany saw continued positive employment growth in services. Germany continued to experience strong negative employment growth in the industry sector in 2003, although the rate of decline seems to have peaked in the first quarter and then slowed over the course of the year. As in 2002, the rate of employment decline in agriculture continued to slow over 2003, but worryingly employment growth in services turned negative in the first quarter of the year and only just became positive again in the last quarter. Nevertheless, employment growth in all three sectors seems to be on an upward path. In France, the rate of decline of employment in industry stabilised to a certain degree following the acceleration in negative

Chart 34 - Comparative employment structure of the EU25, EU15 and group of new Member States in 2003



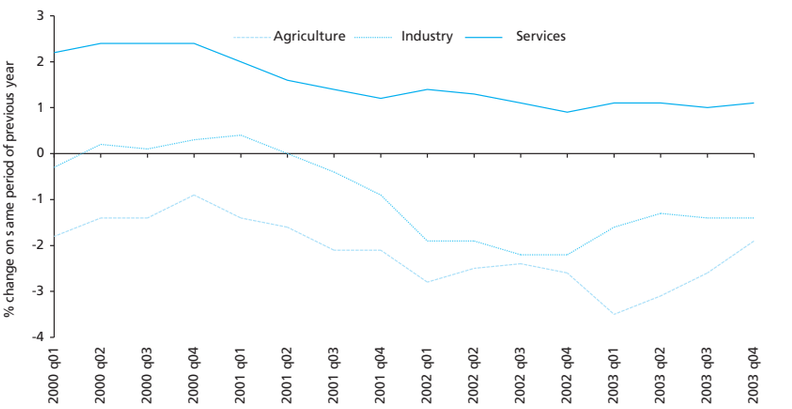
Source: Eurostat, LFS. Note data for LU and NL refer to 2002

Chart 35 - Comparative employment structure (by main employment) of the EU Member States by main sector, 2003



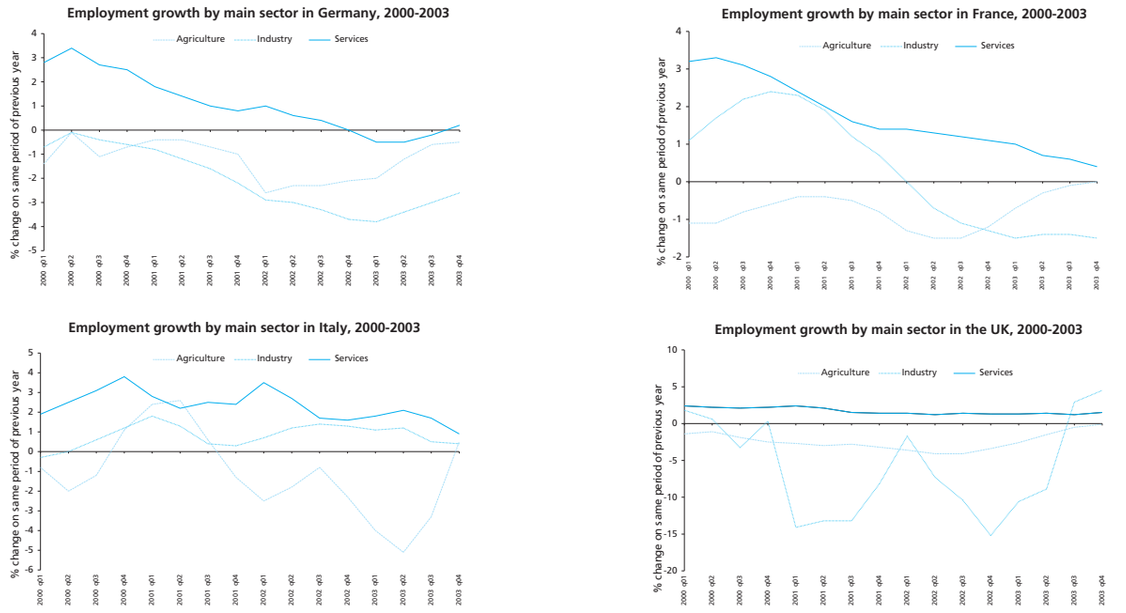
Source: Eurostat, LFS. Note: Data for LU and NL refer to 2002

Chart 36 - Employment growth by main sector in the EU25, 2000-2003



Source: Eurostat, QLFD

Chart 37 - Sectoral employment growth in the four largest Member States, 2000-2003



Source: Eurostat, QLFD

employment growth seen over 2002, while the negative employment growth in agriculture decelerated over 2003 and almost turned positive in the last quarter. Meanwhile, employment in services continued to grow in 2003, but with the rate of growth declining further over the course of the year.

In the UK, the long period of unbroken negative employment growth in agriculture came to an end over the second half of 2003 with growth turning positive in the third quarter. Employment in industry also showed more positive signs with growth almost turning positive in the last quarter. Employment growth in services remained positive and stable at around the levels observed over 2002. In Italy, employment growth in agriculture also turned positive at the end of 2003, having reached a peak in negative growth in the second quarter. Growth in industry and services remained positive over 2003, although rates in both declined noticeably over the second half of the year.

5.2. Changes in sectoral employment in the new Member States in recent years

In last year's *Employment in Europe* report a detailed review was presented of the longer term changes in sectoral employment in the EU15 between 1997 and 2002. In this year's report a similar analysis is presented but focusing on the changes in the sectoral employment structure of the new Member States between 1998 and 2003. All new Member States are examined apart from Malta, where no detailed sectoral employment data is available prior to 2001. Moreover, due to data limitations, the sectoral developments in Cyprus and Poland only refer to those between 2000 and 2003. It should be noted that the analysis focuses on sectors with reasonably sizeable employment shares; those sectors which nearly always account for significantly less than two percent of total employment in the new Member States (namely "mining and quarrying", "electricity, gas and water supply" and "private households with employed persons") are not included.

Looking at the sectoral employment trends in terms of the relative growth in employment between 1998 and 2003 (i.e. the changes as a percentage of the 1998 sectoral employment levels, table 11 and chart 38) indicates that the relative changes in employment by sector have been quite marked in certain sectors within the new Member States. All new Member States apart from Cyprus experienced declines in employment in the "agriculture, fishing and forestry" sector, with Estonia, Slovenia and the Slovak Republic recording particularly strong reductions of between 27% and 35%. The majority also experienced declines in employment in industry, but to a lower degree, with Poland seeing the largest fall in employment in this sector with a decline of around 14%. Within industry, employment also generally declined in manufacturing, with only Hungary registering a marginal rise in employment in this sector. Developments in employment in the construction sector have been more varied across new Member States, with strong growth in Hungary and Latvia of around 35% and 40% respectively compared to a decline of close to 30% in Poland. Overall employment in services has increased in all new Member States other than Poland, where employment has remained relatively static compared to 2000. Cyprus, Hungary, Latvia and Slovenia have seen rises in

Table 11 - Relative change in employment by sector in the new Member States from 1998 to 2003

Sector (NACE rev1 description)	EU-15	CZ	EE	CY*	LV	LT	HU	MT*	PL*	SI	SK
Agriculture. fishing and forestry	-8.0	-20.9	-34.9	6.9	-22.0	-4.9	-21.0	:	-8.3	-30.9	-27.4
Manufacturing	-3.9	-2.8	-2.1	-4.5	-12.5	-6.6	1.1	:	-8.5	-8.4	-1.6
Construction	10.1	-8.6	-13.1	21.3	40.5	5.5	34.9	:	-29.0	2.2	-4.3
Wholesale and retail trade. repair of motor vehicles. motorcycles and personal and household goods	5.9	-1.5	-9.4	11.1	2.8	5.8	18.5	:	-2.5	7.1	3.5
Hotels and restaurants	11.7	-5.1	19.9	2.0	44.6	34.9	17.7	:	-4.6	-5.4	29.9
Transport. storage and communication	10.4	-6.2	4.8	1.5	21.7	-6.1	1.4	:	-8.0	16.4	-14.2
Financial intermediation	5.0	1.4	28.9	-1.3	13.1	-19.9	-13.0	:	-21.1	22.5	15.4
Real estate. renting and business activities	27.5	13.8	35.6	29.3	40.5	49.0	65.9	:	38.2	14.4	43.4
Public administration and defence. compulsory social security	7.9	8.7	3.6	-5.2	-3.7	-3.8	14.1	:	12.9	21.4	5.3
Education	9.7	-1.8	-0.3	26.6	-15.2	-0.1	5.4	:	7.9	3.6	-3.4
Health and social work	13.4	12.5	0.8	30.4	22.1	4.3	13.1	:	-13.4	13.1	1.8
Other community. social and personal service activities	11.2	4.3	10.9	28.9	26.9	-1.6	3.2	:	-11.8	27.1	5.8
Total Agriculture. fishing and forestry	**-8.0**	**-20.9**	**-34.9**	**6.9**	**-22.0**	**-4.9**	**-21.0**	**:**	**-8.3**	**-30.9**	**-27.4**
Total Industry	**-0.4**	**-6.5**	**-8.2**	**7.2**	**1.0**	**-6.9**	**3.5**	**:**	**-13.5**	**-7.1**	**-4.9**
Total Services	**11.3**	**2.2**	**4.7**	**13.1**	**10.6**	**4.6**	**14.0**	**:**	**-0.3**	**11.1**	**4.8**

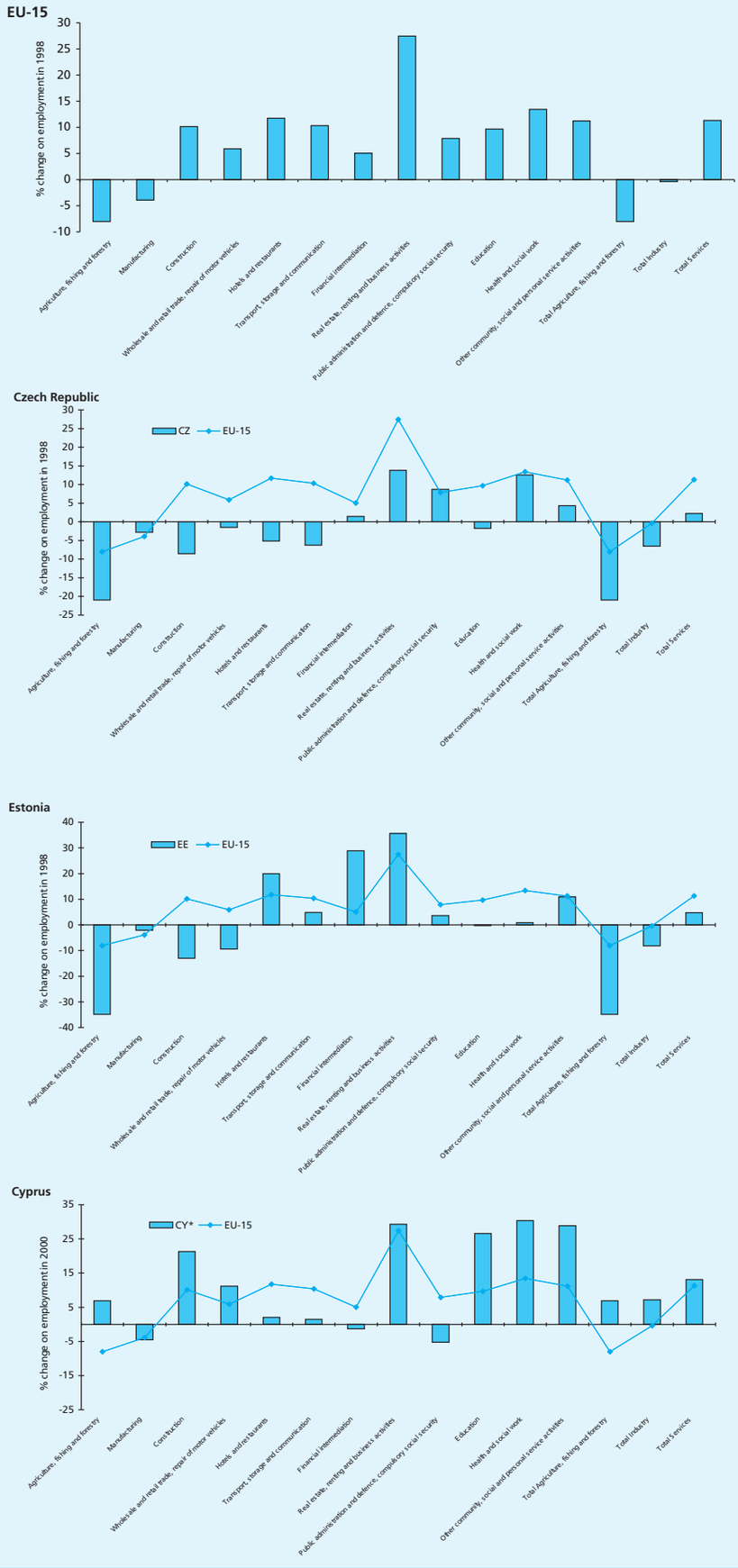
*Source: Eurostat, LFS. Note: estimates based on LFS, spring results; * For CY and PL data refer to the 2000 to 2003 period only, no data for MT for 2000 and before*

employment in the services sector on a par with the average for the EU15, but in the Czech Republic, Estonia, Lithuania and the Slovak Republic growth was well below the EU15 average.

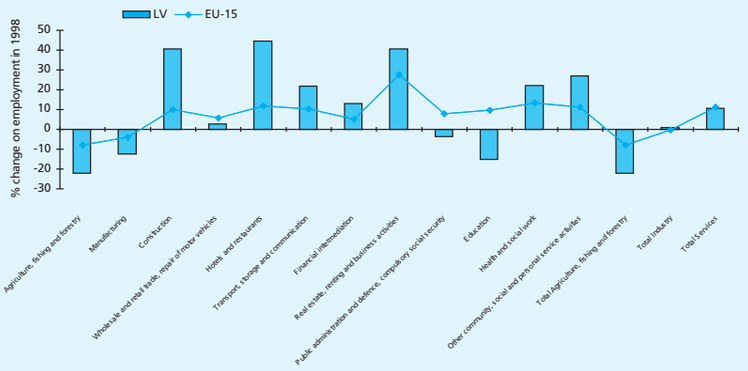
Within services, the growth in employment in "real estate, renting and business activities" has generally been the most significant, with all new Member States seeing employment rise markedly in this sector. Rises were in most cases over 35%, significantly higher than the average for the EU15, and with employment increasing by almost two-thirds in Hungary. Only in the Czech Republic and Slovenia was employment growth in this sector more subdued and below the EU15 average, although even here it reached around 14%. All new Member States apart from Poland also saw employment rise in "health and social work", although rises were fairly limited in Estonia, Lithuania and the Slovak Republic. In the "hotels and restaurants" sector, while the three Baltic States, Hungary and the Slovak Republic registered marked rises in employment well above the average for the EU15, growth was negative in the Czech Republic, Poland and Slovenia, and somewhat subdued in Cyprus. Employment growth in "education" and "wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods" was in most cases relatively subdued or negative, apart from Cyprus and Hungary (for the latter sector), and for the majority of countries well below the growth experienced by the EU15 in these sectors. In the "public administration and defence, compulsory social security" sector, employment rose appreciably in Hungary, Poland and Slovenia and, along with the Czech Republic, more so than in the EU15, while in the other new Member States it either declined or showed only limited growth.

Taking developments across sectors as a whole, Cyprus, Hungary and Latvia have seen relative growth in many sectors greater than that in the EU15. In contrast, sectoral growth in the Czech Republic was below the EU15 average for all sectors except "manufacturing" and "public administration and defence, compulsory social security". Further, as mentioned previously, together with Slovenia, the Czech Republic was the only new Member State where employment growth in "real estate, renting and business activities" was not superior to that in the EU15. Employment growth in Poland was also generally below the EU15 average in almost all sectors, the exceptions being in "real estate, renting and business activities" and "public administration and defence, compulsory social security" (although the sectoral employment changes in Poland only refer to the period 2000-2003 as opposed to 1998-2003 for the EU15 and most other new Member States).

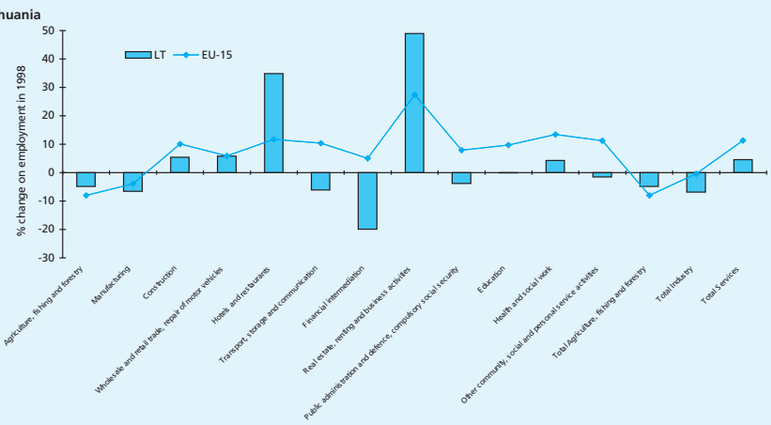
Chart 38 - Relative change in employment by sector in the new Member States from 1998-2003, compared to the EU average



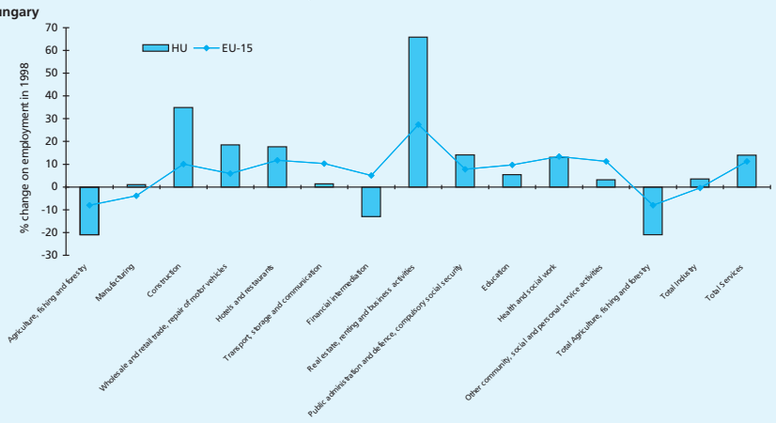
Latvia



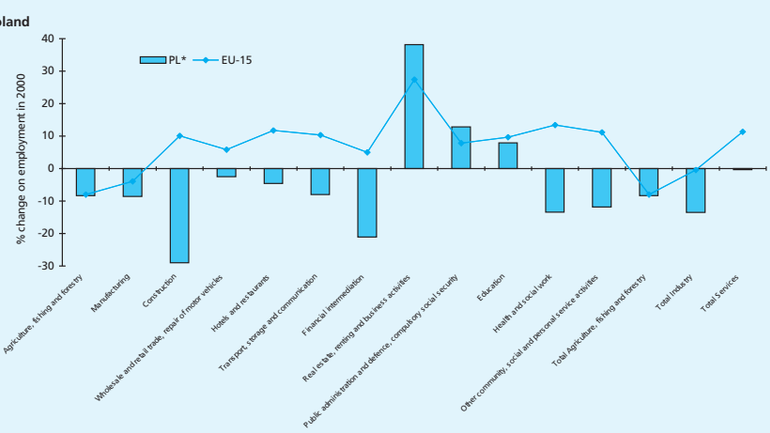
Lithuania

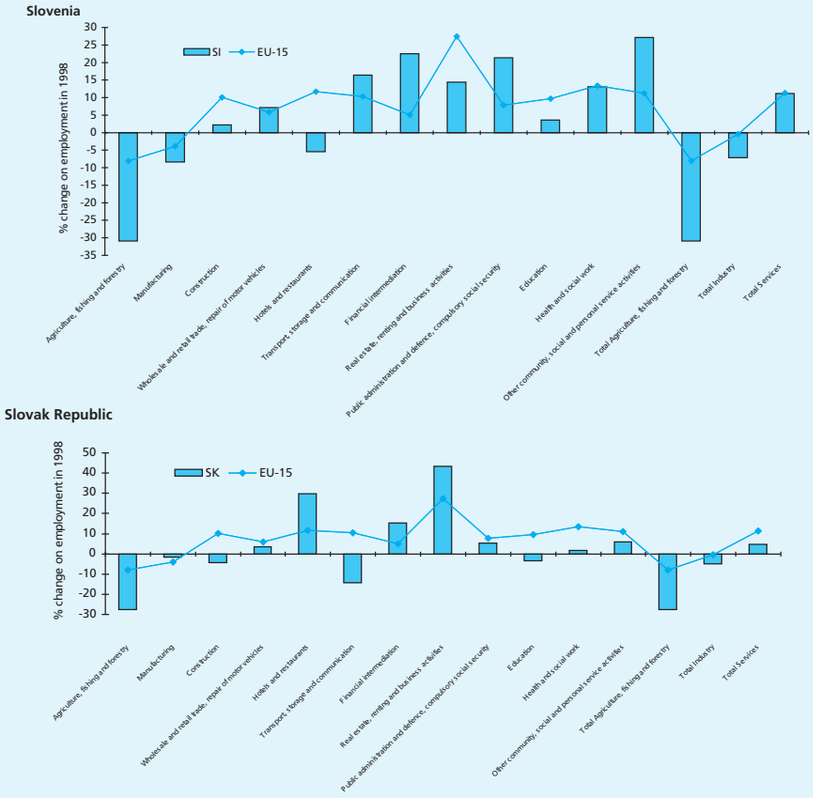


Hungary



Poland





*Source: Eurostat, LFS. Note: * For CY and PL data refer to the 2000 to 2003 period only, no data for MT for 2000 and before EU15 aggregate for 2003 includes 2002 data for LU and NL.*

As a result of these sectoral developments, the overall employment structure (by main employment) has changed more noticeably in certain new Member States than others between 1998 and 2003 (chart 39). For example, there has generally been relatively little change in the overall sectoral employment structure in the Czech Republic, Lithuania and the Slovak Republic. In all these countries the share of total employment in "manufacturing" changed very little and generally much less so than in the other new Member States. Similarly, apart from a more noticeable decline in employment in "construction" and a significant rise in employment in "real estate, renting and business activities", Poland has also seen little change in overall employment structure, although once again the period referred to in this case is limited to 2000 to 2003.

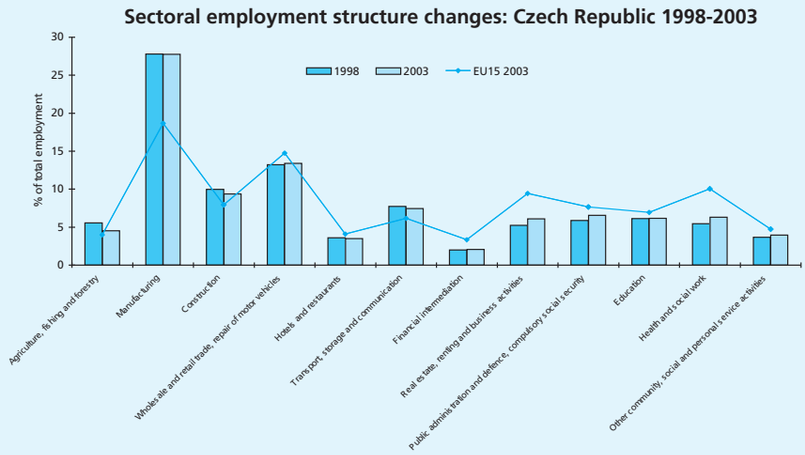
Among the other new Member States, Hungary and Latvia have seen the greatest adjustment in sectoral employment structure over recent years. Both saw marked reductions in the shares of overall employment in "agriculture, fishing and forestry" and "manufacturing" combined with shifts of employment into the "construction" and "real estate, renting and business activities" areas. In addition, Latvia experienced sizeable changes in the share of employment in "transport, storage and communication" and "health and social work", where the shares rose, and a significant reduction in the share of employment in "education".

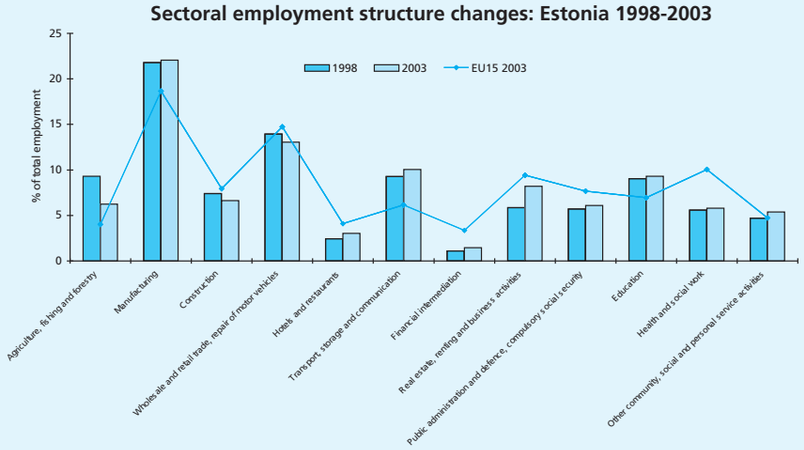
For all new Member States, the share of employment in agriculture has declined, although only marginally so in Cyprus, the Czech Republic, Lithuania and Poland. The share in manufacturing remained little changed in the Czech Republic, Estonia, Poland and the Slovak Republic, but declined noticeably in all other new Member States. Within services, all new Member States have seen shares of employment in "real estate, renting and business activities" rise, and apart from Poland in "health and social work" also. On the other hand, the share of employment in "wholesale retail trade, repair of motor vehicles etc." has remained somewhat static in nearly all the countries, together with "education" in most cases.

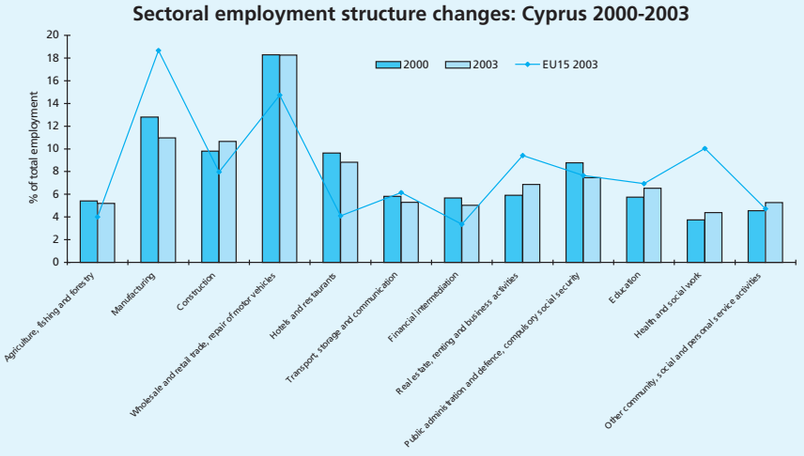
In 2003 several of the new Member States have employment structures very similar to the average profile for the EU15. In particular, the sectoral employment profiles for Hungary and the Czech Republic in 2003 were quite close to the EU15 average, the only sizeable differences being the noticeably larger shares of employment in these countries in "manufacturing" and the significantly lower shares of employment in "real estate, renting and business activities" and "health and social work" compared to the EU15 average. Since 1998 the changes in employment structure in Hungary have resulted in the employment shares in almost all sectors moving closer to the corresponding averages in the EU15. Although most pronounced in Hungary, this convergence towards the employment structure in the EU15 has been a general feature of

developments for all new Member States, with employment shares in the majority of sectors moving towards the corresponding average for the EU15, although less so in Estonia and Poland. Nevertheless, employment shares in "manufacturing" and "agriculture, fishing and forestry" remain substantially higher than the EU15 averages in many of the new Member States, while in all cases the services sectors "real estate, renting and business activities" and "health and social work" remain particularly underdeveloped in comparison with the employment shares in the EU15.

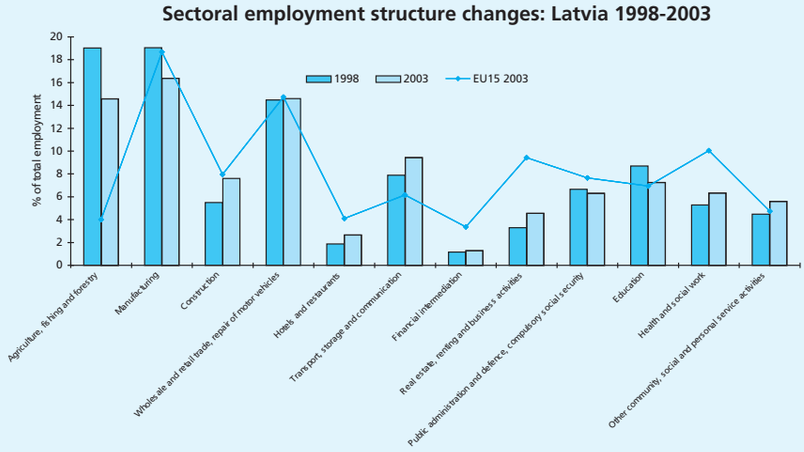
Chart 39 - Changes in the sectoral employment structure in new Member States between 1998 and 2003



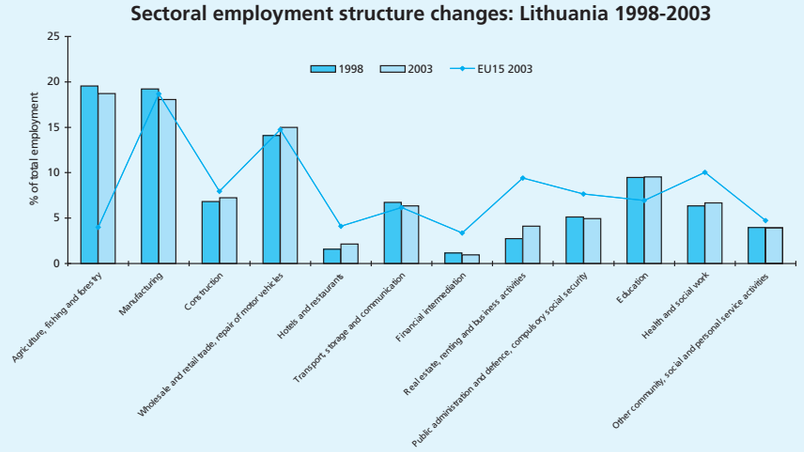




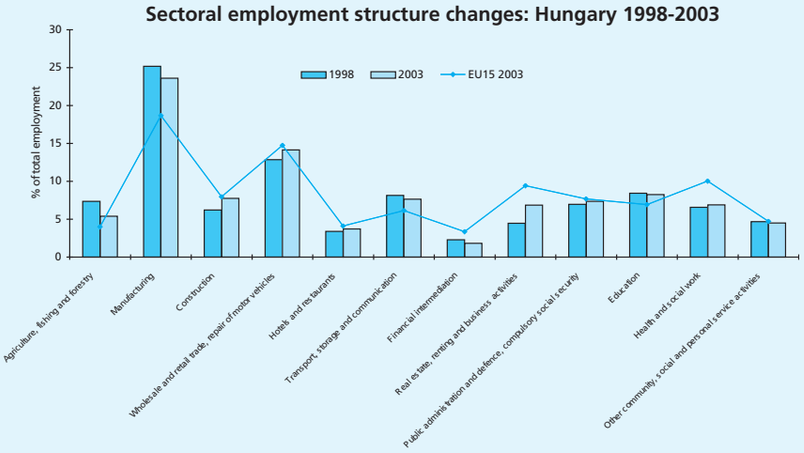
Sectoral employment structure changes: Latvia 1998-2003



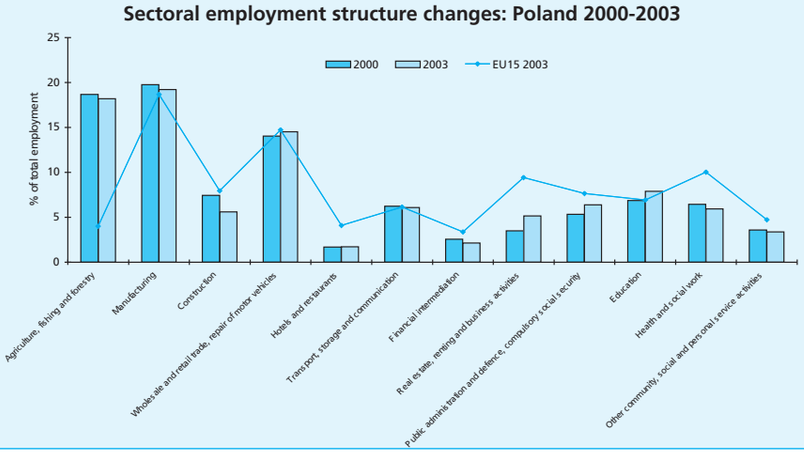
Sectoral employment structure changes: Lithuania 1998-2003



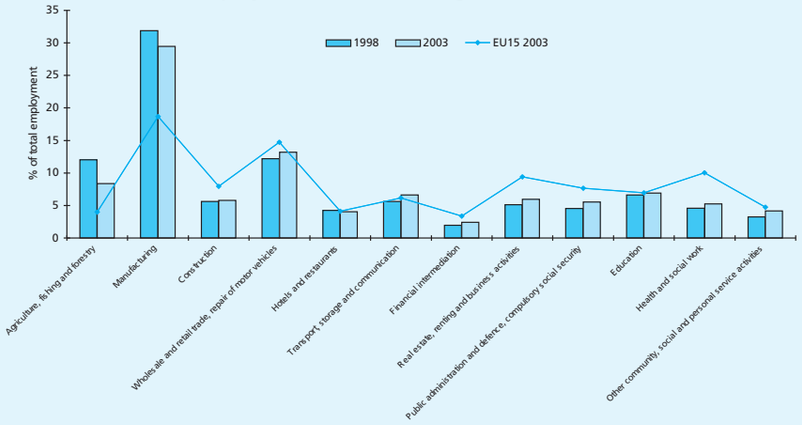
Sectoral employment structure changes: Hungary 1998-2003



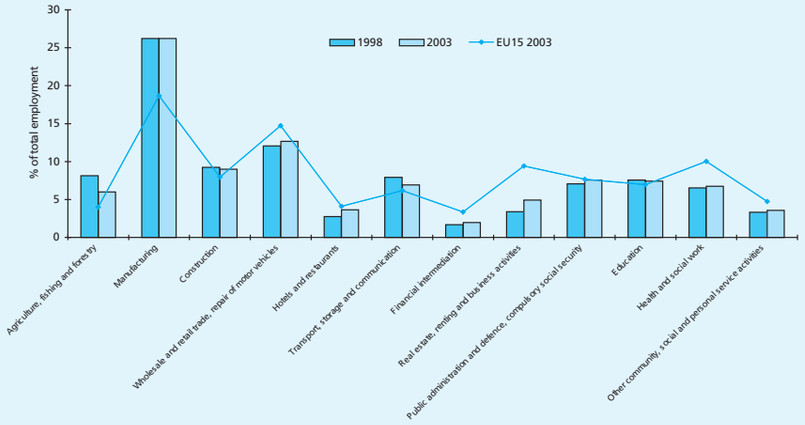
Sectoral employment structure changes: Poland 2000-2003



Sectoral employment structure changes: Slovenia 1998-2003



Sectoral employment structure changes: Slovak Republic 1998-2003



*Source: Eurostat, LFS. Note: * For CY and PL data refer to the 2000 to 2003 period only, no data for MT for 2000 and before EU15 aggregate for 2003 includes 2002 data for LU and NL.*

6. Demographic trends

The total population of the EU25 is estimated to have increased by 1.2 million in 2003, equivalent to an annual growth rate of 0.27%, to reach an overall level of close to 455 million by the start of 2004 (table 12). Most of this increase was accounted for by net migration flow into the EU, estimated at just over 1 million, while natural population growth (live births minus deaths) accounted for only around 0.2 million. For the group of new Member States as a whole, the overall population continued to decline moderately, driven by negative natural growth and even though net migration became positive in 2003.

During 2003, the natural increase in the population was the main component of total population increase only in Finland, France, Ireland, Luxembourg and the Netherlands. In contrast, negative natural growth - there were more deaths than births – was the main component of population decreases in the three Baltic States and Hungary. For all the remaining Member States other than Denmark (where net migration and natural increase were the same) and Poland (where net migration was more negative than natural change), net migration accounted for by far the largest share of the net increase in population. In the Czech Republic, Germany, Greece, Italy and Slovenia negative natural increase was more than offset by the much larger increases in net migration, leading to net increases in their populations. In terms of net migration per 1,000 population, migration was highest in Cyprus, Ireland, Malta, Portugal and Spain. These five Member States also had the highest overall relative increase in population. While most Member States saw overall increases in total population it declined in the three Baltic States, Hungary and Poland.

Table 12 - Population change in 2003 (first estimates)

Country	Population 1.1.2003	Natural increase	Net migration	Total increase	Population 1.1.2004	Natural increase	Net migration	Total increase
	(1000)					per 1000 population		
EU25	453683	202	1015	1217	454900	0.4	2.2	2.7
EU15	379483	294	983	1276	380759	0.8	2.6	3.4
Belgium	10356	6	35	41	10397	0.6	3.4	3.9
Denmark	5384	7	7	14	5398	1.3	1.3	2.6
Germany	82537	-152	160	8	82545	-1.8	1.9	0.1
Greece	11018	-2	30	29	11047	-0.1	2.7	2.6
Spain	40683	70	225	295	40978	1.7	5.5	7.2
France	59629	207	60	267	59896	3.5	1.0	4.5
Ireland	3964	33	28	61	4025	8.3	7.0	15.3
Italy	57321	-47	208	161	57482	-0.8	3.6	2.8
Luxembourg	448	1	1	3	451	3.0	2.5	5.6
Netherlands	16193	62	3	65	16258	3.8	0.2	4.0
Austria	8067	0	25	25	8092	0.0	3.1	3.1
Portugal	10408	9	63	72	10480	0.9	6.1	6.9
Finland	5206	8	6	14	5220	1.6	1.1	2.7
Sweden	8941	5	29	34	8975	0.6	3.2	3.8
United Kingdom	59329	86	103	189	59518	1.4	1.7	3.2
New Member States	74201	-92	32	-60	74141	-1.2	0.4	-0.8
Cyprus	715	2	10	13	728	3.3	14.1	17.4
Czech Republic	10203	-16	24	8	10211	-1.6	2.4	0.8
Estonia	1356	-5	0	-5	1351	-3.7	-0.1	-3.8
Hungary	10142	-40	12	-27	10115	-3.9	1.2	-2.7
Latvia	2332	-12	-1	-13	2319	-5.2	-0.3	-5.6
Lithuania	3463	-11	-5	-15	3447	-3.0	-1.4	-4.5
Malta	397	1	2	2	400	1.8	3.9	5.7
Poland	38219	-10	-15	-25	38194	-0.2	-0.4	-0.6
Slovak Republic	5379	0	2	2	5381	0.0	0.3	0.3
Slovenia	1995	-2	4	2	1997	-1.0	1.8	0.8
Bulgaria	7846	-47	:	-47	7799	-5.9	:	-5.9
Romania	21773	-56	-1	-57	21716	-2.6	0.0	-2.6

Source: Demographic Statistics, Eurostat

7. Update on immigration and labour market integration: recent trends in the EU15

Employment in Europe 2003 reported on the labour market situation of immigrants in the EU15 using information on third-country nationals in the EU. However, international definitions of migrants refer to people who are born in another country than where they live (and work) now. Data from the Community Labour Force Survey (LFS) have become available and allow distinguishing between third-country nationals and people born in another country. The following text uses this new information to provide an insight into the situation of migrants in the EU15[4]. As soon as comparable data is available for the EU25 reporting will cover all Member States.

In 2003, the EU25 counted 455 million inhabitants. The EU15 had a total population of 381 million people. The remaining 74 million lived in the 10 New Member States.

In 2003, of the 381 million people living in EU15 countries some 6 million were EU-citizens living in another country and some 14 million were third-country nationals (non-EU). But the number of people not residing in their country of birth or citizenship was estimated at 33-36 million[5]. A precise figure is not available as several EU Member States do not distinguish between native and foreign-born residents in their official statistics but only between EU citizens and third-country nationals. The growing difference between the legal foreign resident population and the foreign-born (= migrant) population is largely a result of higher naturalisation rates observed since the 1990s. The EU15's migrant population represents roughly 8% of the total population.

In 2003, the EU15 gained approximately 1.0 million people from migration. This accounts for more than 80% of Europe's total population growth (+1.3 million people in 2003). In many countries recent inflows were dominated by families reuniting and asylum-seekers. In other EU Member States particularly in Ireland and Southern Europe economic migration plays a major role.

Between 1997 and 2003 the number of people employed in the EU15 (less Germany and Italy) increased by around 11 million, out of which 9.2 million were EU nationals and more than 1.8 million were third-country nationals. While the share of third-country nationals in total EU employment was below 4%, they contributed to employment growth by about 13% during the period 1997-2003 (table 13). If we also account for foreign born naturalized citizens of EU15 countries the contribution of immigrants to employment growth is likely to be higher.

Migrants' contribution to employment growth is particularly visible for prime-age workers (25-54). In 1997, the employment rate of EU nationals already stood at 79% for the medium-skilled and at 87.5% for the high-skilled. Owing to strong job creation, it had further risen to almost 82% and 89% respectively in 2002, thereby reaching levels that would not be easy to increase further. Indeed, among third-country nationals, these two categories experienced the strongest increases in employment. The number of medium skilled third-country nationals increased by 50% and that of the high-skilled doubled.

Table 13 - Distribution of employment growth (1997-2003) EU15 (less DE and IT)

	Male		Female		Total	
	foreign national	foreign born	foreign national	foreign born	foreign national	foreign born
1.Other EU15	1.3	2.2	1.8	3.2	1.8	2.6
2.CEE	3.9	2.7	5.6	4.1	3.3	4.8
3.Other Europe*	0.1	0.1	1.4	0.6	0.1	1
4.North Africa	0.3	0.4	0.6	1.2	0.3	0.9
5. North America + Oceania	0.4	0.2	0.3	-0.2	0.3	0
6.Other countries **	7.3	5.5	13.4	10.1	6.3	11.6
7. National/Natives in their country	*85.9*	*88.4*	*78.1*	*81.8*	*87.3*	*80.1*
8. No Answer	*0.7*	*0.5*	*-1.2*	*-0.7*	*0.6*	*-1*
Total	100	100	100	100	100	100

** includes Cyprus, Malta, Turkey and EFTA, ** includes Asia and the rest of Africa. Source: EU Labour Force Survey, Spring results*

4 Italy and Germany do not make information on people born in another country available, therefore the comparisons are based on the EU15 without Germany and Italy.

5 Rainer Münz, Heinz Fassmann, Migrants in Europe and their Economic Position; paper prepared for the European Commission; June 2004, http://europa.eu.int/comm/employment_social/employment_analysis/immigr_new_stud_en.htm

The employment rate of the foreign-born population (age groups 15-64) varies according to the place of origin (table 14). People from Western and Southern Europe living in another EU country and immigrants from other industrialised countries have similar or even higher employment rates (EU: 67%; North America, Australia: 76% compared to 66 % for the EU average) and lower unemployment rates than the EU average; employment rates for workers from Central and Eastern Europe are also close to the EU average although somewhat lower. Immigrants from other parts of the world have substantially lower employment and higher unemployment rates. Employment rates for workers born in North Africa are around 50% or just above.

Employment is higher than the male EU average of 74% among men from other EU Member States (75%), and from North America and Australia (86%) while those from North Africa (and other countries) have employment rates 7-10 percentage points below the male EU average.

Differences are larger among women. Only roughly 1/3 of the female immigrants from North Africa are counted as employed in the Labour Force Survey compared to 58% for the EU average while women born in other EU countries and in other industrialised countries have higher employment rates than the EU average.

When comparing legal foreign residents with the EU15 average, the differences are, for some foreign national populations, considerably larger. The overall employment rate of third country nationals residing in the EU15 is 52% compared to 57% for those born outside of the EU an EU average of 64%. This difference is marked for men and even more so for women from North Africa. This analysis remains valid when looking at educational breakdowns, as in the subsequent paragraphs.

Employment rates vary to a considerable degree with acquired educational levels. High and medium skilled male migrants have similar employment rates to the average for men in the EU with the exception of migrants from North Africa for whom employment rates are lower. High skilled migrant women have similar employment rates to the EU average except those from North Africa. Gaps are large for the medium and in particular the low skilled women from North Africa. This contrasts with the employment rate of low skilled women born in southern EU countries which are actually higher than the EU average of low skilled women that is well below 40%. This reflects the well known fact that the EU does not fully utilise the skilled female employment potential among migrants and that women migrants are concentrated in less attractive industries and occupations.

The analysis for Europe clearly shows the importance of citizenship for the process of integration. There is, however, no simple causality. On the one hand, naturalization may help to gain access to certain segments of the labour market – in particular the public service – and to reduce discrimination. On the other hand, it is evident that successful economic integration of immigrants makes it more likely that they become citizens of the receiving country. Migrants with higher educational levels do much better than others reflecting the skills needs of the EU economies as well as their capacity to adjust. This suggests that improving educational levels and training should promote integration. Moreover, the analysis underlines the importance of immigrants for EU employment, particularly in periods of stronger economic activity, even before the demographically induced decline of the working age population starts to fully affect Europe.

Table 14 - Employment rate of the 15-64 years population for EU-15 (less DE and IT) - 2003

	Male		Female		Total	
	foreign national	foreign born	foreign national	foreign born	foreign national	foreign born
1. Other EU15	73.6	74.1	59.9	60.2	66.8	66.9
2. CEE	75.4	73.3	53.6	55	63.9	63.4
3. Other Europe*	67.9	69.8	30.5	37.7	50.4	54.5
4. North Africa	54.2	59.5	25.4	39.5	41.2	50.2
5. North America + Oceania	86.2	82.9	66.7	67.7	75.8	75
6. Other countries **	63.4	68.5	45.4	50.4	54.1	59.1
7. National/Natives in their country	*74.3*	*74.5*	*58.9*	*59*	*66.6*	*66.8*
Total	74	74	58.3	58.3	66.2	66.2

* *includes Cyprus, Malta, Turkey and EFTA, ** includes Asia and the rest of Africa. Source: EU Labour Force Survey, Spring results.*

8. Medium-term employment rate projections for the European Union

The Lisbon/Stockholm Employment Targets

The Lisbon European Council of March 2000 set "*a new strategic goal for the European Union to become the most competitive and dynamic knowledge based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion*". To this end the (Lisbon) Council agreed overall employment targets and employment targets for women[6] for the year 2010. These were completed at the Stockholm European Council of March 2001 with intermediate targets for 2005[7], and an additional target for 2010, reflecting the demographic challenge, for the employment rate of older people[8] (aged 55 to 64). In this respect, it should be noted that the report of the Employment Taskforce chaired by Wim Kok[9], while highlighting the importance of the Lisbon agenda to make the EU competitive and raise the rate of economic growth, remarks that "unless the Member States step up their efforts, it is looking increasingly unlikely that the overarching goal for 2010, and the employment objectives, will be attainable". This section will analyse the outlook for reaching the employment targets.

Table 15 - Employment rate targets for the EU

	Targets	
	2005	2010
Overall employment rate	67.0	70.0
Employment rate for women	57.0	60.0
Employment rate for older workers (aged 55 to 64)	—	50.0

The employment rate targets

The revised Employment Guidelines of 2003[10] fully integrate the Lisbon/Stockholm employment targets, being central to the European Employment Strategy. According to these Guidelines, policies shall contribute towards achieving "on average for the European Union" the employment rate targets as presented in table 15.

How are employment rate trends assessed?

Rather than to carry out projections of employment trends based on long-term forecasts of economic growth, the assessment looks at long-term labour supply trends and whether they are consistent with the employment rate targets. The methodology extrapolates past labour supply trends up to 2010. Clearly, it contains no assumption on economic growth or labour demand trends and only therefore assesses the potential for reaching the employment targets. Two periods are considered 1983-2003 and 1993-2003. The first period represents "long-term" trends of participation behaviour, the second period should show us whether participation behaviour has changed and if so in what direction. Given the low levels of participation and employment in the last two decades, the change in behaviour - if there is any - needs to be towards a substantial increase. The timeframes used for the assessment represent a sufficiently long time span and start in comparable cyclical positions in order not to be distorted by short-term or cyclical effects[11].

Employment rates are indirectly calculated. Participation rates are projected, conditional on the assumption that unemployment rates will converge towards a structural/benchmark unemployment rate. Although the concept of a *Nawru/Nairu*[12] is subject to some controversy, it provides an acceptable benchmark for unemployment

6 *Presidency Conclusions of the Lisbon European Council of 23/24 March 2000: "the overall aim of these measures [which, inter alia, cover areas related to employability, lifetime learning, increasing employment in services, and furthering all aspects of equal opportunities] should be to raise the employment rate from an average of 61% today [level of 1999] to as close as possible to 70% by 2010 and to increase the number of women in employment from an average of 51% today [level of 1999] to more than 60% by 2010. Recognising their different starting points, Member States should consider setting national targets for an increased employment rate. This, by enlarging the labour force, will reinforce the sustainability of social protection systems".*

7 *Presidency Conclusions of the Stockholm European Council of 23/24 March 2001: "the European Council has agreed to set intermediate targets for employment rates across the Union as a whole for January 2005 of 67% overall and 57% for women and accordingly invites Member States to consider setting in their National Employment Plans intermediate employment targets taking due account of their particular national and regional circumstances".*

8 *Presidency conclusions of the Stockholm European Council of 23/24 March 2001: "the European Council has agreed to set an EU target for increasing the average EU employment rate among older women and men (55-64) to 50% by 2010".*

9 *Report of the Employment Taskforce chaired by Wim Kok: "Jobs, Jobs, Jobs, Creating more employment in Europe", November 2003.*

10 *OJ L 197/13 of 5.8.2003.*

11 *It should be noted that this methodology does not take into account the impact of any announced (labour market or other) policy measures or of any country characteristics, which could eventually have a bearing on participation/employment rates. Moreover, this methodology is a partial equilibrium. Such type of analysis can generate unchecked trends.*

12 *A non accelerating wage rate of unemployment (Nawru), or a non accelerating inflation rate of unemployment (Nairu).*

rate trends. Estimates from the Directorate General for Economic and Financial Affairs (ECFIN) of the European Commission for a non accelerating wage rate of unemployment (*Nawru*) are used in order to project unemployment rate values. Consequently, the employment rate is calculated as the difference between projected participation and unemployment rates. For each of the 11 countries for which data are available for a sufficiently long time span[13], participation rate equations are estimated by gender and age group (10 five year sub -groups) using ordinary least squares[14].

Using this methodology, two scenarios are considered. In both scenarios participation rates are regressed on a time trend and on a cyclical variable, namely the unemployment gap (i.e. the difference between the actual unemployment rate and the *Nawru* rate)[15]. Given the assumption that actual unemployment rates gradually converge towards the benchmark *Nawru* rate, reaching negligible differences by 2010, employment rates are therefore obtained by calculating the difference as explained before[16].

The first scenario, hereafter called the "long-term" scenario, assumes that unemployment rates will converge by 2010 towards the structural unemployment rates projected using ECFIN's *Nawru* estimates. Furthermore, the "long-term" scenario is based on the entire dataset available from 1983 to 2003.

The second scenario, hereafter called the "medium-term" scenario assumes that unemployment rates will converge by 2010 to the *Nawru* estimates of ECFIN or the average of the three lowest historical *Nawru* values for the period 1980 - 2003[17] (whatever is lower). Furthermore, participation rates are estimated using data for the sub-period 1993-2003. The use of a shorter period in the "medium-term" scenario is an attempt to capture the more recent favourable trends in a majority of EU countries, which seem to have been at least partially induced by policy measures raising participation rates, particularly of older people, in a number of EU Member States.

In most of the countries considered, the "medium-term" scenario projects higher participation/employment rates than the "long-term" scenario, because the former assumes lower structural unemployment (*Nawru)* rates, together with the fact that in most countries more recent participation/employment trends are more favourable than historical ones. However, in some countries the differences between the two scenarios are small, on account basically of saturation effects resulting from significant improvements in participation/ employment rates dating back from the 1980s.

How to interpret the scenarios' results?

The results of the two scenarios should be interpreted as follows. The "long-term" scenario attempts to capture historical trends also conditional on the cyclical behaviour of participation rates (by gender and age groups), using the complete dataset available (1983-2003). The "medium-term" scenario seeks to extrapolate the more favourable recent trends (1993-2003), for labour market ratios in a majority of countries. Moreover, the "medium-term" scenario assumes the convergence of the unemployment rate towards the minimum of the *Nawru* estimates and the three lowest historical *Nawru* values for the period 1980-2003. For nine countries, namely Germany, Greece, Spain, France, Portugal, Austria, Finland, Sweden and Luxembourg this implies an effective lowering of the actual unemployment rate by 2010 compared with the "long-term" scenario, which instead assumes a gradual convergence of the unemployment rate towards the *Nawru* estimates (of ECFIN), virtually converging to them by 2010.

Summarising, the projections reported in this section should be interpreted as the possible outcomes of participation/employment rates assuming that the unemployment gap gradually declines, becoming negligible by 2010, and recent/historical trends remain broadly valid until 2010 respectively in the "medium-term" and "long-term" scenarios. As explained above this simple methodology considers only "supply" factors. Obviously, real outcomes will depend on actual economic developments, including the impact of

13 Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, the Netherlands, Portugal, and the United Kingdom.

*14 Adding to a total of 220 regressions per scenario considered (i.e. 220=11*2*10).*

15 The Nawru is calculated for the economy as a whole (i.e. there is no breakdown either by gender or by age group).

16 In addition, aggregate values for participation and employment rates are a weighted average of the respective rates by gender/age group. For those countries for which data series are not sufficiently long to allow for the estimation of regressions, labour market variables (i.e. participation and employment rates) are assumed to move in parallel, according to the proportional rule, with the estimated aggregate values for the 11 countries for which estimates were computed. For the period 2004-2010, demographic projections from Eurostat and the UN are used. Demographic projections from Eurostat are available for the EU15 (i.e. the Member States of the Union prior to 1.5.2004); for the new 10 Member Countries, demographic projections from the UN are used. However, the demographic projections from Eurostat are somewhat outdated, having being last revised in 1999. An update of Eurostat's demographic projections, including forecasts for all 25 EU Member Countries, is scheduled to be finalised in the last quarter of 2004. For the 10 new EU Member Countries, the UN demographic projections of 2002 are used.

17 This implies that increased policy efforts are also needed in the following EU countries: Germany, Greece, Spain, France, Portugal, Austria, Finland, Sweden, and Luxembourg, because in these countries the assumed Nawru values for 2010 are lower than the values that result from ECFIN estimates.

Table 16 - Comparison of employment rate projections for the EU14[a] in the two scenarios (as percentage)

	Actual data	"Medium-term"	"Long-term"	"Medium-term"	"Long-term"
	2003	2005	2005	2010	2010
Overall employment rate	64.3	66.2	64.8	67.8	65.7
Employment rate for women	55.9	58.4	57.2	61.5	60.1
Employment rate for older workers (aged 55 to 64)	41.6	43.5	41.8	45.8	41.8

a) EU15, excuding LU due to lack of data for 2003

Table 17 - Overall employment rate and (implicit) employment growth rates for the EU14 (as percentage)

Period/Scenario	Long-term	Medium-term	Target-compatible
1995-2000	1.4	1.4	na
2001-2003	0.6	0.6	na
2004-2010	0.4	0.8	1.3

Table 18 - Overall employment rate and (implicit) employment growth rates for the EU20

Period/Scenario	Long-term	Medium-term	Target-compatible
1995-2000	0.9	0.9	na
2004-2010	0.4	0.9	1.6

"demand" factors not taken on board by the present methodology (e.g. economic growth, employment elasticities, etc.).

Main results

The long-term scenario (i.e. the EU would go back to long-term labour supply trends) suggests that the 70% overall employment rate and the 50% employment rate for older workers targets are out of reach (table 16). By contrast, the 60% employment rate target for women is likely to be met even in this worst case scenario.

While the medium-term scenario (which both extrapolates more recent participation trends and assumes a more pronounced reduction of structural unemployment) suggests that substantial progress can be made towards meeting these objectives, although continuing to fall short of the actual targets (for overall and older age employment rates).

In fact, extrapolation of the more recent trends into the period 2004-2010 (the "medium-term" scenario), through the adoption of policies that contribute towards achieving the targets set in the employment guidelines, is estimated to bring about improvements of about 2 percentage points, 1.5 percentage point, and 4 percentage points respectively for the overall employment rate, the employment rate for women, and the employment rate for older workers compared with the "long-term" scenario (table 16).

Given the projections for (overall) employment rates and population[18], it is straightforward to calculate the (implicit) employment growth rates. However, it should be acknowledged that these (employment growth) estimates are subject to a high degree of uncertainty resulting from the (accumulation of) errors in the projections of employment rates and demographic variables.

In order for the EU14[19] (EU20) to comply with the overall employment target of 70% in 2010, employment would have to grow by at least 1.3% (1.6%) per year in the period 2004-2010 (table 17 and table 18). According to the two scenarios considered, employment is projected to grow by just 0.4% (0.4%) or 0.8% (0.9%) respectively in the "long-term" and the "medium-term" scenarios. Therefore, in order to meet the overall employment rate target of 70% in 2010, policy measures have to increase annual employment growth by at least 0.5% (0.7%). While for the EU14 this basically corresponds to a return to the historically high level of employment growth registered in the period 1995-2000 (i.e. before the last economic slowdown), for the EU20 (table 18) this implies a significant acceleration in the growth rate of employment creation in comparison with the period 1999-2003 (1.6% as against 0.9%).

The enlargement of 1.5.2004 reduced aggregate employment rates in the EU. The impact of enlargement can be illustrated by comparing EU14 with EU20 (table 19).

18 The demographic scenarios used are presented in footnote 16.

19 The main aggregate calculated includes data for only 14 countries (EU15 excluding Luxemburg) in order to secure comparability over time. EU14 includes: Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, the Netherlands, Portugal, United Kingdom, Austria, Finland and Sweden. Data for EU20 include the 25 Member Countries, excluding Estonia, Latvia, Lithuania, Luxembourg, and Malta.

Attainment of employment rate targets by country

Although the employment rate targets were set for the EU as a whole, it is worthwhile to assess the potential for compliance across countries, together with the pace of progress. Consequently, countries are classified in a matrix table, according to the likelihood of meeting an employment target by 2010 (in column) and the pace of progress towards this objective (in row). Given the uncertainty involved, each of these attributes is classified in three categories: the intermediate corresponding to a high degree of uncertainty as regards the actual outcome.

Table 19 - Comparison of employment rate projections for the EU14 and the EU20 in the "medium-term" scenario (as percentage)

	EU14 2003	EU20 2003	EU14 2005	EU20 2005	EU14 2010	EU20 2010
Overall employment rate	64.3	62.9	66.2	64.9	67.8	66.5
Employment rate for women	55.9	54.9	58.4	57.5	61.5	60.5
Employment rate for older workers (aged 55 to 64)	41.6	40.1	43.5	41.9	45.8	43.8

Table 20 - Potential for reaching the overal employment rate target across countries (of 70.0% in 2010) in the "medium-term" scenario and pace of progress

Pace/Likelihood		Likely [a]	Possibly [b]	Unlikely [c]
Rapid [d]	countries	NL, FI, CY	IE	EL, ES
	count	3	1	2
Close to average [e]	countries	SE		BE, HU,SK
	count	1	0	3
Slow [f]	countries	DK, DE, PT, UK, AT		FR, IT, CZ,PO, SL
	count	5	0	5

a) Target achieved by date.
b) Projection lower by less than 1 percentage point than the target.
c) Projection lower by more than 1 percentage point than the target.
d) Rapid progress towards the target (i.e. in the 1990-2010 period, the average annual growth rate of the employment rate is expected to increase faster than the average for the EU14);
e) "Close to average" (i.e. in the 1990-2010 period, the average annual growth rate for the employment rate is expected to increase between the average for the EU14 and 2/3 of it;
f) Slow progress towards the target, (i.e. in the 1990-2010 period, the average annual growth rate for the employment rate is expected to increase below 2/3 of the employment rate average for the EU14).

Table 21 - Potential for reaching the overall employment rate target across countries (of 70.0% in 2010) in the "long-term" scenario and pace of progress

Pace/Likelihood		Likely [a]	Possibly [b]	Unlikely [c]
Rapid [d]	countries	NL,	IE	ES, FI,CY
	count	1	1	3
Close to average [e]	countries			BE, HU, SK
	count	0	0	3
Slow [f]	countries	DK, PT, UK, SE	AT	DE, FR, IT, CZ, PO, SL, SK
	count	4	1	7

20 Germany, France, Italy, UK, Spain and Poland.

In the "medium-term" scenario, about half of the total number of countries considered are projected to be in a position to comply with the overall employment target by 2010 as compared with about one third in the "long-term" scenario (tables 20 and 21).

As regards the pace of convergence towards the overall employment target, the position of between about 1/3 (in the "long-term" scenario) and 1/4 (in the "medium-term" scenario) of a total of 20 countries is particularly worrying, because they are in the worst possible situation, namely: i) in an "unlikely" position to meet the target, and ii) making "slow" progress towards it. Particularly worrying are the positions of France and Italy in both scenarios, and also that of Germany but only in the "long-term" scenario. As regards large countries, Spain is projected to (continue) to make rapid progress towards the overall target in both scenarios, although not attaining it by 2010.

Among the six largest EU countries[20], only Germany and the UK have the potential to comply with the overall employment target in the "medium-term" scenario, and only the UK in the "long-term" scenario. This relatively unfavourable performance among the largest countries pulls down significantly the EU average.

As regards the female employment rate target, there are few differences between the two scenarios considered (tables 22 and 23). In both scenarios, slightly more than half of the 20 countries considered are projected to be in a position to comply with the female employment rate target. Again, some large countries pull down significantly the EU average.

As regards the old age employment rate target there are significant differences between the two scenarios. Extrapolation of the most recent trends (i.e. the "medium-

term" scenario) suggests that about half of EU countries are likely to be in a position to respect it by 2010, compared with less than one third in the "long-term" scenario (tables 24 and 25). Again, some of the large countries reduce significantly the EU average.

Conclusion

According to the results of the two scenarios presented in this section, and in line with the recommendation of the Employment Taskforce chaired by Wim Kok, Member States need to step up their efforts in order to accelerate convergence towards the Lisbon/Stockholm employment rate targets. In fact, even the more favourable "medium-term" scenario, which extrapolates recent labour market trends, clearly suggests that further policy action is needed in order to meet employment rate targets. The gap between employment rate projections and target values is especially large in the case of older workers; while the projected attainment of the female employment target is insufficient to secure compliance with the overall employment rate target. Consequently, further policy measures are necessary in order to increase labour supply in general and, in particular, to ensure that older workers stay longer in employment and that more women enter and remain longer in the labour market. It is worth noting that the methodology employed in this section did not make any detailed analysis of a number of relevant issues such as the factors that determine the participation rate of older workers and migration flows, basically for reasons of data availability and to preserve the overall consistency of this scenario exercise.

Table 22 - Potential for reaching the female employment rate target across countries (of 60.0% in 2010) in the "medium-term" scenario and pace of progress

Pace/Likelihood		Likely [a]	Possibly [b]	Unlikely [c]
Rapid [d]	countries	IE, NL, CY	0	BE, EL, ES
	count	3		3
Close to average [e]	countries	DE, PT, FI	0	IT, HU
	count	3		2
Slow [f]	countries	DK, UK, AT, SE, SL	FR, CZ	PO, SK
	count	5	2	2

Table 23 - Potential for reaching the female employment rate target across countries (of 60.0% in 2010) in the "long-term" scenario and pace of progress

Pace/Likelihood		Likely [a]	Possibly [b]	Unlikely [c]
Rapid [d]	countries	IE, NL, CY	0	BE, EL, ES
	count	3		3
Close to average [e]	countries	DE, PT, FI	0	IT, HU
	count	3		2
Slow [f]	countries	DK, UK, AT, SE, SL	CZ	FR,PO, SK
	count	5	1	3

Table 24 - Potential for reaching the old age (55 to 64 years) employment rate target across countries (of 50.0% in 2010) in the "medium-term" scenario and pace of progress

Pace/Likelihood		Likely [a]	Possibly [b]	Unlikely [c]
Rapid [d]	countries	IE, NL, CY	0	BE, HU, SL, SK
	count	3		4
Close to average [e]	countries	DE, SE, CY	0	CZ
	count	3		1
Slow [f]	countries	DK, PT, UK	0	EL, ES, FR, IT, AT, PO
	count	3		6

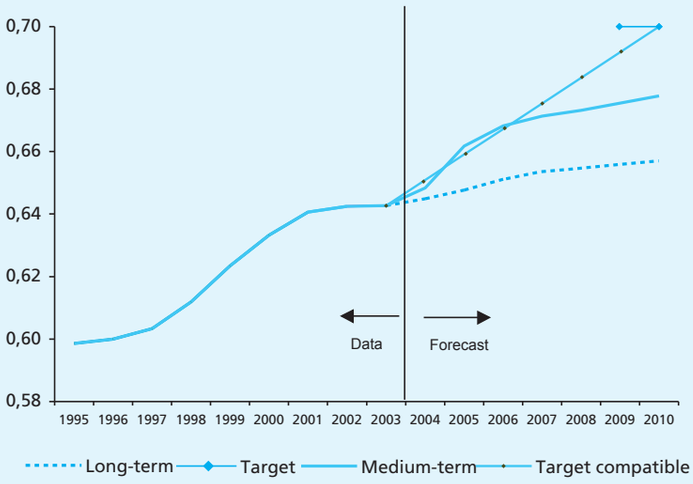
Table 25 - Potential for reaching the old age (55 to 64 years) employment rate target across countries (of 50.0% in 2010) in the "long-term" scenario and pace of progress

Pace/Likelihood		Likely [a]	Possibly [b]	Unlikely [c]
Rapid [d]	countries	IE	0	BE, NL, FI, HU, SL, SK
	count	1		6
Close to average [e]	countries	DE, SE, CY	0	DE
	count	3		1
Slow [f]	countries	DK, PT, UK, SE, CY	0	EL, ES, FR, IT, AT, CZ, PO
	count	5		7

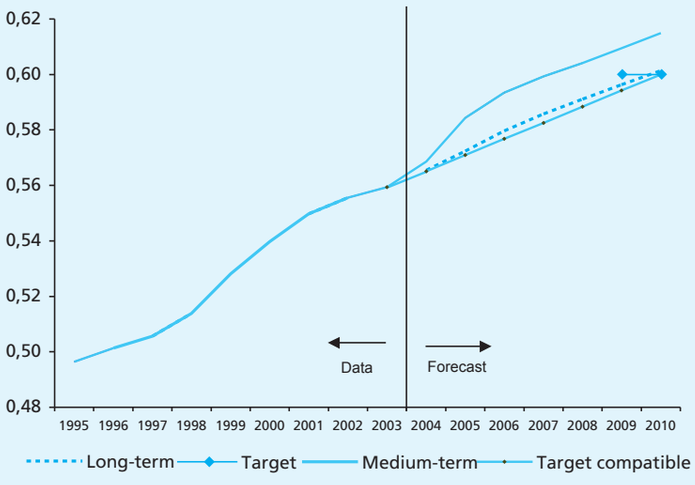
**) See footnote of table 20*

Chart 40 - Comparison between the "Medium-term" and "Long-term" scenarios for the EU14

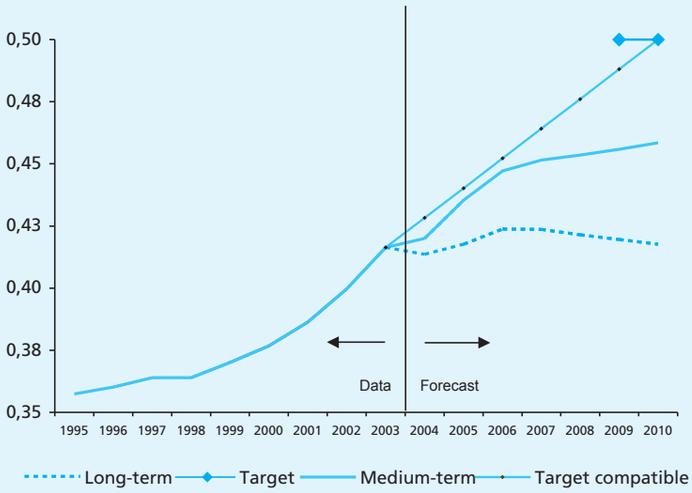
For the working age population



For females



For older workers



Note: "Target compatible" is the linear path leading from the 2003 value to the target for 2010.

Chapter 2

Key Determinants of Labour Market Performance

1. Introduction

The years following the 1990s' recession have been years of deep transformation of the European labour markets. From a peak in 1994 the EU unemployment rate has fallen by about 2 percentage points, reaching 7.4% of the labour force in 2001. Despite this decline there have been no signs of price and wage inflation. In the same period, the rate of price inflation declined from about 3% to about 2%, with the core rate[1] following the same pattern. Wage pressures have been subdued as well. As documented in Employment in Europe 2002, the decline in the unemployment rate occurred with no price and wage pressure, supporting the view of a decline in the structural unemployment rate, as measured by the NAIRU. It is remarkable that the unemployment decline was associated with intense job creation and strong growth of the labour force. More jobs were created for an increasing number (as a percentage of the working age population) of those willing to work.

Nevertheless, progress has been uneven across countries. While in some countries the improvements are relatively recent, in others, such as the Netherlands, Ireland and the UK, they have been ongoing for several years.

The uncertainty of the economic cycle of the last two years does not seem to have changed the overall picture of European labour markets. Notwithstanding the weak economic growth, the EU employment and participation rates kept growing and reached their highest levels of the last three decades[2]. Unemployment, although increasing, stood at a level lower than the average of the first half of the 1990s.

As documented in previous reports[3], these developments reflected exogenous developments in the macroeconomic environment and changes in the structure of the labour supply - revealed by increases in the levels of skills and by changes in the gender and age composition of the work force. These changes interacted with labour market reforms that promoted new forms of contracts (part-time and fixed-term contracts), and of work organisation that made labour markets more flexible and at the same time allowed a better reconciliation of family life with working life[4].

There has been extensive research on the causes of the rising and persistent EU unemployment rate. Some authors identified the origins of persistent and high unemployment rate in the interaction between the labour market institutions, broadly defined, and the exogenous shocks of the early 80s and early 90s. Others stressed the effect of the rising interest rates on the unemployment rate[5].

The structural nature of the recent improvements in labour market performance has been widely acknowledged[6].
Several analyses have focused on the role of policy variables and labour market institutions in the rise of unemployment[7]. For example, studies such as those of Elmeskov et al. (1998), Blanchard

1 *The core inflation is the inflation rate which excludes the volatile energy and food components. It is a measure of the underlying inflation eschewing the more volatile components. The core inflation represents therefore the long-term component of the inflation rate.*

2 *However, in some Member States the bleak economic growth of 2001-2003 had an impact on employment which has been so far stronger than in other Member States.*

3 *Employment in Europe 2002 and 2003.*

4 *Although positive at the aggregate level, the availability of more flexible working arrangements may increase the risks of unemployment or of inactivity for groups at risks such as low skilled and older workers; see Employment in Europe 2002 and 2003.*

5 *The approach followed here is slightly different from those of other authors that limit the analysis of institutions to the interplay between them and certain specific shocks (e.g.. O. Blanchard and J. Wolfers (1999)* The role of shocks and institutions in the rise of European unemployment: The aggregate evidence*). By contrast the chapter tries to identify whether labour market performance is influenced by specific institutional settings. Usually labour market institutions are defined in a very broad sense and are identified with those characteristics of the labour market deemed to change very slowly over time (replacement rates, benefit duration, ALMPs' expenditures, EPL, level of bargaining co-ordination). This definition of institutions is not satisfying because, firstly, it is not clear why slow moving variables should be treated as institutions. Secondly, rather than the variables themselves, the labour market institutions should be defined by the set of rules governing their determination (e.g. social partners and government involvement in wage setting, fixation of minimum wages and expenditures on LMPs, level of bargaining at which wages are determined, etc). In this chapter we have chosen to follow the "narrow" approach, although due to the lack of time series information, we have limited the institutions to the extent of bargaining co-ordination and centralisation between employers on one side and employees on the other.*

6 *See for example* Employment in Europe 2002, EU Economy Review 2002, 2003 *and* Employment Outlook 2003.

7 *Blanchard O. and Wolfers J. (2000)* The role of shocks and institutions in the rise of European unemployment: The aggregate evidence*, The Economic Journal, 110, pp. 1-33. Belot M. and Van Ours J.C. (2000)* Does the recent success of some OECD countries in lowering their unemployment rates lie in the clever design of their labour market reforms?*, IZA Discussion paper No.147. Fitoussi J-P, Jestaz D., Phelps E.S., Zoega (2000), G.* Roots of the recent recoveries: Labor Reforms or Private Sector forces?*, Brooking Papers on Economic Activity, pp 237-291. Nickell S., Nunziata L. Ochel W., Quintini G. (2001)* The Beveridge curve, unemployment and wages in the OECD from the 1960s to the 1990s*, CEP Discussion Paper no.*

and Wolfers (2001), Belot and Van Ours (2000), Bertola et. al (2001) and Nickel et al. (2001) draw attention to the impact of labour market institutions and the interactions between policies and institutions.

This chapter aims to contribute to the debate on determinants of labour market performance focussing on drivers of the EU15 employment rate over time and investigating the sources of the improvements it underwent in the second half of the 1990s. Although this is not the first analysis that looks at the role of labour market institutions, it takes the employment rate as the appropriate measure of labour market performance rather than the unemployment rate, as done in a large set of recent studies on labour market institutions and labour market performance.

Indeed, the effects of policy measures on the unemployment rate may be underestimated - when they affect in the same direction employment and participation rates - or overestimated - when they influence employment and participation in opposing ways.

The effect of policy variables on the employment rate is also of interest *per se*, as the employment rate is the quantitative target set by the Lisbon European council. This chapter looks at the labour market institutions as main determinants of employment performance. It tries to identify how labour market institutions have influenced the evolution over time of the employment rate and to what extent they can explain the cross-country distribution of the employment rate changes of the second half of the 1990s. In doing so, this analysis will make use of the historical patterns of the employment rate and of the policy variables.

2. A broad framework to analyse the determinants of labour market performance

Employment is determined by the interplay between labour demand and wage bargaining and/or labour supply. Hence, any variable which affects firms' hiring decisions and the outcome of bargaining between employers and employees is likely to influence the level of employment, making the competing claims of employers and employees for a share of output per head coherent. Moreover, for a given bargaining framework, factors increasing labour supply may affect job creation through endogenous wage moderation. Finally, changes in the structure of labour supply influence job creation when they improve the match between jobs and vacancies.

Although the variables that determine labour market performance are numerous, it is useful to think of them as belonging to three groups. The first group includes variables under the direct control of policy makers: active and passive LMPs, taxes on labour, employers' and employees' social security contributions and unemployment benefits[8]. The second group includes variables describing the nature of bargaining and the socio-economic structure of the labour market. These variables tend to change only slowly over time and, consequently, shape labour market outcomes primarily through their interactions with those of the first group. Hence, the second group also includes the interactions of the slow burners of employment performance (e.g. level of centralisation and co-ordination of bargaining and variables identifying the socio-demographic structure of employment) with those of the first group. Finally, the last set of determinants controls for rate of technological growth, efficiency of the production process and the degree of economic openness.

The following sections describe first how the key variables in each of these groups influence labour market performance, and second the observed trend in these variables.

2.1 Taxes

Labour taxes may affect employment if they change labour costs and modify the incentive for job creation for given after-tax wages. Changes in taxes affect labour supply decisions when they alter the gap between in-work and out-of-work income[9]. The total effect on labour supply decisions is theoretically uncertain and depends on the relative strength of income and substitution effects[10]. The response of wage-setters also matters for the employment effect of changes in labour taxes. If wage-setters internalise the effect of higher labour taxes on their tax-

8 *These policy elements are at the core of the European Employment Strategy and, in particular, guideline 8 addressing the issue of making work pay.*

9 *Out-of-work income may include all out-of-work benefits either in the form of unemployment benefits or future income flows deriving from social security payments. If the non-labour income is taxed at a lower rate than labour income, an increase in labour taxes increases the net replacement rate and thus the relative convenience between working and non-working, with a negative effect on the decision to participate, and thus, on employment.*

10 *Income effects operate through the impact of income levels on the decision to enter into the labour market or to increase the number of hours worked. Substitution effects are related to the effect of relative wages on the decision to enter the labour market or to increase the number of hours worked. G. Carone and A. Salomaki (2001),* Reforms in the tax and benefit systems in order to increase employment incentives in the EU Economic Papers No. 160 European Commission Directorate-General for Economic and Financial Affairs.

financed benefits, labour taxation is less distorting and employment performance better than when the effect is not internalised[11].

Labour demand is affected by changes in taxes if they alter labour costs. This occurs when labour costs rise in response to a change in one component of the tax wedge as real wages change to keep workers' living standard constant[12]. Hence, an increase in labour taxes raises labour costs and reduces employment if not associated with a reduction of the after-tax wage[13]. This is only a short-term effect. The increase in unemployment triggers a downward adjustment of wages that reduces labour costs and brings employment in the long-term to the level prevailing before the tax rise. Labour market performance is also not affected in the long-term by changes in labour taxation when the reservation wage adjusts proportionally to the real consumption wage. Finally, changes in the composition of the tax burden at an unchanged average labour tax rate can have an impact on job creation. This occurs when a shift of employers' social contributions towards personal taxation - including both employees' social contributions and income taxes - modifies the costs of production of domestic goods relative to foreign goods and improves competitiveness, therefore acting as a real exchange rate depreciation (see Alesina-Perotti (1994)).

The empirical evidence of the effects of taxes on labour costs and unemployment is mixed. Some authors find significant effects of taxes on labour costs or unemployment (Tyrväinen (1995), Elmeskov et. al (1998), Nickell and Layard (1999), Daveri and Tabellini (2000)). Others (e.g. Blanchard and Wolfers (2000)) find few effects of taxes on labour costs. Moreover, there is some evidence (Elmeskov et. al (1998)) that the effect of taxes on labour market outcomes is relatively low in both highly decentralised and highly centralised bargaining systems or when co-ordination is strong[14]. In Daveri and Tabellini (2000) the effect tends to be larger in Continental Europe than elsewhere.

Table 26 reports the tax wedge for two different socio-economic groups. The tax wedge is a measure of the non-wage component of the labour costs in total labour costs and is defined as the difference between the after-tax and the before-tax labour costs as a percentage of total before-tax labour costs. The tax wedge is calculated from the OECD Taxing Wages publication that provides annual data for the period 1980-2000[15]. The cross-country correlation of the tax wedge between the two categories "single worker with no children" and "married couple with two children" is high and stable over time. Hence countries with a high level of the wedge for the former category also tend to have a high level of the wedge for the latter over time[16]. There are differences between countries which persist over time, mainly within rather than between each of the two decades considered. Moreover, when Member States are ranked according to the level of the tax wedge, those countries with a relatively low wedge in the first half of the 1980s (Austria, Spain, Germany and Greece) worsened their relative position in the second half of the 1990s.

11 Gruber, Summers and Vergara (1993) contend that centralised unions look through the (public) budget, internalising the effect on the tax base of their wage claims, and allowing for a less distorting labour taxation and better labour market performance. Hence, countries with centralised bargaining should have higher income taxes and higher employment when compared to decentralised wage setting. Along the same line, a given reduction of the tax rate on wages implies a declining wage and increasing employment in countries with centralised bargaining and an increasing wage and falling employment in decentralised bargaining systems; see for example J. Kilponen and P. Sinko (2003) , Does Centralised wage setting lead into higher taxation? *Vatt, Government Institute for Economic Research, Helsinki, Discussion Paper 314. A similar argument explains why progressive income taxation should be associated with better employment performance.*

12 For an individual firm producing only one good, the labour cost is defined as nominal labour cost divided by the output price: W(1+sscer)/p, *where* W *is the before tax wage and sscer the employers' social security contributions. Assuming that all workers consume the output produced, the consumption wage is the nominal net wage divided by the consumer price:* W (1 - sscee) (1-ti) / p(1+ tc) *where* W *is the before tax wage,* ti *the income tax rate, and* tc *the indirect tax rate. The wedge is the ratio between the consumption and the production wage:*(1+sscer)(1+tc) / (1 - sscee))(1-ti).

13 For the same reason a reduction in the tax wedge reduces labour costs and stimulates job creation when improvements in workers' costs of living due, for example, to a reduction in the indirect tax rate, are not passed onto labour costs through real wage moderation.

14 The argument made popular by Calmfors and Driffill (1988) is different from that of Gruber, Summers and Vergara (1993). According to Calmfors and Driffill very centralised (at national or multi-industry level) and very decentralised (at the level of firms) bargaining systems are likely to perform better than intermediate bargaining systems because the former internalise the effect of high wage claims on aggregate demand while the latter internalise the effect of high wages on firms' labour demand. In the case of intermediate systems, the mechanisms of internalisation are too weak to lead to significant wage moderation. When bargaining occurs at the industry level, firms are able to transfer higher labour costs on the final ouput prices without suffering competitive losses. Of course, in open economies wage restraint occurs also in intermediate systems. See also L. Calmfors (1993) Centralisation of Wage Bargaining and Macroeconomic Performance: A Survey, *OECD Working Paper No. 131. According to Gruber, Summers and Vergara only countries with centralised unions perform better.*

15 An alternative indicator is the implicit tax rate on employed labour, which is defined as all taxes and social contributions levied on employed labour income divided by the total compensation of employees. This is a macro indicator based on actual tax revenues and it is an approximation of the average effective tax burden on labour in the economy. It is published in the yearly report 'Structures of the taxation systems in the EU' *by the European Commission and Eurostat.*

16 This correlation is of at least 0.8 and allows considering one family type only as statistically representative of the other.

Table 26 - Tax Wedge

	Single without children 100% of APW				Married couple with two children one-earner 100% of APW			
	1980-1984	1985-1989	1990-1995	1996-2002	1980-1984	1985-1989	1990-1995	1996-2002
Austria	38.2	39.8	39.6	44.8	27.6	28.7	28.0	33.4
Belgium	50.0	52.6	54.2	56.6	39.7	41.9	41.1	44.1
Denmark	44.5	47.4	46.3	44.5	36.6	37.0	34.0	33.1
Spain	36.4	36.8	37.5	38.4	32.5	32.8	32.8	32.5
Finland	43.8	45.8	48.1	48.5	36.1	37.6	40.1	44.5
France	38.7	41.2	43.4	44.1			41.4	41.2
Germany	43.0	45.0	47.2	51.8	34.0	34.7	36.1	35.5
Greece	28.5	32.5	33.9	35.8	15.1	30.1	33.3	35.7
Ireland	37.9	41.8	38.9	32.9	26.4	31.1	29.8	23.3
Italy	48.1	50.3	49.3	48.7	43.6	45.7	44.4	42.8
Luxembourg	38.3	36.6	34.7	34.7	20.2	17.5	15.0	13.6
Netherlands	49.7	49.1	46.0	44.0	44.3	43.3	39.5	36.2
Portugal	30.9	34.4	33.6	33.7	27.6	30.7	27.2	27.6
Sweden	50.7	51.8	47.3	50.3	45.9	47.0	42.8	46.8
United Kingdom	38.4	35.9	33.1	31.5	29.9	27.5	26.2	26.1

Source: own calculation on OECD data. The tax wedge is computed as the sum of income tax, employers' and employees' social security contributions as a percentage of gross earnings and employers' social security contributions. Missing data within sample have been interpolated. APW: average production worker.

Charts 41 and 42 display the evolution of the tax wedge for two family types. In countries such as the UK, the Netherlands and Luxembourg, taxes on labour declined throughout the 1980s and the 1990s while in Denmark, Italy, Portugal, Sweden and Ireland the decline began in the second half of the 1980s. The reduction was also stronger in Ireland and Denmark in the second half of the 1990s. For the remaining countries the wedge increased, with increases after 1995 coming to a halt or being more moderate in the case of France and Greece and continuing in the case of Germany. In the case of a married couple with children, there is less variation of the tax wedge over time but its time pattern is similar to that observed for the "single worker with no children".

The correlation with the tax wedge of respectively the unemployment and the employment rate is complex and dominated by country-specific patterns, with significant differences in both the cross-country and the cross-time comparisons (Charts 43-45). If one looks cross-section, there is virtually no correlation between the tax wedge and the unemployment and employment rate (Table 27). On the other hand, even though it is not easy to interpret in terms of causality, within each country there is a significant time correlation between labour taxes and employment performance. In Member States such as Germany, Greece, Spain, France, Ireland, and to a lesser extent, Austria, a high (low) unemployment rate is associated with a high (low) tax wedge and *vice versa*[17].

The correlation, negative for the Scandinavian countries, Belgium and Finland in the 1980s, became significantly positive in the 1990s. Compared to the 1980s, it markedly decreased in the 1990s in Italy, Luxembourg and the Netherlands. In addition, with only a few exceptions, the correlation between the unemployment rate and the tax wedge is higher in the first half than in the second half of the 1990s, and in both sub-periods higher than in all the decade. This suggests that the temporal aspect plays a crucial role in the relationship between taxes and unemployment, which cannot be fully understood if the focus is on a cross-country comparison at a certain point in time.

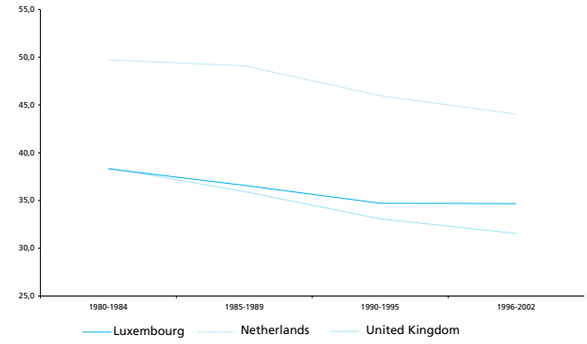
These findings do not change significantly when the correlation is calculated with respect to the employment rate or the structural unemployment rate (charts 44-45). The time correlation between labour taxes and structural unemployment is usually highly significant and higher than that between taxes and unemployment. As expected, a negative correlation between taxes on labour and employment rates is found for almost all Member States (chart 45).

This first zoom-in on the data shows that, although the cross-country correlation between unemployment and the tax burden on labour is not very significant - i.e. countries with high taxes on labour and high employment co-exist with countries with high taxes on labour and

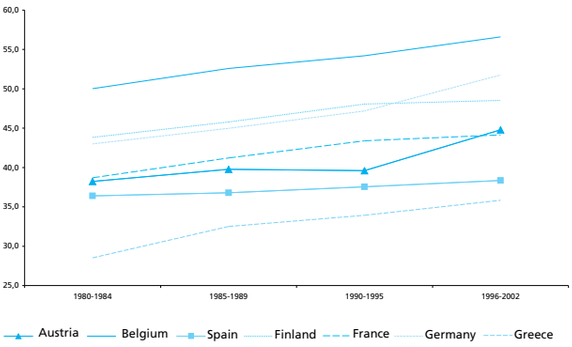
17 Since a correlation does not imply in any sense causality, it is equally correct to say that a country with a high (low) tax wedge had also had a high (low) unemployment rate.

Chart 41 - Average tax wedge single worker no children

Average tax wedge for a single with no children



Average tax wedge for a single with no children



Average tax wedge for a single with no children

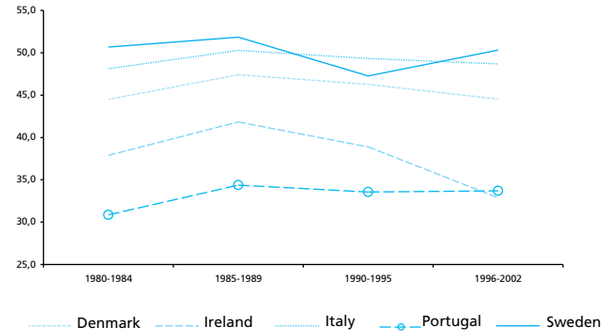
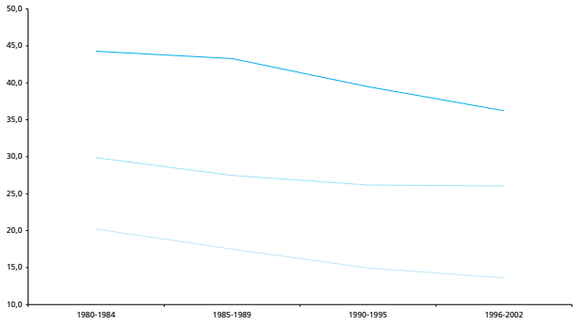
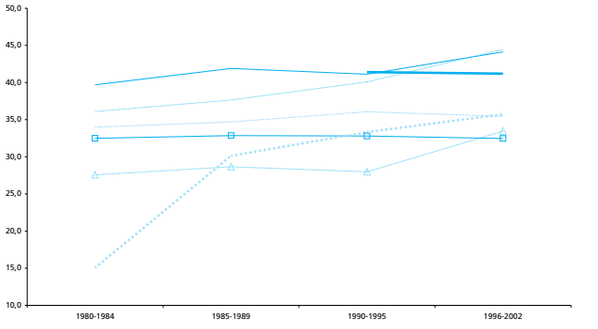


Chart 42 - Average tax wedge married couple with children

Average tax wedge for a married couple with two children



Average tax wedge for a married couple with two children



Average tax wedge for a married couple with two children

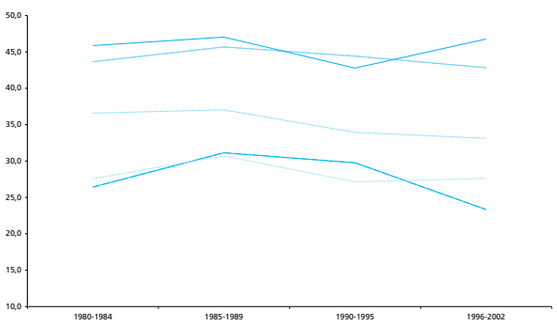


Chart 43 - Unemployment rate and tax wedge (pairwise correlation coefficients)

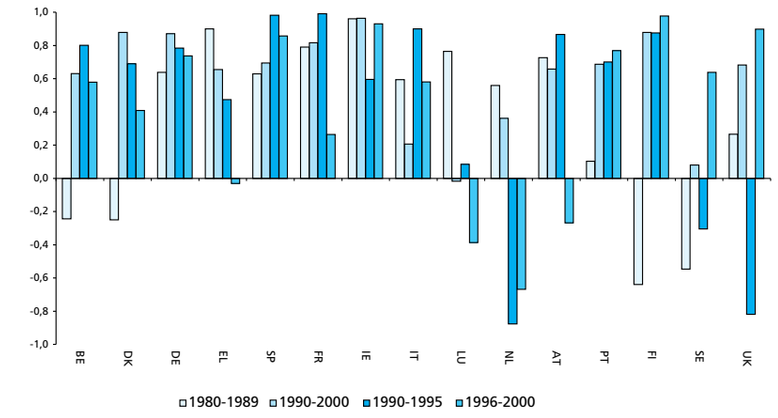


Chart 44 - NAIRU and tax wedge (pairwise correlation coefficients)

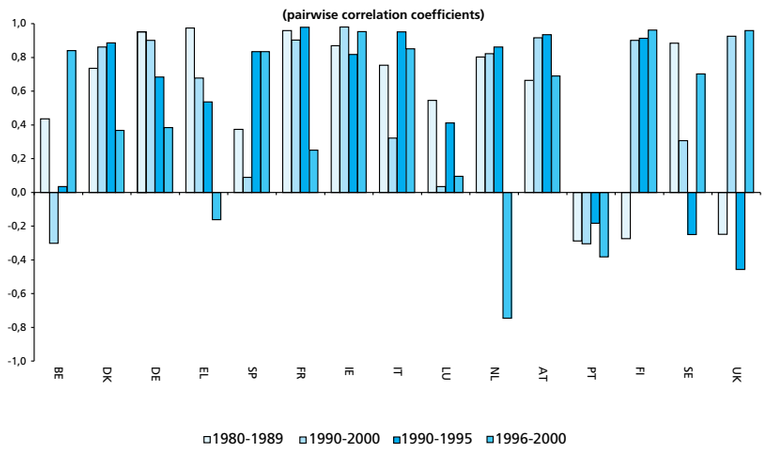
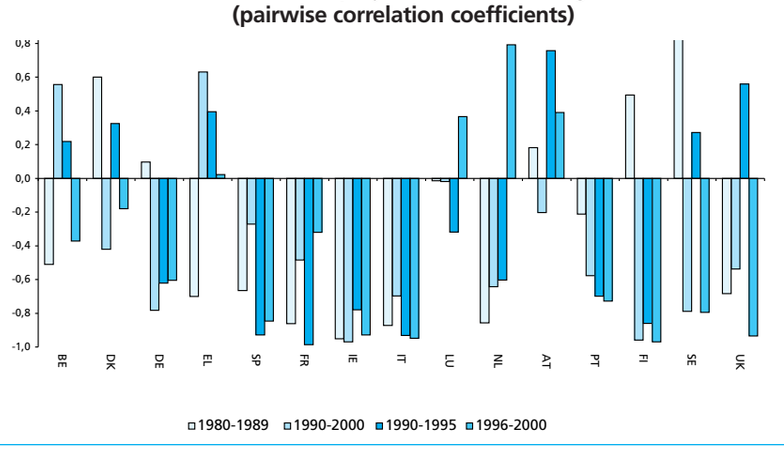


Chart 45 - Employment and tax wedge (pairwise correlation coefficients)



low employment - the correlation over time between unemployment and taxes is positive.[18] Unemployment is not necessarily high (low) in countries with high (low) tax wedge, but, in the average representative country, it tends to be higher after increases in the wedge. This implies that changes in the tax wedge are likely to account more for the country-specific response of the (un)employment rate than for the cross-countries differences at a certain point in time.

Although bivariate correlations are not indicative of the direction of causality between two variables[19], the existence of significant correlation is suggestive of labour taxes being a factor affecting labour market performance. This first evidence suggests that the mechanism relating taxes to labour market performance is not simple. Since employment and unemployment react often with lags, such dynamics should be properly taken into account in order not to underestimate the long-run impact on employment. The role of taxes will be investigated jointly with that of LMPs and other potential determinants of labour market performance in the next section.

2.2 Active Labour Market Policies

The rationale of ALMPs is based on their effect on the skills level of the labour force. Skills and upgrading of skills serve to prepare the labour force to cope with the challenges of structural change and to prevent the unemployed from dropping out of the labour force. By reducing structural imbalances, ALMPs may also increase the adaptability of the labour force to shifts in the labour demand from unskilled to skilled labour. Finally, ALMPs may prevent transitory increases in unemployment from becoming structural in nature.

18 Actually, the possibility that the correlation is zero can be excluded at a high level of confidence. This means that for a given country, a high level of taxes in one (sub-) period is associated to a high unemployment rate. Of course also the opposite holds.

19 A significant correlation between the two variables is equally consistent with a causality from taxes to unemployment and vice versa. Apart from the expected causality from labour taxes to (un)employment, a shock leading to unemployment may require an increase in the level of taxes necessary to provide direct or indirect transfers to the unemployed. Moreover, the correlation of (un)employment with taxes, can be highly significant but the effect of taxes in quantitative terms extremely small.

Table 27 - Unemployment and employment rate

	Unemployment rate					Employment rate			
	1980-1984	1985-1989	1990-1995	1996-2002		1980-1984	1985-1989	1990-1995	1996-2000
Austria	2.2	3.2	3.6	4.2	Austria	65.4	66.0	68.4	67.6
Belgium	9.9	9.2	8.0	8.7	Belgium	54.4	52.9	55.8	58.1
Denmark	7.5	5.8	8.0	5.1	Denmark	70.4	75.7	73.9	75.5
Spain	12.7	16.3	16.4	14.9	Spain	48.1	45.9	47.8	51.4
Finland	5.1	4.4	11.6	11.7	Finland	73.6	74.2	59.7	64.3
France	7.7	9.7	10.4	11.0	France	64.6	60.7	60.0	60.3
Germany	5.2	6.4	6.8	8.7	Germany	64.4	62.8	65.9	64.3
Greece	5.4	6.8	8.0	10.6	Greece	56.3	55.0	53.9	55.3
Ireland	12.1	16.2	14.3	7.8	Ireland	54.7	49.9	52.0	59.6
Italy	7.6	9.2	9.8	11.3	Italy	54.2	53.2	52.3	51.8
Luxembourg	2.7	2.4	2.4	2.6	Luxembourg	59.2	59.2	60.2	60.7
Netherlands	8.9	7.4	6.0	4.2	Netherlands	59.9	57.0	63.1	69.2
Portugal	7.8	7.2	5.5	5.6	Portugal	62.7	63.4	64.8	65.7
Sweden	2.9	2.2	6.3	8.0	Sweden	77.9	80.2	70.7	69.7
United Kingdom	9.2	9.7	8.9	6.5	United Kingdom	65.4	67.1	68.7	70.1
Correlation tax wedge and unemployment and employment	0.1	0.1	0.3	0.0		0.1	-0.1	-0.2	-0.1

Source: own calculation on OECD data. The tax wedge is computed as the sum of income tax, employers' and employees' social security contributions as a percentage of gross earnings and employers' social security contributions. Missing data within sample have been interpolated.

ALMPs may increase job creation when labour demand and labour supply expand as a consequence of such programmes. The effects on labour demand work through improvements to the matching process, increases in productivity, and substitution effects. An increase in matching efficiency weakens the incentives of the employers to attract workers by pushing up wages, reducing the structural rate of unemployment[20]. ALMPs may also raise the efficiency of labour (labour productivity) and increase net job creation. This happens when as workers become more efficient, the incentives to increase labour demand are stronger than those to reduce it[21].

However, not all types of ALMPs may expand employment. This is likely to occur when direct job creation measures crowd-out those workers that do not participate in these programmes, because employers have the incentive to replace regular workers with subsidised labour (Dalhber and Forslund (1999),

20 *In theory the 'structural rate of unemployment', can be defined in different ways. Employment in Europe 2002 provided short explanations and references to the different concepts. The demarcation between 'structural' unemployment and other forms of unemployment is difficult in empirical research. Although it is quite established now that unemployment is a phenomenon going beyond the business cycle, high 'conjunctural' unemployment has its impact on 'structural' unemployment, so the two are not independent from each other, which can also be seen by the fact that in an economic upturn, so-called marginalised groups are often quickly drawn back into the labour market. One theoretical concept often used is the non-accelerating inflation rate of unemployment (NAIRU), which is, as well known, subject to measurement errors. Nevertheless, different estimates of the NAIRU by the Commission, the OECD and the IMF all point towards a reduction of the EU 15 structural unemployment rate.*

21 *The marginal productivity of labour is likely to rise if technological progress is of the labour augmenting type, i.e. more output can be produced because labour becomes more efficient. This effect,* ceteris paribus*, is likely to reduce labour demand, as the same amount of output can be produced by fewer and more efficient workers: Calmfors (1995),* Does Active labour-market policy increase employment? *Theoretical considerations and some empirical evidence from Sweden, Oxford Review of Economic Policy, vol. 11, no.1.*
22 L. Calmfors (1995), Does Active labour-market policy increase employment? Theoretical considerations and some empirical evidence from Sweden*, Oxford Review of Economic Policy, vol. 11, no.1*

Calmfors (1995), (2000))[22]. The higher the degree of substitution between subsidised and unsubsidised labour, the larger the displacement effect due to a fall in the price of subsidised labour[23]. However, displacement effects are less of a problem when ALMPs are targeted at disadvantaged workers (e.g. long-term unemployed) even at the expense of short-term unemployed[24]. Furthermore, dead-weight costs may occur when participants would have got a job anyway even if they did not join such programmes.

ALMPs may affect the labour supply when they increase the matching efficiency and enhance the employability of the labour force through labour market training. Direct job creation may have positive effects on labour supply if it helps individuals to maintain their motivation and skills and, thus, keep them in contact with the world of work (Martin (1998)). By enhancing the employability of unemployed people, direct job creation may affect the economy's potential and non-inflationary growth. Improvements in employability of all workers may also increase competition among them and provide an incentive for wage restraint (Calmfors 2002)[25]. However, participation in active programmes may weaken the intensity of job search, if it leads job seekers to evaluate their employment prospects better than in the case of non-participation. Improvements in labour market prospects due to the effects of ALMPs may also decrease the welfare reduction of being jobless, by increasing either the reservation wage or the subsequent probabilities of being re-employed. In both cases wage pressure rises and employment drops.

The aggregate impact of ALMPs is relatively complex as active measures have both direct and indirect effects[26]. While the former come into play at the static level, the latter start playing a role when economic agents react to the likely impact of direct effects. Indirect effects are likely to be positive when an increase in the labour supply affects in-work and out-of-work income in such a way that labour becomes cheaper than non-labour. This may happen when an increase in labour supply moderates wage claims, and reduces total unemployment and the contribution of employers to unemployment insurance schemes. However, negative indirect effects may occur in the case of displacement or substitution effects or when ALMPs increase the reservation wages.

Because of this complexity, the effectiveness of ALMPs depends on the design of adequate incentives to take up work. In particular, the unemployment benefits eligibility conditions may affect the re-employment probabilities of participants in active programmes. The importance of interactions between preventive measures and tax and benefit systems has been recognised in the guidelines for employment policies. Indeed, the Employment Guidelines stress the need to develop preventive and employability-oriented strategies, building on the early identification of individual needs[27] and to review the tax, benefit and training systems to ensure that they support the employability of unemployed persons. However, it should be kept in mind that these are necessary conditions, given that, to be effective, ALMPs need to have a sufficient demand for labour.

The net effect of ALMPs is theoretically unclear and can be only gauged with the help of empirical analysis. When positive effects dominate negative or neutral ones, labour market measures may reduce the long-term unemployment component by attenuating inflationary pressures in the economy. The empirical analysis will also try to give an indication of the effects that changes in the percentage of GDP diverted to different categories of ALMPs have on labour market performance. Indeed, there is no reason to assume that diverse cat-

22 *L. Calmfors (1995),* Does Active labour-market policy increase employment? Theoretical considerations and some empirical evidence from Sweden*, Oxford Review of Economic Policy, vol. 11, no.1; L. Calmfors and Holmlund (2000)* Unemployment and Economic Growth: a partial survey *Swedish Economic Policy Review vol. 7 107-153. The recognition that subsidised employment schemes may crowd out regular employment led the Swedish authorities to replace relief works (temporary jobs where employers received a subsidy for hiring employees from the pool of individuals registered with the public employment services) with work experience schemes covering activities that "would otherwise not have occurred". L. Calmfors, A. Forslund and M. Hemström (2002)* Does Active Labour Market Policy Work? Lessons from the Swedish Experiences *Seminar Paper n. 700 Institute for International Economic Studies, Stockholm University.*

23 *The displacement effect of ALMPs may be direct or indirect according to whether they have or not wage-rising effects; M. Dahlberg and A. Forslund (1999)* Direct Displacement effects of Labour Market Programmes: the Case of Sweden*.*

24 *J. de Koning (2000)* Models for Aggregate impact analysis of active labour market policy*, in Labour Market policy and Unemployment eds. J. de Koning and H: Mosley, Edward Elgar.*

25 *The competition for jobs may also increase activity rates if individuals perceive that ALMPs preserve or increase the level of skills (Calmfors 2002). In this case, ALMPs may maintain the motivation to seek work actively reducing discouraged worker effects.*

26 *The quantification of the overall effect of ALMPS on aggregate employment is different from the evaluation of the efficiencies and effectiveness of specific ALMPs measures targeted at specific groups. The second type of analysis is essentially based on individual data of participants in programmes and is aimed at evaluating their income and employment prospects conditional to participation in such programmes and not their effect on increasing aggregate employment. Thus, the two levels of analysis provide different and complementary information on the role that ALMPs have in determining the labour market performance. In this chapter, we focus only on the evaluation of the aggregate net impact of ALMPs on job creation.*

27 *OJ of the European Communities (2002/1777/EC),* Council Decision of 18 February 2002 on guidelines for Member States' employment policies for the year 2002*. The 2002 Guidelines ask Member States to make efforts such that within one year every unemployed person is offered a new start before reaching six months of unemployment in the case of young people, and 12 months of unemployment in the case of adults in the form of training, retraining, work practice, a job, or other employability measure…-.*

egories of ALMPs have the same impact on overall labour market performance[28].

Before exploring the empirical links between ALMPs variables and the unemployment and employment rates, it is useful to describe the evolution of spending on ALMPs both as a percentage of GDP and with regard to its composition[29]. Within each country, labour market expenditure is usually strongly related to the evolution over time of the unemployment rate. There has been also a shift of labour market expenditures towards ALMPs, particularly in Ireland, Italy, France and Spain (table 28). Despite this common time pattern, sizeable differences exist across countries with shares of active spending as percentage of total labour market expenditures higher than the average in Italy, Sweden, Ireland, Portugal and Greece.

ALMPs consist of five categories: expenditures for public employment service and administration (PES); labour market training[30]; youth measures; subsidised employment (DJC); and disability programmes[31]. Significant differences exist across Member States both in the composition and in the evolution of the components of ALMPs. Table 29-30 and charts 46 and 47 show the composition of active spending for the 1980-2002 period subdivided into four subperiods. In all periods, more than a quarter of ALMPs expenditure was allocated to disability measures in the Netherlands and Sweden[32].

Table 28 - Labour Market Expenditures in the European Union[1]

	Total expenditures % of GDP				Active expenditure % of total labour market expenditure			
	1980-1984[2]	1985-1989[3]	1990-1995	1996-2002[4]	1980-1984	1985-1989	1990-1995	1996-2002[4]
Austria	:	1.3	1.6	1.8	:	22.7	21.0	27.0
Belgium	:	4.4	4.0	3.8	:	30.3	31.1	35.5
Denmark	6.0	4.5	6.3	5.2	13.1	25.3	24.2	32.8
Spain	2.5	3.1	3.5	2.3	10.3	21.0	19.3	31.4
Finland	1.8	2.3	4.9	3.8	55.3	41.0	32.8	33.0
France	2.5	2.9	3.0	3.1	22.3	25.9	36.2	43.3
Germany	:	2.1	3.3	3.5	:	41.9	41.2	36.8
Greece	:	0.6	0.8	0.9	:	38.2	45.2	47.0
Ireland	:	4.6	4.2	2.7	:	31.9	34.2	51.4
Italy	:	1.8	2.5	1.9	:	38.1	58.7	56.7
Luxembourg	1.5	1.2	0.8	0.9	51.6	33.0	26.2	30.3
Netherlands	3.8	4.4	4.2	4.2	20.6	29.9	33.6	39.4
Portugal	:	0.7	1.4	1.6	:	58.8	52.8	47.3
Sweden	2.2	2.7	5.0	3.5	67.7	70.7	55.9	53.2
United Kingdom	2.1	2.3	1.9	1.0	28.7	35.3	29.1	38.1
Unweighted Average	2.8	2.6	3.2	2.7	33.7	36.3	36.1	40.2

Source: OECD, Social Expenditures database. For the 1995-2000 period data are from the Employment Outlook 1999, 2000, 2001.
1 Total labour market expenditures include ALMPs and passive measures (expenditures for unemployment compensation and early retirement for labour market reasons). Expenditures are expenditures paid and controlled by the general government and mandatory private social expenditures.
2 For Spain, Germany, Greece, Ireland, the Netherlands and Portugal passive measures include only unemployment compensation.
3 For Greece and the Netherlands passive measures include only unemployment compensation. For Ireland and Portugal early retirement for labour market reasons are only available since 1990.
4 Data refer only to public expenditures; 1996-2002 for Austria, Spain, Finland, Germany, Sweden; 1996-2001 for Belgium, France, Ireland, the Netherlands and the UK; 1996-2000 for Denmark and Portugal; 1996-1999 for Italy 1996-1998 for Greece; 1996-1997 for Luxembourg (a) 1985

28 *The econometric analysis of section 3.6 will explore the effect of the intensity of spending of ALMPs and several categories of active programmes on the aggregate unemployment and employment rate. The analysis will be on the aggregate impact and will not evaluate the effectiveness of ALMPs at the micro level (i.e. the effect on participants' re-employment probabilities and or their earning profiles).*

29 *Data are from the OECD labour market database. Eurostat LMP database collect more comparable data. Unfortunately its use is limited by the lack a long time series.*

30 *This chapter is based on an econometric analysis focusing on certain determinants of labour market behaviour in particular ALMPs and related training measures. As previous Employment in Europe reports and other chapters in this report show, human capital more generally is an important factor and this issue is taken up in chapters 3 and 4 of the current report.*

31 *See Martin J. (2000)* What works among active labour market policies: Evidence from OECD countries' experiences in Policies Towards Full Employment, *Paris OECD.*

32 *By nature, this analysis only allows to look at expenditure, while more in-depth analysis of the impact of education on labour markets would need to take account of the general role of education, the pros and cons of initial training compared with on-the-job training, the various types of training, the length and quality of education and training, who finances it (public/private), etc.*

Table 29 - Categories of ALMPs absorbing the maximum share of LMPs expenditures

	1985-1989	1990-1995	1996-2002
Austria	PES	PES	TRAINING
Belgium	DJC	DJC	DJC
Denmark	TRAINING	TRAINING	TRAINING
Spain		DJC	DJC
Finland	DJC	DJC	DJC
France	TRAINING	TRAINING	DJC
Germany	TRAINING	TRAINING	TRAINING
Greece	DJC	TRAINING	TRAINING
Ireland	TRAINING	DJC	DJC
Italy	YOUTH	YOUTH	DJC
Luxembourg	DISABILITY	YOUTH	YOUTH
Netherlands	DISABILITY	DISABILITY	DISABILITY
Portugal	TRAINING	YOUTH	YOUTH
Sweden	DISABILITY	DISABILITY	DISABILITY
United Kingdom	PES	PES	PES

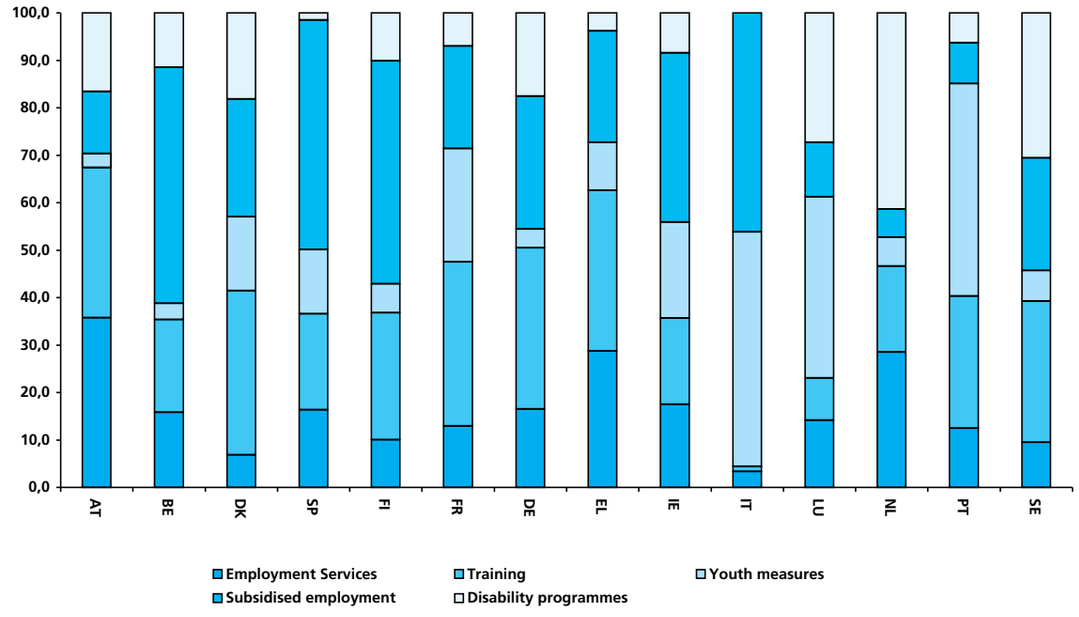
Table 30 - ACTIVE LABOUR MARKET PROGRAMMES

(as % of total active labour market expenditures)

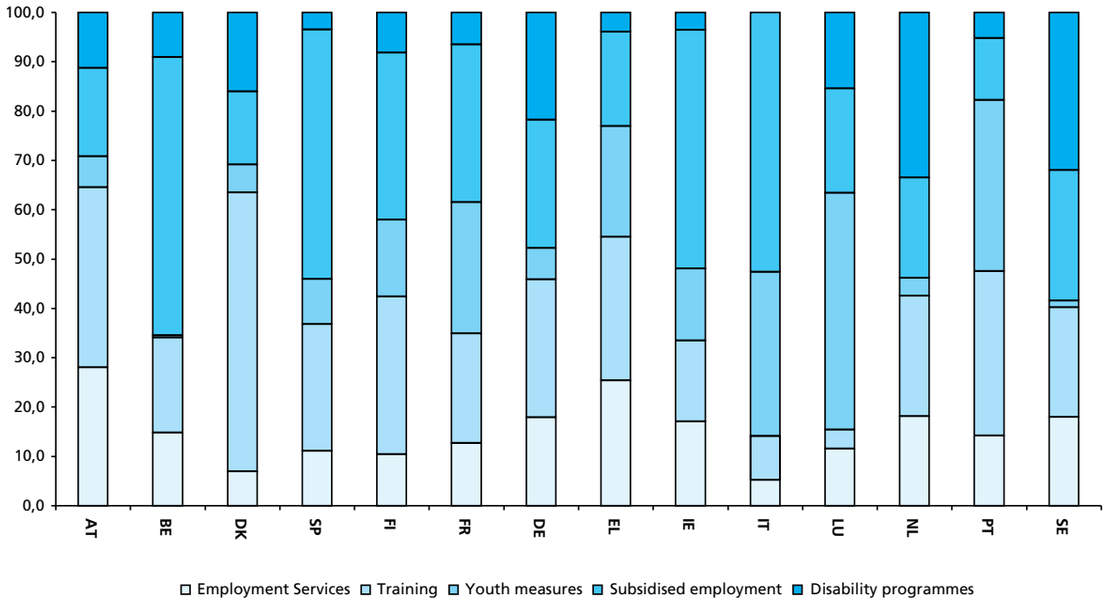
	Employment service and administration				Labour market training				Youth measures				Subsidised employment				Disability programmes			
	1980-1984[1]	1985-1989[2]	1990-1995	1996-2002[3]	1980-1984[1]	1985-1989[2]	1990-1995	1996-2002[3]	1980-1984[1]	1985-1989[2]	1990-1995	1996-2002[3]	1980-1984[1]	1985-1989[2]	1990 1995	1996-2002[3]	1980-1984[1]	1985-1989[2]	1990-1995	1996-2002[3]
Austria	:	36.6	35.7	28.1	:	31.7	31.7	36.5	:	6.8	3	6.3	:	13.1	13	17.9	:	11.8	16.6	11.3
Belgium	:	13	15.9	14.8	:	15.7	19.5	19.3	:	1.3	3.4	0.5	:	58.2	49.7	56.4	:	11.8	11.5	9
Denmark	11.5	9.1	6.8	6.9	26.2	33.7	34.6	56.6	3.5	20.8	15.6	5.7	41.3	20.9	24.8	14.8	17.5	15.5	18.1	16
Spain	:	:	16.3	11.1	:	:	20.3	25.8	:	:	13.5	9.2	:	:	48.4	50.5	:	:	1.6	3.5
Finland	:	9.9	10	10.5	:	26.8	26.8	31.9	:	5.5	6	15.6	:	46.9	47	33.9	:	11	10.1	8.1
France	20.1	16.7	12.9	12.7	43.3	39.2	34.6	22.2	24.3	30.2	23.9	26.6	4.7	7.2	21.6	32	7.5	6.7	7	6.5
Germany	:	23.3	16.5	17.9	:	28.9	34	28	:	5	4	6.3	:	20.6	28	26	:	22.2	17.6	21.8
Greece	:	24.5	28.7	25.4	:	27.8	33.8	29.1	:	13.1	10.1	22.4	:	32.9	23.5	19.1	:	1.7	3.8	3.9
Ireland	:	10.7	17.5	17.1	:	36.1	18.2	16.4	:	31.3	20.2	14.6	:	17.1	35.7	48.3	:	4.8	8.4	3.6
Italy	:	10.8	3.3	5.2	:	3.3	1.1	8.9	:	75	49.4	33.2	:	10.8	46.2	52.6	:	:	:	:
Luxem.	4.9	9	14.2	11.5	2.4	3.5	8.9	3.8	6.2	19.1	38.2	48	72.1	16.1	11.5	21.2	14.4	52.3	27.3	15.4
Netherl.	10.2	26.3	28.6	18.2	14	16.5	18	24.4	2.6	3.8	6.1	3.6	13.4	3.5	5.9	20.3	59.8	49.9	41.4	33.5
Portugal	:	18.5	12.4	14.2	:	37.2	27.9	33.3	:	20.1	44.7	34.7	:	17.4	8.6	12.6	:	6.8	6.3	5.2
Sweden	:	12.4	9.5	18	:	27.4	29.8	22.3	:	6.6	6.4	1.3	:	13.8	23.7	26.5	:	39.8	30.6	32
United Kingdom	24.5	22.6	37.4	39.6	14.6	14.8	26.8	14.5	30.8	32.4	26.6	36.3	25.2	26.4	4.6	4.3	4.9	3.8	4.6	5.4

Source: OECD Social Expenditure database. For the 1995-2002 data from the Employment Outlook.
Note: Data may not add up to 100 due to rounding. For Greece data on "Measures for disabled" are not available for 1995.
For Denmark, Ireland, the Netherlands and Portugal data available until 1997; for Greece data available until 1993.
1 1983-1984 for the Netherlands ; 2 1986-1989 for Portugal
3 Data refer only to public expenditures; 1996-2002 for Austria, Spain, Finland, Germany, Sweden; 1996-2001 for Belgium, France, Ireland, Italy, the Netherlands and the UK; 1996-2000 for Denmark and Portugal; 1996-1998 for Greece; 1996-1997 for Luxembourg. In the case of Italy it is assumed that Expenditures on Public Employment Services and Administration represented the same share as in 2000
(a) 1985
(b) 1989

Chart 46 - Composition of active spending in the EU 1990-1995



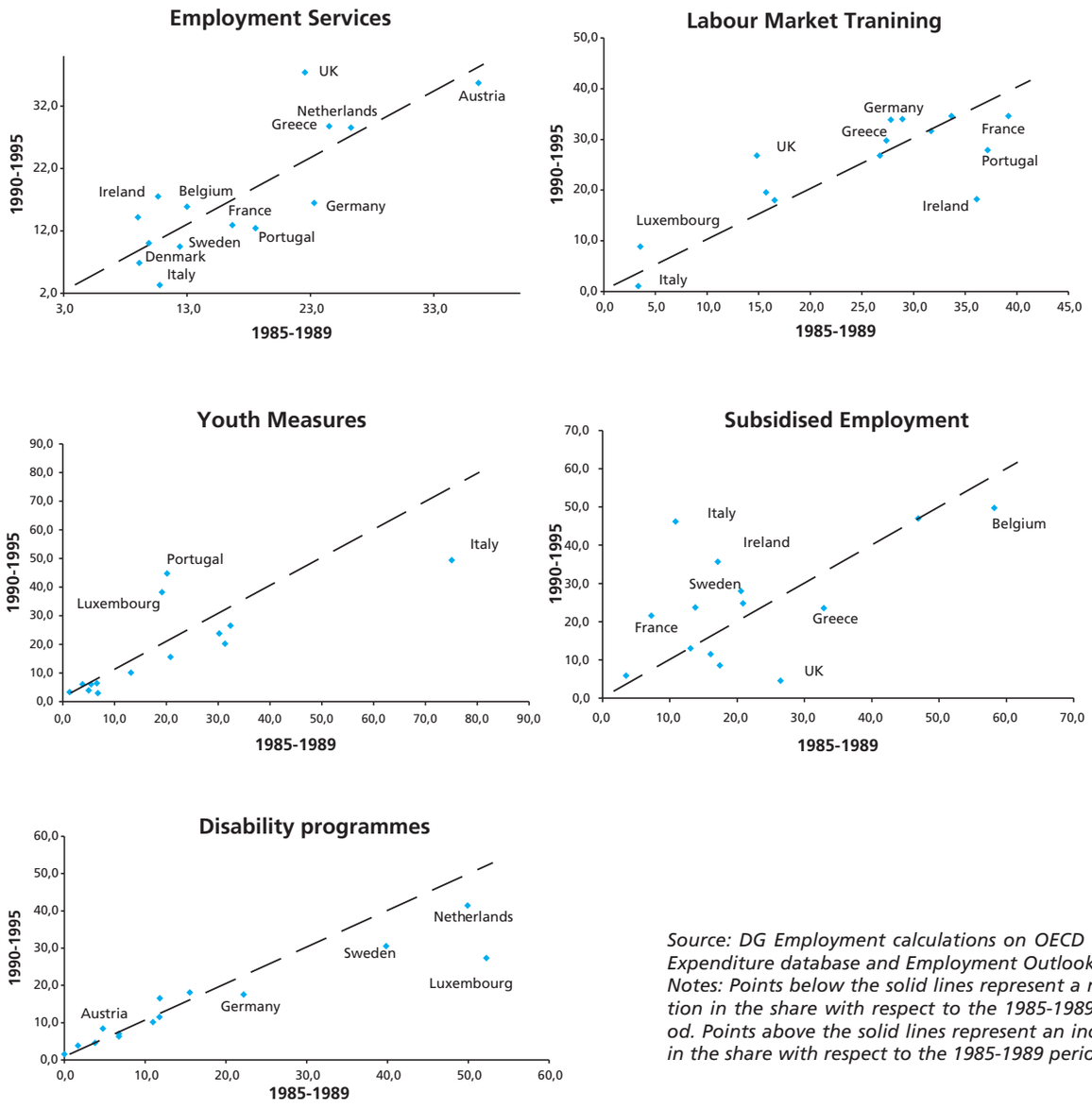
Composition of active spending in the EU 1996-2002



Source: OECD Social Expenditure database. For the 1995-2002 data from the Employment Outlook see footnotes table 34.

Youth measures were allocated a similar proportion of expenditure in Luxembourg, UK, Portugal, and, to a lesser extent, in Italy and France. Direct job creation absorbed the highest amount of funds earmarked to labour market expenditures in Belgium, Italy, Spain and Ireland, with a share of about 50% of total ALMP expenditure in the period 1996-2002. Similarly, in France and Finland, it accounted for about 30% of total ALMP expenditure, although in the latter it had fallen by more than 10 percentage points since the second half of the 1990s. While Austria and Denmark are the only EU countries with a large and increasing share of expenditures attributed to training, in the remaining Member States it accounts for less than 30% of total ALMPs expenditure, with Portugal, Greece and Finland allocating more

Chart 47 - Composition of active spending in the Union (as a % of total ALMP)

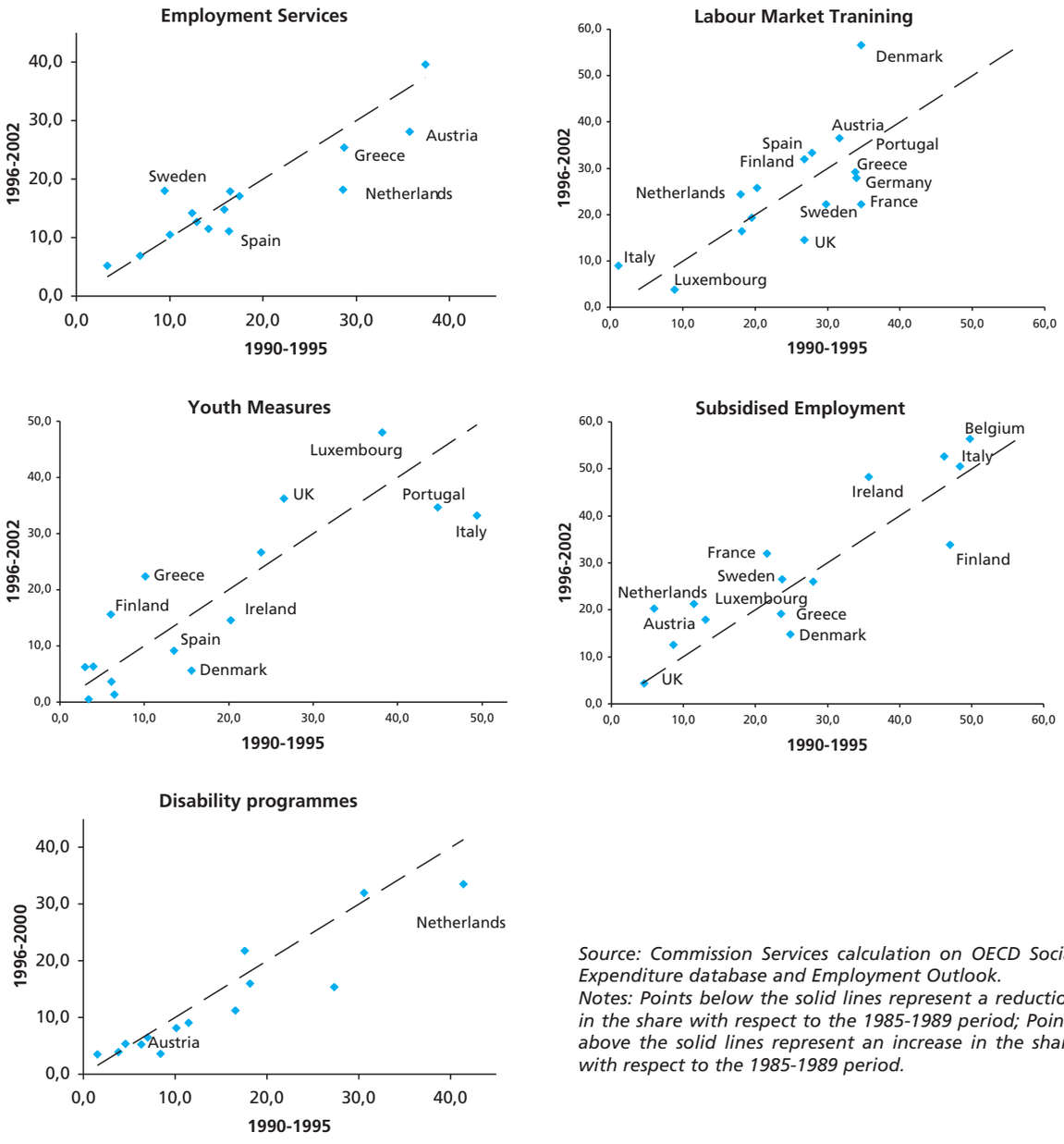


Source: DG Employment calculations on OECD Social Expenditure database and Employment Outlook.
Notes: Points below the solid lines represent a reduction in the share with respect to the 1985-1989 period. Points above the solid lines represent an increase in the share with respect to the 1985-1989 period.

than the others to this category. Finally, only in Ireland, Sweden and particularly the UK, is the financing of the public employment services high and increasing over time.

Almost all Member States have shifted resources for active spending to training. However, the strong increase in the amount of total resources allocated to this item by Denmark, the Netherlands, and, to a lesser extent, by Italy, Spain, Finland and Austria is remarkable. The only relevant exceptions are France and Ireland that have redistributed resources from training to public employment services in the case of Ireland and to direct job creation in the case of both countries. France, which in the second half of the 1980s had a comparatively high share of active spending devoted to training, earmarked in the 1996-2002 period a below (un-weighted) average share to this category. Youth measures absorb an increasing share of active spending in Luxembourg, Portugal, Finland and Greece.

Charts 48-49 give a snapshot of the relation between labour market performance and the expenditures as a percentage of GDP, respectively, on total ALMPs and some of its components. From these charts a common pattern does not emerge neither across countries nor over time. For some countries and in certain years, (e.g. Spain in the 1990s and Germany in the 1980s) the cor-

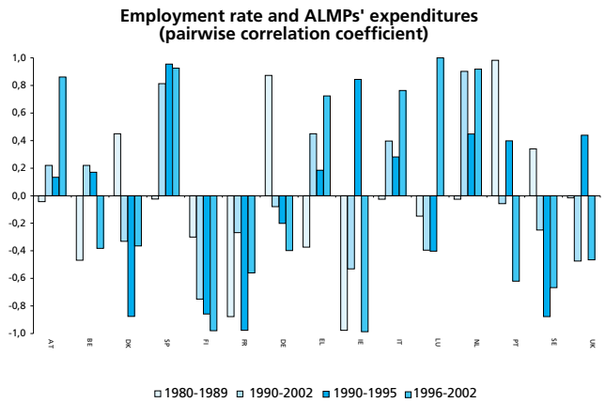


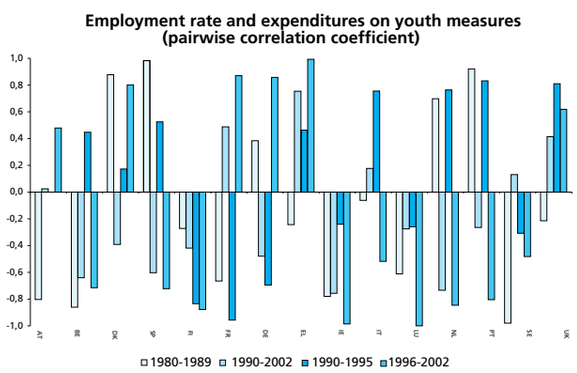
Source: Commission Services calculation on OECD Social Expenditure database and Employment Outlook.
Notes: Points below the solid lines represent a reduction in the share with respect to the 1985-1989 period; Points above the solid lines represent an increase in the share with respect to the 1985-1989 period.

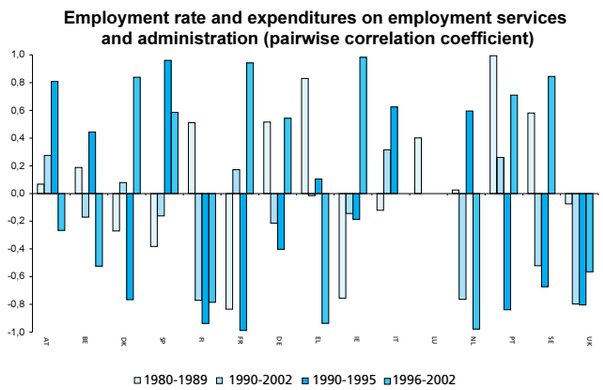
relation is positive, implying that high (low) employment rates are associated with high (low) percentages of GDP on expenditures on ALMPs. In other Member States (e.g. Denmark, France, and, only in the 1990s, Sweden) the relationship is negative, so that high (low) employment is associated with low (high) expenditures on ALMPs.

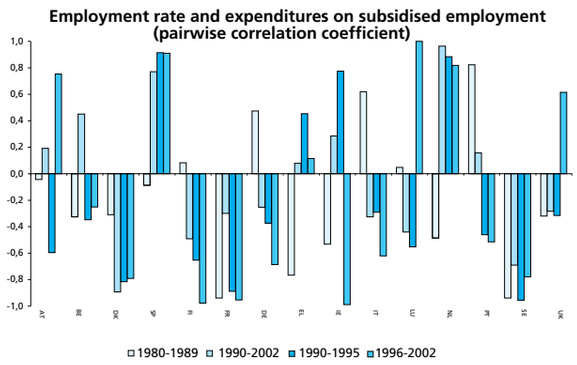
The interpretation of these findings is complicated by the different signs found for the correlation for certain countries and in certain periods. When negative it may reflect reverse causation from employment to ALMPs. If some exogenous shock has pushed the employment rate down, expenditures on labour market policies (passive and active) rise. Low employment rates lead to ALMP expenditure, not the opposite. The positive correlation may reflect either a causal relationship between active policies and job creation, or a spurious correlation such as a third common component that drives both employment and expenditures on ALMPs. For example, when the economy and employment grow, tax receipts rise and the funds available for ALMPs rise as well. Although a correlation does not imply any type of causality, these findings are suggestive of some link between expenditures on active policies and labour market performance. However, the nature of this link can be understood by only controlling for all the possible factors influencing the labour market

Chart 48 - Correlation between employment rate and some categories of ALMPs expenditures









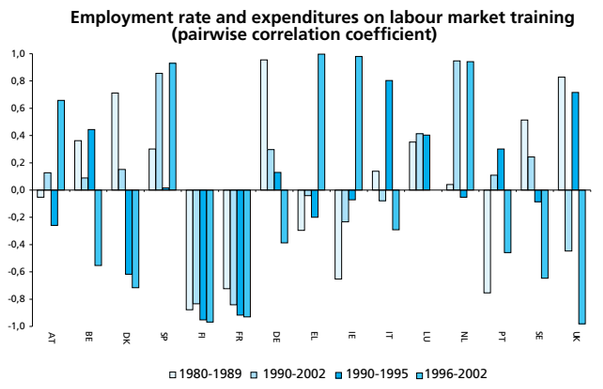
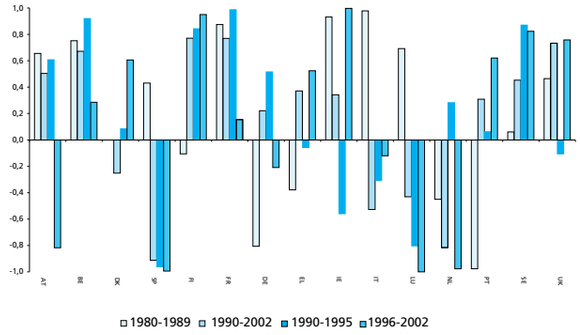
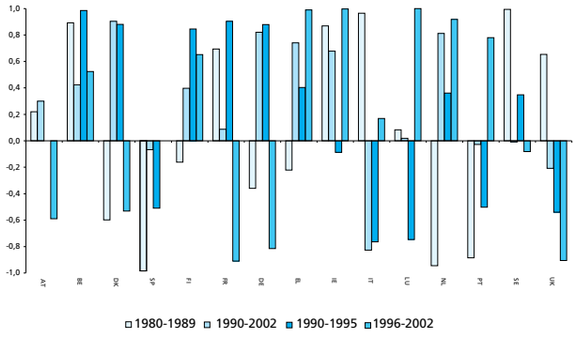


Chart 49 - Correlation between unemployment rate and some categories of ALMPs expenditures

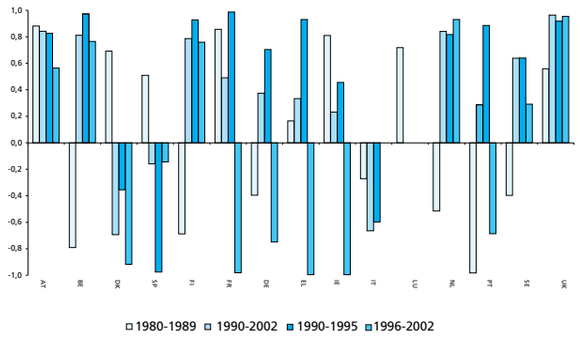
Unemployment rate and ALMPs' expenditures (pairwise correlation coefficient)



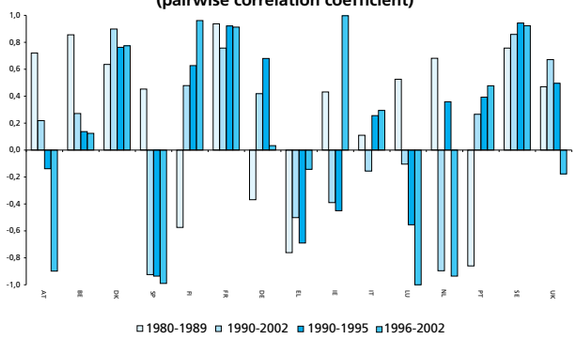
Unemployment rate and expenditures on youth measures (pairwise correlation coefficient)



Unemployment rate and expenditures on employment services and administration (pairwise correlation coefficient)



Unemployment rate and expenditure on subsidised employment (pairwise correlation coefficient)



Unemployment rate and expenditures on labour market trainng (pairwise correlation coefficient)

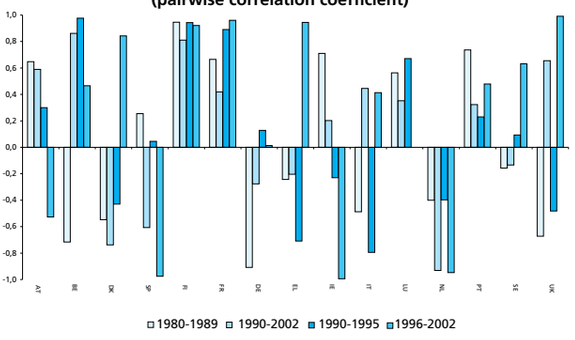
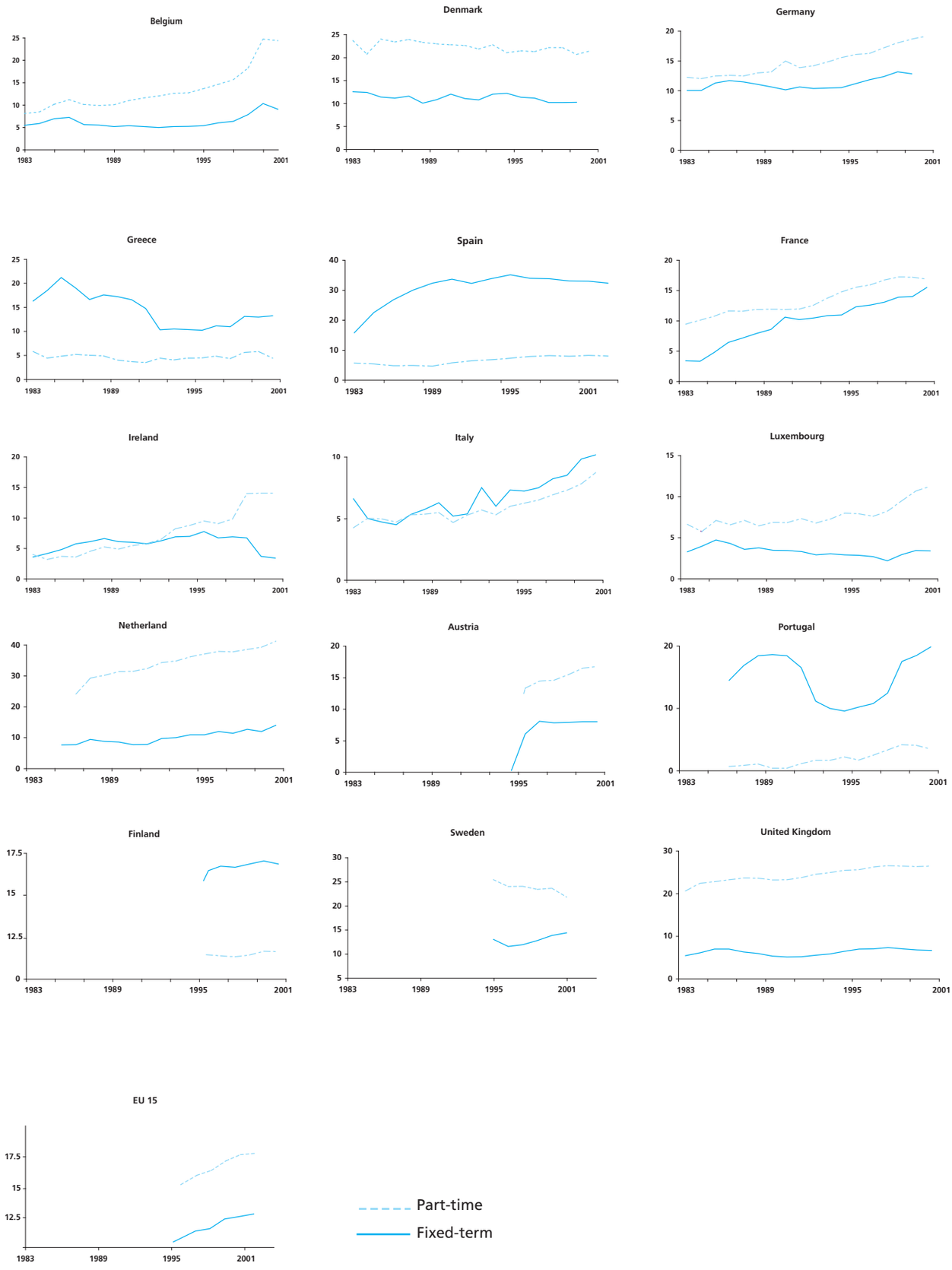


Chart 50 - Share of fixed term and part-time in total employment



performance. Before doing so, this section ends with a description of potential factors, other than taxes and ALMPs, which are likely to influence the evolution of the employment rate.

2.3 Other factors influencing labour market performance

ALMPs and labour taxes are only some of the factors influencing employment performance. It is important to control for other factors, otherwise their effects on employment would be wrongly attributed to taxes or ALMPs. The following section gives a brief review of the role of other variables, and their effect on employment.

2.3.1. Unemployment benefits system

In theory the level of unemployment benefits affects negatively employment performance when they reduce the cost of non-employment and induce unemployed people to wait for a job which suits them. However, unemployment benefits act also as search subsidies, which may improve productivity by improving the match between jobs and vacancies. The recent evidence has also pointed toward the importance of the design of the unemployment benefits regime. The duration of the entitlements, the strictness with which the benefit system is operated and the coverage of the system can be even more important than the level of wages replaced by the unemployment benefits. Also the funding of the regime matters. There is substantial theoretical and empirical literature showing that unemployment benefits are not necessarily detrimental for employment. This occurs when workers' recognise the link between contributions paid and the benefits received. In this case, unemployment benefits allow workers to "buy" insurance against employment risks which takes the form of lower wage claims. Hence, unemployment benefits, as part of workers' expected income, helps to smooth out income fluctuations and to stabilise consumption. At the same time unemployment benefits reduce the risks of non-employment, raise workers bargaining power and reduce employment when wages negotiated are above productivity.

2.3.2. Temporary and part-time jobs

As a response to the high level of unemployment and in order to increase the flexibility of the labour market, the conditions for the use of new forms of contractual arrangements have been eased everywhere in Europe. Temporary and part-time contracts represent two forms of more flexible of working arrangements. During the 1990s, the share of employed people with contracts of limited duration rose in almost all Member States, while more employed, especially women, made use of part-time (Chart 50). Since allowing for more temporary jobs to be created entails an increase in both job creation and job destruction, the effects on employment are uncertain (Blanchard Landier (2000), Cahuc and Postel-Vinay (2001)). Furthermore, the more frequent use of temporary contracts, with unchanged firing costs, may induce firms to substitute permanent with temporary employment (Nunziata and Staffolani (2001)). Because of these ambiguous effects, empirical analysis is needed to understand the quantitative impact on aggregate employment. Part-time and more flexible working hour arrangements reduce the cost of raising a child and allow a better reconciliation of private life with working life. Consequently, labour market participation rises, easing the constraints from the labour supply side to expand labour demand.

2.3.3. TFP and skills

Technological progress or improvements in production efficiency (total factor productivity or TFP) increases labour productivity and shifts upward the demand for labour. However, if wages grow as much as productivity and the reservation wage grows with the real wages deflated by the consumption price index (so-called consumption wages), the initial effect on employment is transitory. Furthermore, the nature of technological progress also matters for employment. With process innovation, the effect on employment is likely to be negative if jobs destroyed by the introduction of labour-saving technologies are not substituted with jobs created by the production of new goods and services, made possible by new technologies. New goods and services are likely to be easily introduced when there is a demand for them, which occurs when the consumers' preferences change. The presence of a skilled labour force enables such a demand change to be effective. Hence, even when technological progress tends to save labour, the interaction of these innovations and a skilled labour force allows new markets to be created[33]. Moreover, a change in the skill composition of the labour force towards higher levels of education tends to increase the weight given to groups with high employment rates (e.g. the highly skilled), pushing up the overall employment rate[34].

2.3.4. Openness

International competition in product markets affects the wage and price formation mechanism, limiting inflationary pressures in the economy. Indeed, the increase in the degree of openness imposes a constraint on price and wage dynamics through the effects on non-tradable producing sectors exerted by the competition within the tradable producing sectors. When this occurs, the wage elasticity

33 Pascal Petit and Luc Soete (2001) Technology and the future of European Employment*, Edward Elgar Publishing.*
34 For a quantification of this effect see Employment in Europe 2002.

of the labour demand rises and the labour demand shifts outwards (i.e. there is more demand of labour at a given wage rate). As a consequence, employment and wages go up and, if the labour force rises by less than the increase in employment, unemployment declines. Increased internal competition and the removal of barriers to external competition reduce the opportunities of rents seeking behaviour by firms and workers, lower the bargained wage and increases employment (Blanchard and Giavazzi (2001)). Moreover, the increased competition may change endogenously the aptitude of unions towards wage moderation leading to more employment friendly bargaining systems[35]. However, more open economies and more globalised markets tend to increase the exposure to external shocks and increase the demand of insurance against employment and income risks (e.g. Agell (2000) and Rodrick (1998)). Hence, growing openness to international competition can have ambiguous effects on employment. These effects tend to be positive when they reduce the mark-up of price on labour cost (i.e. the rents in the product market) and, consequently, the rent seeking behaviour of unions that try to appropriate of monopolistic rents in the product market[36]. The extent of openness has negative effects when it raises the demand for protection of income and employment risks in a way that enhance the bargaining power of the "insiders" at detriment of the "outsiders".

3. Econometric estimates of the determinants of the employment rate

The evolution of the employment rate over time may be explained in terms of the variables just mentioned. Of course, these variables do not exhaust the entire set of all possible determinants in the evolution of the employment rate. Nor is it possible to exclude that some labour market institutions absorb some types of shocks better than others. In this case, part of the cross-country differences in the employment rates would be related to the heterogeneity of institutions and to the interactions between institutions and policy variables. Moreover, the fact that not only the "level" of institutions, but also the changes in the institutional set-up, may affect the medium- to long-term labour market performance makes the analysis more complex. In particular, the response of the employment rate to a change in its determinants may take some time to work out. This implies that static methods are not very informative concerning the dynamic adjustment processes, which characterise the long-term component of the unemployment rate.

The empirical analysis will explore the effects of several variables on the employment rate, estimating a reduced-form model of employment[37] . We use econometric techniques (dynamic panel) which allow for the integration of the time series and the cross-section dimension over the period 1980-2000 into the analysis. Dynamic panel modelling takes account of the variability over time of all those factors which may affect the evolution of the employment rate, and which are not captured explicitly by the set of explanatory variables already considered[38].

The employment rate is expressed as a function of the output-gap (included to capture the business cycle); the tax burden on labour; its components (i.e. employers' and employees' social security contributions, income tax rate); technological growth; the extent of openness of the economy[39]; the intensity and the composition of ALMP expenditures[40]; the share of temporary or part-time contracts. The lagged employment rate is included as an explanatory variable to account for missing variables and for the employment dynamics.

Table 31 shows the results of the employment rate equation with explanatory variables: the output-gap; the rate of growth of total factor productivity; the degree of openness of the economy; the tax wedge, and the gross replacement rate (columns 1-2). There is no reason to assume, as in columns 1 and 2, that labour market performance is invariant with respect to a shift in the composition of the tax wedge from one component to the other. Column 3 verifies the hypothesis of neutrality of the composition of labour taxation. Column 4 introduces the expenditure on active labour market policies. The role of different categories of ALMPs and their interaction with the generosity of the unemployment benefits system

35 It is not by chance that wage agreements that take account of international competitiveness are typical of small and very open economies such as Belgium and the Netherlands.

36 In this case an increase in the degree of openness raises competition and put a limit to the price mark-up. With a more competitive product market there is also a more competitive labour market. This implies that wages reflect more productivity developments than the employers' or employees' bargaining power.

37 In other words, we do not recover from the estimated coefficients the parameters that identify the labour demand and labour supply. This approach has been used by other studies (e.g.) Elmeskov et al. (1998), Layard et al. (2000), IMF (2003), Estevao (2003).

38 See annex to chapter 2 Estimation of employment rate equations.

39 The extent of openness is measured as the sum of exports and imports divided by GDP.

40 The intensity of ALMPs is calculated as active labour market spending as a percentage of GDP divided by the unemployment rate. It is a measure of the spending effort per person unemployed relative to the output per member of the labour force (Martin 1998).

Table 31 - Short-run employment rate equations (PANEL GMM)

	1	2	3	4	5	6
Time Period	1983-2000	1983-1999	1983-1999	1986-1999	1989-2000	1989-2000
Employment rate (-1)	1.32 ***	1.35 ***	1.34 ***	1.22 ***	1.14 ***	1.08 ***
	(19.2)	(16.6)	(17.4)	(15)	(12.3)	(12.2)
Employment rate lagged (-2)	-0.45 ***	-0.48 ***	-0.48***	-0.42 ***	-0.37 ***	-0.35***
	(-8.2)	(-6.76)	(-6.94)	(-7.84)	(-5.61)	(-5.01)
Macroeconomic Variables						
Output gap	0.07 ***	0.05 *	0.06 *	0.08 ***	0.06 ***	0.08 ***
	(3.5)	(1.7)	(1.9)	(4.71)	(2.68)	(3.03)
TFP growth (-1)	0.08*	0.12 **	0.12***	0.14***	0.09 **	0.12***
	-1.71	-2.7	-2.83	-2.53	-1.8	-3.03
Openness	-0.05**	-0.04 **	-0.04 *	0.04 **	0.015 ***	0.04***
	(-2.03)	(-2.07)	(-1.68)	(7.66)	(2.55)	(7.53)
Openness (-1)	0.08 ***	0.08 **	0.08 **			
	(2.66)	(2.53)	(2.38)			
Taxes, social security contributions, and Labour market policies						
Tax wedge (-1)	-0.031	-0.019	:	-0.024	-0.06	
	(-1.15)	(-0.64)		(-1.19)	(-1.60)	
Gross replacement rate(-3)		-0.02**	-0.02 *			
		(-2.2)	(-2.10)			
Gross replacement rate				-0.04 **		
				(-2.36)		
Employers' social security contributions(-1)			-0.05 ***			
			(-4.41)			
Employees' social security contributions			-0.013			
			(-0.48)			
Income tax rate (-1)			0.009			
			(0.25)			
Intensity of spending on active labour market policies1				0.04 ***		
				(5.1)		
Expenditure on ALMPs as % of GDP1						
Intensity of spending on direct job creation					0.02	0.05 **
					(0.68)	(1.90)
Intensity of spending on Youth Measures					0.11***	0.17 ***
					(3.34)	(4.38)
Intensity of spending on Public Employment Services					0.29***	0.30 ***
					(4.86)	(5.83)
Intensity of spending on Training (-3)					-0.001	0.02 ***
					(0.483)	(2.00)
Intensity of spending on Youth Measures * Replacement rate						0.005***
						(2.76)
Intensity of spending on Training measures * Replacement rate (-3)						-0.001 ***
						(-1.77)
Number of observations	270	252	252	194	165	193
Test for first-order serial correlation	-2.87	-2.7	-2.73	-2.36	-2.76	-2.75
	(0.004)	(0.007)	(0.006)	(0.018)	(0.005)	(0.06)
Test for second-order serial correlation	0.59	0.28	0.32	-0.63	-0.56	-1.099
	(0.56)	(0.78)	(0.75)	(0.53)	(0.58)	(0.272)
Sargan test of over-identifying restrictions	160.6	146.8	139.8	217.7	184	206.6
	(182, 0.87)	(181, 0.97)	(179, 0.99)	(531, 1.00)	(872, 1.00)	(934, 1.00)

Notes: The Sargan test is a test of over-identifying restrictions with a c2 asymptotic distribution; degrees of freedom and p-values in parentheses. The tests for first and second-order serial correlation are distributed asymptotically as a standard normal, p-values in parentheses. Equations 1-3 balanced; equation 4 unbalanced. Instruments set in equations 1-3 Emprate(-3) and earlier values; in equation 4 Emprate(-3) ALMPU(-1) and GRR(-1) and earlier values.
**** Statistically significant at 1% level (i.e. there is a 1 per cent probability that the estimated coefficient is not different from zero); ** Statistically significant at 5% level * Statistically significant at 10% level; To get rid of the common component, all variables but the output- gap have been expressed as deviations from country means.*
Source: Eurostat, LFS

are explored respectively in columns 5 and 6. Wages do not appear in the table because the above variables also influence wages and employment. To verify the consistency of the findings of the employment and the wage equations, it is necessary to study separately the wage formation mechanism. This is done in section 4 following the analysis below of the factors influencing the employment rate.

3.1 The role of the macroeconomic variables

The employment rate is characterised by a high degree of persistency, implying that, following a temporary shock, it takes about two years for the employment rate to start to revert towards the pre-shock level. Cyclical recoveries and downturns are respectively accompanied by increases and decreases in the employment rate. Over a long-time span the deviation of current GDP from its potential is on average zero, implying that the output-gap is zero, and thus it does not appear among the long-term determinants of the employment rate (table 32).

The rate of growth of total factor productivity (due to improvements in the efficiency of production or to pure technological progress) has a positive impact on the employment rate with a one-year lag. Both in the short- and long-term, countries with an increase in the TFP growth higher than average TFP growth tend also to have an increase in the employment rate higher than the average employment rate[41]. Taking all countries as a whole, the decline by 0.6 percentage points observed between the 1980s and the first half of the 1990s in the average TFP growth corresponds to a decline in the employment rate of about 0.5 percentage points. In the second half of the 1990s, the increase by 0.5 percentage points in TFP growth is associated with an average increase in the employment rate of about 0.4 percentage points.

The extent of economic openness is another factor influencing labour market performance. Although an increase in the degree of openness has, in the same year, a negative impact on the employment rate in three out of six specifications (table 31), in the long-term it always has a significant positive impact. An increase in the degree of openness by 10 percentage points is associated with a rise in the employment rate, according to the specifications, between 1 and 3 percentage points. The temporary negative response is consistent with the presence of nominal rigidities[42]. As the extent of openness of an economy rises, the competitive pressure from abroad rises as well. With sticky prices and wages, a temporary fall in competitiveness would depress labour demand and reduce employment. This decline is only temporary as the economy tends to adapt to the new environment either through changes in prices and wages or through policies stimulating investment and innovation aimed at reaping the benefits of a more competitive macroeconomic context.

41 This is because all variables have been expressed as deviation from period means. In Estevao (2003) the overall impact of technological growth on the employment rate is negative and it is interpreted as the effects of the introduction of labour-saving technologies in the production process. This different finding may be explained by the different specifications used for the employment rate equations. Firstly, his study analyses a panel of 15 OECD countries including Australia, Canada, New Zealand, Norway and the United States, while Greece, Italy, Luxembourg, Portugal and Ireland are excluded. Secondly, Estevao focuses on the determinants of the business sector employment rate while this chapter looks at factors influencing the total employment rate, i.e. including employment in the public sector. Our findings might be biased by countercyclical changes of employment in the public sector that are not taken into account in his analysis. In other words, public employment should have been managed over time to minimise the effect of technological shocks on the volatility of the total employment rate. However, in this case the TFP growth should not have any long-term impact on employment, which is in contrast with the evidence of table 6. It would also imply that public employment should have been more volatile than private employment, as it would have more than compensated the reduction of business employment caused by the introduction of labour saving technologies. The second argument is more technical as it concerns the specification of the employment rate equations. The dynamic nature of the labour market performance requires dynamic expressions as those in table 6 to evaluate the factors affecting such performance. On the basis of standard diagnostic tests, the equations in table 6 are well specified, while a static estimate of the effect of TFP growth on the employment rate as those of Estevao is badly specified as it is affected by auto-correlated errors. Moreover, ignoring dynamics will strongly underestimate the effects on employment of explanatory variables. Marcello Estevao (2003) Do Active labour Market Policies Increase Employment? IMF Working Paper/03/234

42 Nominal rigidities are widely documented in the case of both the EU and the US. See for example Galì and Gertler (1999) which shows that the sticky price model fits US data well. In the European Commission Annual Economic Review (2003), it is shown that the European degree of price stickiness is in he same ballpark as that of the US.

Table 32 - Long-term effects on the employment rate

	1 1983-2000	2 1983-1999	3 1983-1999	4 1986-1999	5 1989-2000	6 1989-2000
Macroeconomic Variables						
Openness	0.26	**0.33**	**0.29**	**0.17**	**0.07**	**0.13**
	(0.14)	**(0.18)**	**(0.14)**	**(0.04)**	**(0.027)**	**(0.02)**
TFP growth	0.60	**0.93**	**0.87**	0.69	**0.39**	**0.44**
	(0.39)	**(0.47)**	**(0.4)**	(0.4)	**(0.26)**	**(0.08)**
Taxes, social security contributions and Labour market policies						
Tax wedge	-0.25	-0.15		-0.11	-0.25	
	(0.21)	(0.21)		(0.08)	(0.14)	
Gross replacement rate		**-0.17**	**-0.15**	**-0.18**		
		(0.08)	**(0.07)**	**(0.06)**		
Employers' social security contr.			**-0.38**			
			(0.13)			
Employees' social security contr.			-0.09			
			(0.19)			
Income tax rate			0.069			
			(0.28)			
Intensity of spending on active labour market policies				**0.18**		
				(0.011)		
Intensity of spending on Direct job creation					0.08	**0.2**
					(0.11)	**(0.099)**
Intensity of spending on Youth Measures					**0.45**	**0.62**
					(0.16)	**(0.18)**
Intensity of spending on Public Employment Services					**1.25**	**1.11**
					(0.14)	**(0.12)**
Intensity of spending on Training					-0.04	**0.08**
					(0.08)	**(0.04)**
Intensity of spending on Youth Measures * Replacement rate						**0.018**
						(0.008)
Intensity of spending on Training measures* Replacement rate						**-0.004**
						(0.002)

Standard errors in parentheses; In bold coefficient significant at least at the 5% level

3.2 The role of labour taxes, social security contributions and active labour market policies

The effect of the tax wedge on the employment rate is negative but very weak. By contrast, the gross replacement rate (a measure of unemployment and welfare-related benefits as a proportion of work income) contributes to determine the evolution over time of the employment rate. However, the response of employment to an increase in the replacement rate (i.e. a more generous unemployment benefit regime) is not immediate. The replacement rate enters with a coefficient different from zero at lag 3 in the employment rate equation. This implies that it takes about three years for the employment rate to react to a change in the gross replacement rate, but its effect does not disappear in the long-term. Finally, there is evidence that the composition of the tax wedge matters. Employers' social security contributions are the only component with a statistically significant effect on the employment rate. One percentage point of decline in employers' social security contributions raises the employment rate by 0.05 percentage points after one year and by 0.4 percentage points in the long-term.

The above results change only slightly when the intensity of spending on active labour market policies (the expenditure on ALMPs as percentage of GDP normalised with the unemployment rate and equal to the expenditures per unemployed as a percentage of GDP per member of the labour force) is introduced among the factors influencing the

employment rate (column 4, table 31)[43]. The estimated impact on the employment rate of an increase in the financial effort of ALMPs is relatively small in the short-term (by 0.04 percentage points for an ALMPs rise by 1 percentage point in the same year) and relatively larger in the long-run. An increase by 1 percentage point in the intensity of spending on ALMPs is associated with an increase of the employment rate by 0.2 percentage points. Furthermore, contrary to the findings of other studies (i.e. Scarpetta (1996), Elmsekov et al. (1998) and Estevao (2003)), the exclusion of Sweden and Denmark does not augment the impact of ALMPs on the employment rate[44]. Finally, the impact of the replacement rate (a measure of generosity of unemployment and welfare-related benefits) is exactly counterbalanced by that of the intensity of spending on ALMPs. Hence, the employment rate falls when the replacement rate rises, but this decline is counterbalanced by increases in the intensity of spending on ALMPs. Similarly, the employment rate is likely to rise in response to a reduction of the generosity of benefits and increases in the intensity of spending on ALMPs.

Columns 5-6 introduce the categories of ALMPs among the determinant of the employment rate. The econometric evidence on these categories is mixed. "Public employment services and administration" and "Youth measures" have a direct impact on the employment rate while "Training" and "Subsidised Employment" do not (column 5). These findings change when we control for the interaction between the replacement rate and the expenditures on "Youth" and "Training measures" respectively. Accounting for such interaction makes the impact of "Training" and "Direct Job Creation" on the employment rate significant and positive. It is worth noting that it takes about three years for an increase in the intensity of spending on training per unemployed (as a percentage of the workforce) to raise the employment rate. However, the effect of such an increase is reduced when benefits are generous. By contrast, "Youth measures" seem to be more effective when associated with generous unemployment and welfare-related benefits.

3.3 The role of centralisation and co-ordination of wage bargaining

What is the role of labour market institutions? Their importance in influencing labour market performance has been widely recognised. In particular, the relation between wages and employment may depend on the extent of centralisation and co-ordination of wage bargaining. The main argument is that both highly centralised and decentralised systems perform better than intermediate ones, as the co-operative behaviour of the former create incentives to moderate wage claims, while market forces restrain wages when bargaining occurs at company level. By contrast, when bargaining is at industry level, wage increases for all firms in the same industry can be transferred onto consumer prices compensating the effect of higher product prices on profits and holding back the rise of the industry's real product wage (the wage deflated by the output price). This will reduce the employment loss derived from a wage increase and the incentives from wage restraint, implying less wage moderation. Hence, the theoretical relationship between wage levels and centralisation is hump-shaped – wages are relatively low in low- and high- coordinated/centralised systems and high in intermediate ones[45].

The role of centralisation and co-ordination of bargaining is analysed in table 33 which reproduces the estimates in table 32 but with the effects of taxes, benefits and social security contributions conditional to the specificities of the wage setting bargaining levels. Before presenting the results, it should be said that the level of centralisation refers only to the level at which bargaining takes place (firm, industry or economy-wide), while co-ordination occurs when the effects of wage setting on employment are taken into account.

43 This time the coefficient of openness, lagged by one year, is not significant but that of the current year is. This different dynamic specification does not change the long-term impact on employment of the extent of openness. The precision of the estimate of the tax wedge coefficient rises with respect to that in columns 1-3, although it continues to be far from the standard values for acceptance. In other words, if someone is ready to accept a not very precise estimate, then it cannot be excluded that increases in the tax wedge are associated with employment rate reductions. Note that in this case the panel is unbalanced. A panel is said to be unbalanced when for the same variable(s) the period covered differs across units (in our case the Member States). Balanced ALMPs data for all Member States is available only for the period 1986-1998. Data for Luxembourg and Greece is available only until 1997 and 1998. Data are available for all Member States only since 1986. Rather than analyse a balanced panel for a shorter period of time, we opted for estimating the unbalanced panel on a longer time span. To account for the endogeneity of the expenditures on ALMPs (which are high when unemployment is high and employment is low), equation 4 has been estimated with GMM-dif panel data techniques treating as endogenous the ALMPs expenditure as a percentage of GDP relative to the number of unemployed in the workforce. In addition, the replacement rate has been estimated as endogenous although there is no difference in the estimation when it is assumed to be determined independently of shocks to the employment rate.

44 Indeed, the differences are small. Moreover, when Sweden and Denmark are excluded from the panel the coefficient of ALMPs' expenditures rises slightly in the long-run specification to 0.21 but is still at 0.4 in the short-run specification. This suggests that the exclusion of these countries leads to the observed higher impact because they have a lower degree of persistency of employment or, which is the same, because that of the countries remaining in the panel is higher.

45 The hump-shape curve becomes flatter the more open the economy and/or the more competitive the product market. When there are strong externalities across industries, the relationship between wages and the extent of centralisation becomes downward sloped (i.e. the level of wages decline with the level of centralisation of bargaining. Given the negative relationship between employment and wages, the level of employment grows with the level of centralisation/co-ordination). See Calfors (1993).

Hence, co-ordination may be also possible with intermediate levels of centralisation in the presence of inter-industry co-ordination between employers and employees. To capture both aspects we used a summary measure of centralisation/co-ordination reported in table 33[46].

The degree of employment persistency and the effect of the macroeconomic variables is robust over different specifications and coincides with those effects already described[47]. The short-term effects of the tax wedge depend on the nature of wage bargaining (tables 34-35). In systems with a high level of centralisation/co-ordination, changes in the tax wedge do not significantly affect the employment rate, confirming the hypothesis that highly centralised and/or co-ordinated systems enhance social partners' attitude of "looking through the budget" - i.e. internalising the effects of wage increases on the tax base.

However, when centralisation and co-operation among employers on the one hand and employees on the other is low or intermediate, the tax wedge has a negative and significant impact on labour market performance. Moreover, in countries with intermediate systems the long-term negative response on employment is twice as large as in countries where the level of centralisation and/or co-ordination is low. These findings are mildly supportive of the hump-shaped hypothesis (Chart 51)[48], so that in both centralised and decentralised systems unions internalise the impact of wage claims on the individual and the aggregate labour demand respectively.

Table 33	Summary Measure of centralisation/co-ordination: 1979-2000
Low	Italy until 1991, UK from 1987.
Intermediate	Belgium; France; Portugal; Finland since 1985; Sweden since 1991; Spain since 1996; Netherlands until 1981; Ireland until 1987; UK until 1986.
High	Denmark, Germany; Austria; Netherlands since 1982; Ireland since 1988; Italy since 1992; Finland until 1984; Spain until 1985; Sweden until 1990.

Source: Elmeskov et al. (1998)

These results are robust when we control for the effect of the generosity of unemployment and welfare-related benefits (tables 34-35 column 2). The impact of the replacement rate is negative and, more interestingly, depends, in a way consistent with the hump-shaped hypothesis, on the nature of the bargaining system. An increase in the gross replacement rate reduces the employment rate, but it does so more in intermediate than in low- or high- centralised systems, with the replacement rate having similar negative effects in the last two types of wage-setting (Chart 51). Finally, the composition of the tax wedge does matter. Increases in the income tax rate have the highest negative impact on employment, but only for intermediate bargaining. Both centralisation and decentralisation of wage bargaining reduce the direct impact of increases in employers' and employees' social security contributions.

Column 4 of table 34 extends the set of determinants of employment performance to the intensity of spending on ALMPs normalised with the unemployment rate. An increase in the percentage of GDP allocated to ALMPs per individual unemployed (relative to the workforce), is associated with an employment rate increase only in intermediate and centralised systems, with an impact in both cases slightly below 0.2 percentage points for a 1 percentage point rise. Finally, the impact of the remaining variables is qualitatively as expected and as in the columns 1-2, although the effect of the tax wedge is linearly related to the summary measure of centralisation/coordination. The higher the centralisation and or co-ordination of bargaining is, the lower the decline in the employment rate due to an increase in the tax wedge. This finding provides some support to the idea that centralisation/co-ordination, by enhancing the externalities across different bargaining levels, contributes to internalise the effect of the

46 *The index is taken from Elmeskov J., Scarpetta S. and Martin J. (1998),* Key lessons for labour market reforms: Evidence from OECD countries experience*, Swedish Economic Policy Review vol. 5 pp. 205-252. The data refer to the period 1983-1995. From 1995 on the index takes the values of 1995.*

47 *The main difference is that in table 34 the openness variable, lagged by one year, has no significant impact on employment and that the long-run effect of TFP growth is higher while that of openness lower than that implied by table 31.*

48 *Mildly supportive because the coefficient of the tax wedge in the low bargaining systems is not as precisely estimated as in intermediate systems.*

Table 34 - Estimates for the employment rate, controlling for different levels of bargaining centralisation/co-ordination

	1	2	3	4
Time Period	1983-2000	1983-1999	1983-1999	1986-1999
Employment rate (-1)	1.33 ***	1.33 ***	1.21 ***	1.13 ***
	(20.0)	(22.1)	(13.6)	(16.4)
Employment rate lagged (-2)	-0.48 ***	-0.50 ***	-0.37 ***	-0.39 ***
	(-8.9)	(-9.41)	(-4.29)	(-8.27)
Output gap	0.06 **	0.06 **	0.08 ***	0.10 ***
	(2.2)	(2.21)	(2.59)	(9.41)
TFP growth (-1)	0.16 **	0.16 **	0.15 **	0.13 ***
	(2.32)	(2.28)	(2.33)	(1.91)
Openness	0.03 ***	0.03 ***	0.03 ***	0.046 ***
	(2.7)	(2.74)	(3.42)	(9.08)
Tax wedge (-1) LOW co-ordination	-0.18*	-0.24***		-0.14 ***
	(-1.88)	(-2.87)		(-3.55)
Tax wedge (-2) LOW co-ordination	0.11**	0.15***		
	(2.08)	(3.66)		
Tax wedge (-1) INTERMEDIATE co-ordination	-0.16***	-0.20***		-0.10 **
	(-3.09)	(-3.19)		(-1.93)
Tax wedge (-1) HIGH co-ordination	0.00296	0.004		-0.009
	(0.063)	(0.08)		(-0.415)
Gross replacement rate LOW co-ordination				-0.07 ***
				(-7.51)
Gross replacement rate(-1) LOW co-ordination		-0.035 *		
		(-1.63)		
Gross replacement rate (-1) INTERMEDIATE co-ordination		-0.065 *		-0.10 ***
		(-1.71)		(-3.14)
Gross replacement rate HIGH co-ordination				-0.07 ***
				(-7.51)
Gross replacement rate (-3) HIGH co-ordination		-0.033		
		(-1.99)		
Income tax rate (-1) INTERMEDIATE co-ordination			-0.14	
			(-3.88)	
Employers' social security contributions LOW co-ordination			-0.011	
			(-0.24)	
Employers' social security contributions INTERMEDIATE co-ordination			-0.11 ***	
			(-3.72)	
Employers' social security contributions HIGH co-ordination			-0.05 *	
			(-2.81)	
Employees' social security contributions LOW co-ordination			-0.041	
			(-0.23)	
Employees' social security contributions (-3) INTERMEDIATE co-ordinat.			-0.08 ***	
			(-2.41)	
Employees' social security contributions HIGH co-ordination			-0.042	
			(-0.99)	
ALMPs LOW co-ordination				0.03 ***
				(1.23)
ALMPs INTERMEDIATE co-ordination				0.05 ***
				(4.14)
ALMPs HIGH co-ordination				0.04 ***
				(6.57)
Number of observations	234	234	234	181
Test for first-order serial correlation	-2.53	-2.54	-2.62	-2.18
	(0.012)	(0.011)	(0.009)	(0.029)
Test for second-order serial correlation	0.29	-0.2759	0.19	-1.092
	(0.77)	(0.78)	(0.85)	(0.275)
Sargan test of over-identifying restrictions	141.4	127	154	511
	(180, 0.98)	(177, 0.99)	(195, 0.99)	(196.7, 1.00)

*Notes: The Sargan test is a test of over-identifying restrictions with a c2 asymptotic distribution; degrees of freedom and p-values in parentheses. The tests for first and second-order serial correlation are distributed asymptotically as a standard normal, p-values in parentheses. Instruments set in equations 1-3 Emprate(-3) and earlier values. In eq. 4 instruments Emprate(-3); Grr(-2); ALMPU(-1) and earlier values. To get rid of the common component, all variables but the output- gap have been expressed as deviation from country means. * * * Statistically significant at 1% level (i.e. there is a 1 per cent probability that the estimated coefficient is not different from zero); * * Statistically significant at 5% level; * Statistically significant at 10% level*

Table 35 - Long-run effects on the employment rate for different levels of bargaining centralisation/co-ordination

	1	2	3	4
Openness	**0.19**	**0.18**	**0.18**	**0.17**
	(0.07)	**(0.07)**	**(0.05)**	**(0.035)**
TFP growth	1.12	0.96	0.99	0.48
	(0.59)	(0.48)	(0.49)	-0.3
Tax wedge LOW co-ordination	-0.49	-0.55		**-0.53**
	(0.39)	(0.33)		**(0.14)**
Tax wedge INTERMEDIATE co-ordination	**-1.14**	**-1.2**		-0.37
	(0.23)	**(0.29)**		(0.17)
Tax wedge HIGH co-ordination	0.02	0.026		-0.035
	(0.32)	(0.31)		(0.08)
Gross replacement rate LOW co-ordination		**-0.21**		**-0.27**
		-0.13		**-0.04**
Gross replacement rate INTERMEDIATE co-ordination		-0.39		**-0.37**
		(0.24)		**(0.12)**
Gross replacement rate HIGH co-ordination		-0.20		**-0.25**
		(0.11)		**(0.06)**
Income tax rate INTERMEDIATE co-ordination			**-0.88**	
			(0.27)	
Employers' social security contributions LOW co-ordination			-0.07	
			(0.30)	
Employers' social security contributions INTERMEDIATE co-ordination			**-0.71**	
			(0.17)	
Employers' social security contributions HIGH co-ordination			**-0.32**	
			(0.14)	
Employees' social security contributions LOW co-ordination			-0.27	
			(1.19)	
Employees' social security contributions INTERMEDIATE co-ordination			-0.55	
			(0.24)	
Employees' social security contributions HIGH co-ordination			-0.27	
			(-1.19)	
Intensity of spending on ALMPs LOW co-ordination				0.11
				(0.096)
Intensity of spending on ALMPs INTERMEDIATE co-ordination				**0.18**
				(0.042)
Intensity of spending on ALMPs HIGH co-ordination				0.16
				(0.012)

Standard errors in parentheses In bold coefficient significant at least at the 5% level

wage claims on the tax base (and on the budget), making labour taxation less distorting.

3.4 The role of part-time and fixed term contract

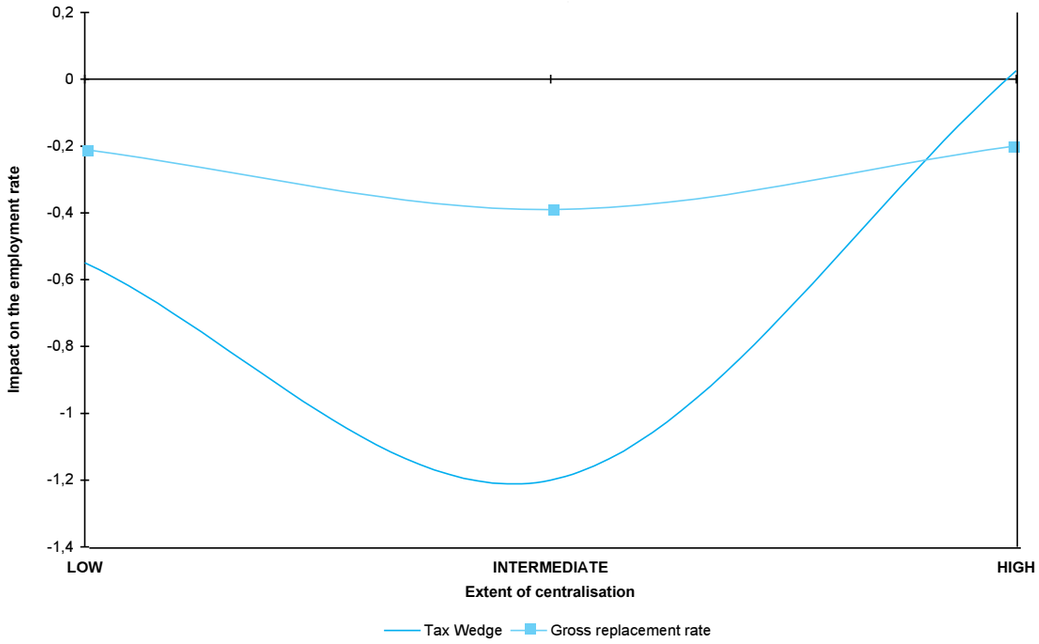
When fixed-term and part-time contracts are included among the determinants of the labour market performance, the panel becomes highly unbalanced[49]. Rather than working with a balanced panel we prefer to focus this section on a panel of 11 EU countries with full coverage in terms of fixed-term and part-time contracts, implying that the findings of this sub-section are not necessary comparable with those of the previous ones. With this caveat in mind, the short- and long-run impact on the employment rate of part-time and fixed-term contracts has been estimated after controlling for macro-economic factors, the tax wedge and the intensity of spending on ALMPs (table 36 and table 37). In order to check the robustness of the results to the higher than average share of fixed-term employment in Spain, the same estimate has been done on both a panel composed by all the 12 Member States (columns 1-2) and one that excludes Spain (columns 3-4).

As far as the macro-economic variables are concerned, the findings are consistent with those found in tables 31 and 32. The extent of the openness of the economy and the TFP growth (i.e. the efficiency of the production process boosted by technological and organisational innovations) have a positive influence on the employment rate. The results for the tax wedge are somewhat more uncertain – its effect is negative as expected but only in two cases statistically different from zero – while increases in the gross replacement rate do not seem to lead to any substantial decline in the employment rate. Finally, independently of the presence of Spain in the panel, an increase in the financial effort on ALMPs per individual unemployed (relative to the workforce) helps to push up the employment rate.

Turning to the role of fixed-term employment, the evidence suggests that an increase in its share is associated with a small negative effect on the employment rate in the short-term which turns out surprisingly high in the long-term. Therefore, it cannot be excluded that an increase in the temporary nature of employment has led to a reduction of total employment. However, this is not the entire story. Employment in Europe 2002 showed that the increasing trend in the share of temporary contracts accounted for the increasing reactivity of employment to the evolution of the busi-

49 This is also the reason why their impact has been left at the end of this section. For the Netherlands 1984 and 1986 and Luxembourg 1995 data is not available. Finally, fixed-term contracts for Denmark and Germany are available only from 1984. For Austria, Finland and Sweden data on fixed-term employment are available only since 1995, and for Spain and Portugal since 1987 and 1986 respectively. After excluding Austria, Finland, Sweden and reducing the sample to the period 1987-2000 to get a balanced panel we are left with 12 countries for 13 years (reduced to 10 when we consider lags in the employment equation) for a total of 109 observations. Because of the small sample size, the findings of this sub-section may be subject to certain margins of statistical error.

Chart 51 - The extent of centralisation and impact of tax wedge and replacement rate on the employment rate



ness cycle[50]. Employment is more flexible in terms of quantity in countries with a high and rising share of temporary contracts. However, the report also warned against the risk of some substitution of temporary with permanent jobs over the business cycle, as an increase in the actual share of temporary contracts above its trend was associated with a decline of employment below its trend. These findings were limited to the effects of temporary contracts on the cyclical component of employment only (i.e. on the employment gap) with no direct implication for the overall employment or employment rate. This aspect has been further explored in column 5 of table 36.

Following the analysis of EIE 2002, column 5 distinguishes the effects on the employment rate of the cyclical and trend component of the share of temporary contracts, controlling for variables used already in columns 1 and 3. This time the effects of temporary contracts are consistent with what was found in the 2002 report, while the impact of the remaining variables is as previously found. In the short-term, the employment rate responds positively to a rising share of temporary contracts when this occurs for the trend component of this share. However, when the actual share of temporary contracts rises more than its trend, the employment rate, *ceteris paribus*, tends to decline. In addition, both in the short- and in the long-term, the positive effect tends to prevail over the negative, which confirms the overall role of temporary contracts as one of the drivers of employment creation[51].

Finally, both in the short- and the long-term, an increase in the share of part-time employment leads to an increase in the employment rate, which is even stronger when Spain is excluded from the sample. This positive impact may reflect the response of the participation rate to greater flexibility in work schedules (part-time employment). The greater flexibility in work schedules, relaxing the labour demand constrain on job creation, has stimulated participation, in particular of the female component.

3.5 What explains the improvements in the employment rates of the second half of the 1990s?

Table 38 shows the contribution of each factor considered so far to the change in the employment rate in the sub-periods 1990-1995 and 1995-1999[52]. The component of the employment rate change not accounted by any of these factors – i.e. the gap between the effective and the estimated change in the employment rate – appears in the last column. This component

50 Note that in Employment in Europe 2002 the focus was on employment and not on the employment rate. However, given the strong time correlation between the two measures the results concerning the former can be qualitatively extended to the latter.

51 A formal test of hypothesis that the negative effect of the cyclical component of temporary contracts is in absolute value equal to the positive effect of its trend is rejected at a high level of confidence. The statistics for this test distributed as a c2 with 1 degree of freedom gives a value of 12.26 and a p-value of 0.0005.

52 The contributions of the explanatory variables are calculated taking into accounts the coefficients of lagged employment rates and are equal to the coefficients of the long-run equation multiplied by the change of the explanatory factors over the relevant period.he decomposition is based on the equation in column 2 of tables 11 and 12.

Table 36 - Short-run employment rate equations: 1987-1999 (PANEL GMM)

Time Period	-1	-2	Spain Excluded -3	Spain Excluded (4)	Spain Excluded -5	Spain Excluded -6
Employment rate (-1)	1.03 ***	0.94 ***	0.95 ***	0.82 ***	0.89 ***	0.82 ***
	(8.23)	(6.84)	(7.7)	(6.5)	(7.35)	(6.57)
Employment rate lagged (-2)	-0.41 ***	-0.36 ***	-0.32 ***	-0.26 ***	-0.33	-0.28 ***
	(-3.96)	(-3.22)	(-3.64)	(-2.70)	(-3.48)	(-2.85)
Macroeconomic Variables and fixed-term and part-time contracts						
Output gap	0.11 ***	0.08 *	0.14 ***	0.11 **	0.11 ***	0.10 ***
	(2.20)	(1.74)	(2.57)	(1.91)	(2.05)	(1.74)
TFP growth (-1)	0.08 *	0.06 *	0.07	0.06	0.07	0.06
	(1.75)	(1.59)	(1.44)	(1.26)	(1.55)	(1.39)
Openness (-1)	0.05***	0.05***	0.04**	0.05 ***	0.05 ***	0.06 ***
	(2.41)	(2.92)	(2.24)	(2.93)	(4.70)	(4.60)
Share of fixed term contracts	-0.08 ***	-0.08 ***	-0.08 ***	-0.08 ***		
	(-2.50)	(-2.47)	(-2.09)	(-2.07)		
Cyclical component of the Share of fixed term contracts					-0.09 ***	-0.09 ***
					(-2.64)	(-2.38)
Trend in the share of fixed term contracts					0.12 *	0.06
					(1.7)	(0.8)
Share of part-time contracts	0.20 ***	0.21 ***	0.26***	0.27***	0.23	0.25
	(2.72)	(2.57)	(4.23)	(4.87)	(5.9)	(5.35)
Taxes, social security contributions and Labour market policies						
Tax wedge (-1)	-0.06 *	-0.04	-0.07 *	-0.04	-0.09 ***	-0.06
	(-1.51)	(-0.80)	(-1.71)	(-0.82)	(-2.17)	(-1.29)
Gross replacement rate(-1)	-0.001	-0.01	0.018	0.009	0.017	0.01
	(-0.045)	(-0.51)	(0.78)	(-0.50)	(0.077)	-0.55
Intensity of spending on active		0.04***		0.05***		0.03***
labour market policies1		(3.03)		(3.61)		(2.45)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes
Test for first-order serial correlation	-2.59	-2.51	-2.37	-2.28	-2.38	-2.31
	(0.01)	(0.012)	(0.017)	(0.022)	(0.02)	(0.02)
Test for second-order serial correlation	0.024	-0.21	0.27	-0.04	0.072	-0.011
	(0.98)	(0.83)	(0.78)	(0.97)	(0.94)	(0.91)
Sargan test of over-identifying restrictions	103.4	102.1	89.67	89.02	84.09	84.9
	(275, 1.00)	(339, 1.00)	(275, 1.00)	(339, 1.00)	(201, 1.00)	(275, 1.00)

Notes: The Sargan test is a test of over-identifying restrictions with a c2 asymptotic distribution; degrees of freedom and p-values in parentheses. The tests for first and second-order serial correlation are distributed asymptotically as standard normal, p-values in parentheses. (1)- (4) balanced equations. Instruments are Emprate(-3) and earlier values, ALMPs relative to the unemployment rate (-2), GRR(-1), share of fixed- term contracts (-1) and earlier values. Variables are expressed as deviation from period means.
**** Statistically significant at 1% level (i.e. there is a 1 per cent probability that the estimated coefficient is not different from zero);*
*** Statistically significant at 5% level * Statistically significant at 10% level.*

Table 37 - Long-run effects on the employment rate

	(1)	(2)	Spain excluded (3)	Spain excluded (4)	Spain excluded (5)	Spain excluded (6)
Openness	**0.12**	**0.12**	**0.11**	**0.11**	**0.12**	**0.12**
	(0.04)	**(0.04)**	**(0.04)**	**(0.04)**	**(0.02)**	**(0.03)**
TFP growth	0.2	0.15	0.18	0.14	**0.17**	0.14
	(0.13)	(0.10)	(0.14)	(0.11)	**(0.12)**	(0.11)
Share of fixed term contracts	**-0.20**	**-0.19**	**-0.21**	**-0.19**		
	(0.08)	**(0.09)**	**(0.11)**	**(0.10)**		
Trend in the share of fixed term contracts					**0.29**	0.13
					(0.09)	(0.17)
Share of part-time contracts	**0.53**	**0.48**	**0.70**	**0.63**	**0.53**	**0.54**
	(0.23)	**(0.19)**	**(0.25)**	**(0.16)**	**(0.11)**	**(0.11)**
Taxes, social security contributions and labour market policies						
Tax wedge	-0.16	-0.085	**-0.19**	0.09	**-0.21**	-0.14
	(0.12)	(0.11)	**(0.12)**	(0.11)	**(0.09)**	(0.10)
Gross replacement rate	-0.003	-0.02	0.05	0.02	0.04	0.02
	(0.06)	(0.05)	(0.065)	(0.04)	(0.05)	(0.04)
Intensity of spending on active		**0.09**		**0.11**		**0.07**
labour market policies		**(0.02)**		**(0.02)**		**(0.03)**

Standard errors in parentheses; In bold coefficient significant at least at the 5% level

captures the effects of the interaction between different policy variables, the nature of bargaining, the efficiency of the matching between unemployed and vacant posts, and the change in the demographic and skill structure of the population - i.e. all the determinants not considered because of the limited time series dimension. Since the short-time span reduces the precision of the estimated effects, the decomposition is only indicative of a possible contribution.

For all Member States, the extent of openness and the share of part-time contracts are the most important factors accounting for the changes in the estimated employment rate. The change in the employment rate due to increases in the degree of openness is estimated to be between the 1.1 percentage points of Italy and the 8 percentage points of Luxembourg. The increase in the share of part-time contracts turns out to be an important factor in countries such as Belgium, Germany, France and Italy[53]. By contrast, fixed-term employment helps to keep the employment rate up in Greece, France, Ireland, Italy and the UK. The tax wedge accounts for a relatively small part of the change, higher than 0.5 percentage points only in the case of Italy and Ireland. With the exception of Germany, Greece and Italy, the expenditure on ALMPs relative to the number of unemployed in the labour force seems to have played a positive role. In Denmark, Spain, Ireland and the Netherlands, ALMPs explain about half percentage points of the total increase in the estimated employment rate in the period 1995-2000. Moreover, the cyclical factors (both output gap and cyclical component of fixed term contracts) can not be ignored.

Finally, the column "other factors" provides an indication of how well a simple model of the employment rate is able to explain the past evolution of the employment rate. A negative sign implies that the estimated change in the employment rate (the sum of the first eight columns of table 38) is higher than the actual employment rate, implying that factors other than those considered above constrained the employment rate. A positive sign is an indication that "other factors" contributed to keep the actual employment rate higher than what was actually estimated on the basis of the variables considered. The model performs quite well in the case of Italy, France, the UK, the Netherlands, and Denmark with the estimated employment rate higher than the actual by 0.1, 0.3, 0.6, 0.4 and 1 percentage points respectively. The estimated change of the employment rate is lower than the actual only in the case of Spain and Portugal. In all remaining countries, other factors not taken into account by the set of variables considered in the model limited their effect on the employment rate.

53 *The finding that the share of part time contracts is an important factor in driving the employment rate is not striking if one considers that someone with few hours working week is counted as in employment and that the phenomenon increases over time. Ideally, the sensibility of our findings should be checked against full time employment rates. However, data availability do not allow to explore this aspect.*

Table 38 - ESTIMATED CONTRIBUTION TO CHANGES IN THE EMPLOYMENT RATE OF

		TFP growth	Degree of Openness	Share of fixed-time trend	Share of part-time	Tax wedge	Gross replacement rate	ALMPs	Cyclical factors	Other factors
BE	1990-1995	-0.30	1.65	-0.34	1.46	-0.41	-0.07	-0.31	-0.27	-0.12
	1995-2000	0.37	2.38	-0.34	3.79	0.02	0.00	0.36	0.27	2.64
DK	1990-1995	0.10	0.46	-0.18	-0.70	0.18	0.35	0.94	-0.04	3.46
	1995-2000	0.03	2.15	-0.1	0.00	0.11	-0.02	0.57	0.87	1.03
DE	1990-1995	-0.29	-0.66	-0.11	0.60	-0.75	-0.02	-0.21	-0.17	0.89
	1995-2000	0.03	2.07	-0.10	1.68	-0.14	0.07	-0.03	-0.18	2.69
EI	1990-1995	0.37	0.62	0.10	0.43	-0.23	0.21	-0.05	0.63	2.49
	1995-2000	0.32	2.28	0.11	-0.05	-0.01	-0.07	-0.05	-0.25	1.51
ES	1990-1995	0.11	1.50	0.00	1.30	-0.33	-0.05	-0.25	-1.33	4.49
	1995-2000	0.00	2.14	0.00	0.38	0.13	-0.02	0.40	0.82	-5.12
FR	1990-1995	-0.04	0.78	0.04	2.00	-0.25	0.00	0.14	-1.26	3.90
	1995-2000	0.07	1.53	0.10	0.70	0.00	0.00	0.20	-0.05	0.28
IE	1990-1995	0.33	4.57	0.22	2.16	0.42	-0.05	0.21	-1.95	4.31
	1995-2000	-0.17	6.75	0.22	2.49	1.12	0.07	1.10	2.84	3.93
IT	1990-1995	0.27	1.06	0.16	0.81	-0.25	0.37	0.15	-1.04	4.07
	1995-2000	-0.16	1.10	0.16	1.35	0.54	0.02	-0.01	-0.41	0.14
LU	1990-1995	-0.36	1.32	-0.04	0.60	0.20	:	-0.76	-1.35	-0.21
	1995-2000	0.66	7.95	-0.30	1.79	-0.12	:	0.25	2.50	9.06
NL	1990-1995	-0.07	2.10	-0.51	3.08	0.22	-0.14	-0.12	-0.93	2.04
	1995-2000	0.04	2.62	-0.38	2.16	-0.03	0.12	2.91	0.94	0.42
PT	1990-1995	0.35	1.15	0.14	0.70	0.00	0.05	-0.13	0.08	3.22
	1995-2000	-0.44	1.62	0.34	0.97	0.03	0.23	0.30	-0.98	-2.53
UK	1990-1995	0.29	0.83	0.41	1.30	0.01	0.00	-0.25	-1.50	4.25
	1995-2000	0.08	1.77	0.36	0.43	0.44	-0.02	0.11	0.17	0.59

4. Explaining the evolution of real wages

Most of the factors just considered influence employment performance through their effects on real labour costs. This occurs either because these factors impinge upon the bargaining power of workers modifying the response of wages to unemployment or because they put a constraint on wage developments from outside[54]. Thus, if an increase in the generosity of the unemployment benefits (i.e. an increase in the replacement rate) is associated with low employment, then it should also increase wage pressures. Wages requests may be less moderate if unemployment benefits are too generous. If the employment rate does not react to changes in the replacement rate, as in tables 31 and 32, then the labour

54 For example, unemployment benefits and non-labour income raise the reservation wage reducing the costs of non-employment. On the other hand, higher openness of the economy raises the pressures to keep labour costs in check.

Table 39 - Short-run gross wage equations (PANEL GMM)

Time Period	1 1982-2000	2 1982-1999	3 1982-1999	4 1986-1999	5 1988-1998	6 1987-1999
Real Compensation per employee(-1)	0.91 *** (22.5)	0.91 *** (20.3)	0.92 *** (19.7)	0.90 *** (17.2)	0.90 *** (17.9)	0.93 *** (21.1)
Macroeconomic Variables						
Labour Productivity	0.54 *** (9.17)	0.53 *** (7.75)	0.52 *** (8.25)	0.58 *** (6.18)	0.58 *** (4.42)	0.57 *** (4.11)
Labour Productivity (-1)	-0.46 *** (-5.72)	-0.45 *** (-5.01)	-0.44 *** (-5.03)	-0.50 *** (-4.66)	-0.49 *** (-3.41)	-0.51 *** (3.26)
Openness	-0.0002*** (-3.43)	-0.0002 *** (-2.24)	-0.002 * (-1.6)	-0.0003 *** (-3.39)	-0.0002 * (1.60)	-0.0002 * (-1.91)
Unemployment rate (-1)	-0.002 *** (-3.27)	-0.0022 *** (-2.84)	-0.0022 *** (-2.65)	-0.0028 *** (-2.94)	-0.002 ** (-3.19)	-0.0014 (-1.37)
Taxes, social security contributions and Labour market policies						
Tax wedge	0.15 ** (1.97)	0.11 (1.45)		0.23 *** (2.71)	0.27 *** (2.92)	0.19 *** (2.31)
Indirect taxes	-0.88 *** (-6.37)	-0.93 *** (-8.19)	-0.90 *** (-8.35)	-0.81*** (-5.47)	-0.79*** (-7.46)	-0.89 *** (-7.38)
Indirect taxes (-1)	0.51 *** (3.31)	0.56 *** (3.98)	0.53 *** (3.88)	0.39 *** (2.94)	0.36*** (2.65)	0.55 *** (2.88)
Indirect taxes (-2)	0.41 *** (6.66)	0.38 *** (5.38)	0.39 *** (5.21)	0.45 *** (3.96)	0.41*** (3.96)	0.47 *** (5.51)
Gross replacement rate		-0.0017 *** (-1.95)	-0.002 * (-1.89)	-0.002 * (-1.64)	-0.002 * (1.67)	-0.0025 * (-1.78)
Gross replacement rate (-1)		0.0019 (2.19)	0.002 ** (2.19)	0.003 * (1.78)	0.002 * (1.73)	0.029 ** (1.97)
Personal tax rate			0.002 ** (2.14)			
Personal tax rate (-1)			-0.0017 * (-1.80)			
Employers' social security contributions			0.0005 ** (2.19)			
Intensity of spending on ALMPs1				-0.00006 (-0.325)		
Expenditure on ALMPs as % of GDP(-1)1					0.009 *** (2.28)	
Intensity of spending on Youth Measures						0.005 *** (2.88)
Intensity of spending on Direct job creation						-0.002 ** (-1.94)
Intensity of spending on Direct job creation (-1)						0.0033 *** (2.21)
Intensity of spending on Public Employment Services (-1)						-0.0014 (-0.84)
Intensity of spending on Training (-1)						0.00013 0.252
Number of observations	300	266	266	208	168	194
Test for first-order serial correlation	-2.619 (0.009)	-2.587 (0.01)	-2.527 (0.012)	-2.448 (0.014)	-2.22 (0.027)	-2.536 (0.011)
Test for second-order serial correlation	-1.179 (0.238)	-1.174 (0.24)	-1.006 (0.315)	-1.097 (0.273)	-1.14 (0.25)	-1.324 (0.185)
Sargan test of over-identifying restrictions	464.2 (1134, 1.00)	421.2 (1029, 1.00)	383.9 (1441, 1.00)	273.2 (1131, 1.00)	213.2 (923, 1.00)	240.3 (1086, 1.00)

Notes: To get rid of the common component, all variables but the output- gap have been expressed as deviation from country means. Labour costs and tax variables in logs. The Sargan test is a test of over-identifying restrictions with a c2 asymptotic distribution; degree of freedom and p-values in parentheses. The tests for first and second-order serial correlation are distributed asymptotically as a standard normal, p-values in parentheses. Equations 1-3 balanced. GMM-SYS estimation combining transformed and level equations. In (1) employment is considered as endogenous, Wedge, Indirect taxes and the extent of openness predetermined, productivity exogenous. In (2) in addition the replacement rate is considered as exogenous. In (3) in addition the components of the tax wedge are supposed predetermined. (4) –(6) unbalanced panel. In (4) intensity of spending on ALMPs is predetermined. In (5) expenditure on ALMPs as % of GDP is predetermined. In (6) categories of ALMPs are instrumented with ALMPs supposed to be predetermined.
1 The intensity on spending on ALMPs is defined as Expenditure on ALMPs as % of GDP normalised by the unemployment rate
**** Statistically significant at 1% level (i.e. there is a 1 per cent probability that the estimated coefficient is not different from zero);*
*** Statistically significant at 5% level; * Statistically significant at 10% level.*

Table 40 - Long-run effects on real gross wages

	1	2	3	4	5	6
	1982-2000	1982-1999	1982-1999	1986-1999	1988-1998	1987-1999
			Macroeconomic Variables			
Labour productivity	**0.92**	**0.91**	**0.93**	**0.89**	**0.86**	**0.84**
	(0.03)	**(0.05)**	**(0.05)**	**(0.05)**	**(0.06)**	**(0.08)**
Openness	**-0.002**	-0.003	-0.002	-0.003	-0.002	-0.0034
	(0.001)	(0.002)	(0.002)	(0.002)	(0.0015)	(0.0027)
Unemployment rate	**-0.02**	**-0.03**	**-0.03**	**-0.03**	**-0.024**	-0.02
	(0.012)	**(0.015)**	**(0.016)**	**(0.015)**	**(0.011)**	-0.017
			Taxes, social security contributions and Labour market policies			
Tax wedge	1.77	1.36		**2.35**	**2.56**	**2.68**
	(0.99)	(1.00)		**(1.00)**	**(1.26)**	**(1.53)**
Indirect taxes	0.49	0.23	0.29	0.3	-0.12	1.94
	(1.22)	(1.09)	(1.07)	(1.08)	(1.24)	(2.35)
Gross replacement rate		0.002	0.004	0.0014	-0.0009	0.006
		(0.003)	(0.004)	(0.003)	(0.003)	(0.006)
Personal tax rate			0.003			
			(0.007)			
Employers' social security contributions			0.006			
			(0.004)			
Intensity of spending on active				-0.0006		
labour market policies				(0.002)		
Expenditure on ALMPs as % of GDP					0.085	
					(0.04)	
Intensity of spending on Youth Measures						0.066
						(0.039)
Intensity of spending on Direct job creation						0.015
						(0.0089)
Intensity of spending on Training						0.0019
						(0.007)
Intensity of spending on Public Employment Services						-0.02
						(0.023)

Standard errors in parentheses; In bold coefficient significantly different from zero at least at the 5% level

costs should not react either. In general, for any given (un)employment rate and labour productivity any variable that increases real wages can potentially affect the rate of job creation.

This section explores whether the variables influencing the evolution of the employment rate also allow a fair description of the evolution of real wages. Table 39 shows the results for the short-term real wage equations, extending in each column the set of possible determinants to the tax wedge, the replacement rate (column 2), and the intensity of spending on ALMPs and its composition (columns 4-6). Column 3 provides evidence on whether real labour costs are sensitive to the structure of the tax wedge. Table 40 reports the long-term wage equation corresponding to the short- term dynamic real wage curves in table 39. Each specification control for macro-economic variables such as the output-gap, a measure of the business cycle, the labour productivity, which contributes to determine the part of product distributed to wages, and the degree of openness, which captures the extent of wage discipline "imported" from abroad. Wages are defined as compensation per

employee (labour costs) deflated by total consumption deflator.

Starting with the role of the macroeconomic variables, the degree of openness contributes to wage moderation in the short-term by preventing wages from being set independently of external competitiveness, while in the long-term it does not affect real wages. The fact that the degree of openness does not permanently modify the cost competitiveness but raises the employment rate is suggestive of the advantages of economic integration being related not simply to increases in the degree of price competition, but also to the diffusion of innovation and knowledge. Moreover, productivity gains (or losses) are only partially reflected in higher (or lower) real wages in the same year these changes occur. For any increase of productivity by real wages rise in the same year by about $^{X\%}/_{2}$. Notwithstanding a temporary reduction of wages one year later, about 90% of productivity gains are transferred in the long-term into higher wages, producing a decline in the labour share in national income. An increase in productivity growth by 20% - about the (un-weighted) average productivity growth from 1990 to 2000) - accounts for a decline in the wage share by about 2.25%. Finally, rising unemployment reduces real wages while labour market tightness increases them.

Turning to the role of taxation, the effect of indirect taxes is robust over different specifications of the wage equations. Increases in indirect taxation are accompanied by simultaneous declines of real wages. However, such decline is offset by real wage increases occurring during the following two years. In the long-term, the effect of indirect taxes on real labour costs wanes out. This result coincides with that obtained for both the dynamics and the long-term effect in the case of the gross replacement rate (a measure of the generosity of unemployment and welfare-related benefits). Although the tax wedge increases wage pressure, this effect is not estimated precisely (i.e. it can not be excluded that the impact is not significantly different from zero).

Controlling for the intensity of spending of ALMPs increases the precision with which the impact of the wedge is estimated (column 4). However, the effect of the intensity of ALMPs is not statistically different from zero (actually is zero), implying that what is found for the tax wedge is not reliable. When the expenditure on ALMPs as a percentage of GDP is used rather than the expenditure on ALMPs as percentage of GDP normalised by the unemployment rate, there is evidence that increases in such expenditures and/or in the tax wedge raise the wage pressure. As to the wage pressures stemming from different categories of ALMPs, we find that the spending on youth measures and on direct job creation only affects the real labour costs in the short-term. Youth measures raise wage pressures while direct job creation (subsidies to employment) contributes to wage moderation in the year the measure takes place but this restrain is offset by wage increases one year after. Finally, the composition of the tax wedge does matter but, again, only in the short-term. The increase in the real labour costs following an increase in the personal income tax is only temporary and partly offset after one year.

5. Conclusions

Many observers have highlighted the role of labour market institutions as key determinants of labour market performance: the level of labour taxation; the characteristics of the collective bargaining agreements and the wage setting mechanism; the features of the unemployment benefit systems and the level and composition of ALMPs are all possible determinants of labour market performance. Some have argued that these institutions can have important effects on labour market performance when they reinforce each other's effects on employment. Hence, the interactions between different set institutions can potentially compensate for the effects of what, in isolation, can be considered an ill-designed measure. Of course, the opposite also applies: the interaction of institutions can be more important than each single measure, and compensate for the effects of what, in isolation, can be considered a well-designed measure.

The dynamic nature of the analysis allows the temporary or permanent impact of certain variables on the employment rate to be determined. The employment rate was chosen because it is a key element of the Lisbon agenda and one crucial component of the development of GDP per capita[55]. A higher employment rate with a higher productivity level is clearly desirable as it allows (on average) more people in work to be more productive. The main findings of the chapter can be summarised as follows:

The extent of economic openness is the main driving factor impacting labour market performance. In 1997, the flows of goods and services intermediated by the foreign markets were on average 88% of the average GDP. In 2000 this flow (i.e. the degree of openness) reached about 104% of GDP.

55 'Employment and productivity and their contribution to economic growth', *Commission Staff Working Paper, SEC(2004) 690.*

According to the model specified in this chapter, this increase explains about 60% of the total change in the employment rate observed in this period.

Then this chapter has analysed the role of labour market institutions in determining the evolution over time of the overall employment rate of the EU15 Member States.

- The increase by 3.5 percentage points in the share of part-time employment is a major determinant according to this model specification, explaining between 20% and 30% of the total change in the employment rate.

- For data reasons, the impact of ALMPs is measured by the expenditure on ALMPs; expenditure on active policies as a percentage of GDP relative to the number of unemployed in the labour force has a smaller impact on employment prospects. The increase in the intensity of spending on ALMPs (defined as the percentage of GDP allocated to ALMPs divided by the number of unemployed over the labour force) is responsible for between 10% and 20% of the increase in the employment rate observed between 1997 and 2002. This should be considered an upper threshold for methodological reasons that are underlined in the main text.

- The category of ALMPs to which resources are allocated is not irrelevant. In this chapter, four of the five OECD categories on ALMPs have been considered[56]. The intensity of spending on youth measures and on public employment services clearly seems to have a positive impact on the employment rate while the effect is less pronounced for the other categories.

- These findings change when the employment rate is explained as a function of different categories of expenditure also allowing for their interactions with other institutions. When the interaction between the gross replacement rate (proxy for the unemployment benefit system, i.e. the percentage of gross wage replaced by unemployment and welfare related benefits) and the spending on youth measures and on training respectively is taken into account, all categories of ALMPs expenditures have a positive effect on the employment rate, with the effect of public employment services and youth measures stronger than that of direct job creation and training. Furthermore, the effect of the intensity of spending on youth measure is larger in countries where the replacement rate is relatively high. In contrast, the positive effect of training is slightly reduced in countries where the replacement rate is high.

- In the long-term, increases in the tax wedge have a negative impact on the employment rate. Between 1997 and 2000 the EU15 (un-weighted) average wedge declined by about 1 percentage point. This reduction is responsible for less than 10% of the increase in the employment rate observed during the same period. This effect is not estimated precisely; it probably depends on the short time period taken into consideration and on the fact that it may take some time before the impact of a change in taxes is visible (sometimes in opposite directions).

- When single components of the wedge are allowed to play a role, only the employers' social security contributions have an impact on the employment rate. In the period 1997-2000 the EU15 (un-weighted) average of the employers' social security contributions declined by about 0.5 percentage point. Our estimate of the impact on the employment rate suggests that this reduction explains about 5% of the 3% increase in the employment rate observed during the same period. The moderate increase in the gross replacement rate marginally reduces the positive effect of lower employers' contributions.

- The employment response to changes in the gross replacement rate and in the tax wedge is influenced by the level of co-ordination of bargaining. Compared to systems where bargaining occurs at the intermediate (industry level), the employment performance of systems where bargaining occurs at both the decentralised and centralised level tends be less influenced by changes in the tax wedge (especially employers' and employees' social security contributions) and the replacement rate level. Finally, higher expenditure on ALMPs raises the employment rate only in systems where bargaining is at the intermediate or centralised level.

The findings of this chapter suggest that labour market policies should be designed consistently with the mechanism insuring against unemployment risks, and, more in general, with the rules governing the welfare state. Training measures can influence not only job creation but also future aspirations of workers. With higher replacement ratios people may be tempted to wait longer than otherwise before accepting a job which fulfils their aspirations, at the risk of remaining longer out of employment. By contrast, too rigorous a system of unemployment benefits will not create the incentives to enter into the labour market. This may explain our finding that measures for unemployed and disadvantaged young people become more effective when the replacement rate is relatively high. The findings highlight the importance of pursuing make work pay policies through

56 We exclude the expenditures on disabled. The use of OECD data rather than the Eurostat LMP database is determined by the length of period covered by the OECD database.

57 Recommendation for a Council Recommendation on the Implementation of Member States' employment policies, (2004).

both financial and non-financial incentives, including individual taxation, quality in work in all its dimensions, childcare and care facilities and other measures to reconcile work and family life' as stated in the common recommendations to all Member States in the Guidelines on the implementation of employment policies[57]. They also underline the important role of public employment services with respect to advising and counselling job seekers, which reduce the information asymmetries in the labour market.

As suggested by the reduction in the NAIRU, the improvement in labour market performance of the late 1990s appears to have been more than just a cyclical phenomenon. However, the employment record of the last two years has been disappointing, partly on account of macroeconomic developments. Employment growth remained at a standstill in the third quarter of 2003, this being the fourth consecutive quarter of modest growth. Following the moderate rises seen in 2001 and 2002, unemployment in the Euro area stabilised at 8.8% over 2003, and remained unchanged during the first quarter of 2004. In some countries youth unemployment is too high, and this is a matter of concern. The EU economy continues to recover at a very moderate pace compared to the accelerating recovery in the US and Japan. On the more positive side, during the recent years of modest growth the EU participation kept rising while it clearly declined in the US.

Notwithstanding the improvements of the late 1990s, many Member States still exhibit the symptoms of structural problems in their labour markets. These include low labour force participation in particular for women and older workers and persistent regional disparities in employment rates. The structural nature of the problem is reflected in the fact that over 40% of unemployed people have been out of work for one year or more, compared to fewer than 20% in the best-performing countries. And this is a matter for concern that calls for immediate action.

The internationalisation of markets accelerates the diffusion of shocks and requires a much more rapid adjustment than in the past of both quantities and prices[58]. However, at the same time a more rapid adjustment can destabilise producers' and consumers' expectations without an efficient workers' protection against the income and the employment risks associated with such adjustment. In a more integrated world economy the challenge for policy makers is to find new and more efficient forms of insurance against such risks; as stated in the 2004 Employment guidelines, 'the concept of job security should be modernised and broadened with a view not only to covering employment protection but also to building on women and men's ability to remain and progress in work'[59]. This may include rebalancing the protection of permanent and non-permanent contracts in a number of Member States, reforms of wage-setting mechanisms that allow local market conditions to be taken properly into account, reforms to make work pay, greater cost-effectiveness of active labour market policies, and enhanced labour mobility. Since these changes can take years if not decades, a small change in the nature of regulation of labour conceals significant effects which are not captured by the indices broadly used in these type of exercises (e.g. the extent of coordination of bargaining and EPL).

Finally a note of caution: in this chapter, institutions have been treated as exogenous parameters so that a change in an institutional configuration (a labour market reform) affects labour market performance. This view can be too simplistic. In reality, institutions change only slowly over time, are endogenous with respect to the nature of income and employment risks and are intertwined with the characteristics of government interventions. For example, the nature of employment protection (either on the job or in the market) is not independent from the frequency of shocks and efficiency of distributive policies. And the short period covered by our analyses does not warrant any conclusion without risks.

58 A similar argument holds, of course, in the case of the EMU.
59 Recommendation for a Council Recommendation on the Implementation of Member States' employment policies, (2004).

6. Annex to Chapter 2

GMM estimation of the employment rate and definition of variables

Panel data have important advantages[1]. Firstly, they allow for the use of both the cross-sectional and time dimension of data. This implies that estimates based on panel data are relatively more accurate than other procedures. Secondly, econometric techniques based on panel data, can take into account the effects of variables not taken explicitly into account and that tend to vary over time and/or over each individual units. This implies that panel data techniques are more robust with respect to incomplete model specification. Finally, they provide an easy way out to the problem of endogeneity of the explanatory variables. Panel data may be static or dynamic. In static models it is assumed that the variable of interest may be expressed as a function of the contemporaneous values of some explanatory variables. In doing so they neglect the dynamics which characterise the behaviour of economic agents (persistence, lagged effects of explanatory variables, habit formation etc). Dynamic panel techniques have the advantage that they can take into account the lagged adjustment and the lagged effect which is typical of all economic processes. Furthermore, dynamic modeling allows the explanatory variables to have both a short-run and a long-run impact on the variables of interest.

In practical terms, the dependent variable (in our case the employment or the unemployment rate) is expressed as a function of its lagged level and some explanatory variables. The explanatory variables are the implicit tax rate, the intensity of spending on ALMPs or of different categories of ALMPs, the share of temporary or permanent contracts (or of different typologies of such contracts), the output-gap, to capture the behaviour over the cycle of the employment and unemployment rate.
In symbols the following dynamic fixed-effect model is estimated for both the unemployment and the employment rate.

$$\gamma_{it} = \alpha_i + \mu_t + \beta_1^{*} \gamma_{it-1} + Z_{it}\beta + \varepsilon_{it}$$

where γ_{it} is respectively the unemployment or the employment rate, α_i is a fixed effect which identify country specific characteristics which are invariant over time, μ_t is a time varying levels that affect all countries equally and Z_{it} a (K-1) x1 vector of explanatory variables and ε_{it} is a random disturbance distributed normally.

Introducing a lagged dependent variable as an explanatory variable creates a number of problems as the lagged value of the dependent variable is correlated with the unobservable effect α_i , introducing a correlation between the lagged dependent variable and the error term which renders standard estimators of panel data biased. Moreover, the OLS estimates are inconsistent and FGLS technique also when there is heteroschedasticity and autocorrelation of the residuals (Sevestre and Trognon (1996)). A further complication is that some of our explanatory variables are clearly endogenous. This is certainly the case of the intensity of spending on ALMPs whose values and dynamics clearly depend on the level and the evolution of the unemployment rate. And also the share of temporary contracts can be considered as endogenous should its pattern follow the increase in the unemployment rate.

One solution to this problem is to first difference the model and estimate the first differenced model with OLS. However, even if there is no autocorrelation in the error term of models in levels, the error term in first differences follows an MA(1) process (with coefficient –1) and is correlated with the first differences of the dependent variable since ε_{it-1} is correlated with γ_{it-1} .

In order to account for this endogeneity of regressors, we adopt the generalized method of moments (GMM) estimation procedure developed by Arellano and Bond (1991). The GMM procedure takes into account unobserved heterogeneity between countries, endogeneity of the lagged dependent variable as well as possible endogeneity of explanatory variables. In practice the GMM estimator requires using lags of the dependent variable in levels as instruments for the lagged dependent variable in first differences to generate consistent estimates of the parameters. Consistency of the GMM estimator requires lack of second order serial correlation in the dynamic formulation, so tests are presented for assessing the validity of the empirical specification. Two such tests are considered in our analysis: the Sargan statistic for over-identifying restrictions, which verifies the lack of correlation between errors and the instruments, and the tests m1 and m2 testing for the absence of first and second-order serial correlation in the differenced residuals.

The results in the text are obtained starting from a general version of the equation above with explanatory variables lagged at most 4 years. Insignificant coefficients were successively excluded from the model on the basis of the usual statistical tests. Moreover, if there is autocorrelation in the levels equation, there will be second order autocorrelation in the first differenced equation implying that the instruments used (dated t-2) are not adequate. In these cases yit lagged 3 periods and more may be valid. Therefore it is important to verify if there is second order autocorrelation, which is the crucial information for the validity of the instruments with the Sargan tests. Finally, the estimator is robust when the number of cross section is large and the time periods relatively small. Our data set with 15 countries and at most 18 time periods do not totally satisfy these conditions, so that the result should be taken as indicative of possible direction of causality. The equation is estimated with the DPD program written in GAUSS by Arellano and Bond (1998).

[1] M. Verbeek (2000) Modern Econometrics

Chapter 3

Employment structures in Europe and the US: the role of skills, wages and final demand

1. Introduction

The extraordinary Council meeting on employment issues ('Jobs Summit') in Luxembourg in 1997 requested that the European Commission analyse how individual Member States could achieve a significant increase in the EU's average employment rate. As a response, the European Commission published its Employment Rates 1998 report[1] which argues that the employment rate is an effective measure of an economy's performance in that it indicates the extent to which the economy can provide jobs for those able to work and focuses attention on employment and the employment potential of the non-employed, including both "economically inactive" people and the unemployed.

Most notably, the report observes that the employment rates[2] – i.e. the population shares of people in employment – have evolved differently in the EU and the US over the last two decades: up to the mid-1970s, the EU's employment rate stood at 64%, slightly exceeding that of the US at 62%. By 1997, however, the EU rate had dropped to 60.5%, whilst that of the US had increased to 74%, a difference of almost 14 percentage points – the so-called EU-US employment gap.[3] This gap was equivalent to about 34 million 'missing' jobs in the then European Union as compared to the US.

The report also describes the main sources of the EU-US employment gap. While employment rates for prime-age males (25-54) were found to be broadly similar to those in the US, employment rates for young people (15-24), prime-age women, older people (55-64) and low-skilled people were found to be much lower in the EU, although varying widely between the Member States. The report further notes that reversing the downward trend in the EU and closing the remaining gaps in employment rates - both in comparison with the US and across gender, age and skill groups within the EU – offers three main benefits:

- Economic benefits: the low employment rate in Europe means that there is a high level of unused potential labour resources. Bringing such potential to work would boost economic growth in the EU, beyond the long-term growth trend resulting from labour productivity increases;

- Demographic benefits: higher employment - a larger number of individuals contributing to welfare schemes - would help to improve Member States' public finances and the sustainability of social security systems struggling to cope with an ageing population;

- Social benefits: Attachment to the world of work enables people to contribute to, and participate in, active society, and enjoy the benefits of progress and prosperity. It is also important to close the gender gap. Women and men should be able to participate in the labour market on equal terms with equal responsibilities.

The report shows that the employment gap between the EU and the US can be attributed almost entirely to the services sector. Whereas the proportion of the population employed in agriculture and industry was found to be roughly similar in the US and the EU (3.1% and 18.2% respectively in the EU, 2.0% and 17.7% in the US), employment in services accounted for only 39.2% of working-age population in the EU in 1997, as opposed to 54.2% in the US. This difference existed for all services sectors - communal services, distribution, hotels and restaurants, and business and financial services – and for both

1 *European Commission (1998),* Employment rates 1998*, Employment and social affairs DG*

2 *Note that, in much of the literature, the term 'employment to population ratio' is used instead of 'employment rate'. For the sake of consistency with other European Commission documents, in this chapter only the latter will be used.*

3 *Employment rates stated refer to the age group 15-64. It should be noted that some of the EU-US comparisons reported in this chapter refer to different age groups or employment definitions: in the US, employment data usually refer to the age group 15+ and exclude, when based on establishment data, employment in agriculture and self-employment - contrary to the EU where employment data refer to the working-age population 15-64, generally covering all types of employment.*

low-paid, low-skilled and high-paid, high-skilled services.

According to the report, the same differences in employment structures also exist between the Member States with high and low employment rates, with France, Germany and Italy in particular having below average employment growth in these sectors. The report therefore concludes that the services sector offers the greatest potential for employment growth in Europe and that future increases in the overall employment rate would, to a large extent, depend on an expansion of jobs in services.

Based on this analysis, the report points to the areas where action could be taken to remedy the situation on both the demand and supply sides of the economy. It calls for significant improvements in the employment situation particularly in the three biggest Member States, and in the areas of female employment, employment of older people (55-64 years) and the services sectors, which would clearly have a major impact on the overall employment rate in the EU.

The panorama of the European labour markets in Chapter 1, as well as previous editions of the Employment in Europe report, have both assessed Member States' contributions to the evolution of the EU-level employment rate in recent years. Employment in Europe 2003 provides an extensive comparison of relative wage structures and wage determinants in the enlarged EU. Although it does not include an analysis of the employment effects of the different relative wage structures across countries, it does raise the question of whether the current wage structure supports job creation in the services sector, and in the high technology and knowledge-intensive services sectors in particular.

This chapter provides an up-to-date description of employment structures within the EU25 as compared to those of the US. It analyses the employment structures in Europe by sector and occupation, and the determinants of differences in employment structures across countries, paying attention to skills, relative wages, productivity and final demand structures, following approaches suggested in recent literature.[4] Analyses are based on data for the years 1998-2003 from Eurostat for the EU and from the US Bureau of Labor Statistics (BLS) for the US. They are made comparable where possible, including the longer time series on employment by gender and age group, and the sectoral employment structures from the OECD. The annexes contain a detailed description of key definitions, industry and occupational classifications, as well as the correspondence tables that were used to translate US classifications into EU-type classifications.

2. EU-US employment structures and performance

This section first reviews the long-term trends in employment rates and employment by broad sectors for the years 1970-2002, with a discussion on the most recent evolution for the years 1998-2003.[5] Secondly, it provides a detailed account of employment structures by characteristics of the workforce (gender, age, skills level), by sector and by occupation and skill. Finally it presents possible reasons behind the EU-US employment rate gaps, including differences in the skill composition of the workforce, productivity growth at sectoral level, the relative wage structures and final demand structures.

2.1. The EU-US employment gap: long-term evolution and recent trends

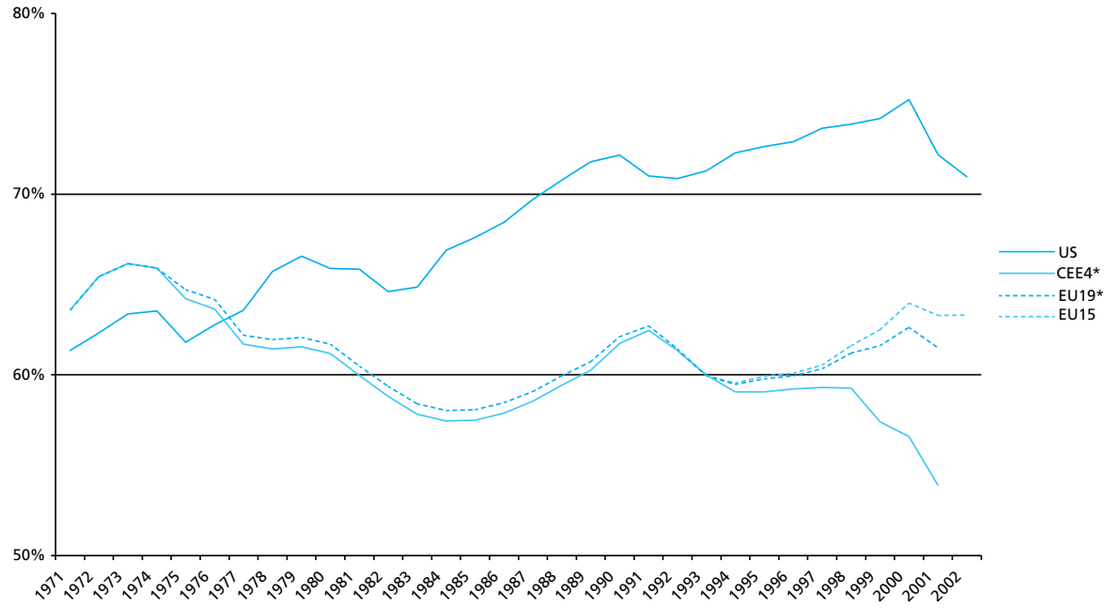
In both the US and the EU, the shift of economic activity to employment in services has contributed strongly to job creation and increases in overall employment. However, the speed, intensity and success with which this transition has so far taken place differs between Europe and the US, as reflected in the differing evolution of their employment rates since the mid-1970s. Both started at around 63% in the mid-1970s, but the US employment rate subsequently increased steadily to reach some 74% in the year 2000, while the EU employment rate declined to levels below 60% in the mid-1980s, before rising to more than 62% in 2000 (chart 52).

In the US, a pronounced shift to the services economy has taken place. Employment in the services sector increased by more than 43 million, or 72%, to more than 100 million in

4 *See e.g. Freeman and Schettkat (1999),* The role of wage and skill differences in US-Germanemployment differences*, Jahrbücher für Nationalökonomie und Statistik, 219(1-2), 49-66, and Gregory and Russo (2004),* The employment impact of differences in demand and production structures*, DEMPATEM Working Paper No. 10, AIAS, University of Amsterdam*

5 *Due to lack of data on sectoral employment, notably for Poland, no aggregate data on the enlarged European Union (EU25) are available before the year 2000. Therefore, reference is made to the employment structures in the subgroup of the original EU15 Aggregates for the group of those countries who acceded the Union in 2004 – the 'new' Member States (NMS10) – are calculated for those countries with available data only and will be reported where available.*

Chart 52 - Employment rates in the EU and the US, 1971-2002



Source: OECD, Labour market statistics database, Table 1
Notes: Employment rates using civilian employment in the age group 15-64, excluding employment in the armed forces and in institutional households, and census-based population figures; aggregate employment rates for EU15, include those countries with available data, with data missing for some of the countries missing in the following years: Austria (1973, 2002), Belgium (2000-2002), France (1990-2002), Greece (1970-1980, 2000-2002), Italy (1972-1976), Netherlands (1970-1974), Portugal (1970-1979, 1982-1985), UK (2001-2002);
** among the new Member States, data are available for Poland (1993-2001), Hungary (1992-2001), the Czech Republic (1975-2000) and the Slovak Republic (1994-2001) only.*

2000. At the same time, employment in both agriculture and industry remained stagnant at around 33 million in 2002: 29.5 million in industry and 3.5 million in agriculture (for a definition of the broad sectors "agriculture","industry" and "services" used in the analysis, see annex 6.2). The employment share of services – i.e. the share of employed in the services sector as a percentage of total employment – increased from 65% in the mid-1970s to 71% in 1990 and up to 75% in 2000, while those of agriculture and industry declined from 4% to 2.5% and from 31% to 22.5%, respectively. When measured as a share of the total population of working age, employment in services increased from 42% in 1977 to 54% in 2002. The employment rate of industry declined considerably from 20% in 1977 to 15% in 2002, while that of agriculture was down to 2% in 2002, from 2.5% 25 years before.

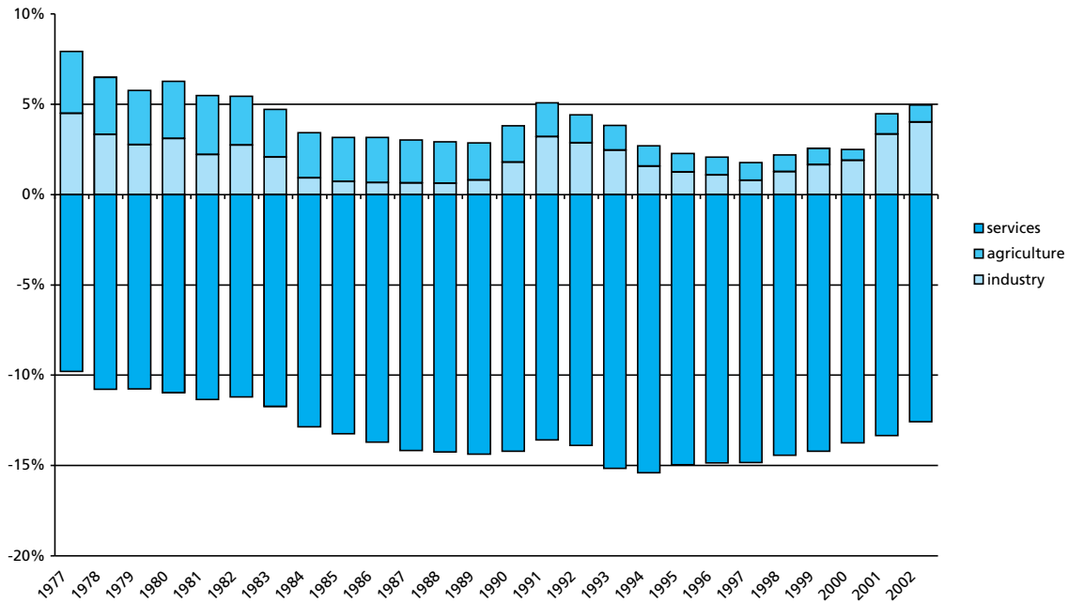
The EU also experienced growth in services sector employment over the same period.[6] However, this was not strong enough to make up for the heavy employment losses in industry and agriculture: employment in agriculture declined by more than 7.5 million, or 60%, reducing the employment share of agriculture from above 10% in the mid-1970s to 4% in 2002, and the employment rate from 6% to below 3%. Employment in industry declined by one-fourth, or 12.5 million, reducing the employment share of industry by 10 percentage points to 29%, and the employment rate by 5 percentage points to below 20%. The services sector created more than 20 million new jobs, equivalent to an employment growth of more than a third. The employment share of services increased to two-thirds, and the employment rate to 42%, up from 32% in the mid-1970s.

As a consequence of the above differences in employment performance, the EU-US employment gap opened up considerably over the 1970s and 1980s, before stagnating over most of the 1990s.[7] The widen-

6 *Due to the lack of long time-series information on the new Member States, statistics here are only for the EU15.*

7 *According to academic literature, these trends of convergence or divergence in employment rates between the EU and the US are shown to be even more pronounced when taking into account differences in hours worked per adult population. See e.g. Wiemer Salverda, Stephen Bazen and Mary Gregory (2001),* The European-American employment gap, wage inequality, earnings mobility and skill: A study for France, Germany, the Netherlands, the United Kingdom and the United States*, Final Report by the European Low-Wage Employment Research Network (LoWER) to the European Commission, Employment and Social Affairs DG. This study confirmed the existence of a significant jobs deficit and showed in particular that the largest single source of the jobs deficit is in jobs for women – an area where the European economies have failed to match the employment growth achieved in the US. The growth of part-time employment has provided only a modest offset to this. In fact, in each of the four EU economies covered by the study, the biggest source of the jobs gap, by a large margin, was found to be the shortfall in full-time employment by women, accounting for at least 55% (France) and up to 93% (UK) of the overall gap, although in the Netherlands and the UK part-time employment for women contributes a partial offset. Differences in hours of work were found to be much less important, although the shorter full-time hours worked by men in Germany and the Netherlands, and to some extent France, also contribute to the employment gap. Furthermore, a significant part of the employment gap was shown to emerge from the shorter hours worked in the European economies.*

Chart 53 - Evolution of EU-US employment rate gap by broad sectors, 1977-2002



Source: OECD, Labour market statistics database, Table 1
Notes: Due to missing information on employment by broad sector for a large number of Member States before 1977, the data for the years 1971-1976 are not strictly comparable and therefore not reported in the chart. See also the notes of chart 52.

ing of the EU-US employment gap is due to two main trends: first, the faster increase in services sector employment in the 1970s and 1980s, and second, the less favourable employment evolution of industry and agriculture in the EU. Almost the entire gap at the end of the 1990s was determined by differences in services sector employment (chart 53).

As illustrated in chart 53, the long-standing trend of an increasing EU-US employment gap has been slightly reversed since the late 1990s. In fact, the EU-US employment gap has decreased slightly since 1997 – due to both a further reduction in the employment gap of services and a very unfavourable employment evolution of the manufacturing sector in the US since 2000. In the years 1998-2000, total employment growth in the EU of 4% equalled that in the US, contributing to a slight reduction of the employment gap to 12 percentage points. In the services sector, the EU actually outperformed the US, with more than 5.5 million new jobs in the services sector, equivalent to an increase of 6%, compared to an increase of 5% in the US. In the subsequent years, against the backdrop of the economic slowdown, employment creation in the services sector decelerated, coming to an almost complete standstill in the US, but still adding almost 4 million new jobs in the EU.[8]

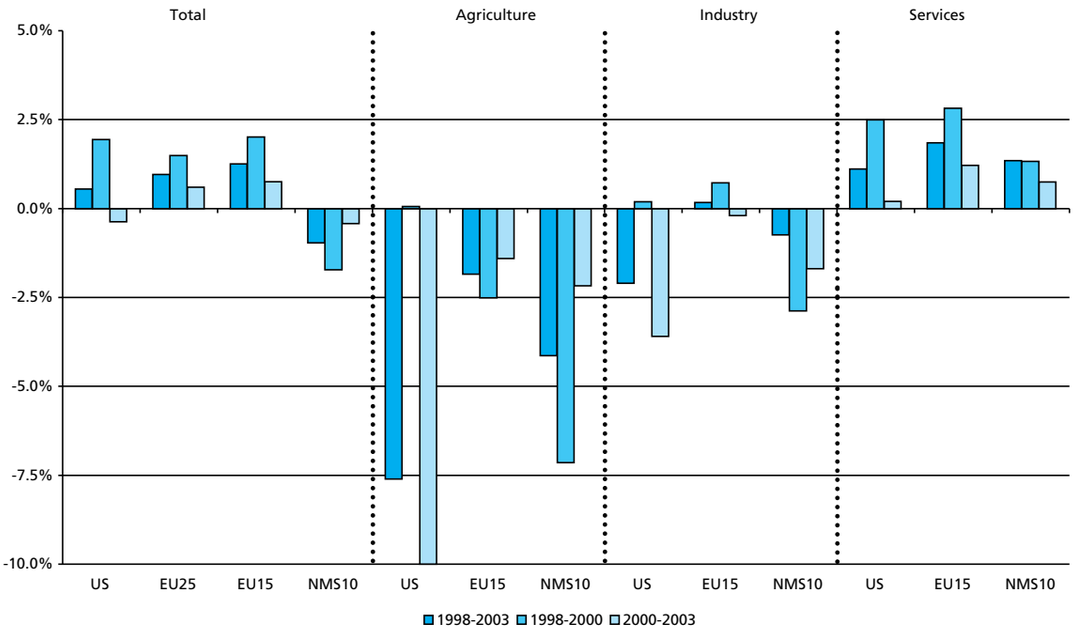
Job dynamics in the US services sector were not strong enough to compensate for the strong job destruction of almost 3 million jobs in US manufacturing over the same period, leading to a net decline in the employment rate. In the EU, on the other hand, net employment creation continued to be positive, albeit small and declining, throughout 2003, and the services sector in particular was able to compensate for the more moderate job losses in EU manufacturing. While the employment rate increased by 3 percentage points to more than 64% in the EU between 1998 and 2003 (2.5% in agriculture, 18% in industry, 43.5% in services), in the US it declined to 70% (2% in agriculture, 12.5% in industry, 55.5% in services), down from more than 73% in 1998, with changes driven equally by the lower employment performance of both industry and services (chart 54). As a result, by 2003 the EU-US employment gap had declined to less than 10 percentage points,[9] and to around 12 percentage points in the services sector (chart 55).

While the services sector in Europe has contributed significantly to the

8 *It should be noted that this recent 'trend reversal' in employment performance was accompanied by a change in productivity developments across EU and US, apparently reversing a long-standing trend of higher labour productivity growth rates in the EU. Productivity growth was much lower in the EU when compared to the US, notably in wholesale and retail trade and in ICT-using services. For further details, see* Employment in Europe 2003*, chapter 2.*

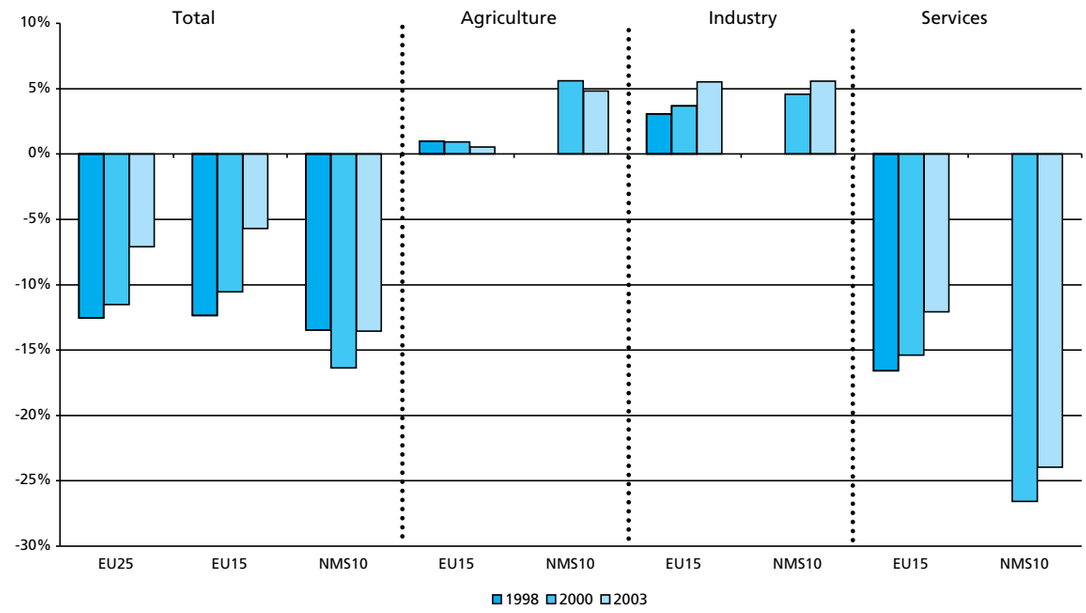
9 *Please note that due to differences in definitions, coverage and underlying data sources, measures of the employment gap might vary somewhat. Nevertheless, the recent trend in closing the EU-US employment gap is well confirmed when changing coverage or using the various data sources. According to the various measures obtained, the EU-US employment gap has come down to levels of 7-8 percentage points for the EU25, 5-7 percentage points for the EU15, and 12-13 percentage points for the NMS10 in 2003.*

Chart 54 - Annualised employment growth rates by broad sector in the EU and the US, 1998-2003



Source: Eurostat, LFS for EU25; Bureau of Labor Statistics (BLS), OES and CPS for US
Notes: EU25 and NMS10 for the periods 1998-2000 and 1998-2003 excluding Poland due to the lack of detailed sectoral employment data for Poland in 1998; data at sectoral level for EU25 not reported; only data on employment in agriculture for US based on CPS.

Chart 55 - Difference in employment rates by broad sector between the EU and the US,1998-2003



Source: Eurostat, LFS for EU25; BLS, OES for US
Notes: EU25 and NMS10 by broad sector in 1998 excluding Poland due to the lack of detailed sectoral employment data; data at sectoral level for EU25 not reported.

resilience of European labour markets to the recent economic slowdown, there are various indications that the services sector might also be leading the recent upturn in economic growth and employment creation in the US, with yearly employment growth rates of up to 10% between April and June 2004. This is equivalent to more than half a million new jobs in service-providing sectors, most notably in health care and social assistance and in professional and technical services, including management and consulting services, architectural and engineering services, and computer systems design and related services. Retail trade employment, on the other hand, was little changed.[10]

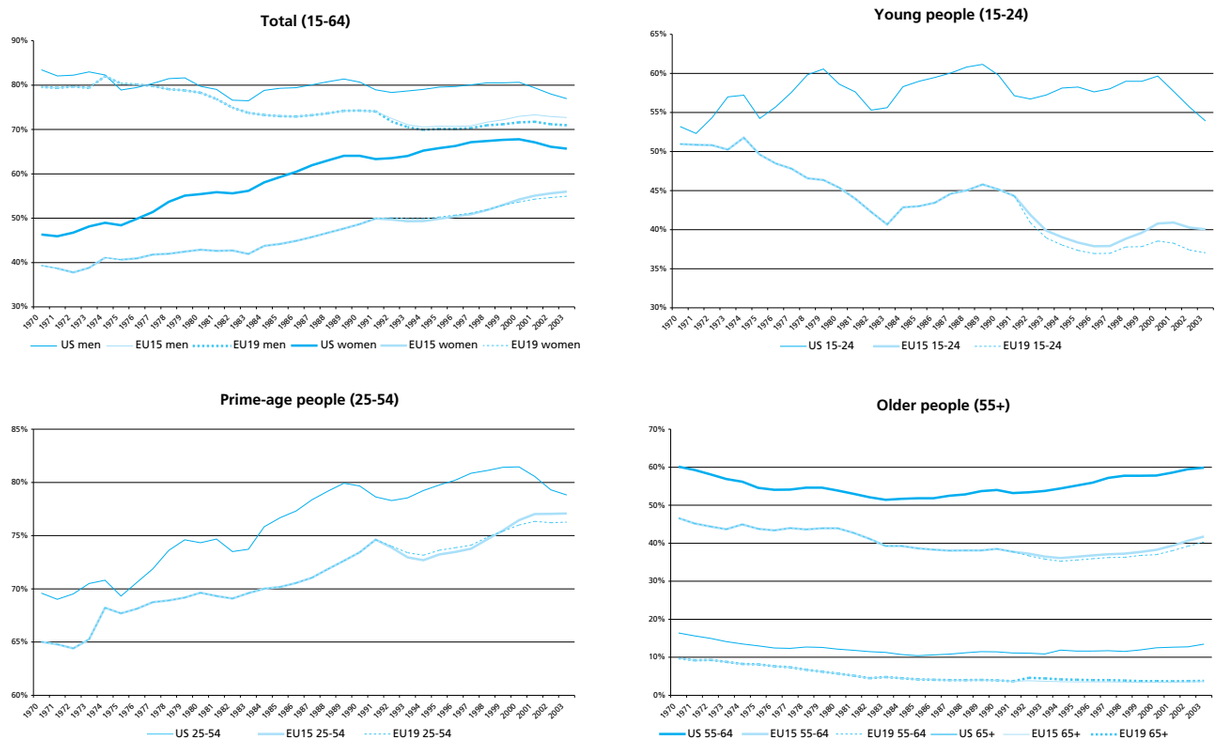
2.2. Further breakdown of the EU-US employment gap …

This section presents the results of a further breakdown of the differences in employment structures between the EU and the US. Three main issues are addressed: first, differences by individual characteristics of the jobholder (gender, age, skill level); second, differences across detailed sectors; and third, differences across occupations and skill levels.[11]

2.2.1. … by gender and age group

When looking at employment rates and their evolution by gender and age group[12], it can be seen that major differences exist for all groups but most prominently for women, the young (15-24) and older (55-64) age groups. The employment evolution of both men and women has actually contributed to the widening of the EU-US employment gap. First, while in the EU employment rates of men have dropped by some 10 percentage points, down from mid-1970s levels of 80% or more, they have remained around 80% in the US. Second, although female employment rates have increased strongly in both the EU

Chart 56 - Evolution of employment rates in the EU and the US by gender and age group, 1970-2003



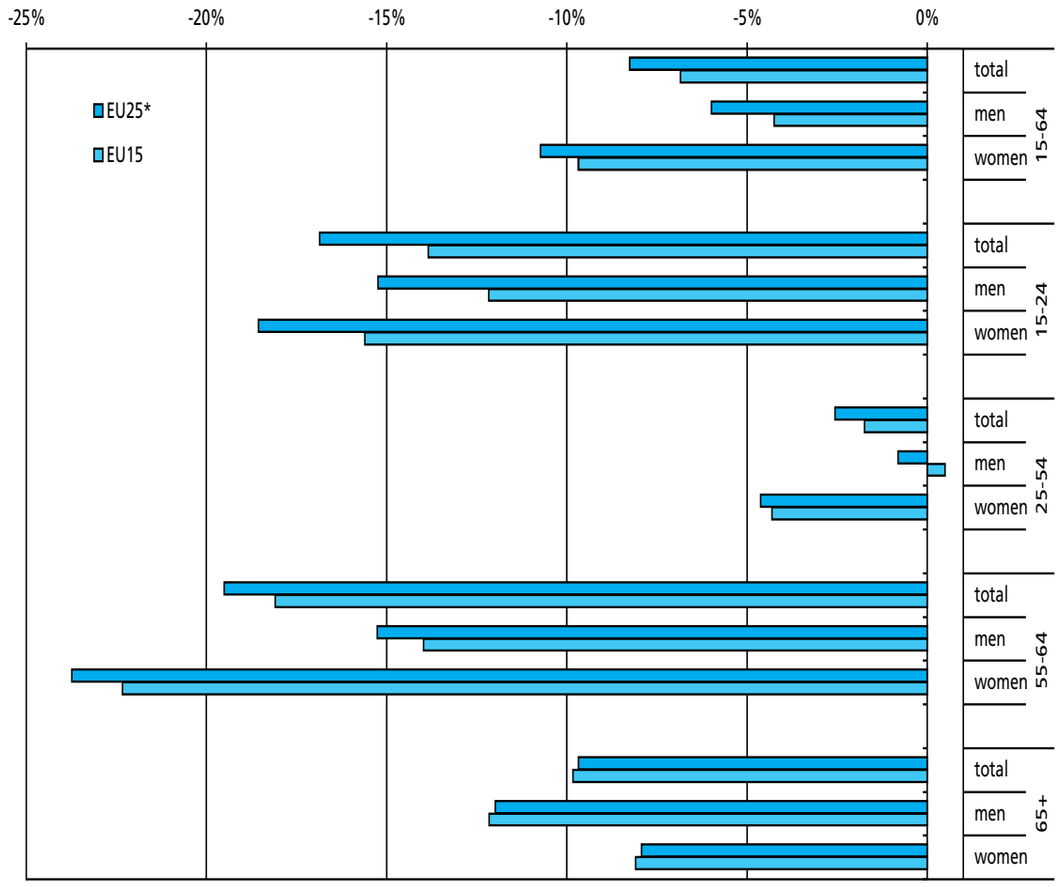
Source: OECD, Labour market statistics database, Table 2
Notes: Data might deviate slightly from those in charts 52 and 53 due to differences in the underlying definitions and data sources. See also footnote 12.

10 In this context it should be noted that there is an ongoing debate in the US as to the type of employment created throughout the latest recoveries. According to a report released on 21 June 2004 by CIBC World Markets, "[h]igh quality jobs in the U.S. have been replaced in the past three years by lower-paying, less stable employment." The report also states that since the economic expansion got underway in the US in late 2001, the number of jobs in high-paying industries fell by more than 2% while the number of jobs in low-paying industries rose by 1.2%.

11 Breakdowns by skill level are based on data at broad ISCED level as used in the OECD Education at a glance report. Breakdowns by sector are based on data at NACE-1 or NACE-2 level for the EU and, for the US, on data at SIC-3 level for the years 1998 and 2000 and at NAICS-4 level for the year 2003.
Breakdowns by occupation are based on data at ISCO-1 level for the EU and at SOC-3 level for the US. For this purpose, US employment data by sector and occupation have been translated into the corresponding EU classification (NACE for sectors and ISCO for occupations). The correspondence tables used in making the sectoral and occupational data comparable between the EU and the US are presented in the appendix. See also annex 6.5 for detailed overview tables containing key indicators on employment, skills and wages by detailed sector (NACE-1).

12 Note that figures presented here can deviate from those in the previous section in general, and in charts 1 and 2 in particular. This is because in this and later sections, data are based on Tables 2 and 3 of the OECD Labour Market Statistics database in which all data, including population, are from labour force surveys. Population data are either annual averages or for a specific month of the year. Lower and upper age limits can vary from country to country. In Table 3 of the OECD Labour Market Statistics database, labour force series reflect national survey coverage. Reporting date for labour force series can be different in both Tables (annual average, a specific quarter, a specific month, etc.). Data in the previous section, on the other hand, are based on OECD Table 1 for which population figures are census-based and are mid-year estimates. Furthermore, even though labour force series are from labour force surveys they exclude armed forces that are reported separately from external sources.

Chart 57 - Decomposition of the EU-US employment gap by gender and age group, 2003
(differences in employment rates by gender and age group wrt respective US rates in percentage points)



Source: OECD Labour market statistics database, Table 2
*Notes: Data might deviate slightly from those in charts 52 and 53 due to differences in the underlying definitions and data sources. *EU25 includes those new member states with available data in the OECD database. See also footnote 12.*

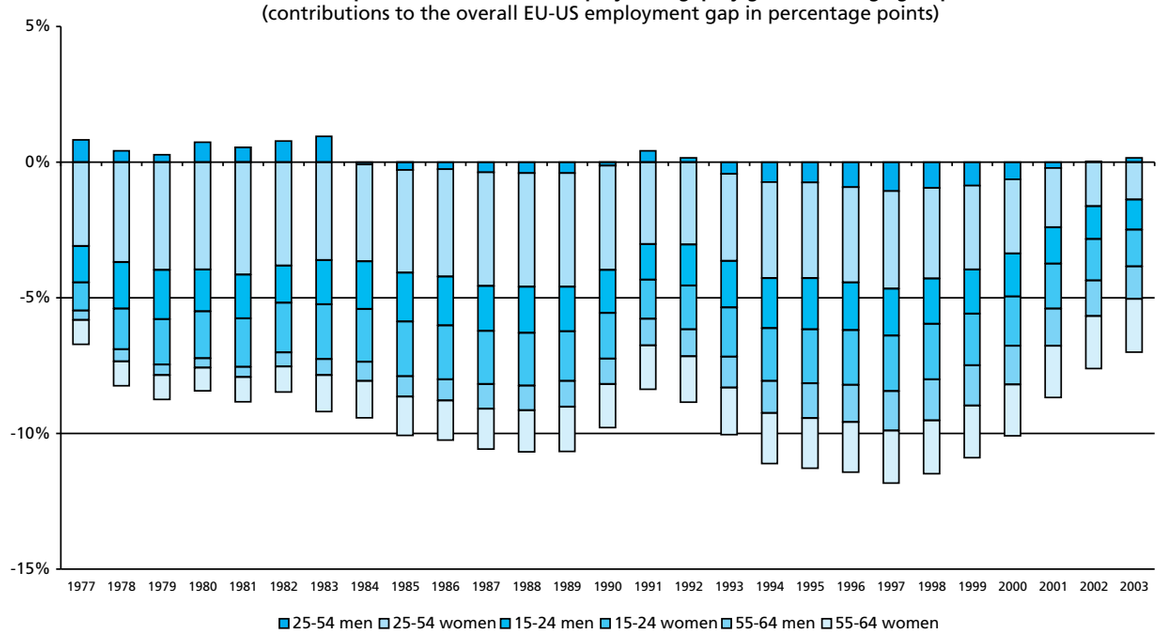
and the US, increases have been stronger in the US. Increases in the female employment rate to more than 55% in the EU, up from 40% in the mid-1970s, remain inferior to those observed in the US where the female employment rate increased by almost 20 percentage points between the mid-1970s and 2000, bringing the female employment rate close to 70%.

A further breakdown by age group helps to qualify these results. Among prime-age men, employment rates have traditionally been similar between the EU and the US. Among prime-age women, on the other hand, there has generally been a significant employment gap of more than 10 percentage points, although this has been halved since 1998. However, the biggest discrepancy in employment rates between the EU and the US is observed for the young (15-24) and older (55-64) age groups, with employment gaps at record levels of around 20 percentage points in each of them in the late 1990s. This can be attributed to the fact that, during the last 25-30 years, employment rates in Europe have risen only for prime-age women, and fallen among prime-age men and other age groups for both men and women. By contrast, in the US employment rates of young people have risen slightly and employment rates of older people are back to levels seen in the early 1970s, after a drop of some 10 percentage points between the mid-1970s and the mid-1980s (similar to that observed in Europe). The US has experienced a similar, though less pronounced, trend reversal for the employment rates of people aged 65 or above, while in the EU employment rates of this age group are some 10 percentage points lower than in the US and have been declining steadily to levels below 5% (chart 56).

While the employment gaps among young and prime-age people have recently declined again, progress in closing the employment gap for older workers is still very modest, with employment rates in the EU, in particular of older women, more than 20 percentage points below those in the US. Among prime-age women, on the other hand, the gap has narrowed to less than 5 percentage points (chart 57).

These varying trends have led to significant changes in the composi-

Chart 58 - Decomposition of the EU-US employment gap by gender and age group, 1977-2003
(contributions to the overall EU-US employment gap in percentage points)



Source: OECD Labour market statistics database, Table 2
Notes: Data might deviate slightly from those in charts 52 and 53 due to differences in the underlying definitions and data sources. See also footnote 12.

tion of the EU-US employment gap by gender and age group. While, traditionally, the comparatively lower employment of prime-age women has contributed most strongly – up to a third - to the overall gap, its contribution to the overall employment gap has narrowed substantially since 1997. In 2003, the lower employment of older women in the EU, as compared to the US, was the strongest contributing factor to the overall employment gap. The contribution of the lower employment of older men, moreover, has also been increasing steadily, while that of young people has decreased slightly (chart 58).

2.2.2. … by sector of employment

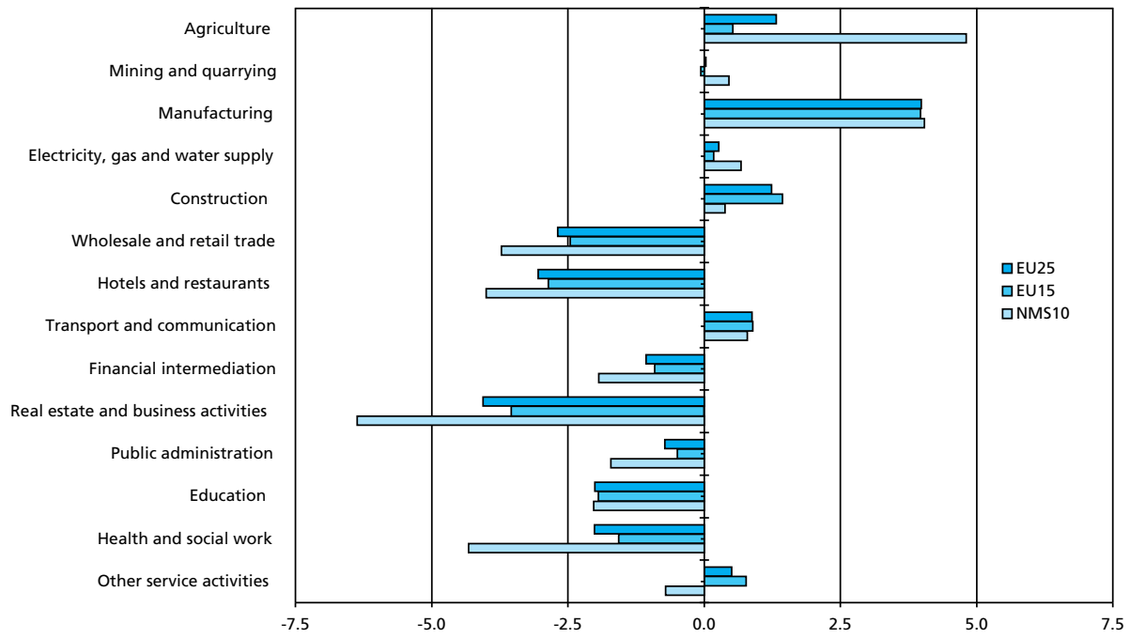
When looking at the EU-US employment gap by sector, it is clear that – as the Employment Rates report in 1998 rightly states - an employment gap between Europe and the US exists for all services sectors. The biggest gap of up to 4 percentage points (4.1 percentage points for EU25, 3.5 for EU15) is found in real estate and business activities. In wholesale and retail trade and hotels and restaurants, the employment rates in the EU are 2-3 percentage points below those in the US, while in education and health and social services the gap is around 2 percentage points. Only in agriculture and industry are employment rates higher in the EU, exceeding those in the US by 4 percentage points in manufacturing, and by just over one percentage point in construction and agriculture. Most interestingly, and somewhat at odds with widespread perceptions, employment rates and employment shares in public administration are found to be rather similar in the EU and the US (chart 59).[13]

These results are confirmed when analysing differences in EU-US employment structures based on a more detailed breakdown of employment by sector at NACE-2 level. Of the ten sectors for which employment rates exceed those of the US by up to 1.5 percentage points, only two are in the service sector (two transport sectors). The others include agriculture, construction and six manufacturing sectors. On the other hand, of the ten sectors with the biggest employment gap compared to the US all but two – manufacturing of other transport equipment including railway and aircraft, and manufacturing of office machinery and computers - are from the services sector. They include three sectors of comparatively lower productivity and/or with above average employment shares of the low-skilled (wholesale trade, retail trade, and hotels and restaurants), and five sectors of comparatively higher productivity and above average employment shares of the high-skilled (public administration, social security and defence; financial intermediation, insurance and pension funding; health and social work; education; and other business activities such as consultancy, architecture, engineering and advertising) (chart 62).

Hence there are important differences in employment structures in general and important gaps in serv-

13 Differences in sectoral employment structures across the EU Members States and candidate countries will be described in the following section. For more detailed data on the EU member states and candidate countries, see also the tables in annex 6.5.

Chart 59 - Decomposition of the EU-US employment gap by sector (NACE-1), 2003
(differences of sector-specific employment rates wrt respective US rates in percentage points)



Source: Eurostat, LFS for EU25; BLS, OES for US
Notes: US employment data by sector at SIC-3 or NAICS-3 level have been converted to NACE-1 level according to annex 6.2.

ices sector employment in particular, and this despite the fact that employment growth in some of these sectors, notably in the private market services (wholesale and retail trade, hotels and restaurants, business services) has outpaced that in the US in recent years. However, in this context it is also important to state that, with the exception of business services, the EU did not outperform the US with regard to job creation in some of the other, predominantly high-skilled services sectors such as education, health and social services, and public administration – all sectors which make a negligible contribution to closing the services employment gap compared to other private market services mentioned before.

2.2.3. … by occupation and skill level

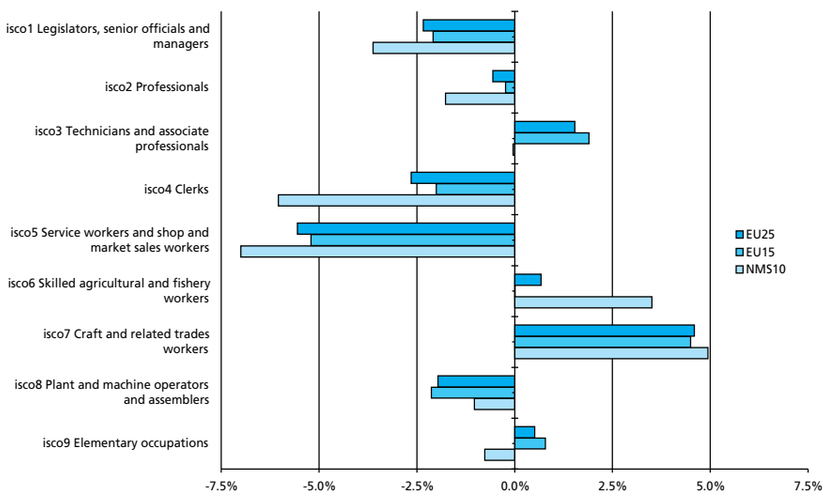
An analysis of the differences in EU-US employment structures by occupation and by skill level confirms the finding that the EU-US employment gap is due to differences in employment in both predominantly high-productivity, high-skilled areas and in predominantly low-productivity, low-skilled areas. While the biggest occupation-specific employment gap is found among services workers and market sales workers - where the US employment rate exceeds that of the EU by more than 5 percentage points - there are other, predominantly medium and high-skilled, occupations which also contribute significantly to the EU-US employment gap, notably managers and clerks. On the other hand, workers in the EU are comparatively more often employed as craft and related workers or as technicians and associate professionals. Moreover, in most of the central and eastern European Member States, there is also a considerably higher share of workers in skilled agricultural occupations. As in the sectoral analysis, the employment gaps in most occupational categories tend to be more pronounced in the new Member States (NMS10) than in the EU15. This applies to managers, legislators, professionals and clerks, as well as to service workers and market sales workers (chart 60).

Finally, there are differences in employment by skill level between the EU and the US.[14] Comparable data on educational attainment

14 The skill data used in this chapter are from Eurostat, LFS for EU25 and candidate countries, and from the OECD Labour Market Statistics database for the US. Educational attainment levels have been classified according to the broad ISCED classification described in annex 6.4. It should be noted that these data are not completely comparable and that the findings on employment by skill level therefore need to be interpreted with caution. In particular differences in the average intellectual capacities of the low skilled in countries with large population shares in that category and of those in countries with small shares are likely to exist. Furthermore, when comparing employment rates for the least educated quartile across countries, other studies find considerably lower rates for the least qualified in Europe than in the US (See e.g. Andrew Glyn (2001), "Inequalities of employment and wages in OECD Countries", Oxford Bulletin of Economics and Statistics). Alternative sources for the measurement of internationally comparable skill levels are used in other studies. These sources include in particular the OECD Adult Education and Literacy Survey (AELS) and the Programme for International Student Assessment (PISA) survey. As will be discussed further below, results on skill distributions across countries might vary considerably according to the underlying data source. Since no long time-series on employment by skill levels are available from the above sources, this section focuses on current differences in employment by skill levels only.

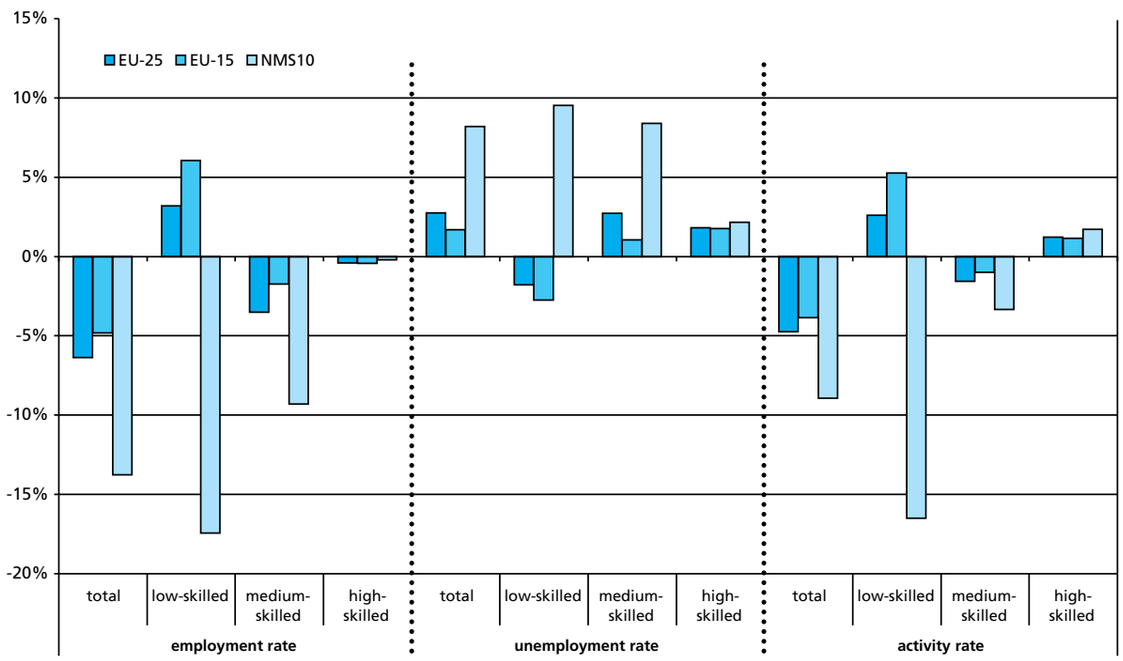
levels (ISCED) from the OECD indicates that while labour market participation and employment of the medium- and high-skilled is generally lower - and unemployment of these groups generally higher - in the EU than in the US, the opposite holds for the low-skilled group in the EU15. Both labour market participation rates and employment rates of the low-skilled are found to be around 5 percentage points higher in the EU15 compared to the US. Also unemployment rates of the low-skilled are found to be slightly higher in the US than in the EU15. On the other hand, employment prospects for the low-skilled in the new Member States are significantly less favourable, with participation and employment rates in that group of more than 15 percentage points below those in the US, and unemployment rates of more than 10 percentage points higher than in the US (chart 61).

Chart 60 - Decomposition of the EU-US employment gap by occupation, 2003
(differences of occupation - specific employment rates wrt respective US rates in percentage points)



Source: Eurostat, LFS for EU25; BLS, OES for US
Notes: US employment data by occupation at SOC-3 level have been converted to ISCO-1 level according to annex 6.3.

Chart 61 - Decomposition of the EU-US employment gap by skill level (ISCED), 2003
(differences of skill-specific (un)employment and activity rates wrt respective US rates in percentage points)



Source: Eurostat, LFS, for EU25; OECD, Labour market statistics database for US
Notes: See annex 6.4. for a definition of the broad ISCED categories used in defining educational attainment levels.

2.3. Concluding remarks

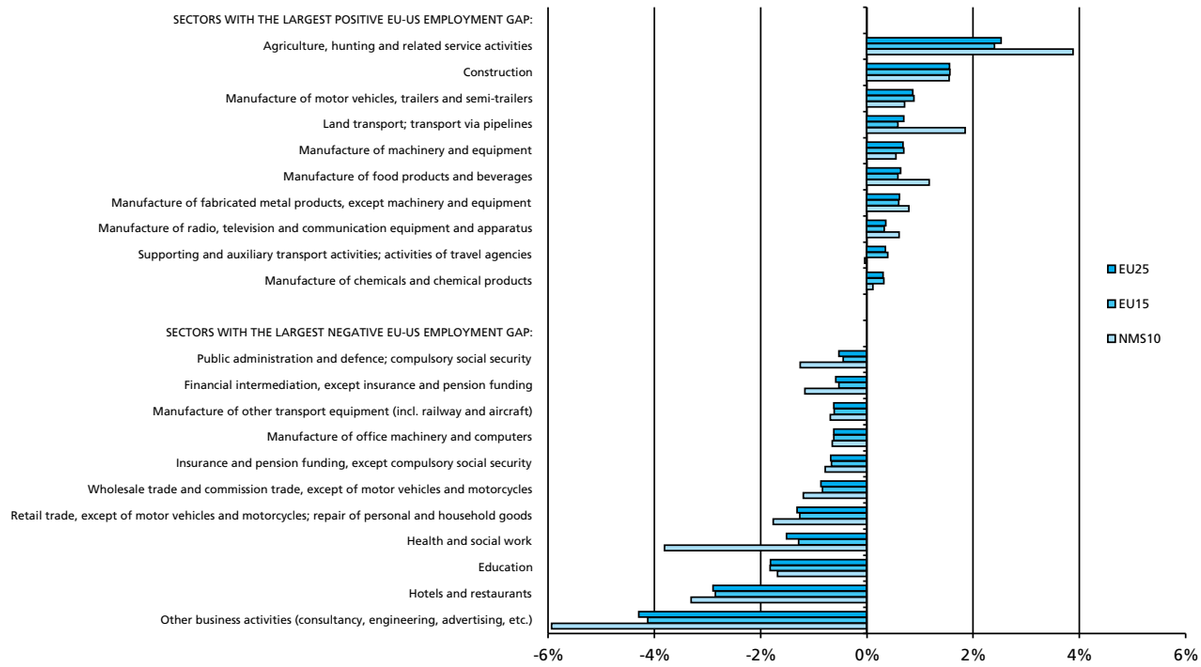
As shown above, the overall EU-US employment gap remains, and in the services sector in particular. The structural findings of the 1998 Employment Rates Report continue to be largely valid, and this despite some reduction in the EU-US employment gap in recent years. Furthermore, the enlargement of the EU has not considerably changed the situation: with the exception of agriculture and the employment situation of the low-skilled, employment patterns and differences with respect to the US are comparable between the EU15 and the NMS10, even if more pronounced in the latter. In this context, however, the weak recent employment performance in the EU in general and in some of the new Member States in particular is of concern.

Various recent studies challenge simple explanations of this employment gap, arguing that, at least for some EU countries, it can probably not be fully explained by differences in productivity growth and wage structures alone.[15] These studies point in particular to the following additional arguments: first, the link between skills and wages, showing that the US has experienced exceptional employment growth not only in some low-wage and low-skilled retail trade sectors, but also in some high-wage, high-skill sectors, such as education and research or business services; second, the predominant role of increasing participation in the US, notably through increases in female participation and less recurrence to early retirement; third, the differences in household consumption patterns and final demand structures notably for services, in part as a consequence of the above increases in labour market participation by women and older people; and fourth, and more generally, the potentially crucial role of the differences in working times as reflecting differences in preferences for leisure against work.[16] These issues will be explored in more detail in the section on reasons behind the EU-US employment rate gap.

3. Employment structures in the enlarged European Union

This section analyses the employment structures within the EU, and attempts to identify employment gaps across the EU Member States in comparison both to the EU average and to the US. It focuses in particular on the services sector at detailed NACE-2 level and on employment rates rather than employment shares. It also presents detailed breakdowns of employment structures and employment growth rates based on employment data by sector, occupation and skills. Since no

Chart 62 - Decomposition of the EU-US employment gap by detailed sector (NACE-2), 2003
(differences of sector-specific employment rates wrt respective US rates in percentage points)



Source: Eurostat, LFS for EU25; BLS, OES for US
Notes: The chart shows the employment gaps for those ten sectors with the highest positive employment rates gap in favour of the EU (the upper panel of the chart) and for those ten sectors with the highest negative employment rates gap between the EU and the US (the lower panel of the chart). Sectors are sorted in declining order from the top to the bottom, from largest positive employment gap to largest negative employment gap. US employment data by sector at SIC-3 or NAICS-3 level have been converted to NACE-2 level according to annex 6.2. For some sectors (construction, hotels and restaurants, education, health and social work), there is no further disaggregation so that NACE-1 and NACE-2 coincide.

15 See section 4 on "Explaining differences in employment structures" for more detail and references to the most relevant studies.
16 Olivier Blanchard (2004), "The economic future of Europe", NBER working paper no. 10310, Cambridge, Massachusetts

comparable long time-series data are available for such a comparative analysis across EU Member States, the section focuses on employment structures and employment performance for the period 1998-2003. Detailed key employment statistics by sector at NACE-1 level can be found in the annex 6.2.

3.1. Sectoral employment structures

Table 41 gives an overview of employment rates, employment shares and annual employment growth rates by broad sector in the EU Member States and the candidate countries. Employment rates in agriculture vary from less than 2% in Belgium, Germany, Sweden and the UK to around 10% in Greece, Latvia, Lithuania and Poland and to almost 20% in Romania. Employment in agriculture has continued to decline in all EU Member States, with the exception of France, and in the candidate countries. The employment decline in agriculture was generally more pronounced in the new Member States – with employment declines of 4% or more - notably in the Czech Republic, Estonia, Latvia, the Slovak Republic, Slovenia, and Romania. Similar decreases in employment in agriculture were also observed in some of the EU15 Member States, notably Belgium, Finland and the UK.

The lowest population shares in employment in industry of around 15% are observed in Belgium, France, Poland and, most notably, Greece. Member States with comparatively high employment rates in industry, on the other hand, include Austria, the Czech Republic, Germany, Portugal, the Slovak Republic and Slovenia. In all of

Table 41 - Employment rates and employment shares in the EU Member States and the candidate countries by sector, 2003

	Employment rate				Employment share			Employment growth 1998-2003			
	Total	Agriculture	Industry	Services	Agriculture	Industry	Services	Total	Agriculture	Industry	Services
BE	59.3	1.0	14.8	43.5	1.7	25.0	73.4	1.0	-4.6	-0.8	1.8
CZ	64.9	2.9	26.0	35.9	4.5	40.1	55.4	-0.5	-4.4	-1.3	0.5
DK	75.1	2.3	17.4	55.2	3.1	23.2	73.5	0.1	-2.0	-2.5	1.1
DE	64.9	1.5	20.5	43.0	2.3	31.5	66.2	0.2	-2.5	-1.6	1.2
EE	62.3	3.8	19.8	38.7	6.2	31.7	62.1	-0.9	-8.6	-1.9	0.6
EL	57.9	8.7	12.9	36.3	15.1	22.3	62.6	0.2	-1.6	-0.8	1.1
ES	59.6	3.3	18.4	37.9	5.5	30.9	63.6	4.0	-2.2	4.2	4.6
FR	62.8	2.7	15.7	44.2	4.3	24.9	70.3	2.0	2.2	0.8	2.3
IE	65.0	3.7	18.2	42.9	5.6	28.0	66.0	3.6	-3.5	2.7	4.8
IT	56.1	2.6	17.9	35.6	4.5	32.0	63.5	1.6	-2.4	1.0	2.3
CY	69.2	2.8	16.2	50.2	4.1	23.3	72.6				
LV	61.7	8.8	16.8	36.2	14.2	27.1	58.7	0.5	-3.9	0.2	1.9
LT	62.8	11.4	17.4	34.0	18.2	27.7	54.1	-0.2	-0.8	-1.4	0.8
LU	:	:	:	:	:	:	:	:	:	:	:
HU	57.0	3.1	19.1	34.9	5.4	33.5	61.1	1.5	-4.5	0.7	2.6
MT	:	:	:	:	2.7	29.7	67.6	:	:	:	:
NL	73.6	:	:	:	:	:	:	1.9	:	:	:
AT	69.1	3.7	20.7	44.7	5.4	30.0	64.7	0.7	-1.9	0.8	0.8
PL	51.4	8.8	14.9	27.6	17.2	29.0	53.7	-2.1			
PT	67.3	6.0	23.3	38.0	8.9	34.7	56.4	1.0	-2.3	-0.5	2.7
SI	62.5	4.2	23.4	34.4	6.7	37.5	55.1	0.0	-7.3	-1.5	2.2
SK	57.9	3.5	22.1	32.3	6.0	38.2	55.7	-0.3	-6.2	-1.0	0.9
FI	68.7	3.4	18.3	46.6	5.0	26.7	67.9	1.9	-4.3	0.8	2.9
SE	73.6	1.6	16.7	55.2	2.2	22.7	75.0	2.0	-2.2	-0.8	3.0
UK	71.7	0.8	16.9	53.8	1.2	23.6	75.0	1.1	-4.9	-1.4	2.1
EU	62.8	3.2	18.1	41.2	5.1	28.9	65.6	1.0	:	:	:
BG	53.1	5.3	17.3	30.5	9.9	32.6	57.4	:	:	:	:
RO	58.7	19.7	18.3	20.8	33.5	31.1	35.4	-2.6	-3.9	-3.1	-0.9

Source: Eurostat, LFS
Notes: Employment growth refers to annualised employment growth rates for the period 1998-2003. No data available for LU. No data on the breakdown of total employment by broad industry available for NL. For MT, no data on employment rates 2003 available due to the lack of population data for 2003. For CY, MT, BG and EU, no data on employment growth 1998-2003 available due to the lack of data for 1998.

these countries, more than 20% of the working-age population are employed in industry, reaching up to 26% in the Czech Republic – and this despite recent decreases in employment in industry of more than 1 per cent per year in some of these countries, notably the Czech Republic, Estonia, Germany, the Slovak Republic, and Slovenia. Employment in industry has also declined to a similar extent in some of those countries with below-average employment levels in industry, including Lithuania, the UK and, most notably, Denmark. The latter had the strongest employment decline in industry of, on average, 2.5% per year, exceeded only by Romania which experienced declines of around 3% per year. By contrast, employment growth in industry, and in construction in particular, was favourable in Ireland, Italy and, most notably, Spain. In the latter, annual growth rates of more than 4% were observed between 1998 and 2003, similar to the employment growth rates in the Spanish services sector in the same period which were higher than in all other EU Member States except Ireland.

The services sector has the highest employment rate in all Member States and candidate countries except Romania where all three broad sectors have similar employment rates of around 20%. Nevertheless, employment rates in services of more than 50% of the working-age population in Denmark, Sweden and the UK are in sharp contrast to employment rates in services of below 40% in the NMS10 (except Cyprus and Malta) and the southern European Member States, and rates at or below 30% in Bulgaria (30.5%), Poland (27.6%) and Romania (20.8%).

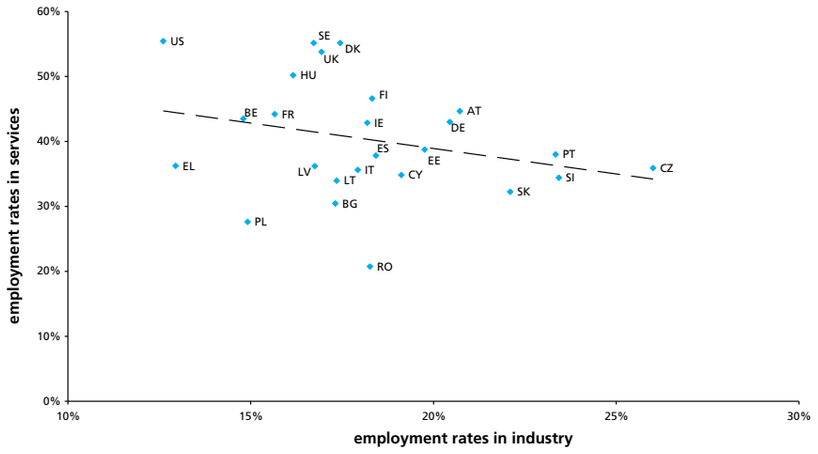
In all the southern Member States, most of the central and eastern European Member States and the candidate countries, there clearly remains significant potential for job creation in the services sector when compared both to the US and to the more advanced service economies within the EU. And indeed, again with the exception of Romania, employment in services has grown in all Member States between 1998 and 2003. However, among those Member States with comparatively low levels of service sector employment, only the southern Member States and Hungary, Latvia and Slovenia have known significant employment growth rates of more than 1 per cent per year in the period 1998-2003. Among those Member States with relatively high employment levels in services, on the other hand, employment growth in services in general has also been above average in the period 1998-2003, with annual employment growth rates of at least 1 per cent.[17]

It is worth noting that there is no evidence of a trade-off between employment in industry and services. A closer look at the employment performance of these two sectors over the last five years shows that employment developments in both sectors go hand in hand, and for all skill groups. So, while in Ireland and Spain, employment continued to grow strongly in both sectors, employment growth notably in services was well below the average in the Czech Republic, Estonia, Germany, Greece and the Slovak Republic (charts 63 - 64).

Charts 65 and 66 further highlight cross-country differences in employment rates and employment growth within the services sector at detailed sectoral NACE-2 level. The first set of charts indicates the deviations of Member States employment rate in a given sector from the EU average in percentage points. The second set of charts shows the variation in annual employment growth rates across the Member States and candidate countries by sector. For comparison, these charts also indicate the Member States' position relative to the US. For more detailed key employment statistics by sector, including agriculture and industry, see also annex 6.5.

The variation in employment rates across the Member States is particularly large in health and social services – with an employment gap of more than 10 percentage points between the Member States with the highest employment rates in this sector (the Nordic member states) and those with the lowest employment rates (Cyprus and Greece and the candidate countries). Considerable employment gaps within the EU of

Chart 63 - Employment rates in industry and services in the EU and the candidate countries, 2003



Source: Eurostat, LFS
Notes: dotted line shows simple regression line

17 No employment growth data are available for Cyprus and Malta.

up to 10 percentage points are also observed in real estate and business services, as well as in wholesale and retail trade. There are further employment gaps of around 5 percentage points in hotels and restaurants and in education, however, little variation is observed in the employment rates across Member States in transport and communication, financial intermediation and public administration (chart 65).

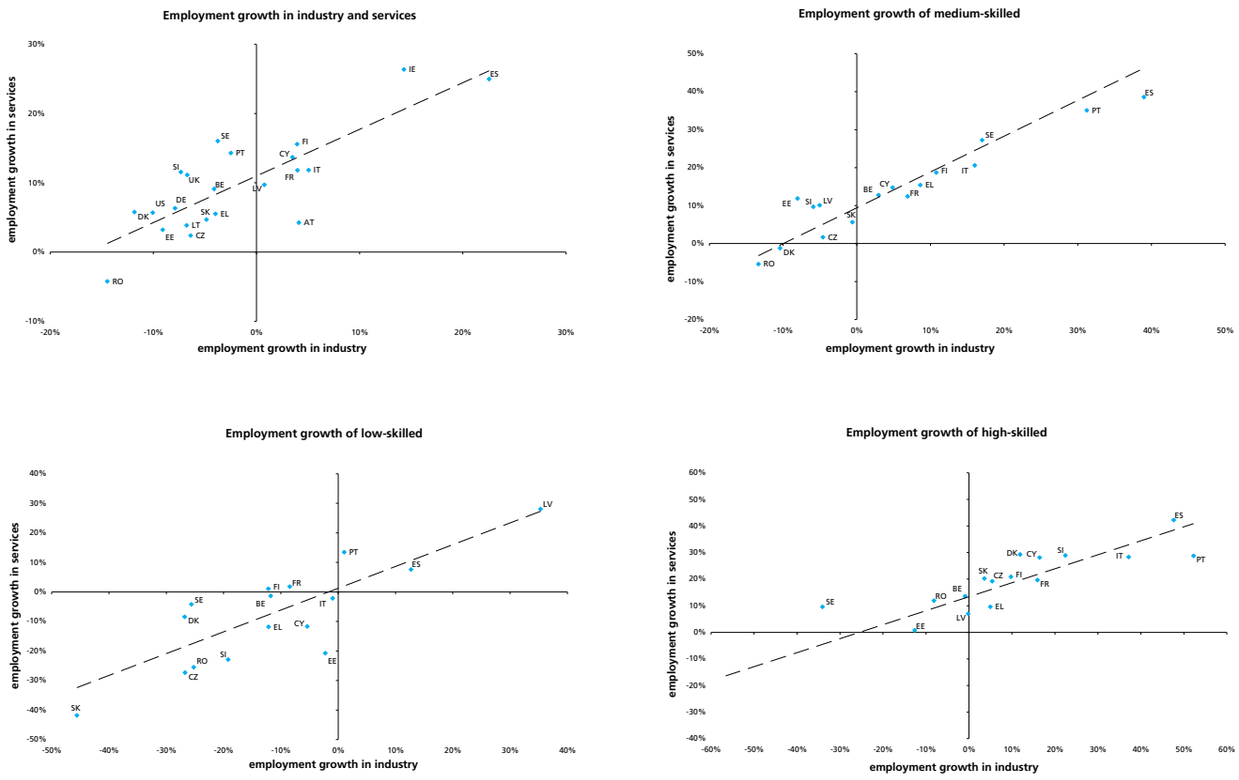
Although employment in the services sectors has been growing in most Member States and candidate countries, there are considerable differences in the growth rates across countries. These variations are most pronounced in real estate and business services, education, health and social services, and in hotels and restaurants. In business services, employment growth rates range from more than 7.5% per year in Lithuania, Spain, Sweden and, most notably, Hungary, to less than 3% in the Czech Republic, Denmark, Slovenia, and the UK. In Romania, moreover, employment in business services has declined (chart 66).

A few Member States managed to reach employment levels comparable to those in the US: Cyprus, in wholesale and retail trade and in hotels and restaurants; Cyprus and the UK, in financial intermediation; Sweden, in education and in real estate and business services; France and Belgium, in public administration; the Nordic Member States and the UK, in health and social services; and, finally, most European countries show higher employment rates in transport and communication. In most Member States, however, employment growth rates in the above service sectors – except in education - have recently exceeded those in the US, thus contributing to the closing of the EU-US employment gap since the late 1990s.

3.2. Employment structures by occupation and skill level

Table 42 shows that differences in sectoral employment structures are also reflected in occupational employment structures. The employment rates among the most skilled occupations - including legislators, managers, professionals and technicians – are highest in the Nordic Member States and Austria, Belgium, France, Germany, Ireland and the UK – where a third or more of all employed are working in these non-manual, skilled occupations. On the other hand, only around one in four employed in the southern Member States and in most of the new Member States, and only one in five in Poland and the candidate countries, work in these occupations. Furthermore, the employment rates among manual, skilled workers vary between less than one-fourth in Belgium, France, Germany, and the UK, to 30% or more in Austria, Czech Republic, Greece, Lithuania, Sweden, and Portugal. Finally, comparatively high employment rates of unskilled workers of 7% or more are observed in the Baltic Member

Chart 64 - Employment growth in industry and services in the EU and the candidate countries, 1998-2003



Source: Eurostat, LFS
Notes: dotted lines show simple regression lines

Table 42 - Employment rates and employment shares in the EU Member States and the candidate countries by occupation, 2003

	Employment rates 2003				Employment shares 2003			Annualised employment growth rates 1998-2003			
	Total	Non-manual skilled	Manual skilled	unskilled	Non-manual skilled	Manual skilled	unskilled	Total	Non-manual skilled	Manual skilled	unskilled
BE	59.3	33.9	19.0	5.7	57.2	32.0	9.6	1.0	1.4	-0.4	3.1
CZ	64.9	28.9	32.1	3.7	44.5	49.5	5.7	-0.5	0.4	-0.3	-8.0
DK	75.1	39.3	27.6	7.9	52.3	36.7	10.6	0.1	1.5	-0.6	-3.4
DE	64.9	34.9	24.0	4.9	53.7	36.9	7.6	0.2	1.1	-1.0	0.8
EE	62.3	26.5	28.5	7.0	42.4	45.8	11.3	-0.9	-1.2	-0.9	0.0
EL	57.9	23.3	30.2	4.0	40.2	52.1	6.8	0.2	0.1	0.1	3.0
ES	59.6	23.7	27.1	8.4	39.8	45.5	14.1	4.0	4.7	3.4	4.0
FR	62.8	31.9	24.7	5.3	50.7	39.3	8.4	2.0	2.4	1.1	3.5
IE	65.0	33.9	25.6	5.1	52.2	39.5	7.9	3.6	:	:	:
IT	56.1	25.2	25.5	4.8	45.0	45.4	8.5	1.6	3.9	1.1	1.4
CY	69.2	29.7	27.7	11.1	42.9	40.1	16.1	:	:	:	:
LV	61.7	23.6	29.3	8.6	38.3	47.6	13.9	0.5	1.2	-0.4	1.2
LT	62.8	21.5	34.0	7.2	34.2	54.1	11.4	-0.2	-1.5	1.2	0.4
LU	:	:	:	:	:	:	:	:	:	:	:
HU	57.0	23.7	28.2	4.5	41.6	49.4	7.9	1.5	2.5	1.0	-0.2
MT	:	:	:	:	:	:	12.8	:	:	:	:
NL	73.6	:	:	:	:	:	:	1.9	:	:	:
AT	69.1	31.9	30.6	6.4	46.1	44.2	9.3	0.7	0.7	0.5	1.6
PL	51.4	19.8	27.3	3.9	38.6	53.2	7.6	-2.1	-1.0	-2.6	-3.7
PT	67.3	22.7	35.2	9.0	33.7	52.2	13.4	1.0	3.2	-0.4	1.7
SI	62.5	28.9	29.8	3.0	46.3	47.7	4.8	0.0	2.7	-2.5	0.0
SK	57.9	23.6	28.8	5.2	40.7	49.8	9.0	-0.3	-0.2	0.1	-3.2
FI	68.7	33.6	28.6	6.2	48.9	41.6	9.0	1.9	1.2	2.6	5.3
SE	73.6	38.6	30.4	4.2	52.5	41.3	5.7	2.0	2.6	1.1	3.8
UK	71.7	38.9	24.7	7.7	54.3	34.5	10.7	1.1	0.8	0.2	7.3
EU	62.8	30.2	26.2	5.7	48.0	41.6	9.2	:	:	:	:
BG	53.1	20.4	26.1	6.3	38.4	49.2	11.8	:	:	:	:
RO	58.7	14.3	39.9	4.4	24.4	68.0	7.6	-2.6	-1.4	-3.1	-1.8

Source: Eurostat, LFS

Notes: Employment growth refers to annualised employment growth rates for the period 1998-2003. Employment shares by occupation and skill level might not add up to 100% due to missing information. No data available for LU and MT, partly due to the lack of reliability of existing survey information. No data on the breakdown of total employment by skill level available for NL. For CY, BG and EU, no data on employment growth 1998-2003 are available due to the lack of data for 1998. For IE, no information on employment growth 1998-2003 by skill level is available due to the lack of data on the breakdown of employment by skill level in IE in 1998.

States, Cyprus, Denmark, Portugal, Spain and the UK.

As regards the recent employment growth by broad occupation, the highest growth rates have been observed in the group of non-manual, skilled occupations in all Member States and candidate countries, reaching annual average growth rates of more than 3% notably in Italy, Portugal, and Spain, and of 2-3% in France, Hungary, Slovenia and Sweden. Only in Estonia, Lithuania, Poland and the Slovak Republic has employment among non-manual, skilled workers declined between 1998 and 2003. Employment in unskilled occupations has also increased in many Member States, and in Austria, Belgium, Denmark, France, Greece, Sweden and the UK at even higher rates than in non-manual, skilled occupations. The performance of manual, skilled workers across Member States is more mixed, with employment growth rates per year varying between around 3% in Finland and Spain to around -3% in Poland and Slovenia.

As for sectors, charts 67 and 68 highlight cross-country differences in employment rates and employment growth within the services sector at detailed occupational ISCO-1 level. The first set of charts indicates the deviations of Member States' employment rates in a given occupation from the EU average in percentage points. The second set of charts shows the variation in annual employment growth rates across the Member States and candidate countries by occupation.

The extent to which employment rates vary across Member States are similar in the various occupational categories, but are most pronounced in the group of technicians and associate professionals group, implying an employment gap in this occupational group of more than 10 percentage points between those Member States with the highest employment rates (Denmark and Sweden) and those with the lowest (Greece, Ireland and Portugal). Compared to the US, none of the European countries employ relatively more people as clerks or services workers; few employ relatively more managers (Estonia, Ireland, and the UK) or plant and machine operators (Bulgaria, Czech Republic, Estonia, the Slovak Republic, Slovenia); half employ relatively more professionals and technicians (most notably the Nordic member states, Ireland and the UK); and all employ relatively more craft and related trade workers (chart 67).

Although recent employment growth rates by occupation also vary considerably across EU Member States, there are some common patterns. In particular, employment among professionals, technicians, associate professionals and among service workers grew in almost all EU Member States, while it fell among craft and related trades workers in almost all Member States, except Finland, Slovenia and Spain. Among the other occupations, employment performance was more mixed. This applies in particular to the following occupational groups: managers, where high growth rates of around 5% per year in Hungary and Portugal contrast with job losses of similar size in Estonia, Lithuania, Poland and Romania; clerks, with annual employment growth rates of around 4% in Latvia, Portugal and Spain, compared to similar, or even higher, job losses in Denmark, Lithuania, Poland, and the Slovak Republic; and elementary occupations, where, again, employment growth rates of around 5% or more a year in Finland, France Spain, Sweden and the UK contrast sharply with considerable job destruction in the Czech Republic, Denmark, the Slovak Republic, and Poland (chart 68).

As expected, with respect to the skill level, the variation in employment rates across EU Member States is largest among the low-skilled, while much less pronounced among the medium- and high-skilled. Employment rates of the low-skilled in particular vary from 25 percentage points above the EU average in Portugal –the country with the highest population share of low-skilled as measured by comparable data on educational attainment levels – and from more than 10 percentage points above the EU average in Denmark and Sweden - to more than 20 percentage points below the EU average notably in the Czech Republic, Poland and the Slovak Republic. Belgium and Germany also have employment rates of the low-skilled well below the EU average. Above average employment rates of medium- and high-skilled are found in particular in Austria, Cyprus, the Czech Republic, Sweden and the UK.

Moreover, there are important differences in the employment rates by skill level across sectors. While the variation in employment rates in industry is similar across skill levels, in most of the services sectors, and most notably in real estate and business services, education, and health and social services, there tends to be much higher variation in employment rates of the high-skilled across countries than in the employment rates of medium- or low-skilled.

Most interestingly, in Germany, above average employment rates of the high-skilled contrast with below average rates of the low-skilled in industry, while in most of the services sectors, employment rates are found to be below average for both the low-skilled and the high-skilled groups. This applies in particular to business services, real estate and education, where employment rates of the high-skilled are around 3 percentage points below the EU average. Finally, in health and social services Germany has above average employment rates for the low-skilled and below average employment rates for the high-skilled.

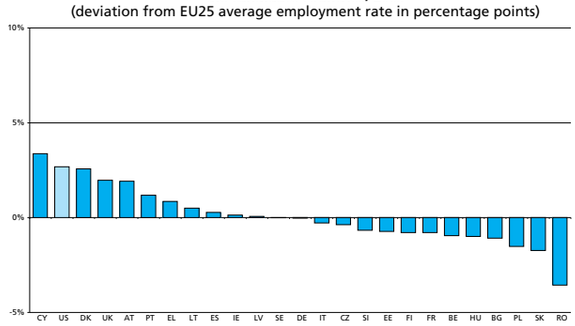
This observation is in sharp contrast to the employment rates by skill level observed, for example, in Sweden, where employment rates of the low-skilled exceed the EU average in all sectors, except agriculture and public administration – and most notably in real estate and business services and in health and social services. On the other hand, employment rates of the high-skilled are above average only in real estate and business services and, most strongly, in education and health and social services, while considerably below average in industry.

As regards recent employment growth by skill level, in all EU Member States, except Estonia, the employment evolution of the high-skilled was positive over the 1998-2003 period, exceeding 5% growth rates in Austria, Italy, Portugal and Spain. Over the same time period, employment of the low-skilled declined in most Member States, with the exception of France, Latvia, the Netherlands, Portugal and Spain. The contrast in the diverging employment evolution of the low-skilled and the high-skilled is particularly pronounced in Austria and in a number of new Member States, including the Czech Republic, Poland, the Slovak Republic, and Slovenia.

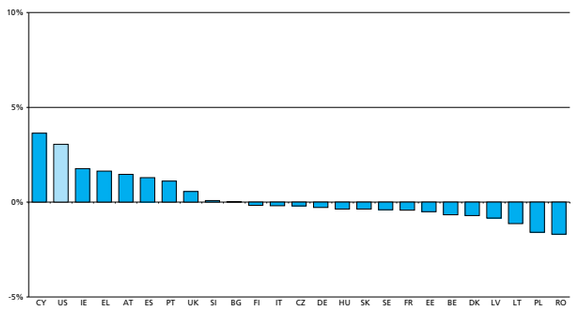
While this finding of differing employment evolution does hold in general across all sectors, a closer look at the sectoral employment performance reveals some important differences in job creation patterns by skill level across countries: first, the employment of the low-skilled has been falling in particular in industry in all Member States, except Latvia, Portugal and Spain while growing most strongly among the high-skilled in Denmark, France, Hungary, Italy, Poland,

Chart 65 - Employment rates by detailed services sector (NACE-2)

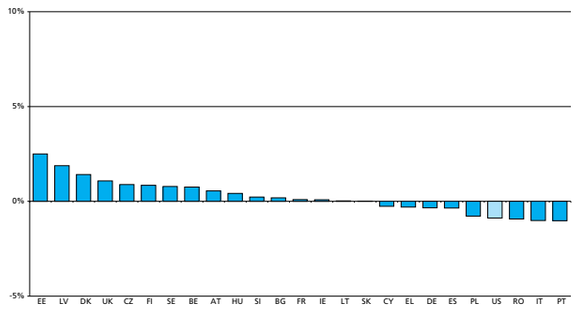
Employment rates in wholesale and retail trade in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



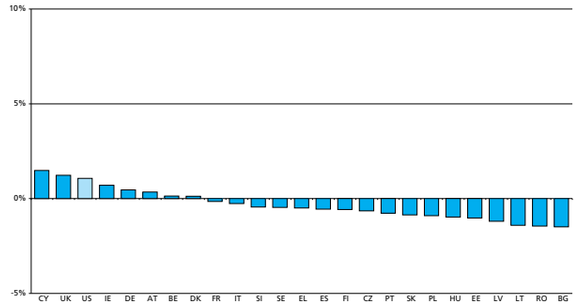
Employment rates in hotels and restaurants in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



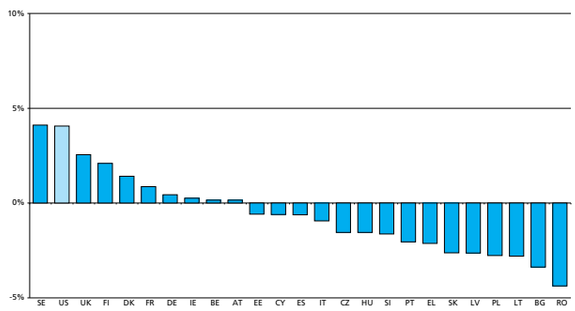
Employment rates in transport and communication in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



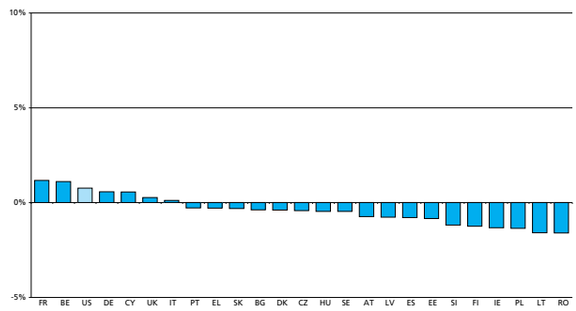
Employment rates in financial intermediation in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



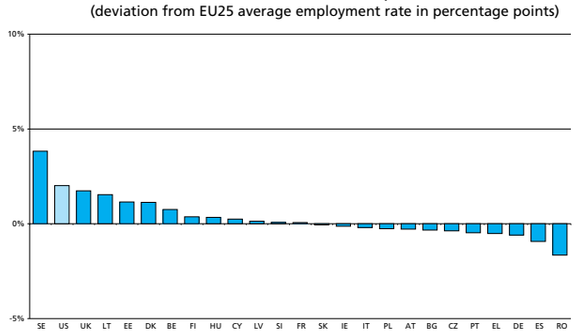
Employment rates in real estate and business services in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



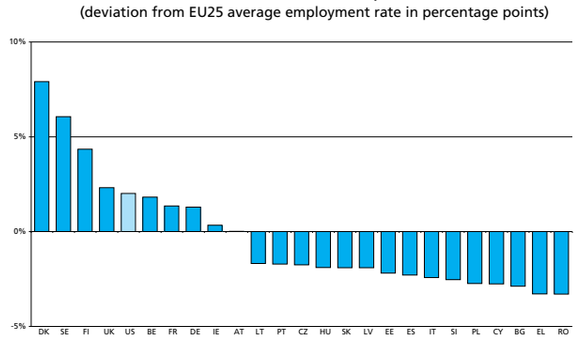
Employment rates in public administration in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



Employment rates in education in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



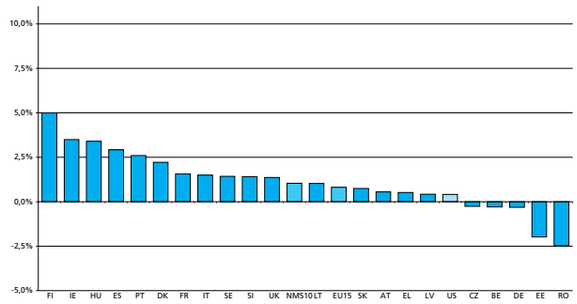
Employment rates in health and social services in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



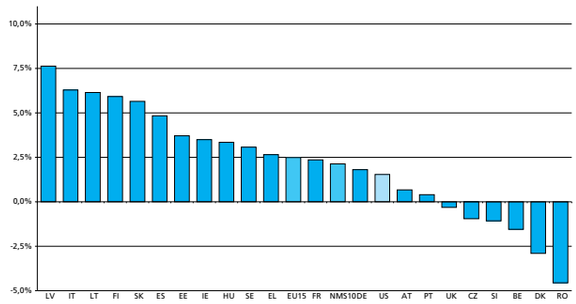
Source: Eurostat, LFS
Notes: US data highlighted in light blue. No data available for LU, MT and NL.

Chart 66 - Employment growth by detailed services sector (NACE-2)

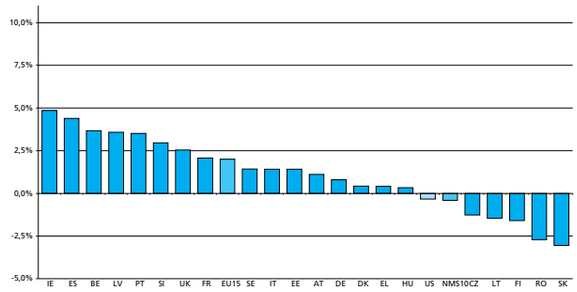
Employment growth in wholesale and retail trade in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



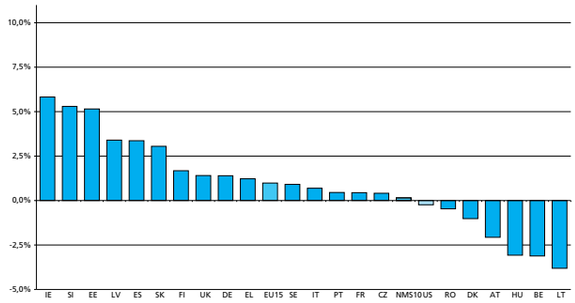
Employment growth in hotels and restaurants in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



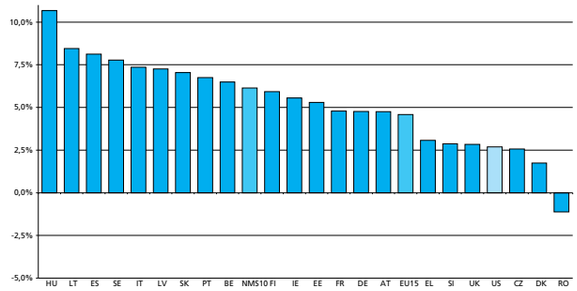
Employment growth in transport and communication in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



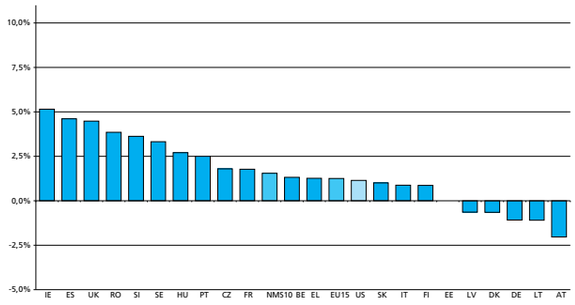
Employment growth in financial intermediation in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



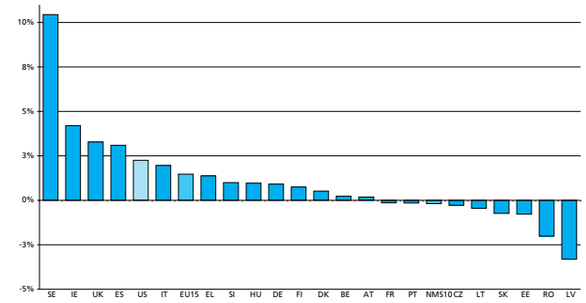
Employment growth in real estate and business services in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



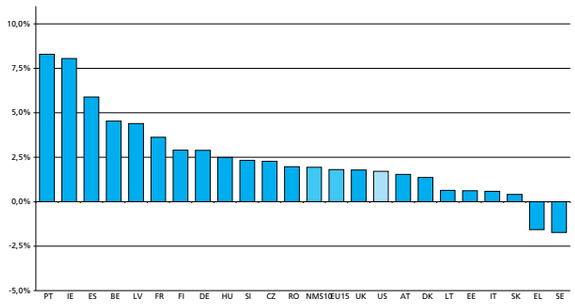
Employment growth in public administration in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



Employment growth in education in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



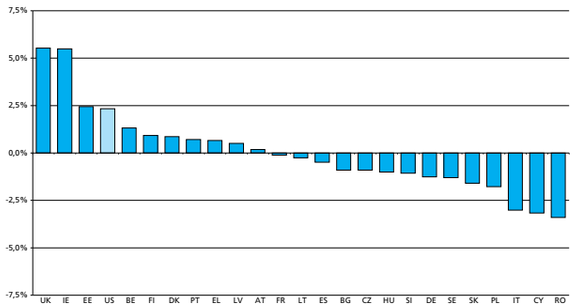
Employment growth in health and social services in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



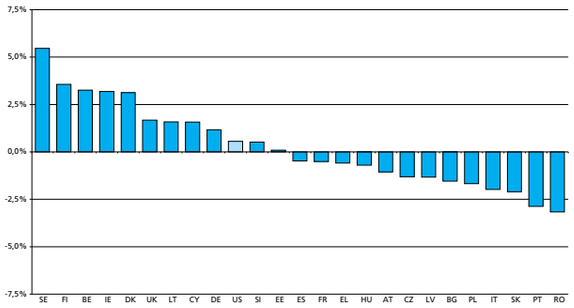
Source: Eurostat, LFS
Notes: Employment growth refers to annualised employment growth rates for the period 1998-2003. US data highlighted in light blue. EU15 and NMS10 averages (for countries with available data) highlighted in light blue. EU25 averages not reported due to lack of information on employment by sector for Poland in 1998. No data available for CY, LU, MT, NL, PL and BG.

Chart 67 - Employment rates by occupation (ISCO-1)

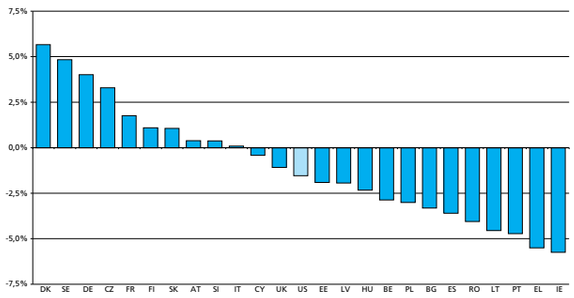
Employment rates of legislators and managers in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



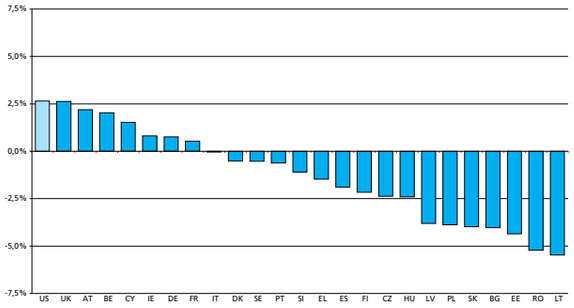
Employment rates of professionals in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



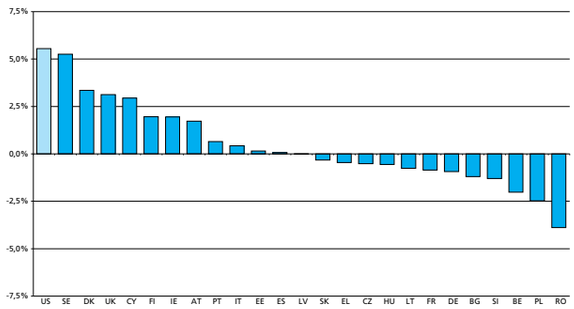
Employment rates of technicians and associate professionals in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



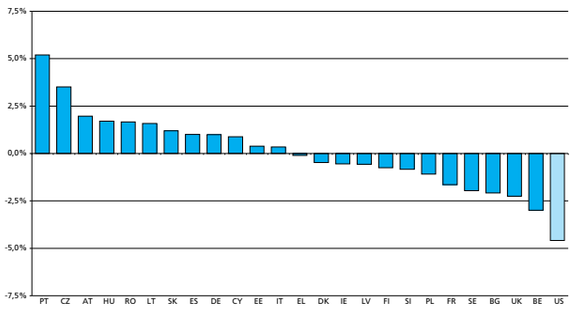
Employment rates of clerks in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



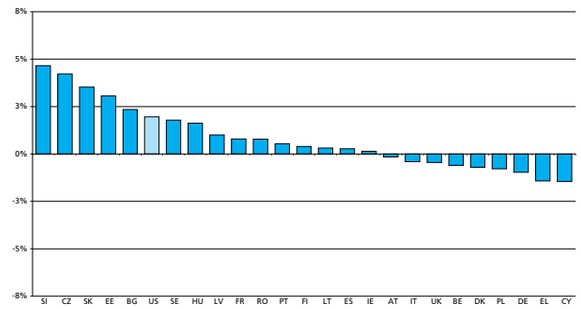
Employment rates of service workers in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



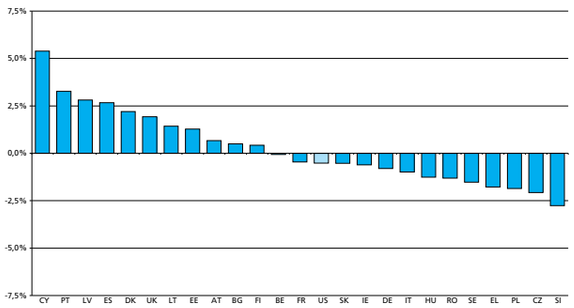
Employment rates of craft and related trades workers in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



Employment rates of plant and machine operators in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



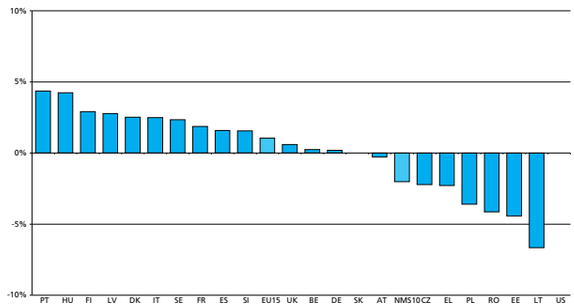
Employment rates of elementary occupations in the EU and the candidate countries, 2003
(deviation from EU25 average employment rate in percentage points)



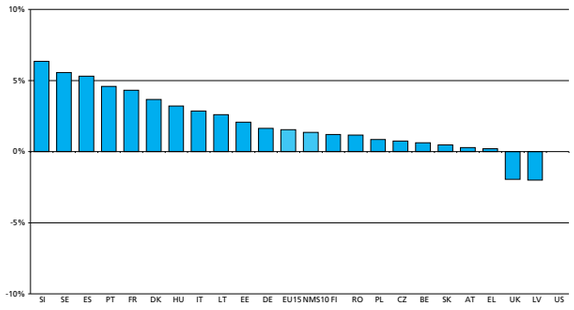
Source: Eurostat, LFS
Notes: Information on the category of skilled agricultural workers not shown in the chart. US data highlighted in light blue. No data available for LU, MT and NL.

Chart 68 - Employment growth by occupation (ISCO-1)

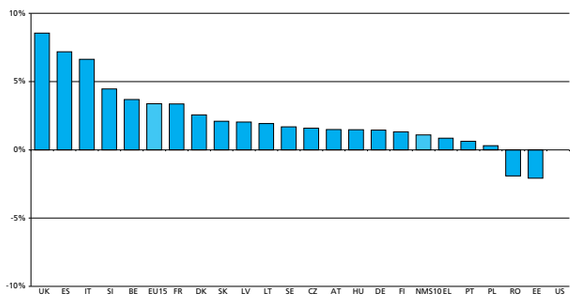
Employment growth of legislators and managers in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



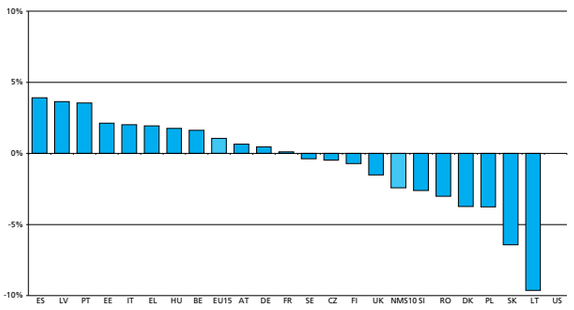
Employment growth of professionals in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



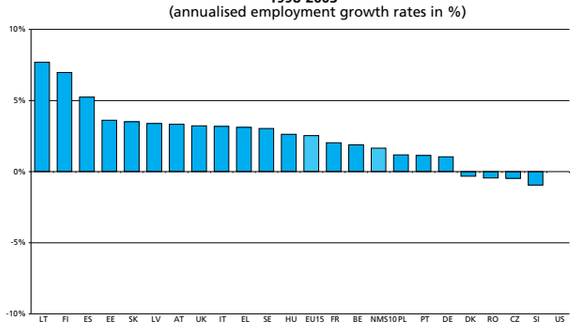
Employment growth of technicians and associate professionals in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



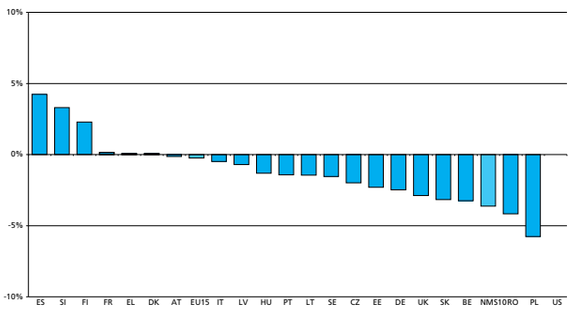
Employment growth of clerks in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



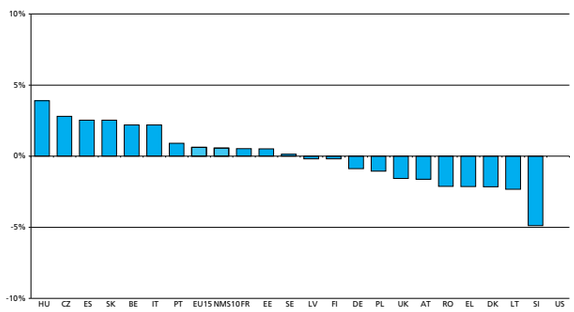
Employment growth of service workers in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



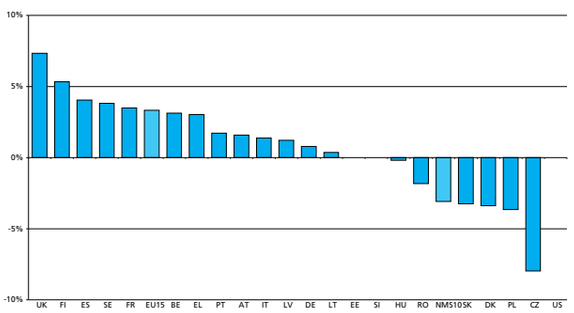
Employment growth of craft and related trades workers in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



Employment growth of plant and machine operators in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



Employment growth of elementary occupations in the EU and the candidate countries, 1998-2003
(annualised employment growth rates in %)



Source: Eurostat, LFS

Notes: Employment growth refers to annualised employment growth rates for the period 1998-2003. US data highlighted in light blue. EU15 and NMS10 averages (for countries with available data) highlighted in grey blue. Information on the category of skilled agricultural workers not shown in the chart. No data available for CY, LU and IE.

Portugal, Slovenia and Spain. Furthermore, in some services sectors, notably transport and communication, financial intermediation and public administration, employment of the low-skilled has been declining over the past five years, except in Belgium, France, Latvia, Portugal and Spain, in transport and communication; the Netherlands in financial intermediation; and Latvia, the Netherlands, Portugal, Spain and Romania in public administration. Employment of the high-skilled in these sectors, on the other hand, has continued to increase in almost all Member States.

Employment patterns by skill level were somewhat different in the remaining services sectors, including, on the one hand, wholesale and retail trade and hotels and restaurants – two comparatively low-paying, low-skill sectors – and on the other, real estate and business services, education, and health and social services – three comparatively high-skill, high-paying services. In all of these, there is stronger evidence of positive employment creation for both the high-skilled and the low-skilled, in a number of Member States. These include Denmark, Finland, the Netherlands, Portugal and Spain with regard to the low-skill, low-paying services sectors, and Austria, Greece, Italy and Sweden, in the case of high-skill, high-paying sectors.

Real estate and business services continued to be the sector with the strongest employment growth rates for all skill groups. In this sector, employment of the high-skilled continued to rise at high rates of up to 10% a year in all Member States. Employment of the low-skilled in that sector, on the other hand, declined in the Czech Republic, Denmark and Slovenia only, while also rising for the low-skilled in all other Member States, with employment growth rates of around 5% a year in Greece, Italy, Spain and Sweden, and of up to 10% a year in Estonia, Hungary, and the Slovak Republic.

Sweden is furthermore a particularly interesting case in that, similar to the recent employment performance in the US, job reductions in the comparatively low-skill, low-paying sectors for all skill groups went hand in hand with employment creation for all skill groups in some of the high-skill, high-paying services sectors, notably real estate and business services and education. Other countries with similar experiences are Belgium and France, where employment reductions in the former sectors contrast with a more positive evolution for all skill groups in real estate and business services as well as in health and social services.

For further detail on employment growth by skill level in the various services sectors, see annex 6.5 which contains detailed information on employment rates, employment shares and employment growth rates by sector and skill level. Furthermore it contains comparisons of employment growth rates by skill level for the two distinct sub-periods, 1998-2000 and 2000-2003, showing that a more favourable employment performance of the low-skilled in most sectors in the first period was offset by the often quite strong employment decline in the second period.

4. Explaining differences in employment structures

The analysis so far clearly shows that important differences in employment structures do exist both between the US and Europe, as well as within the European Union. Many of these differences – such as the employment gap in the services sector in the EU when compared to the US - have existed for several decades. There are, however, signs of improvements since the second half of the 1990s, with employment growth in the period 1998-2003 in general more favourable in Europe than in the US, allowing certain Member States to increase their employment rates to levels above those in the US. While in 1998, Denmark was the only EU Member State with an employment rate higher than that of the US, by 2003 the Netherlands, Sweden, and the UK had also surpassed the US.

Clearly, the services sector has been the driving force behind job creation in all European labour markets, and in most EU Member States employment growth rates for most services sectors were higher than in the US. In particular, in real estate and business services and in transport and communication, almost all EU Member States showed higher employment growth rates than the US between 1998 and 2003. This was also true for wholesale and retail trade, hotels and restaurants, and health and social services, where employment growth rates in a majority of EU Member States outperformed those observed for the US. Notwithstanding, employment rates in these sectors in most EU Member States remained well below those in the US. With regard to these EU-US comparisons it is important to note that in the education sector both employment rates and recent employment growth rates were considerably higher in the US than in all EU Member States, apart from Ireland, Spain, Sweden and the UK where recent growth rates of employment in education were higher, but – with the exception of Sweden - employment rates still much lower.

The previous two sections therefore do raise questions as to the determinants of employment structures, and the link between employment structures and overall employment performance. Does Europe, as is sometimes predicted, have lower employment levels in services just because of higher labour productivity? Is it, moreover, lagging behind because of institutional labour market inflexibilities and path dependence that cause wage inflexibilities? Or are the differences in employment structures across sectors or occupations instead structural in that they reflect underlying differences in the demand and supply of skills, in relative wage struc-

tures, in consumption patterns or, more generally, in individual and societal preferences for work, leisure and services?

After showing that there is little, if any, evidence for the traditional explanation that differences in employment structures can be accounted for by productivity differentials across sectors and countries, this section sheds more light on the various alternative potential factors which might explain the observed differences in employment structures: skills, wages and final demand structures.

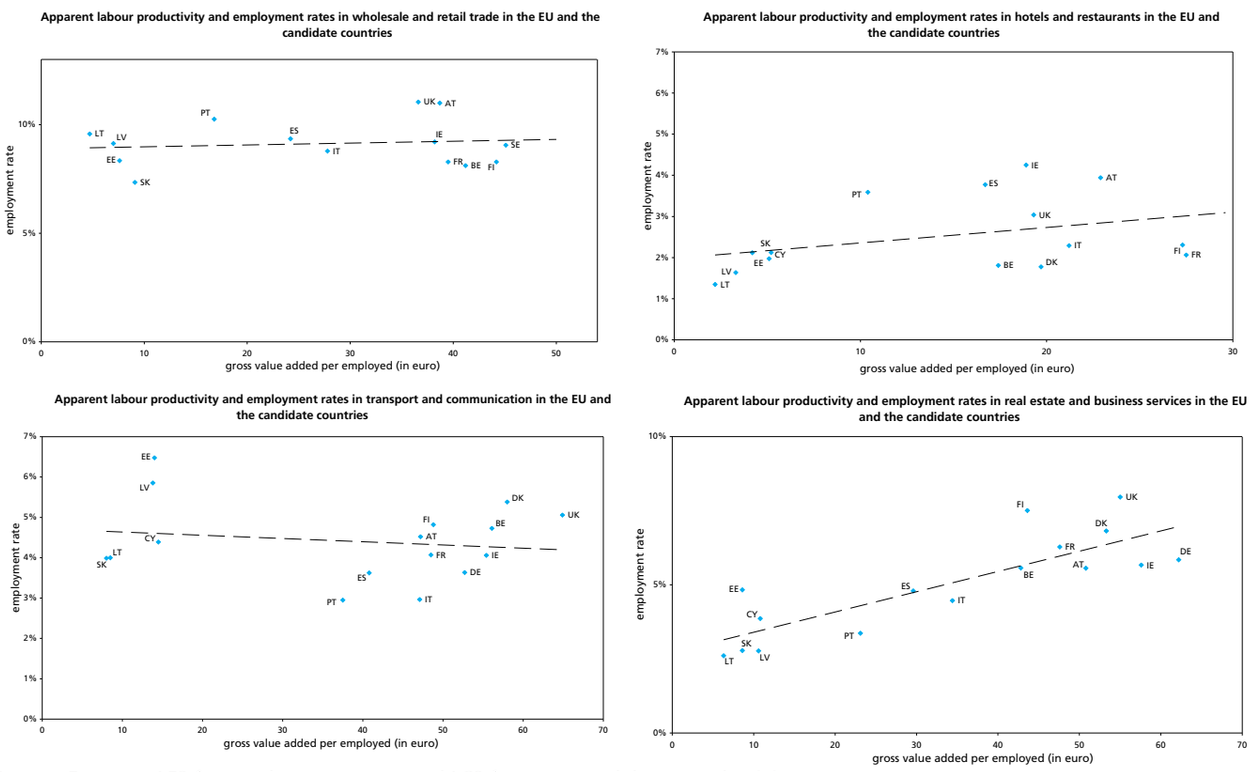
4.1. Theoretical explanations and major hypotheses

Economic literature provides a series of potential determinants of employment structures in general and services sector employment in particular, from both the (labour) demand side and the supply side. On the demand side, the classical development argument goes back to Fourastié (1949) and Baumol (1967, 2001) and their so-called "cost disease" argument on differential productivity growth.[18] According to this argument, some sectors, such as the services sector, have structurally lower labour productivity growth rates, implying relatively lower wages and labour costs. In combination with higher income levels, employment in the long run is then shifted from more costly, capital-intensive, high-productivity industry sectors to less costly, labour-intensive, low-productivity services sectors. Capital deepening might further lead to changes in the skill requirements on the various jobs, requiring more skilled workers to fill jobs in the high-productivity sectors in industry. From a more short-term perspective, it is often argued that "wage compression" and, most notably, institutional rigidities on downward wage flexibility are likely to inhibit job creation in particular in low-productivity services.

Based on cross-country comparisons of levels of apparent labour productivity, however, there is in general no support for the view that higher productivity levels account for lower employment levels in the services sectors. There is no clear correlation between labour productivity and employment performance at sectoral level and, if anything, a positive relationship exists between labour productivity and employment rates most notably in real estate and business services (chart 69).

Furthermore the recent strong increases in labour productivity in many services sectors and sustained

Chart 69 - Labour productivity and employment rates by detailed sector (NACE-1)



Source: Eurostat, LFS for employment rates, and LCS for apparent labour productivity
Notes: No information available on gross added value for missing sectors, notably: financial intermediation, public administration, education, and health and social services; dotted lines show simple regression lines

18 *Jean Fourastié (1949),* Le grand espoir du XXe siècle, *Presses Universitaires de France, Paris; William Baumol (1967),* Macroeconomics of unbalanced growth: the anatomy of urban crisis, *American Economic Review, 57, 415-426, and (2001),* Paradox of the services: exploding costs, persistent demand, *in: Thijs ten Raa and Ronald Schettkat (eds),* The growth of service industries: The paradox of exploding costs and persistent demand, *Edward Elgar, Cheltenham, 3-28.*

job creation in the highly productive sectors in both the US and many EU labour markets call into question the existence of Baumol's "cost disease"[19]. There are, however, other demand-side factors that may explain a similar trend towards the services sector in the inter-industry division of labour. These include trade specialisation, structural change and outsourcing of services activities.

Trade specialisation can help explain differences in employment structures across countries, as in particular those which have a high share of net manufactured exports to GDP also exhibit greater employment shares in manufacturing than countries that are net importers of manufactured goods. Trade in services, on the other hand, is also increasing. With regard to outsourcing, the most frequent outsourcing of activities is from manufacturing to services. Services might be more frequent as intermediate products in manufacturing than the other way around, and indirect employment (i.e. employment in supply sectors compared to respective goods-producing or service-producing sectors) is also generally higher in services.[20] Finally, inter-industry wage differentials due to either 'efficiency wages', rent sharing or sorting effects – i.e. unobserved heterogeneity of workers and firms across industries – might lead firms to adopt new technologies more easily or to revert to training and workplace reorganisation as a response to the comparatively higher wages, allowing them to substitute capital for labour and further increase productivity.[21]

On the supply side, differences in both the skill composition of the population and the structure of the labour supply behaviour of individuals might contribute to varying outcomes with regard to employment structures across sectors and occupations. In particular, changes in the labour supply behaviour of households and parent couples might lead to higher demand for various services, such as care services or restaurants. This may in turn lead to differences in the 'marketisation' of services across countries. Such variations in household consumption and final demand structures - brought about by changes in labour supply behaviour, household production or demographic structures - may also play an important role for labour demand. For example, economies with comparatively higher birth rates have a higher demand for education, or geographic areas specialised on tourism have a specific seasonal demand for services. Higher shares of final demand for services as a share in GDP and relative demand structures that are more concentrated on services, are likely to have an impact on employment structures. At the same time, by setting incentives, relative wage structures might also be of importance for individuals' decisions regarding education, labour supply, occupational choice or inter-sectoral mobility.[22]

While noting the long list of potential determinants of employment structures, three alternative hypotheses will be addressed, following on from Freeman and Schettkat (2001):[23]

1. **"wage compression hypothesis"**: according to this hypothesis, the more narrow wage distribution in the EU than in the US, due to wage-setting institutions, might reduce low-wage employment in the EU, especially in the services sector. The US is considered as having a more flexible wage structure, responding with flexible downward adjustments in the relative wages of low-skilled workers to the relevant economic shocks, such as oil price increases, skill-biased technological change, or globalisation and outsourcing activities. This action protects low-wage, low-skilled employment in industries and occupations that disproportionately use low-skilled labour. By contrast, in Europe the wages of unskilled workers remain constant or even increase relative to wages of skilled workers, thus leading to falling employment in low-wage, low-skill sectors, and services sectors in particular, in Europe rela-

19 *See also* Employment in Europe 2003*, chapter 2 "Employment specialisation and productivity growth".*

20 *For more detail, see e.g. Schettkat and Yocarini (2003),* Demand Patterns and Employment Growth in Perspective: State-of-the-Art Review*, DEMPATEM Deliverable Report N°1,Utrecht University, Faculty of Social Sciences.*

21 *In the case of the US, e.g. Borjas and Ramey (2000),* Market responses to interindustry wage differentials*, NBER Working Paper No.7799, show that there is a large degree of stability of inter-industry wage differentials over time, in line with efficiency wage or rent sharing hypotheses. In particular they do not find any evidence for offsetting adjustments by employment to high-wage levels in an industry, but other long-term adjustments instead, notably of productivity and capital-labour ratios. Firms in fact are found to respond to stable inter-industry wage structures "by raising productivity to equal [non-competitive] wages", implying changing inter-industry productivity structures over time, with high-wage industries becoming increasingly more productive. The authors show that these are general results which are not just driven by deindustrialisation trends.*

22 *See in particular the related discussion in Employment in Europe 2003, chapter 3 "Wage structures and determinants in an enlarged Europe".*

23 *Freeman, Richard and Ronald Schettkat (2001),* Differentials in service industry employment growth: Germany and the US in the comparable German American structural database*, study report for the European Commission, DG Employment and Social Affairs. In their study, the authors discuss a 4th hypothesis, namely that of measurement problems which would not necessarily allow to conclude that differences in services sector employment between the EU and the US have a major structural component. According to this hypothesis, the differences in employment structures and, notably, in services sector employment, between countries, and between the EU and the US in particular, are a statistical artefact, owing to the fact that National Accounts Statistics classify firms into industry by their main product. If European firms were less prone to outsource services activities than their US counterparts, services employment would be underestimated in Europe, or US services sector employment overstated, since much of European business service activities would be counted in manufacturing rather than services in the available statistics. This hypothesis, which is generally found to be unsubstantiated, is not treated at any greater length in this chapter.*

tive to the US. According to this hypothesis, the differences in employment structures between the EU and the US should mainly show up as differences in low-wage employment in low-productivity services. Measures which promote such low-wage employment would reduce employment gaps across countries, and the EU-US employment gap in particular.

2. **"skill compression hypothesis"**: according to this hypothesis, the difference in wage structures between countries, and between the EU and the US in particular, reflect differences in the distribution of skills across countries (as indicated by official statistics on educational attainment levels or by comparable literacy surveys and other international tests). Contrary to the first hypothesis, differences in wage structures are seen as market conforming rather than market distorting, taking into account the differences in the skill base of the workforce. This hypothesis also puts forward that differences in employment structures across countries might reflect structural differences in both skill supply and skill requirements. Once these are taken into account, differences in wage structures would be significantly reduced. Reductions in the employment gaps across countries, and between the EU and the US in particular, would require changes in either the skill composition of labour supply or the skill requirements on the job, or both. Related measures include education and training of the existing workforce, as well as increases in the potential labour force through immigration and integration.

3. **"demand compression hypothesis"**: according to this hypothesis, differences in household consumption and in final demand patterns - and therefore in the services share in GDP - contribute to explaining the differences in employment structures across countries, and between the EU and the US. In particular, differences in the labour supply behaviour of households and in the age structure of the population might lead to diverging demand for various services, such as restaurants, recreation activities or care services. This hypothesis suggests that the main explanation for the EU-US gap in services employment is the fact that there is generally a greater marketisation of work in the US than in the EU, notably among women's activities, while in the EU, more goods and services are being produced through household production and less through the market than in the US. Measures to reduce employment gaps across countries, and between the EU and the US in particular, include stronger incentives for women and older workers to participate in the labour market (notably through a review of existing seniority pay schemes and gender wage gaps, and the provision of adequate care facilities) and various other measures with a potential to stimulate the demand for services - e.g. targeted tax reductions, longer, or more adequate, shop-opening hours and improvements in the quality of the services provided. When financing the provision of services, such as education and health and services through the public budget, public finance policies also play a key role in closing employment gaps.

These arguments have diverging policy implications, and potentially different impacts not only on overall employment performance, but also on labour supply behaviour, and mobility; quality in work and productivity; innovation and lifelong learning; specialisation and competitiveness; and social cohesion. Consequently, the relative importance of each argument needs to be examined empirically. Last but not least, a more detailed knowledge of the driving factors behind existing employment gaps is crucial for the design of appropriate economic and employment policies aimed at better exploiting the services sector employment potential.

4.2. Previous studies and further evidence

The EU-US employment gap and its determinants have received considerable attention in the economic and sociological literature in recent years, in an attempt to identify the main reasons for the traditionally lower employment dynamics in the services sector in the EU as compared to the US. Further to the findings of the Employment Rates 1998 report much of the related empirical work of recent years was supported or financed by the European Commission. The various studies and initiatives include in particular:

- a joint seminar by the European Commission, DG Employment and Social Affairs, and the OECD in 1998 on "Wages and employment";[24]
- a study by the Employment Observatory RESEARCH network in 2000 on "The job creation potential of the service sector in Europe";[25]
- a study by Richard Freeman and Ronald Schettkat in 1999-2000, analysing the employment gap in the services sector between Germany and the US;[26]

24 European Commission (1998), EC DG V – OECD/DEELSA seminar: Wages and employment*, Employment and Social Affairs DG, Brussels.*

25 The full report edited by Dominique Anxo and Donald Storrie from the Centre for European Labour Market Studies, Gothenburg, is available at the following address: http://europa.eu.int/comm/employment_social/publications/2001/ke2800616_en.html.

26 Freeman, Richard and Ronald Schettkat (2001), Differentials in service industry employment growth: Germany and the US in the comparable German American structural database*, study report for the European Commission, DG Employment and Social Affairs. See also the series of related NBER working papers by the same authors:* The role of wage and skill differences in US-German employment differences *(No. 7474, January 2000);* Skill compression, wage differentials and employment: Germany vs. the US *(No. 7610, March 2000);* Low wage services: Interpreting the US-German difference *(No. 7611, March 2000);* Marketization of production and the US-Europe employment gap *(No. 8797, February 2002); and, finally, Richard Freeman (2003),* Can marketization of household production explain the EU-US jobs gap puzzle?*, paper presented at the DEMPATEM conference, 18.10.2003, Sevilla.*

- the Benchmarking project by the Low-wage Employment Research Network (LoWER) at the University of Amsterdam in 2001, and their other related projects, such as e.g. the ongoing analysis on the topic "Can improving low-skilled consumer-services jobs help European job growth?";[27]

- the DEMPATEM research project in 2001-2004 on the link between demand patterns and employment performance, a joint project by the Universities of Amsterdam, Utrecht, Oxford, Paris-Sorbonne I and Madrid-Carlos III, University College London and 17th Street Economics in Washington.[28]

In parallel, the OECD has covered the topic of employment in the services sector on several occasions. In its 2001 Employment Outlook, the job quality in the services sector, including wages and the incidence of low pay, were analysed.[29] In Employment Outlook 2004, the OECD provides further evidence on the link between wage inequality and employment performance, concluding in particular that "[c]ountries in which earnings inequality increased more slowly since 1970 (or fell) tended to fare worse in terms of employment and unemployment, than did countries where the earnings inequality rose more rapidly." Using panel information on inequality and employment performance across the European regions Galbraith and Garcilazo (2004), by contrast, find that higher pay inequality in Europe is associated with more, not less, unemployment, in particular for women and young workers.[30]

On the basis of establishment-level data and matched employer-employee data, the ongoing PIEP project on "Pay Inequalities and Economic Performance" is examining in more detail whether large pay inequalities in themselves are sufficient to generate good growth and employment performance, as competitive economic theory would predict. It is also looking at how far the exceptions to this view, in which small inequalities coexist with good performance, can be explained by reference to different approaches to performance management within firms and the way firms manage their industrial relations.[31]

In several EU Member States, various studies have been carried out that analyse in more depth the job creation potential of the services sector, and the link between employment structures, productivity and wages. In Germany and Austria – both economies with predominantly industrial structures as regards employment and wages - there is an open debate as to whether this predominance is beneficial to overall productivity and employment growth or not.[32] Similar debates, with a particular focus on the effect of industrial structures on the transition to a market economy, are taking place in the most industrialised new Member States, notably the Czech Republic and the Slovak Republic.[33]

While these and other studies provide invaluable insights into the nature of employment creation (e.g. low-paying vs. high-paying sectors) and into the determinants of differences in employment structures across countries, based on comparable data and advanced econometric methodology, there are also some major drawbacks: first, they only cover one or a small subset of EU Member States, in view of resource constraints and data problems; and second, most of these studies focus on one specific hypothesis. The study by Freeman and Schettkat is an important exception in that it covers several hypotheses in parallel, while remaining largely speculative on the role of household consumption and final demand structures for employment – a speculation which seems well confirmed by the preliminary results from the DEMPATEM project.

This section will address the above three major hypotheses by reviewing the main findings from the studies listed above, and add further evidence for the enlarged EU, replicating in part the Freeman and Schettkat (2001) study. It should be noted that a more in-depth empiri-

27 *Wiemer Salverda, Stephen Bazen and Mary Gregory (2001),* The European-American employment gap, wage inequality, earnings mobility and skill: A study for France, Germany, the Netherlands, the United Kingdom and the United States*, Final report by the European Low-Wage Employment Research Network (LoWER), study commissioned by the European Commission, Employment and Social Affairs DG, June 2001.*

28 *Among the various working papers and reports of the project, see e.g.: Gregory, Mary and Giovanni Russo (2004),* The Employment Impact of Differences in Demand and Production Structures*, DEMPATEM Working Paper no. 10, February 2004; Andrew Glyn, Wiemer Salverda, Joachim Möller, John Schmitt and Michel Sollogoub (2004),* Employment differences in services: the role of wages, productivity and demand*, DEMPATEM Working Paper no. 13, February 2004; and Ronald Schettkat and Wiemer Salverda (2004), Demand patterns and employment growth, Consumption and services in France, Germany, the Netherlands, the United Kingdom and the United States, DEMPATEM Working Paper no. 13, February 2004. For more information, see: http://www.uva-aias.net/lower.asp.*

29 *OECD (2001),* The Characteristics and Quality of Service Sector Jobs*, chapter 3 in OECD Employment Outlook 2001, Paris, 89-128.*

30 *Galbraith, J.J. and E. Garcilazo (2004), Unemployment, inequality and the policy of Europe: 1984-2000, Banca Nazionale del Lavoro, Quarterly Review no. 228*

31 *For further detail on the main results of that project, see: http://cep.lse.ac.uk/piep/.*

32 *See in particular Gerhard Bosch (2002),* Die sogennante Dienstleistungslücke in Deutschland*, Institut für Arbeit und Technik Gelsenkirchen, Graue Reihe Nr. 2002-01, and Lothar Beyer et al. (2003),* Dienstleistungen für mehr Lebensqualität*, Insitut für Arbeit und Technik Gelsenkirchen, Graue Reihe Nr. 2003-03. See also Maennig, Wolfgang and Manfred Stamer (1999),* Ist der Strukturwandel in Deutschland zu langsam? Ein empirischer Vergleich mit den USA und Japan*, Jahrbuch für Wirtschaftswissenschaften, 50(1), 1-22; and Michael Peneder (1999),* The Austrian paradox: 'old' structures but high performance?*, Austrian Economic Quarterly, 4/1999, 239-247*

33 *See e.g. Flek, Vladislav and Jiri Vecernik (1998),* Employment and wage structures in the Czech Republic*, Czech National Bank, Working Paper No. 3, and references cited therein.*

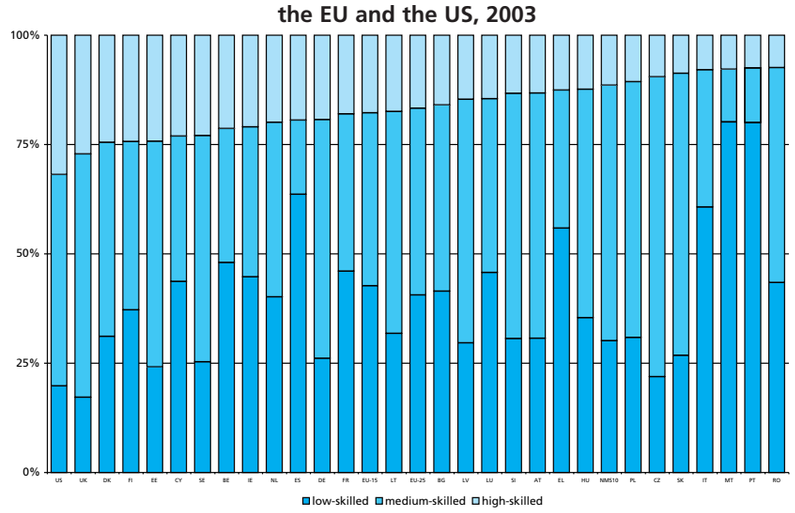
cal analysis of the link between wages, skills and employment structures on the basis of EU-wide data is very much constrained by the continued lack of time-series data on wages and skills, and by the lack of information on changes in wage structures in Europe over time. For this reason, the analysis has so far been restricted to cross-sectional analysis and simple correlation analysis. For a further analysis of the role of trade, outsourcing and globalisation on employment, see chapter 5.

4.2.1. Skill composition of the workforce

The level of skills and the returns on them are two of the most important factors cited to explain the growing wage inequality in the US, the difference in inequality between the US and the EU, and, consequently, the EU-US employment gap. It is argued that the relative wage of the unskilled in Europe has not fallen sufficiently to stimulate relative demand in the labour market for this category of skills – a theory that will be discussed in the next section. We will now take a closer look at the skill distributions across countries and at the employment situation of the various skill groups.

Two types of data can be used for this kind of comparison: first, internationally comparable data on educational attainment levels (ISCED); and second, data from international literacy or numeracy surveys, such as the International Adult Literacy Survey (IALS) or the OECD Programme for International Student Assessment (PISA). While the former are easily available, they are most appropriate for analyses of changes over time within countries but they can be difficult to compare due to the significant cross-country differences in educational systems. The latter, on the other hand, require specific surveys and are thus only available for selected years, but do provide more uniform data on cognitive skills rather than the usual classification of formal educational credentials.[34]

Chart 70 - Skill composition of the working-age population in the EU and the US, 2003



Source: Eurostat, LFS, for EU25; OECD, LFS database for US
Notes: See annex 6.4. for a definition of the broad ISCED categories used in defining educational attainment levels.

According to comparable data on educational attainment levels, the US stands out in that it has the highest population share of high-skilled workers (32%), compared to 48% medium-skilled and 20% low-skilled. In the EU, countries with comparatively high shares of high-skilled workers include Belgium, Cyprus, Estonia, France, Ireland, the Netherlands, Nordic member states, Spain and the UK. The US population share of low-skilled is also relatively low when compared to the EU, where it ranges from around 20% in the Czech Republic, Estonia, Sweden and the UK to around 40% or more in Belgium, Greece, Italy, Luxembourg, Malta, Portugal and Spain. In five of the countries in the latter group, more than half of the working-age population have less than upper secondary level education, and in Malta and Portugal even more than three quarters of the working-age population. Moreover, compared to the US, the population share of medium-skilled is higher in most EU Member States, notably in Austria, the Baltic States, the Czech Republic, Germany, Hungary, Poland, the Slovak Republic, Slovenia, Sweden and the UK- where more than half of the population is medium-skilled, in part due to the dual education or apprenticeship systems in place in these countries (chart 70).

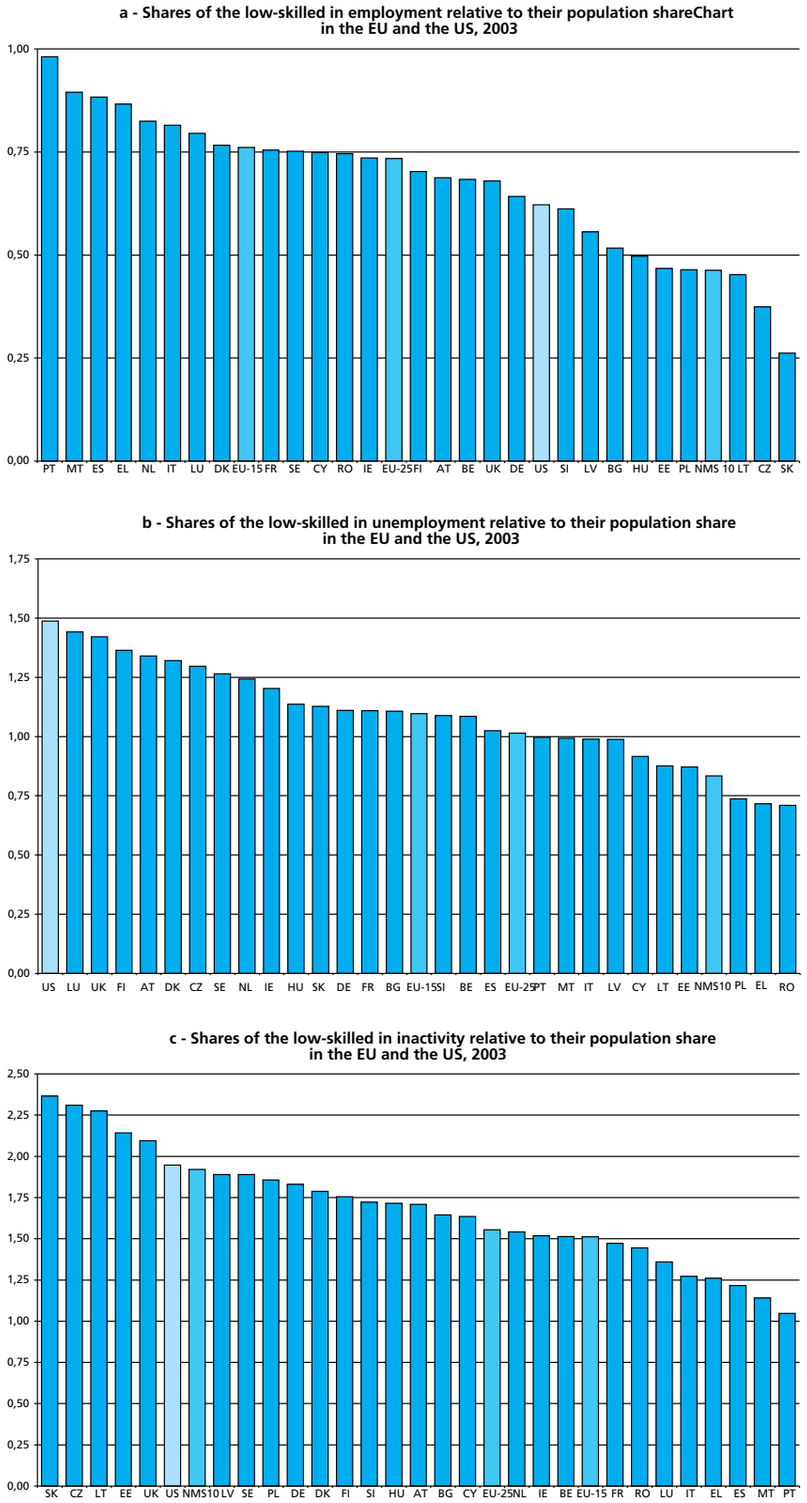
However, based on the above comparable data on educational attainment levels, the employment situation of the low-skilled at EU level seems somewhat more favourable

34 *The great advantage of the IALS data is that it provides a uniform measure of (cognitive) skills across countries based on scores from identical literacy tests. The survey was jointly organised by Statistics Canada and the OECD for a range of countries and was given to respondents in 1994 and again in 1996 and 1998, covering in total 23 countries. Various types of intensive paper-and-pencil tests were used: prose, documentation and quantitative literacy, and problem solving. The outcomes are highly correlated and their average has been used in the analysis. The respondents were also interviewed about the skills needed for their jobs and these job characteristics have been used to extend the analysis to labour demand. For more information on the IALS and related surveys, see also: http://www.nald.ca/nls/ials/introduc.htm. Furthermore, PISA is a three-yearly survey (starting in 2000) of the knowledge and skills of 15-year-olds in the principal industrialised countries. It assesses how far students near the end of compulsory education have acquired some of the knowledge and skills that are essential for full participation in society. Tests were administered in the domains of reading, mathematical and scientific literacy, and problem solving - not merely in terms of mastery of the school curriculum, but also of important knowledge and skills needed in adult life.*

than in the US, with higher employment rates and lower unemployment and inactivity rates for the low-skilled in the EU as compared to the US.[35] As stated earlier, the employment evolution across all skill groups has generally been more favourable in the EU than in the US in recent years. This notwithstanding, there are important differences in the employment situation of the low-skilled across the EU. The relative employment situation of the low-skilled, as measured by the share of the low-skilled in employment relative to their population share, is most favourable in Greece, Italy, Luxembourg, Malta, Portugal and Spain – all countries with excessively high population shares of people of working age with low skills – but also in countries with below average population shares of the low-skilled, such as France, the Netherlands and, most notably, Denmark and Sweden. On the other hand, even when compared to the US, the employment situation of the low-skilled in most of the new Member States, except Cyprus and Malta, is much less favourable, notably in the Czech Republic and the Slovak Republic. Furthermore, in Austria, Belgium, Finland, Germany and the UK, the employment situation of the low-skilled seems roughly comparable, and, although possibly slightly more favourable than in the US, in any case well below average in the enlarged EU (chart 71a).

The share of the low-skilled among the unemployed is higher than their population share in almost all countries, except in the southern Member States (including Cyprus and Malta) – all countries with comparatively high population shares of the low-skilled of 50% or more – as well as in the Baltic States, Poland and Romania. However, the share of low-skilled among the unemployed is higher in the US than in all EU Member States and candidate countries. Those EU Member States coming closest to the high US figure are

Chart 71 - Shares of the low skilled in employment, unemployment, and inactivity relative to their population share in the EU and the US, 2003



Source: Eurostat, LFS, for EU25; OECD, LFS database for US
Notes: See annex 6.4 for a definition of the broad ISCED categories used in defining educational attainment levels. See also footnote 14.

35 When interpreting the results in this section, cross-country differences in the population shares of low-skilled and high-skilled have to be borne in mind.

Austria, the Czech Republic, Luxembourg, the Nordic member states and the UK (chart 71b). And while the low-skilled are overrepresented in inactivity in all countries, they are less likely to join the labour force in the US than in most EU Member States, with the exceptions of the Baltic states, the Czech Republic, the Slovak Republic, and the UK. On the other hand, participation of the low-skilled in the labour force is relatively most favourable in the Benelux countries, France, Ireland, southern EU Member States and Romania (chart 71c).

When taking account of the differences in population shares of the low-skilled and high-skilled, however, it is seen that the skill distributions within sectors are generally similar across countries, and not that different from those observed in the US. The low-skilled are employed more frequently in agriculture and industry, and in manufacturing in particular. They are also over-represented in some services sectors, such as private households and in hotels and restaurants. The high-skilled, on the other hand, are employed more frequently in the services sector, and in financial intermediation, real estate and business activities, extra-territorial organisations, and education, as well as health and social services and other community, social or personal services in particular.

In addition, the relative skill content of employment within the services sector is largely comparable across countries. In all EU Member States and candidate countries, employment in hotels and restaurants is predominantly low-skilled, most notably in Denmark, Germany and Luxembourg. The low-skilled are also over-represented in wholesale and retail trade and in transport and communication in most countries, with the exception of some of the new Member States and the candidate countries. Employment is more skewed towards the medium- and high-skilled in the other services sectors, not only in financial intermediation, real estate and business services and education, but also in public administration and health and social services (chart 72).

Finally, based on cross-country analysis, there is no obvious correlation between the use of low-skilled labour in a sector and the employment performance or employment rate of that sector. Among the predominantly low-skilled sectors, there seems to be a weak positive correlation between the use of low-skilled labour and employment rates in wholesale and retail trade and in transport and communication, while there is no such evidence at all for the hotels and restaurants sector. Moreover, there is some indication of a slight positive correlation between the use of low-skilled labour and the employment rate in some of the predominantly high-skilled sectors (chart 73).

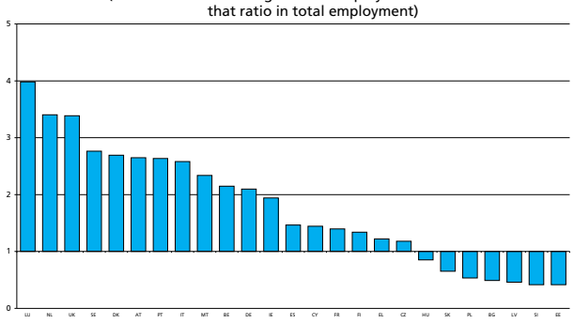
The positive correlation between the use of low-skilled labour and employment rates at sectoral level is probably strongest in real estate and business services and in health and social services. The Nordic Member States and the UK offer interesting examples: first, in particular when compared to Germany, they both have higher employment rates and relatively lower shares of low-skilled in employment in these sectors; second, in the case of Sweden employment growth has been strongest for both low-skilled and high-skilled in these two comparatively high-skill, high-wage services sectors, allowing Sweden eventually to overtake the US in terms of the overall employment rate. It therefore seems that not only a more highly qualified labour force in general, but also a better integration of the low-skilled into the high-skill, high-wage services sectors might explain the higher overall employment rates in some of the more successful EU Member States, including Sweden.

Clearly, the above provides little evidence to support the skill compression hypothesis, i.e. the lack of low-skilled employment due to the lack of low-skilled workers. Indeed, the employment prospects of the low-skilled – as measured by the formal level of highest educational attainment - seem to be most problematic in countries with comparatively low population shares of low-skilled, notably the new Member States and the US. On the other hand, while their employment situation seems more favourable in countries with comparatively high population shares of low-skilled, notably the southern EU Member States, most of these countries are also among those with the lowest employment rates - thus less favourable overall employment prospects for all skill groups – and lower levels of labour productivity.

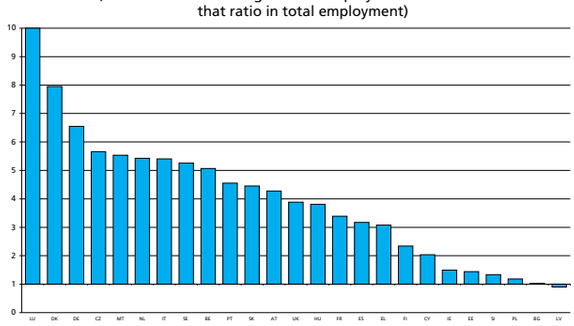
While the above findings could be considered somewhat unexpected, especially with regard to the employment situation of the low-skilled in the US, the analysis of the link between skills and employment in the Benchmarking project - based on literacy scores from the International Adult Literacy Survey (IALS), which provides more uniform data on cognitive skills than the usual classification of formal

Chart 72 - Skill distributions by detailed sector (NACE-1)

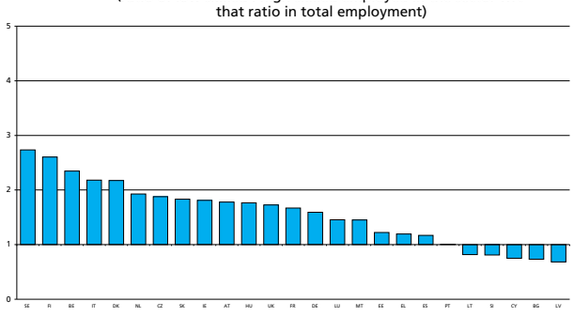
Relative skill distribution in wholesale and retail trade in the EU and the candidate countries, 2003
(ratio of low-skilled : high-skilled employed in the sector wrt that ratio in total employment)



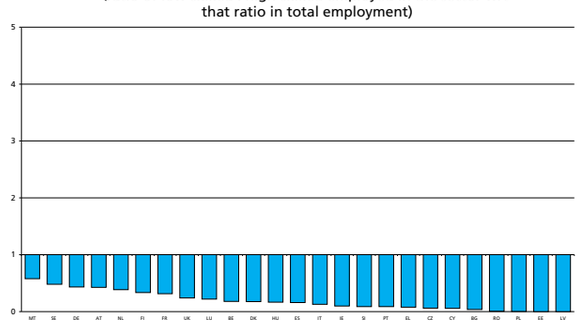
Relative skill distribution in hotels and restaurants in the EU and the candidate countries, 2003
(ratio of low-skilled : high-skilled employed in the sector wrt that ratio in total employment)



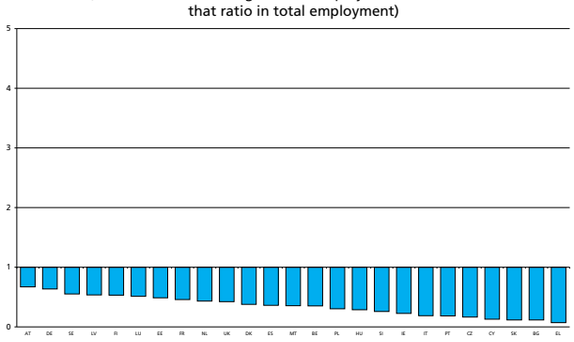
Relative skill distribution in transport and communication in the EU and the candidate countries, 2003
(ratio of low-skilled : high-skilled employed in the sector wrt that ratio in total employment)



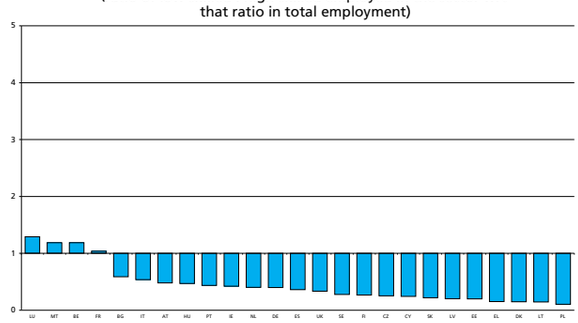
Relative skill distribution in financial intermediation in the EU and the candidate countries, 2003
(ratio of low-skilled : high-skilled employed in the sector wrt that ratio in total employment)



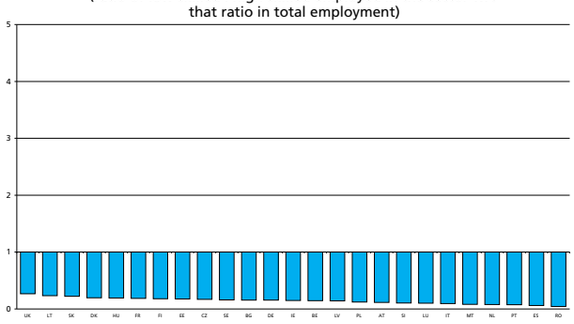
Relative skill distribution in business services in the EU and the candidate countries, 2003
(ratio of low-skilled : high-skilled employed in the sector wrt that ratio in total employment)



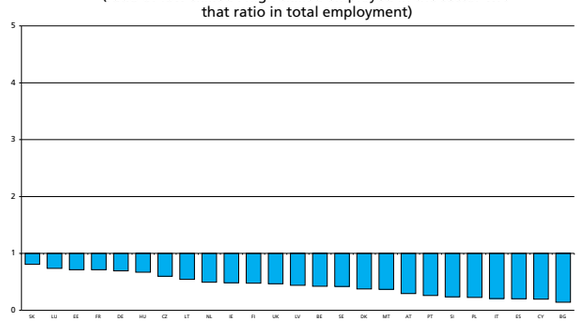
Relative skill distribution in public administration in the EU and the candidate countries, 2003
(ratio of low-skilled : high-skilled employed in the sector wrt that ratio in total employment)



Relative skill distribution in education in the EU and the candidate countries, 2003
(ratio of low-skilled : high-skilled employed in the sector wrt that ratio in total employment)



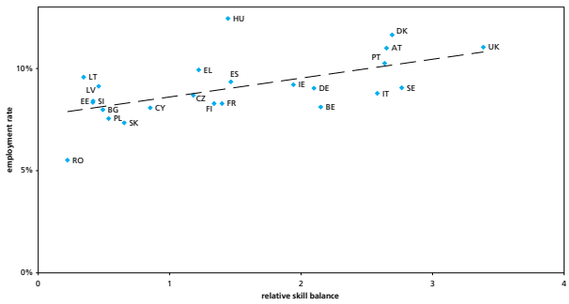
Relative skill distribution in health and social services in the EU and the candidate countries, 2003
(ratio of low-skilled : high-skilled employed in the sector wrt that ratio in total employment)



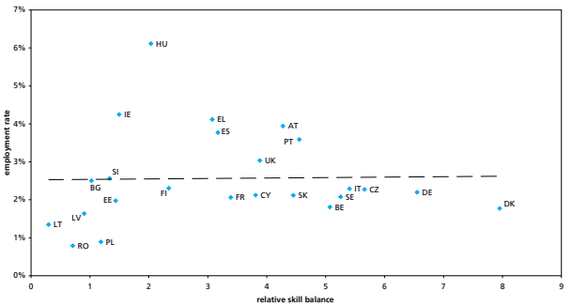
Source: Eurostat, LFS
Notes: Values indicate the ratio of low-skilled to high-skilled employed in the respective sector relative to that share in total employment. A value of 1 thus indicates that the relation of low-skilled to high-skilled in a given sector is equal to that in the total economy. A value larger (smaller) than 1 indicates that low-skilled are relatively over-represented (under-represented) in a given sector.

Chart 73 - Skill distributions and employment rates in the services sector (NACE-1)

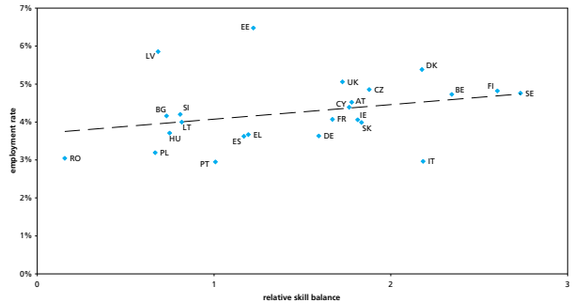
Relative skill balance and employment rates in wholesale and retail trade in the EU and the candidate countries



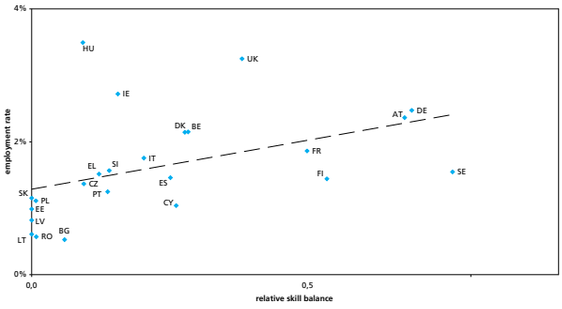
Relative skill balance and employment rates in hotels and restaurants in the EU and the candidate countries



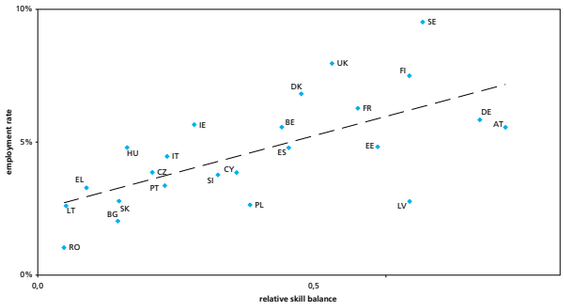
Relative skill balance and employment rates in transport and communication in the EU and the candidate countries



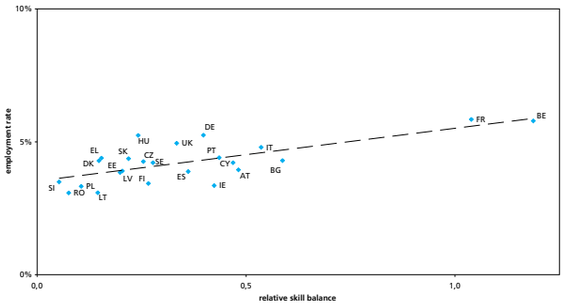
Relative skill balance and employment rates in financial intermediation in the EU and the candidate countries



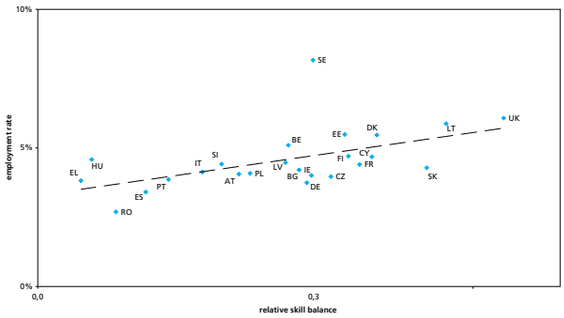
Relative skill balance and employment rates in real estate and business services in the EU and the candidate countries



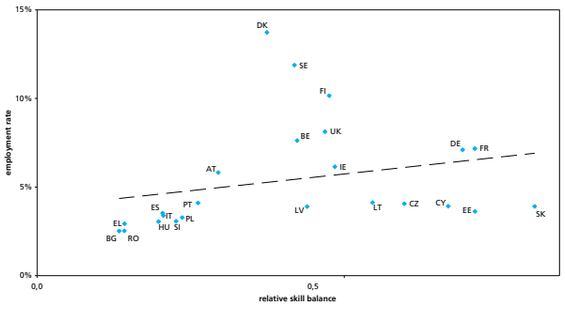
Relative skill balance and employment rates in public administration in the EU and the candidate countries



Relative skill balance and employment rates in education in the EU and the candidate countries



Relative skill balance and employment rates in health and social services in the EU and the candidate countries



Source: Eurostat, LFS

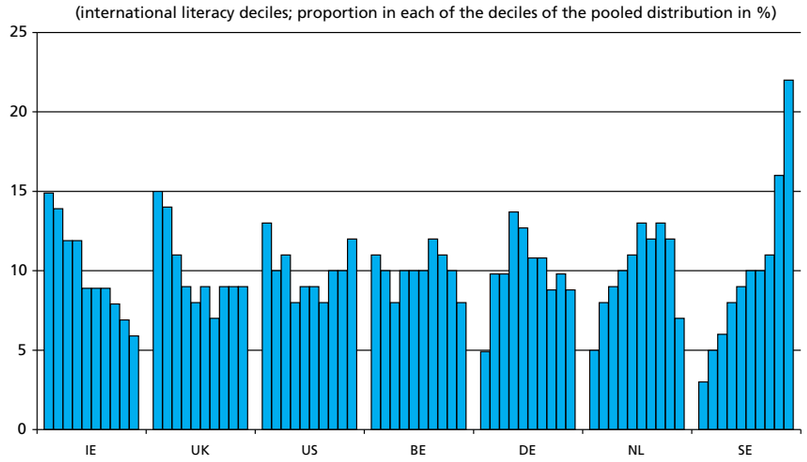
Notes: Ratio of low-skilled to high-skilled employed in the respective sector relative to that share in total employment on the horizontal axis; sector-specific employment rate on the vertical axis; dotted lines show simple regression lines

educational credentials at an international level [36] - provides slightly different results.[37]

First, it finds that there are important differences between the internationally standardised educational credentials (ISCED) and the literacy scores, and that the lower educational credentials in the Continental countries covered by the project (Belgium, France, Germany, the Netherlands and Sweden) are associated with much higher levels of literacy than in the Anglo-Saxon world (Ireland and the UK). For people with less than secondary education, the average literacy score across the Anglo-Saxon countries is considerably lower than in the Continental countries. Similarly, the literacy of people with lower secondary education is much better in Continental countries. For upper secondary and tertiary education, on the other hand, no systematic differences occur.

Second, the project developed an internationally standardised skill distribution for each of the countries by assigning each person to a literacy decile based on the distribution of the pooled data for all ten countries covered in the survey, i.e. for each country the proportion in each of the deciles of the pooled distribution was calculated[38]. Using this measure, it was found that there were comparatively high proportions of low-skilled persons in the Anglo-Saxon countries, and low shares in the Continental countries. At the other extreme, the US was also found to have among the highest shares of the best educated, although still below that observed for Sweden, where 22% of the population are found to be in the highest IALS decile (chart 74).

Chart 74 - National skill distributions of populations aged 15-65
(international literacy deciles; proportion in each of the deciles of the pooled distribution in %)



Source: Salverda et al. (2001), op. cit., figure 4.2
Notes: In the research, each person in the dataset was assigned a literacy decile based on the distribution of the pooled data for all ten countries analysed, i.e. for each country the proportion in each of the deciles of the pooled distribution was calculated. In the case that countries have the same skill distributions, each of these proportions should equal 10%. Values above (below) 10% indicate that the share of people in a given literacy decile is comparatively higher (lower) than in the other countries. Data for Canada, New Zealand and Switzerland omitted to improve readability.

Third, and most importantly, the project examined how skills, as measured by the literacy scores, related to pay, and how both wages and skills related to employment, thus testing the trade-off hypothesis. A particular focus was the pay gap between the median and the lower quintiles of the literacy distribution. As a result, not only the negative impact of low literacy on wages appeared to be significantly larger for the Anglo-Saxon countries compared to the Continental ones, but also relative employment chances at lower literacy lev-

Table 43 - Estimated coefficients of first-to-third literacy quintile to wages and employment

Dependent variable	BE	DE	IE	NL	SE	UK	US
Earnings	-0.076	-0.079	-0.313	-0.139	-0.092	-0.141	-0.291
Employment	-0.926	-0.794	-0.98	-0.711	-0.934	-1.135	-1.208

Source: Salverda et al. (2001), op. cit., table 4.1
Notes: Estimates of wage effects and effects on the probability of employment, respectively, of the first literacy quintile relative to the third quintile for those EU member states covered in the benchmarking project and for the US.

36 There are important differences between the internationally standardised educational credentials (ISCED) and the literacy scores. Particularly striking is that the lower educational credentials in the Continental countries are associated with much higher levels of literacy than in the Anglo-Saxon world. For people with less than secondary education (ISCED 0-1) the average literacy score across the Anglo-Saxon countries is 208, which compares to 248 on the Continent. Similarly, the literacy of people with lower secondary education (ISCED 2) is much better in Continental countries. For upper secondary and tertiary education, on the other hand, no systematic differences occur. The later extension of the IALS, for 1998, to a few more countries could not be used as no microdata have yet been made available.

37 The purpose of the Benchmarking project was to see whether labour market outcomes by skills depend on the differences in labour market institutions or, alternatively, on the supply and demand of different levels of skills. The former view, expressed by Krugman, asserts a trade-off between higher relative wages for the low-skilled and lower employment. According to the supply-and-demand view, however, higher wages for the low-skilled reflect a better labour market position and go together with a favourable employment situation. As the argument hinges on skills, their calibration by means of literacy levels rather than educational attainment may affect the debate substantially.

38 For more detail see Peter Mühlau and Justine Horgan (2001), "Labour Market Status and the Wage Position of the Low Skilled", LoWER Working Paper No.5, July 2001.

els were found to be better in the Continental countries (table 43).

There was no indication that higher wages are indeed traded-off against lower employment. Based on the plotting of estimated regression coefficients against the employment rates, the authors of the Benchmarking study conclude that the relationship between relative wages and relative employment chances of low-skilled workers is not negative as predicted by the trade-off hypothesis. On the contrary, across all countries, the relationship is found to be slightly positive, which is consistent with the supply-and-demand hypothesis.

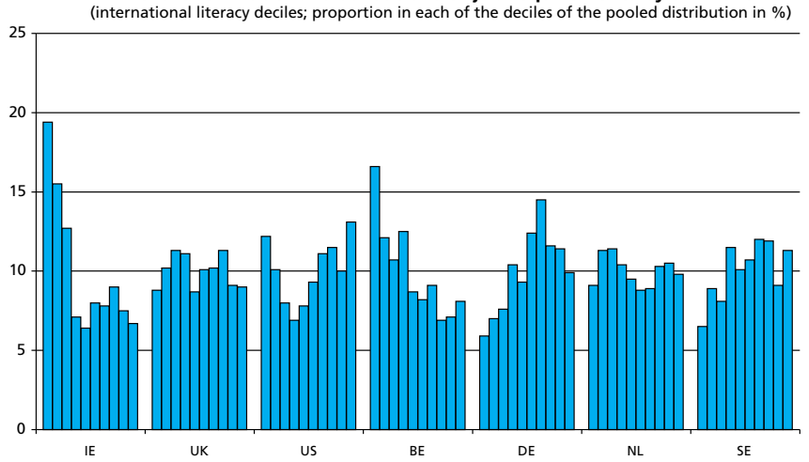
The Benchmarking project finally examines whether there are differences in the skill requirements of jobs between countries and whether these correspond to the above skill endowments of the countries. It finds that the proportion of low-requirement jobs is much higher in the Anglo-Saxon countries than on the Continent, with the exception of Belgium, while the proportion of high-level jobs is also considerably larger in the US. On average, the highest job requirement level was established for Germany, the lowest for Ireland. It was estimated that Ireland with 18% has the highest share of jobs suited for low-skilled (first-quintile) workers, followed by Belgium. Relatively low proportions of such jobs, on the other hand, were found for Sweden and Germany. However, from a demand-and-supply perspective, the ratio of people with a given level of skill to the number of jobs requiring this level of skill is more important as a determinant of the relative labour market position of a skill group than the number or share of suitable jobs.

Based on a net-supply index for the skill groups constructed by dividing the number of people belonging to a literacy decile by the number of jobs available to them, the study showed that the demand for the low-skilled relative to their supply is significantly smaller in Anglo-Saxon than in Continental countries. Although Ireland has by far the largest number of jobs for people with low cognitive skills, it also has the highest, i.e. most disadvantageous, ratio of low-skilled workers to jobs, closely followed by the UK. The Netherlands and Sweden, on the other hand, have the lowest ratios. Although Anglo-Saxon countries have higher shares of jobs which are suited for workers with low cognitive skills, the demand for the low-skilled relative to their supply is significantly smaller in Anglo-Saxon than in Continental countries (chart 75, table 44).

The study therefore concludes that the situation of the low-skilled for both pay and employment combined, is better in the Continental countries than in the Anglo-Saxon world, thus contradicting Krugman's hypothesis of a trade-off between higher levels of relative pay and lower levels of employment. By contrast, the hypothesis stating that a favourable supply of low-skilled workers compared to demand can lead at the same time to higher wages and better employment prospects, is found to be broadly consistent with the data.

Taken together, the above evidence shows that, while internationally comparable data leave doubt as to the relative importance of the low-skilled in the labour force in the EU when compared to the US, Europe as a whole has considerably lower shares of high-skilled workers, both in the labour force and in employment. There is, furthermore, evidence from both data on educational attainment and on internationally comparable literacy scores that the low-skilled face a more difficult employment situation in the US than in many of the EU Member

Chart 75 - National distributions of job requirements by skill level
(international literacy deciles; proportion in each of the deciles of the pooled distribution in %)



Source: Salverda et al. (2001), op. cit., figure 4.5
Notes: Figures indicate the relative proportions of job requirements by skill level, based on an internationally comparable scale constructed from self-reported data in the IALS on the reading and writing skills required in the job. See also the notes of chart 23. Data for Canada, New Zealand and Switzerland omitted to improve readability.

Table 44 - Demand and supply of low-skilled workers

Indicator	BE	DE	IE	NL	SE	UK	US
Demand	16.5	11.6	18.1	14	12.1	13.8	14
Supply	2.21	2.01	3.25	1.54	1.01	3.18	2.57

Source: Salverda et al. (2001), op. cit., table 4.2
Notes: Estimates of labour demand and supply indicators for the low-skilled for those EU member states covered in the benchmarking project and for the US. For more detail on the underlying definitions, see Salverda et al. (2001).

States. Finally, based on cross-country analysis, there is no obvious correlation between the use of low-skilled labour and employment performance at sectoral level, while there is some indication of a positive relationship notably in comparatively high- skill, high-wage services sectors, such as real estate and business services and health and social services.

4.2.2. Relative wage structures

The "Benchmarking project" also looks at the role of wages by identifying the EU jobs' deficit within the different earnings categories: low-, medium- and high-wage employment. The study identifies a clear and substantial jobs deficit in both high-wage jobs and low-wage jobs in the European economies, with a gap in high-wage employment found to be particularly pronounced for women. This deficit may be due, in part, to the narrower distribution of earnings, particularly in Continental Europe. However, the EU-US jobs gap emerges clearly at both ends of the earnings distribution, and it is divided approximately equally between the two. So, while low-wage and high-wage employment contribute an almost equal share to the overall employment rate in both the US and in each of the EU economies covered by the study, their actual contribution is much lower in the EU than in the US. In regard to the deficit in low-wage jobs, the study shows that the extent of earnings mobility is at least as great in the European economies as in the US. In regard to the jobs deficit in high-wage employment, on the other hand, the further analysis of skills indicates that while the numbers of skilled workers have been rising, skill wage premia are showing little change.

The study goes on to discuss the relative pay structures across sectors and occupations. It finds that the structures of pay inequalities are strikingly similar across the five countries. In particular, the low-paying industries are quasi universal: agriculture, retail trade, hotels and catering, and personal services – covering between 14% and 23% of total employment. The industry distribution of high pay, on the other hand, shows a less universal pattern, and the high-wage employment gap seems to relate more strongly to personal characteristics than to industry. The high-paying sectors common to the five countries are utilities, financial services and education. Taken together they represent a considerably smaller share of employment than the four low-paying industries. Beyond this, high-paying industries tend not to coincide closely across countries, nor is their employment share related to their wage position. For example, in the industries that pay comparatively high wages in the US, Europe has an employment advantage, but European wages in these industries are not necessarily high. On the other hand, European high-wage industries pay wages that exceed the average by less than US high-wage industries, while employment tends to be lower than in the US.[39]

As to the relative risk of low pay, the study reveals that the groups at highest risk are broadly similar across countries: young workers, the low-educated, hotel and catering workers, retail workers, agricultural workers, workers in miscellaneous services, manual workers, shop and services workers, men in part-time jobs, women in part-time jobs, women in full-time jobs and workers with low seniority. Amazingly, however, in spite of the lower overall incidence of low pay in Europe, certain groups in European labour markets have a higher risk of being low paid than the same groups in the US. The high-wage categories, by contrast, are more dispersed. There are eight common categories: managers, professionals, the highly educated, financial services workers, utilities workers, prime-age employees, the education sector and men in full-time work.

Finally, when examining earnings mobility at the individual level across the four selected European economies, and between them and the US, it is found that there is no systematic support to the view of rigid labour markets in the European economies inhibiting job growth. In fact, each of the European economies, with the exception of France which is on a par with the US, shows greater earnings mobility than the US. The same holds for downward wage flexibility: in terms of downwards earnings change for workers continuing in employment, with or without a job change, the evidence does not support wage rigidity in the European economies by contrast to the US. Rather a significant minority (25% to 45%) of workers experience reductions in real hourly earnings in a given year in all countries. Downwards earnings adjustments are actually found as frequently in the European economies as in the US and, at the individual level, wages show a substantial degree of downwards as well as upwards flexibility, in the European economies as in the US. [40]

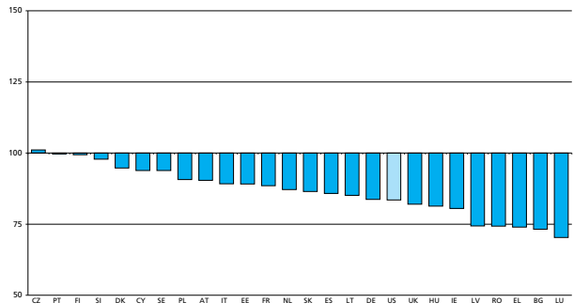
The study concludes that the EU-US employment gap is as much a problem of a deficiency of high-wage jobs as of low-wage jobs. At the same time, it stresses that European economies showed a strong performance in employment rates at intermediate levels of earnings. Furthermore, based on the observation that there is substantial earnings flexibility and mobility in the European economies, the study argues that "the European-American employment gap and the earnings mobility record of four European economies (France, Germany, the Netherlands and the UK) relative to the US does not endorse the bleak picture of a 'sclerotic' Europe which fails to match

39 The findings from a comparison between US-German employment and wage structures at sectoral level in Freeman and Schettkat (2001) are similar.

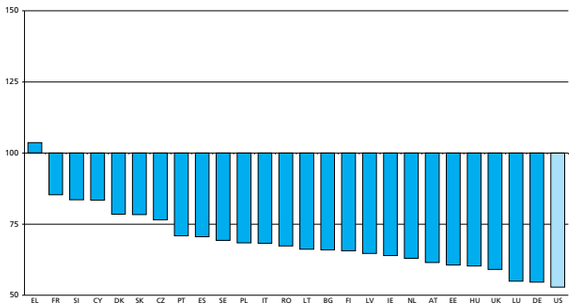
40 See chapter 4 for more information on earnings mobility in European labour markets.

Chart 76 - Relative wages by detailed sector (NACE-1)

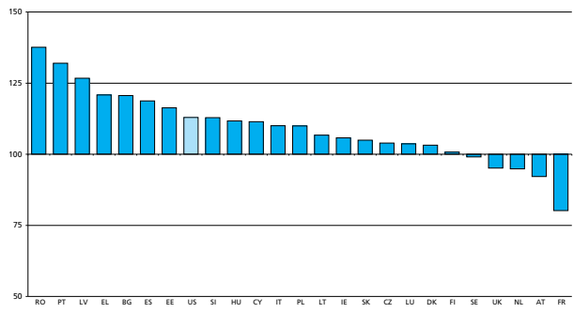
Relative wages in wholesale and retail trade in the EU and the candidate countries, 2000
(deviation from country-specific average wage in %)



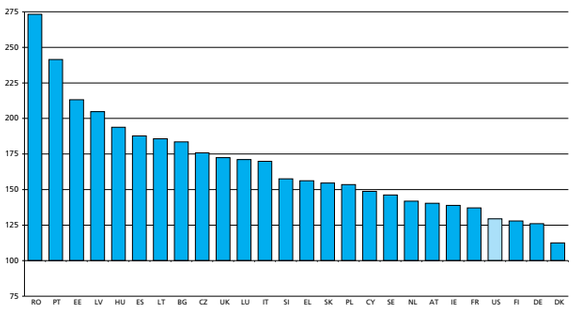
Relative wages in hotels and restaurants in the EU and the candidate countries, 2000
(deviation from country-specific average wage in %)



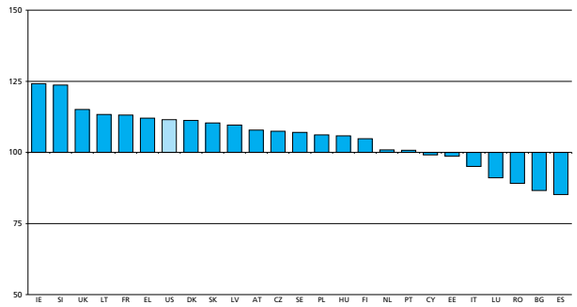
Relative wages in transport and communication in the EU and the candidate countries, 2000
(deviation from country-specific average wage in %)



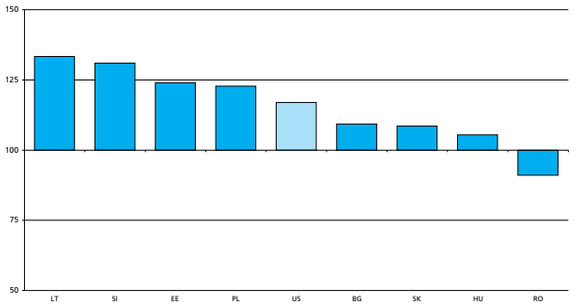
Relative wages in financial intermediation in the EU and the candidate countries, 2000
(deviation from country-specific average wage in %)



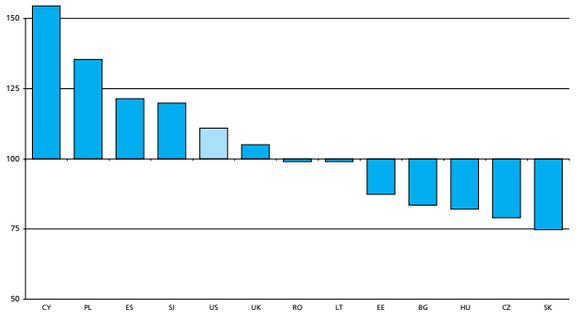
Relative wages in real estate and business services in the EU and the candidate countries, 2000
(deviation from country-specific average wage in %)



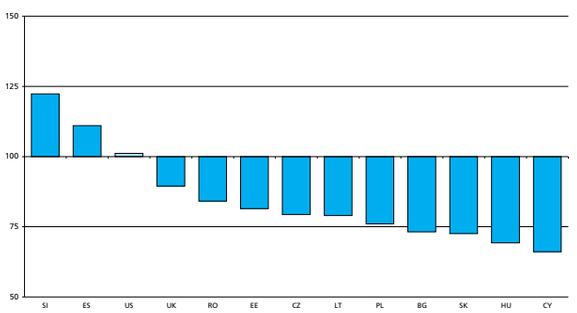
Relative wages in public administration in the EU and the candidate countries, 2000
(deviation from country-specific average wage in %)



Relative wages in education in the EU and the candidate countries, 2000
(deviation from country-specific average wage in %)



Relative wages in health and social services in the EU and the candidate countries, 2000
(deviation from country-specific average wage in %)



Source: Eurostat, LCS 2000 for EU25; BLS, OES for US.
Notes: Relative gross hourly wages in % of the country-specific average gross hourly wage. Values above (below) 100 indicate that a sector is comparatively high (low) paying. Data refer to 2000. US data highlighted in light blue. No data available for BE and MT. For NACE sectors L (public administration), M (education) and N (health and social services), data are not available from the Labour Cost Survey 2000 due to the lack of survey coverage of these sectors for the EU15 – except the UK - and only available for the new Member States – except Malta - and the candidate countries.

the wage flexibility of the US. The employment gap in the European economies continues to pose challenges, but these economies have areas of significant achievement. More strikingly, the stereotype of wage rigidity in the European economies is not confirmed."

With regard to the policy implications, the authors argue that downwards wage adjustments, whether through the weakening of wage-setting institutions or otherwise, are not a necessary, or even appropriate, response to the low employment rates. They further conclude that the relatively unchanged skill premia do not appear to signal a shortage in the supply of skilled workers. They also note the remaining divergence between the rising educational attainment of women and their still low employment rates. The deficit in high-wage jobs would therefore, according to the authors of the study, seem to lie more with the limited demand for skills by firms in the European economies than with shortfalls in their supply, although they note that there is no easy recipe for stimulating high-wage jobs growth.

Coming back to the relative pay structures across sectors and occupations, there is further evidence based on the Labour Cost Survey 2000 for the enlarged EU that relative wage structures in Europe are neither out of line with those known in the US nor necessarily correlated with the observed employment structures. Only in hotels and restaurants and in financial intermediation are the relative wages in the US well below those in most European economies. In the former, relative wages in the US are 55% of the average wage and only those in Luxembourg and Germany come close to this level. In the latter, only Denmark, Germany and Finland have relative wages that are less favourable than in the US (chart 76).

In most other sectors, relative wages in many EU Member States are well below those in the US. In wholesale and retail trade, for example, relative wages in Greece, Ireland and the UK are below those in the US, as are their employment rates. On the other hand, the employment rates in wholesale and retail trade in Cyprus or Denmark are at least as high as in the US, and this despite the fact that relative wages in this sector are much higher than in the US. In industry, finally, the US is found to be the economy with the highest relative wage of around 110% of the average wage, while in most European countries – with the exception of Austria, Germany, Ireland and Spain - average wages in industry are below the average.

When looking at the relationship between relative wage structures and employment performance across countries, it is not clear whether lower relative wages at sectoral level are beneficial to employment in that sector. Although the results have to be interpreted with caution, in industry, transport and communication, and financial services there is some tentative evidence of a negative correlation between relative wage levels and employment rates, while in hotels and restaurants there is no evidence at all for any relationship between relative wages and employment. On the other hand, in wholesale and retail trade as well as in business services, there is, if anything, a positive correlation across countries between relative wages and employment rates. In real estate and business services, countries such as Sweden, the UK and the US combine both comparatively high wages and high employment rates. However, employment rates in business services differ by up to 5 percentage points between countries with similar relative wages, e.g. between Austria and Sweden, or between France and the US (chart 77).

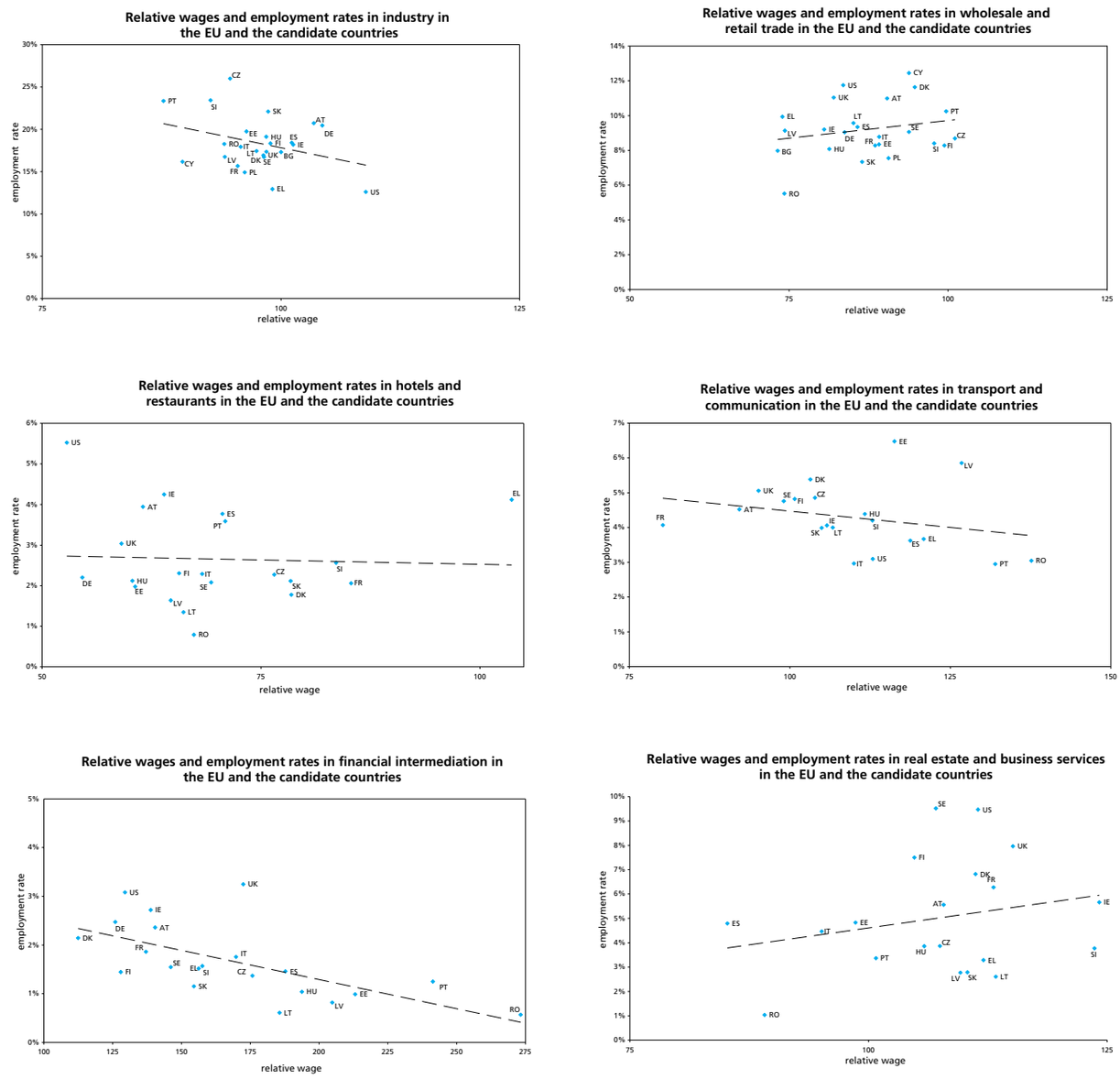
Relative wage positions of sectors and occupations are generally found to be comparable in the EU and the US, with significant differences probably only in education and health and social services – sectors for which the Labour Cost Survey does unfortunately not provide data for a majority of EU Member States – and in business services where average wages in particular in Italy, Spain and the candidate countries stand well below the respective country average, contrary not only to the US but also to all other EU Member States.

On the other hand, it has yet to be established to which extent changes in the relative wage position of sectors and occupations over time do actually accompany the move towards a knowledge economy, notably by exploiting the remaining employment potential in the services sector described above. While the available data for Europe do not allow us to study such changes for the enlarged EU as a whole, it might be worthwhile to take a closer look at the US experience where - as discussed in detail in section 2 of this chapter – the move to the services economy probably took place some 20 years earlier than in Europe.

Using the US classification of sectors, it is found that pay levels have traditionally been slightly more favourable in the goods-producing industries, notably in construction and in natural resources and mining, while slightly below average in the private service-providing sectors. There have been, however, important changes in the relative wage levels of sectors accompanying the changes in employment structures since the mid- 1970s. In industry, relative pay levels rose during the 1970s, and have been slowly levelling off since the 1980s. In manufacturing, relative pay levels have been standing at average wages in the economy since the mid-1980s before slightly falling short of the average since the late 1990s - in combination with an important decline in employment.

In services, on the other hand, diverging evolutions of relative pay levels can be observed for the various sectors. In information activities

Chart 77 - Relative wages and employment rates in the services sector (NACE-1)



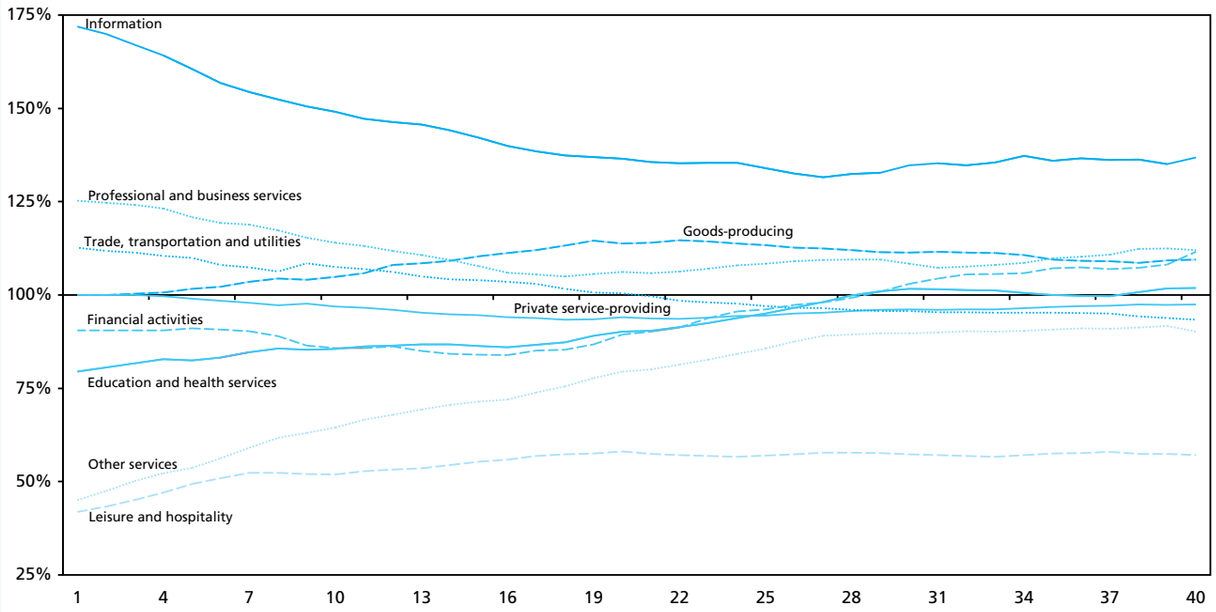
Source: Eurostat, LFS
Notes: Average gross hourly wages in the respective sector as a share of average gross hourly wages in industry and serrvices on the horizontal axis; sector-specific employment rate on the vertical axis; dotted lines show simple regression lines

and business services – the two sectors with traditionally the highest rewards - the relative pay levels fell over the 1970s while basically stagnating since the 1980s, although remaining at high levels well above the average. In trade, transport and utilities, moreover, the relative earnings position has gone down over the last 30 years, with relative pay levels below the average since the 1980s.

On the other hand, there have been particular strong improvements in the relative earnings position of some other services sectors over the last decades, including financial services, education and health and social services, and other community, social and personal services. The former two moved from below to above average, while the latter increased from around 50% of average wages in the mid-1970s to almost 90% by 2003. However, in hotels and restaurants, relative wages have remained more or less the same since the early 1970s at around 45% below the average wages (chart 78).

It is difficult to predict what, if any, changes in relative wages are necessary to stimulate job creation in the European services sector. Relative wage structures at sectoral level are in particular rather similar between the EU and the US, and cannot in general account for the differences in employment structures and in services. For example, relative wages in the German hotels and restaurants sector are similar to

Chart 78 - Evolution of relative pay levels by sector in the US, 1964-2003



Source: BLS

those in the US, but employment rates in Germany remain less than half those in the US.

Nonetheless, there is evidence that in several Member States, relative wages in some of the most dynamic services sectors - such as real estate and business services, education, and health and social work – still compare unfavourably with those in the US. This observation is possibly in line with the well-known presumption that Europe as a whole is lagging some 20 years behind the US - relative wage levels in these sectors in the US were still significantly below average in the mid-1980s. An exception is Spain where both relative wages and recent employment growth in education and health and social services are seen to be well above average.

On the other hand, relative pay in some other services sectors is found to be well above that in the US, notably in hotels and restaurants as well as in financial intermediation – and this, in the latter case, despite a strong increase in relative pay levels in US financial services. Studies that estimate wage premia also generally find that the above differences in pay across sectors disappear, or are even inverted, once other personal and job-related characteristics are controlled for in the analysis. It is therefore not possible to establish any clear-cut link between relative wages and employment performance at sectoral level.

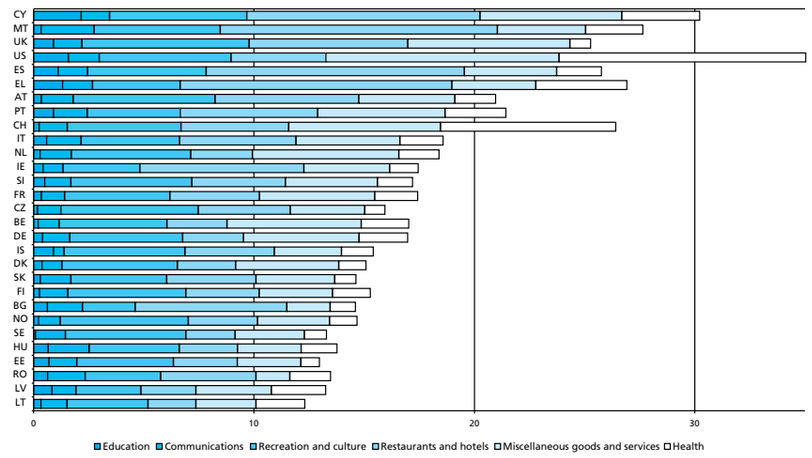
One way to better understand the link between relative wages and employment performance is to estimate the determinants of relative employment structures while taking simultaneous account of productivity differentials, relative wages and the skill composition of the workforce across sectors. Preliminary results from such a regression analysis – not reported here - confirm that there is no significant relation between wage structures and employment.[41] A more ambitious project would be to look at wage distributions both within sectors and within establishments, based on detailed firm-level data. However, these analyses are clearly beyond the scope of this chapter and should be dealt with in more detail in future research based on matched employer-employee data.

4.2.3. Marketisation of services, household consumption and final demand structures

As seen in the previous sections, neither cross-country variations in productivity differentials nor cross-country variations in wage and skill structures across sectors - control-

41 Such regression models analysing the link between employment structures and relative wages across time and across countries were tested in the study report by Freeman and Schettkat mentioned before. The authors conclude that "none of these calculations yield a systematic statistically significant relation between wage structures, changes in relative wages and employment", and that "[i]n sum, our examination of the wage compression hypothesis (like that of other empirical researchers) finds little empirical support for the belief that lack of jobs in the EU is due to the effect of the compression of wages on employment in low skill industries". For more detail, see: Freeman, Richard and Ronald Schettkat (2001), Differentials in service industry employment growth: Germany and the US in the comparable German American structural database*, study report for the European Commission, DG Employment and Social Affairs, pp. 24-25, 32.*

Chart 79 - Private household consumption (in % of GDP), 1998



Source: Eurostat

ling for differences in sector-level productivity - can account for the observed differences in employment structures. More recent research into the determinants of employment structures has therefore focused on alternative explanations and, most notably, on the important role of cross-country differences in household consumption patterns and final demand structures.

Indeed, there are important differences across EU Member States both with respect to the level of final demand expenditures and to the composition of final demand across the various goods and services. According to the latest comparable information available, final consumption expenditure of households in 1998 as a percent of GDP ranged from less than 50% in Ireland, Luxembourg, the Nordic Member States and the Netherlands, to more than 60% in the UK, the US, as well as in most southern European Member States, the NMS10 and candidate countries. Overall, demand per head of the population in working age is about 40% higher in the US than in Europe, which affects both goods and services. Despite this gap in services demand, all countries show a trend towards services in final demand.[42]

Household expenditures for services vary from around 10-15% of GDP in the Baltic States, the candidate countries and the Nordic Member States, to more than 20% in the southern European countries, as well as in the UK and the US. The variation in household expenditure is particularly pronounced in hotels and restaurants, ranging from below 3% of GDP in countries such as Denmark, Germany, the Netherlands and Sweden to more than 4% in the US, 7% in the UK and 10% in the southern Member States most specialised in tourism, notably Cyprus, Greece, Malta and Spain. There is also a strong variation in private demand by households for recreation and cultural activities, and transport, ranging between 5 and 12% of GDP in the former case, and between 3 and 7.5% in the latter. The US shows, furthermore, the highest final demand shares in education and in health and social services, mainly due to the differences in their financing - predominantly market services in the US and public services in most of Europe (chart 79).

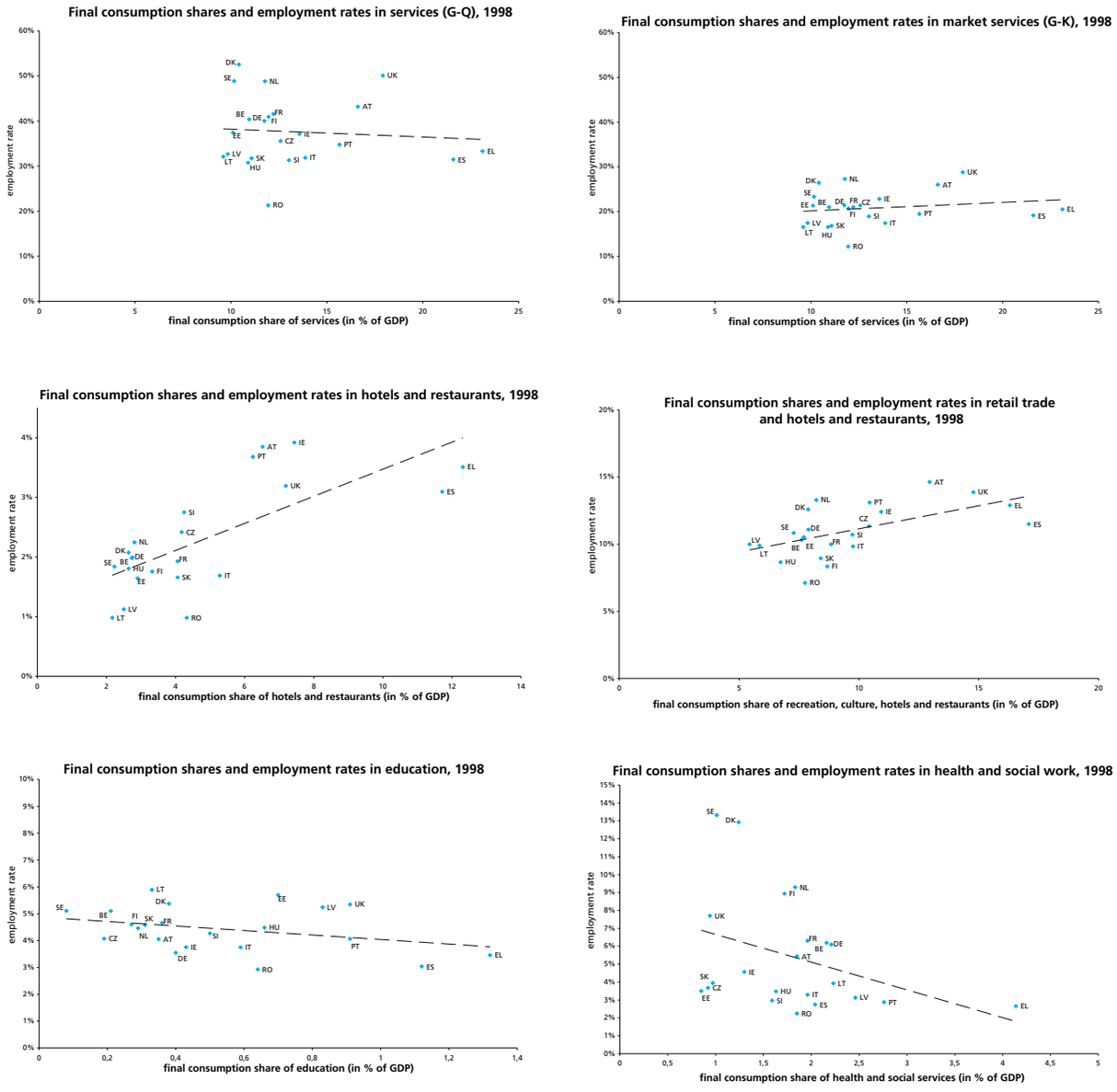
Moreover, there are important differences in the expenditure shares of goods and services and in consumption patterns of households, both within the EU and between the EU and the US. While household expenditures for food, housing and transport tend to be higher in most EU Member States when compared to the US, the US has a higher share of services in final demand of about 10 percentage points.[43] US households, on the other hand, spend almost one-fifth of their total expenditure on health and education, eight times as much as Swedish households do, largely reflecting the varying coverage of education and health services through either private market services or tax-financed state provision.

There is hence a clear trade-off between private and public expenditures on services depending on the national institutional arrangements. In part, US households spend a higher share of their disposable incomes on services because they need to buy services which are provided publicly in Europe. That said, no clear pattern emerges from the US-EU differences in private final consumption even in categories where public provision is unimportant (e.g. 'restaurants, hotels'). Furthermore, in all countries private consumption is the most important demand component for services followed by government consumption that together account for about 80 to 95% of all final demand for services, while imports (and exports) of services are marginal in overall final demand and in household final consumption. Collective consumption in GDP, finally, is roughly

42 At the same time, the services share in value added is bigger in the US than in Europe.

43 These results are confirmed when taking price developments into account. Price trends are in fact similar across countries, with services rising in relative prices whereas overall goods prices are falling in every country. On the other hand, there are important differences in the relative price levels, with relative prices for goods rather than for services being lower in the US than in Europe. This is mainly the result of relatively low prices for health and education in Europe, which are usually mixed public-private services in Europe. Other services, especially 'market services' have substantially lower relative prices in the US. As a consequence, when measured in international prices, the gap in relative service demand between the US and the European countries narrows but the gap remains. See Schettkat, Ronald and Joep Damen (2004), Demand patterns and employment structures: An aggregate analysis*, DEMPATEM Working Paper no. 11, February 2004.*

Chart 80 - Final demand shares and employment rates by detailed sector (NACE-1)



Source: Eurostat, LFS
Notes: final demand shares in given category as percentage of GDP on horizontal axis; sector-specific employment rate on the vertical axis; dotted lines show simple regression lines

similar in all countries and, if anything, higher in the US than in Europe.

The above differences in household consumption patterns and final demand structures notwithstanding, it is not easy to establish clear-cut correlations between household consumption expenditures, on the one hand, and employment rates at sectoral level, on the other. Based on cross-country analysis, there is some significant correlation between final demand for services and services sector employment for market services in general and for hotels and restaurant, retail trade and transport in particular. However, no obvious correlation can be found between demand structures and employment in sectors commonly financed through the public budget such as education and health and social services. If anything, there is a negative relationship between household expenditure and employment rates, reflecting the comparatively higher employment rates in the Nordic countries where education and health are fully publicly financed (chart 80).

A more in-depth analysis of the link between demand patterns and employment structures was carried out between 2001 and 2004 by the research project on "Demand patterns and employment growth: consumption and services in France, Germany, the Netherlands, the UK

and the US", or DEMPATEM.[44] The main purpose of the project was to analyse the causal mechanisms between economic growth and services demand and the reverse causation that services sector expansion promotes economic growth.

Thus, for the first time a research project provides an analysis of product and labour markets in an international comparison of employment trends and their causes, using the US as the benchmark country. The project covered four main areas of research: first, an analysis of aggregate demand components using data from input-output and national accounts statistics, with a special focus on private consumption; second, an analysis of household consumption behaviour, relating budget patterns to household characteristics, including demographics, employment participation and income, on the basis of microdata from consumer budget surveys; third, an analysis of the employment effects of demand patterns, considering the entire production chain in vertically integrated sectors based on input-output data; and fourth, an analysis of the employment structure of services, focused on the main employment gap in private-sector services, namely the distribution sector (trade, hotels and restaurants).

While not all of the study results can be summarised here, its most significant finding is that product demand patterns have an impact on the level of employment and do account for a part of the EU-US employment gap. Compared to the level of demand, however, the effect on employment is rather small. Higher US employment relates to higher income and demand, which is largely – but not exclusively – achieved by higher employment participation and longer working hours.

With regard to the four areas covered by the project, the first – the aggregate analysis - confirms that services do play a large role in final demand, primarily through public and private consumption, which is more important in the US than in Europe. The analysis also reveals the impact of institutional arrangements (public-private) concerning the provision of services, indicating that part of the gap in private-household service expenditures between the US and Europe disappears once the public provision of individual services, such as health care in Europe is taken into account. The remaining collective consumption is at similar levels in the US and in Europe.

Second, the analysis of household expenditure surveys shows that household characteristics have a very limited impact on the evolution of the share of services in expenditures in each of the countries. Among the household characteristics, the expenditure level seems to be the most important for both relative services demand trends over time and the differences between the EU and the US. This indicates the most important role of incomes for services demand. Overall, the shift towards services runs parallel between the US and Europe, but at a higher level in the US.[45]

Third, the analysis of product demand on employment, based on vertically integrated sectors which take account of the whole production chain, showed that the relative employment-friendliness of demand in individual sectors remained fairly constant over time within countries. They are also fairly similar across countries, and the employment intensities of services and goods demand are roughly equal. Based on input-output techniques to assess the contribution of patterns of final demand and consumption to the differing employment rates observed across countries, the project concludes that final demands originating in both manufacturing and services were increasingly generating jobs located in services.

It further shows that the changing patterns of final demand have been significantly employment-friendly in the European economies, but employment-neutral in the US. Also the final demand mixes of the European economies are more employment-friendly than the US pattern. In a counterfactual exercise, the demand mixes of all the European countries were found to raise US employment, while the US mix would result in lower employment in the European economies.

The changing mix of consumption, on the other hand, has been significantly less employment-friendly than final demand, and only a minor source of employment growth within each economy. The European consumption patterns tend to be less employment-friendly than that of the US. The consumption patterns of France and Germany would reduce US employment by 3-5% respectively, while those of Spain and the UK would have little effect. Conversely, if the US consumption mix were adopted in the European economies, employment would be 2-4% higher.

Overall, the project finds that the levels of demand play a much more important role for the EU-US employment gap than the structures of demand. Demand growth

44 This research project was a joint undertaking of the Universities of Amsterdam, Utrecht, Oxford and Paris-I Sorbonne, and the University Carlos III in Madrid, University College London and 17th Street Economics, Washington DC. The main network partners involved were Wiemer Salverda (Amsterdam), Ronald Schettkat (Utrecht/Wuppertal), Mary Gregory and Andrew Glyn (Oxford), Michel Sollogoub and François Gardes (Paris), Javier Ruiz-Castillo (Madrid), Stephen Machin (University College London) and Joachim Möller (Regensburg). The project was financially supported by the Socioeconomic Key Action of the Fifth Framework Programme of the European Commission (HPSECT- 2001-00089). For further information on the network's research output, see also footnote 28.

45 These results were achieved on the basis of micro data internationally standardised in expenditures and households characteristics, and limited to those expenditures (between 55 and 75 per cent of total) which are unaffected by the institutional differences of public/private provision.

has been the major source of employment growth, offset by job losses through labour productivity gains. Structural change along the supply chain, including outsourcing, both creates and destroys jobs, with only a small net effect. In the US, stronger demand growth has brought more job creation, while weaker productivity gains have been less job-destroying than in the European economies. These are, according to the DEMPATEM project, the major factors which have opened up the employment gap.

Finally, with regard to the specific employment gap in the distribution sector (trade, hotels and restaurants), the project confirms that the wage structure of retailing relative to the rest of the economy provides no convincing evidence that, in comparison to Europe, US retailing benefits from higher wage flexibility, offering possibilities of paying lower wages. Notably, no particular contribution was found for pay differentials at low levels of skill nor at the bottom end of the wage distribution. On the other hand, more rapid productivity growth in the European distribution sector did contribute to the jobs gap in distribution in the 1970s but not during the two later decades. The much higher macroeconomic level of goods consumption per capita in the US as compared to Europe is important for explaining the gap in retail employment, thus substantially mitigating the importance of potential constraining effects of wages and productivity.[46]

5. Conclusions

While the EU-US employment gap has narrowed considerably over the period 1998-2003 due to stronger employment performance of services in the EU and a less unfavourable employment evolution in industry, the US still has the highest employment rate in services (55.4%) and the lowest employment rate in industry (12.6%) compared to the EU as a whole and the individual EU Member States. As a consequence, the remaining EU-US employment gap is entirely due to a gap in services sector employment, thus suggesting the existence of a further untapped job creation potential in the European services sector.

In many of the central and eastern EU Member States and the southern EU Member States, a large gap in employment rates in the services sector remains, while in Spain and Ireland, employment in services has risen by more than 20% between 1998 and 2003. At the same time, the Czech Republic, Germany, Greece, and the Slovak Republic in particular showed employment growth in the services sector well below the average.

The EU-US employment gap in services is most acute for women and older workers – the latter being the only population group for which there has not been any significant closing in the EU-US employment gap in recent years. Moreover, with regard to the sectoral and occupational composition, the EU-US employment gap exists at two levels: on the one hand, in comparatively low-skill, low-paying sectors, such as wholesale and retail trade and hotels and restaurants, and on the other, in comparatively high-skill, high-paying sectors, such as real estate and business services, education and health and social services. The latter sectors are those in which the most successful EU Member States have created most jobs from 1998-2003. The same observation holds for the EU-US employment gap by occupation, which is found to be highest among services workers and shop assistants, on the one hand, and among clerks, legislators and managers, on the other.

The breakdown of the EU-US employment gap thus helps to identify the areas with the greatest job creation potential in the EU: female employment, employment of older people, and employment in the services sector and in certain comparatively high-skill, high-paying sectors, such as business services, education and health and social work. However, the various positive experiences in several of the EU Member States also offer useful benchmarks. By 2003, for example, the Netherlands, Sweden and the UK had joined Denmark in overtaking the US in terms of the employment rate. While in the case of the Netherlands, this might have been to a large extent due to the strong expansion of part-time work, the picture looks different for Sweden and the UK, where a strong performance in services sector job creation in the high-skill, high-paying services sectors strongly compensated for the important job losses in industry. In fact, in all of these EU 'benchmark countries' employment rates in services are close to those in the US, while employment rates in industry continue to be much higher.

The chapter also casts some doubt as to what extent the recent US experience and the US employment structures are necessarily a benchmark for the EU. The various studies summarised in this chapter conclude that differences in employment structures are to a large extent structural, and that they are the outcome of substantial differences in household consumption patterns and demand structures, most notably of lower increases in the levels of final demand in the EU than in the US. These differences, in turn, are a consequence of important changes

46 In this context, the study also shows that productivity in France, the Netherlands and West Germany has caught up with US levels and that, by the end of the last century the income gap between the US and these countries roughly corresponded to the labour-input gap, while Spain and the UK, by contrast, still have lower productivity levels. While acknowledging that the shift of the causes of the American income advantage from production technology to labour input was hard to explain with conventional macroeconomic arguments, given that it would require substantial changes in labour supply and consumption behaviour, the project leaves open the "pressing question for further research (…) why the USA raised labour input so much and why the European countries fail to achieve higher participation: preferences or constraints?"

in labour supply behaviour, especially of women and older people, as well as a consequence of demographic changes and changes in household formation.

Furthermore, there is no clear and binding evidence in support of the conventional perception that differences in employment structures between the EU and the US are predominantly due to either too rigid relative wage structures or more favourable productivity patterns in the EU (which would prevent in particular the low-skilled from acceding the labour market). According to information on formal education credentials and internationally comparable literacy tests, the employment situation of the low-skilled is actually less favourable in the US than in the EU as a whole - and this despite higher supply of, and higher demand for, unskilled labour in the US. The strong labour market performance in services in the US has disproportionately benefited the high-skilled.

Relative wage structures are generally similar across countries and are not found to be a significant determinant of employment structures. For example, although relative wages in the hotels and restaurants sector in Germany are at US levels, and productivity levels are similar, the German employment rate in that sector is not even half that in the US. For the US in particular, there is further evidence that the increases in services employment were matched by strong increases in relative wages - not only in business services, but also in education, health and social services, and other personal or communal services - there is no evidence for offsetting adjustments by employment to high wage levels in an industry. Instead, there are other long-term adjustments, notably of productivity and capital-labour ratios, with high-wage sectors becoming increasingly more productive.

Finally, the employment intensities of demand in industry and services are in general found to be similar, and there is also evidence that spill-over effects of final demand on employment might in some cases well be stronger for industry demand than for services demand.

In conclusion, the key to increasing employment in services is in the creation of jobs in the comparatively high-paying, high-productive services, such as business services, education and health and social services. To achieve this, the spill-over effects on employment in services from product demand in industry need to be better exploited and further increases in final demand for services are necessary. The latter will follow on from further increases in the labour market participation of women and older people, from more, and more efficient, investment in human capital and lifelong learning, sharing the related costs and responsibilities between public authorities, companies and individuals, and from the support of public spending in areas such as education and health and social services.

6. Annexes to chapter 3

Annex 6.1. Employment, skills and wage data for the EU and the US

Data on employment and skill levels in this chapter are based on data from the European Community Labour Force Survey (LFS) for the years 1998-2003. Population and employment data generally refer to the age group 15-64 unless indicated otherwise. Structural employment data by sector or occupation further generally refer to the second quarter of the year, except when indicated otherwise. For Lithuania and Austria, data on employment growth by skill level in the period 1998-2003 are missing in part due to recent breaks in the series of educational atainment levels for these countries. For some other countries, too, employment growth data by skill level might be affected either by revisions in the classification of educational attainment levels or by base effects related to small sample sizes. Furthermore, employment rates for the total economy in annex 6.5 might deviate slightly from those presented in the Key Employment Indicators in the statistical annex to this report due to both the use of quarterly information from the LFS and the use of preliminary estimates of population figures. Long-term employment data by broad sector for the years 1977-2002 are from the OECD. Data on relative and hourly wages are based on the 2000 Labour Cost Survey, a structural enterprise survey, covering industry and services, and excluding in most EU Member States agriculture, public administration and enterprises with less than 10 employees. In the future, it will be carried out every four years. The coverage of a number of sectors is therefore either weak or missing, notably of "Education, health and social services", "Public administration and defence", and "Social and personal services". No information is provided on the self-employed. The survey contains detailed information on the level and structure of labour costs, wages and salaries, working hours and employment at the national, regional and sectoral (NACE-2) level and by establishment size. Latest structural data from the Labour Cost Survey (LCS) are available for the year 2000. In that survey, no data are provided for Belgium, Malta and Turkey. Wage information from the 2002 Structure of Earnings Survey was not yet available at the time of publication of this report.

Data on employment and wages for the US used in this chapter are based on data National Industry-Specific Occupational Employment Statistics (OES) for the years 1998-2003, provided by the Bureau of Labor Statistics (BLS). Population and employment data generally refer to the age group 16-64 unless indicated otherwise. Structural employment data by sector or occupation are annual averages, except when indicated otherwise. The sectoral and occupational data have been re-classified into the standard European classification systems (NACE for sectors, ISCO for occupations) according to the correspondence tables below. Long-term employment data by broad sector for the years 1977-2002 are from the OECD Labour Market Statistics database. Hourly wages are calculated based on a "year-round, full-time" figure of 2,080 hours. Data on skill levels by labour force status are from the OECD. Data on skill levels by sector are based on the Current Population Survey (CPS).

The OES National Industry-Specific Occupational Employment and Wage Estimates are calculated from data collected in a national survey of employers. These data are used to calculate industry-specific occupational employment and wage estimates for most 3, 4, and 5-digit North American Industry Classification System (NAICS) industry groups. Self-employed persons are not included in the survey. With regard to the occupational employment structure, since 1999, the OES program has used the Standard Occupational Classification (SOC) system. With regard to the sectoral employment structure, the Standard Industry Classification (SIC) has been used in 1998 and 2000, and the North American Industry Classification System (NAICS) in 2003. The surveys covered in principal the sectors SIC 071 to SIC 497 (agricultural services; mining; construction; manufacturing; transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services). For all analyses of employment rates by sector in this chapter, aggregate data on employment in agriculture (annual averages) from BLS have been added.

Annex 6.2. Sectoral classifications (NACE, SIC and NAICS)

NACE-1 - SIC-3 conversion		NACE-1 - NAICS conversion	
	AGRICULTURE (NACE A-B)		
	Agriculture, hunting and forestry (NACE A)		
71	Soil Preparation Services	113000	Forestry and Logging
72	Crop Services	115000	Support Activities for Agriculture and Forestry
73	Veterinary Services		
74	Animal Services, Except Veterinary		
241	Logging		
	Fishing (NACE B)		
	INDUSTRY (NACE C-F)		
	Mining and quarrying (NACE C)		
10	Metal Mining	211000	Oil and Gas Extraction
12	Coal Mining	212000	Mining (except Oil and Gas)
13	Oil and Gas Extraction	213000	Support Activities for Mining
14	Mining and Quarrying of Nonmetallic Minerals, Except Fuels		
	Manufacturing (NACE D)		
20	Food and Kindred Products	311000	Food Manufacturing
21	Tobacco Products	312000	Beverage and Tobacco Product Manufacturing
22	Textile Mill Products	313000	Textile Mills
23	Apparel and Other Finished Products Made From Fabrics and Similar Materials	314000	Textile Product Mills
24	Lumber and Wood Products, Except Furniture	315000	Apparel Manufacturing
25	Furniture and Fixtures	316000	Leather and Allied Product Manufacturing
26	Paper and Allied Products	321000	Wood Product Manufacturing
27	Printing, Publishing, and Allied Industries	322000	Paper Manufacturing
28	Chemicals and Allied Products	323000	Printing and Related Support Activities
29	Petroleum Refining and Related Industries	324000	Petroleum and Coal Products Manufacturing
30	Rubber and Miscellaneous Plastics Products	325000	Chemical Manufacturing
31	Leather and Leather Products	326000	Plastics and Rubber Products Manufacturing
32	Stone, Clay, Glass, and Concrete Products	327000	Nonmetallic Mineral Product Manufacturing
33	Primary Metal Industries	331000	Primary Metal Manufacturing
34	Fabricated Metal Products, Except Machinery and Transportation Equipment	332000	Fabricated Metal Product Manufacturing
35	Industrial and Commercial Machinery and Computer Equipment	333000	Machinery Manufacturing
36	Electronic and Other Electrical Equipment and Components, Except Computer Equipment	334000	Computer and Electronic Product
37	Transportation Equipment	335000	Electrical Equipment, Appliance, and Component Manufacturing
38	Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks	336000	Transportation Equipment Manufacturing
39	Miscellaneous Manufacturing Industries	337000	Furniture and Related Product Manufacturing
		339000	Miscellaneous Manufacturing
		511000	Publishing Industries (except Internet)
	Electricity, gas and water supply (NACE E)		
491	Electric Services	221000	Utilities
492	Gas Production and Distribution		
493	Combination Electric and Gas, and Other Utility Services		
494	Water Supply		
496	Steam and Air-Conditioning Supply		
497	Irrigation Systems		
	Construction (NACE F)		
15	Building Construction General Contractors and Operative Builders	236000	Construction of Buildings

16	Heavy Construction Other Than Building Construction Contractors	237000	Heavy and Civil Engineering Construction
17	Construction Special Trade Contractors	238000	Specialty Trade Contractors
	SERVICES (NACE G-Q)		
	Wholesale and retail trade (NACE G)		
50	Wholesale Trade--Durable Goods	423000	Merchant Wholesalers, Durable Goods
51	Wholesale Trade--Non-Durable Goods	424000	Merchant Wholesalers, Nondurable Goods
52	Building Materials, Hardware, Garden Supply, and Mobile Home Dealers	425000	Wholesale Electronic Markets and Agents and Brokers
53	General Merchandise Stores	441000	Motor Vehicle and Parts Dealers
54	Food Stores	442000	Furniture and Home Furnishings Stores
55	Automotive Dealers and Gasoline Service Stations	443000	Electronics and Appliance Stores
56	Apparel and Accessory Stores	444000	Building Material and Garden Equipment and Supplies Dealers
57	Home Furniture, Furnishings, and Equipment Stores	445000	Food and Beverage Stores
59	Miscellaneous Retail	446000	Health and Personal Care Stores
		447000	Gasoline Stations
		448000	Clothing and Clothing Accessories Stores
		451000	Sporting Goods, Hobby, Book, and Music Stores
		452000	General Merchandise Stores
		453000	Miscellaneous Store Retailers
		454000	Nonstore Retailers
		811000	Repair and Maintenance
	Hotels and restaurants (NACE H)		
581	Eating and Drinking Places	721000	Accommodation
70	Hotels, Rooming Houses, Camps, and Other Lodging Places	722000	Food Services and Drinking Places
	Transport, storage and communication (NACE I)		
40	Railroad Transportation	481000	Air Transportation
41	Local and Suburban Transit and Interurban Highway Passenger Transportation	482000	Rail Transportation
42	Motor Freight Transportation and Warehousing	483000	Water Transportation
44	Water Transportation	484000	Truck Transportation
45	Transportation By Air	485000	Transit and Ground Passenger Transportation
46	Pipelines, Except Natural Gas	486000	Pipeline Transportation
47	Transportation Services	487000	Scenic and Sightseeing Transportation
48	Communications	488000	Support Activities for Transportation
		492000	Couriers and Messengers
		517000	Telecommunications
		518000	Internet Service Providers, Web Search Portals, and Data Processing Service
		519000	Other Information Services
	Financial intermediation (NACE J)		
60	Depository Institutions	521000	Monetary Authorities - Central Bank
61	Non-Depository Credit Institutions	522000	Credit Intermediation and Related Activities
62	Security and Commodity Brokers, Dealers, Exchanges, and Services	523000	Securities, Commodity Contracts, and Other Financial Investments and Related Activities
63	Insurance Carriers	524000	Insurance Carriers and Related Activities
67	Holding and Other Investment Offices	525000	Funds, Trusts, and Other Financial Vehicles
	Real estate, renting and business activities (NACE K)		
74	Veterinary Services	531000	Real Estate
78	Landscape and Horticultural Services	532000	Rental and Leasing Services
65	Real Estate	533000	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)
73	Business Services	541000	Professional, Scientific, and Technical Services
751	Automotive Rental and Leasing, Without Drivers	551000	Management of Companies and Enterprises

811 87	Legal Services Engineering, Accounting, Research, Management, and Related Services	561000	Administrative and Support Services
Public administration and defence, compulsory social security (NACE L)			
90	Government (OES designation)	999000	Federal, State, and Local Government (OES Designation)
Education (NACE M)			
82	Educational Services	611000	Educational Services
Health and social work (NACE N)			
80 83	Health Services Social Services	621000 622000 623000 624000	Ambulatory Health Care Services Hospitals Nursing and Residential Care Facilities Social Assistance
Other community, social, personal service activities (NACE O)			
495	Sanitary Services	512000	Motion Picture and Sound Recording Industries
72	Personal Services	515000	Broadcasting (except Internet)
75	Automotive Repair, Services, and Parking	516000	Internet Publishing and Broadcasting
76	Miscellaneous Repair Services	562000	Waste Management and Remediation Services
78	Motion Pictures	711000	Performing Arts, Spectator Sports, and Related Industries
79	Amusement and Recreation Services	712000	Museums, Historical Sites, and Similar Institutions
84	Museums, Art Galleries, and Botanical and Zoological Gardens	713000	Amusement, Gambling, and Recreation Industries
86	Membership Organizations	812000	Personal and Laundry Services
89	Services, not elsewhere classified	813000	Religious, Grantmaking, Civic, Professional, and Similar Organizations
Private households with employed persons (NACE P)			
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Extra-territorial organisations and bodies (NACE Q)			
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Annex 6.3. Occupational classifications (ISCO and SOC)

ISCO-1 - S0C-3 conversion

Legislators, senior officials and managers (ISCO 1)
Management occupations (1100)
Business and financial operations occupations (1300)
Legal occupations: lawyers and judges (2310)
Food preparation and serving related occupations: first-line supervisors, managers (3510)
Building and grounds cleaning and maintenance occupations: first-line supervisors, managers (3710)
Personal care and service occupations: first-line supervisors, managers (3910)
Sales and related occupations: first-line supervisors, managers (4110)
Office and administrative support occupations: first-line supervisors, managers (4310)
Farming, fishing, and forestry occupations: first-line supervisors, managers (4510)
Construction and extraction occupations: first-line supervisors, managers (4710)
Installation, maintenance, and repair occupations: first-line supervisors, managers (4910)
Production occupations: first-line supervisors, managers (5110)
Transportation and material moving occupations: first-line supervisors, managers (5310)

Professionals (ISCO 2)
Computer and mathematical occupations (1500)
Architecture and engineering occupations: architects and engineers (1710-1721)
Life, physical, and social science occupations: scientists (1910-1930)
Community and social services occupations: counselors and therapists (2110-11 - 2110-15)
Community and social services occupations: clergy and religious activities (2120)
Education, training, and library occupations: teachers, archivists and librarians (2510-2540)
Arts, design, entertainment, sports, and media occupations: arts directors, artists (2710-11 - 2710-13)
Arts, design, entertainment, sports, and media occupations: actors, producers (2720-11 - 2720-12)
Arts, design, entertainment, sports, and media occupations: dancers, choreographers, musicians (2720-31 - 2720-42)
Arts, design, entertainment, sports, and media occupations: PR specialists, writers, editors, translators (2730-31 - 2730-91)
Healthcare practitioners and technical occupations: medical doctors and therapists (2910, 2911-21 - 2911-31)

Technicians and associate professionals (ISCO 3)
Architecture and engineering occupations: technicians (1730)
Life, physical, and social science occupations: technicians (1940)
Legal occupations: legal assistants (2320)
Community and social services occupations: social workers and assistants (2110-21 - 2110-93)
Education, training, and library occupations: teacher assistants (2590)
Arts, design, entertainment, sports, and media occupations: commercial and industrial designers (2710-21 - 2710-27)
Arts, design, entertainment, sports, and media occupations: athletes, sports competitors (2720-21 - 2720-23)
Arts, design, entertainment, sports, and media occupations: announcers, news analysists(2730-10 - 2730-20)
Arts, design, entertainment, sports, and media occupations: audio and video technicians, photographers (2740)
Healthcare practitioners and technical occupations: Registered nurses (29-1111)
Healthcare practitioners and technical occupations: health technicians (2920 - 2990)
Healthcare support occupations (3100)
Protective service occupations: first-line supervisors, inspectors, detectives (3310, 3320-21 - 3330-21, 3390-21)
Office and administrative support occupations: executive secretaries and administrative assistants (4360-11 - 4360-13)
Transportation and material moving occupations: pilots, air traffic controlers (5320)
Transportation and material moving occupations: traffic technicians and transport inspectors (5360-40 - 5360-51)

Clerks (ISCO 4)
Office and administrative support occupations (4300, except 4310 and 4360-11 - 4360-13)

Service workers and shop and market sales workers (ISCO 5)
Protective service occupations: fire fighters, police officers, control workers, security guards (3320-11, 3330-31 - 3390-11, 3390-13 - 3390-91)
Food preparation and serving related occupations (3500, except 3510)
Personal care and service occupations (3900, except 3910)
Sales and related occupations (4100, except 4110)

Skilled agricultural and fishery workers (ISCO 6)
Farming, fishing, and forestry occupations (except 4510)

Craft and related trades workers (ISCO 7)
Construction and extraction occupations (4700, except 4710, 4720-61, 4730, 4750-81)
Installation, maintenance, and repair occupations (4900, except 4910, 4991-98)

Plant and machine operators and assemblers (ISCO 8)
Production occupations (5100, except 5110 and 5191-98)
Transportation and material moving occupations: drivers, locomotive engineers, railroad conductors (5320-5340)
Transportation and material moving occupations: transport operators (5370-11 - 5370-51)

isco9 Elementary occupations (ISCO 9)
Building and grounds cleaning and maintenance occupations (3700, except 3710)
Construction and extraction occupations: labourers and helpers (4720-61, 4730, 4750-81)
Installation, maintenance, and repair occupations: helpers (4991-98)
Transportation and material moving occupations: station and parking lot attendants (5360-11 - 5360-31)
Transportation and material moving occupations: cleaners, labourers, packagers, etc. (5370-51 - 5371-21)

Annex 6.4. Classifications of educational attainment levels (ISCED)

Following the classification used by the OECD in Education at a Glance, educational attainment categories are defined with reference to the International Standard Classification of Education (ISCED) of 1997:

ISCED categories
Low-skilled ISCED 0/1: Pre-primary and primary education ISCED 2: Lower secondary education
Medium-skilled ISCED 3A: Upper secondary education. Programmes at level 3 designed to provide direct access to ISCED 5A ISCED 3B: Upper secondary education. Programmes at level 3 designed to provide direct access to ISCED 5B ISCED 3CL: Upper secondary education. 'Long' is dependent on the theoretical duration of the programmes at that level. ISCED 3CS: Upper secondary education. 'Short' is dependent on the theoretical duration of the programmes at that level. ISCED 4: Post-secondary, non-tertiary education
High-skilled ISCED 5A: First stage of tertiary education: The programmes provide the level of education required for entry into a profession with high skills requirements or an advanced research programme. ISCED 5B: First stage of tertiary education. The programme content is typically designed to prepare students to enter a particular occupation. ISCED 6: Second stage of tertiary education (leading to an advanced research qualification). It prepares recipients for faculty posts in institutions offering ISCED 5A programmes, as well as research posts in government and industry.

Annex 6.5. Key employment indicators by sector (NACE-1) in the EU and the US, 1998-2003

Total economy

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	130 673	189 219	160 806	28 421	4 027	4 649	2 665	35 523	568	3 898	16 560	24 394	1 743	21 716	317	980	1 443	:	3 899	148	8 054	3 715	13 380	4 745	877	2 160	2 381	4 279	28 114	2 819	8 764
2000	132 136	185 873	157 240	28 633	4 093	4 617	2 696	35 977	553	3 840	15 199	23 029	1 637	20 620	286	918	1 382	180	3 781	:	7 807	3 680	14 145	4 711	873	2 078	2 350	4 050	27 404	2 834	9 765
1998	127 149	180 437	151 087	29 350	3 841	4 770	2 652	35 194	595	3 854	13 624	22 139	1 462	20 051	:	958	1 454	170	3 623	:	7 347	3 593	14 878	4 504	878	2 194	2 163	3 885	26 608	:	10 013
Employment growth (in thousands)																															
1998-2003	3 524	8 782	9 719	-1 394	186	-121	13	329	-27	44	2 936	2 255	281	1 665	:	22	-11	:	276	:	707	122	-1 498	241	-1	-34	218	394	1 506	:	-1 249
1998-2000	4 987	5 436	6 153	-1 003	252	-153	44	783	-42	-14	1 575	890	175	569	:	-40	-72	10	158	:	460	87	-733	207	-5	-116	187	165	796	:	-248
2000-2003	-1 463	3 346	3 566	-360	-66	32	-31	-454	15	58	1 361	1 365	106	1 096	31	62	61	:	118	:	247	35	-765	34	4	82	31	229	710	-15	-1 001
Employment growth (in %)																															
1998-2003	2.8	4.9	6.4	-4.7	4.8	-2.5	0.5	0.9	-4.5	1.1	21.6	10.2	19.2	8.3	:	2.3	-0.8	:	7.6	:	9.6	3.4	-10.1	5.4	-0.1	-1.5	10.1	10.1	5.7	:	-12.5
1998-2000	3.9	3.0	4.1	-3.4	6.6	-3.2	1.7	2.2	-7.1	-0.4	11.6	4.0	12.0	2.8	:	-4.2	-5.0	5.9	4.4	:	6.3	2.4	-4.9	4.6	-0.6	-5.3	8.6	4.2	3.0	:	-2.5
2000-2003	-1.1	1.8	2.3	-1.3	-1.6	0.7	-1.1	-1.3	2.7	1.5	9.0	5.9	6.5	5.3	10.8	6.8	4.4	:	3.1	:	3.2	1.0	-5.4	0.7	0.5	3.9	1.3	5.7	2.6	-0.5	-10.3
Annualised employment growth (in %)																															
1998-2003	0.5	1.0	1.3	-1.0	1.0	-0.5	0.1	0.2	-0.9	0.2	4.0	2.0	3.6	1.6	:	0.5	-0.2	:	1.5	:	1.9	0.7	-2.1	1.0	0.0	-0.3	1.9	2.0	1.1	:	-2.6
1998-2000	1.9	1.5	2.0	-1.7	3.2	-1.6	0.8	1.1	-3.6	-0.2	5.6	2.0	5.8	1.4	:	-2.1	-2.5	2.9	2.2	:	3.1	1.2	-2.5	2.3	-0.3	-2.7	4.2	2.1	1.5	:	-1.2
2000-2003	-0.4	0.6	0.8	-0.4	-0.5	0.2	-0.4	-0.4	0.9	0.5	2.9	1.9	2.1	1.7	3.5	2.2	1.5	:	1.0	:	1.0	0.3	-1.8	0.2	0.2	1.3	0.4	1.9	0.9	-0.2	-3.5
Employment share (in %)																															
2003	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2000	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1998	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Employment rate (in %)																															
2003	69.9	62.8	64.2	56.4	59.3	64.9	75.1	64.9	62.3	57.9	59.6	62.8	65.0	56.1	69.2	61.7	62.8	:	57.0	:	73.6	69.1	51.4	67.3	62.5	57.9	68.7	73.6	71.7	53.1	58.7
2000	73.8	62.3	63.2	57.4	60.9	64.9	76.4	65.3	60.4	55.8	56.0	61.7	64.5	53.4	65.3	57.4	59.6	62.7	55.9	:	72.9	68.5	55.1	68.3	62.7	56.3	68.2	71.1	71.3	51.5	64.2
1998	73.5	61.0	61.1	60.0	57.3	67.5	75.3	63.7	65.2	55.6	50.9	60.0	59.7	51.8	:	59.8	62.1	60.3	53.2	:	69.4	67.4	59.2	66.8	63.5	60.6	63.4	68.7	70.2	:	65.9
Employment share of high-skilled (in %)																															
2003	:	24.0	24.7	17.2	34.8	12.7	29.7	25.4	31.3	19.6	28.9	26.1	29.7	13.1	31.6	18.5	25.5	22.0	17.9	13.1	24.3	17.7	16.6	10.2	17.9	13.2	32.3	26.0	30.9	24.6	9.5
2000	:	:	23.7	:	33.9	12.0	24.2	24.9	31.4	18.6	26.5	25.6	24.9	12.0	27.5	20.1	44.3	22.4	16.3	:	23.9	15.5	13.1	9.1	15.7	11.6	32.4	29.3	29.2	21.8	7.9
1998	:	:	20.2	:	33.1	10.7	23.9	:	30.7	18.6	24.5	24.0	:	11.1	:	18.5	43.3	:	15.6	:	23.0	9.0	:	9.2	14.0	11.4	30.3	27.9	:	21.8	7.7
Employment share of medium-skilled (in %																															
2003	:	48.3	46.1	70.8	37.2	80.1	50.4	58.9	57.9	37.2	19.5	44.8	40.0	41.6	37.7	65.6	63.0	44.8	66.6	17.3	45.1	63.4	70.3	12.4	64.4	81.1	46.4	56.5	56.6	56.5	58.1
2000	:	:	45.6	:	35.2	78.8	53.1	57.3	57.4	36.1	18.5	44.4	41.5	41.6	39.2	66.1	43.6	44.4	65.9	:	45.1	63.7	71.5	11.3	63.2	81.3	44.4	49.7	57.2	55.1	53.9
1998	:	:	37.5	:	35.8	79.5	52.5	:	56.8	32.5	16.9	43.7	:	38.1	:	66.7	43.7	:	65.6	:	46.1	68.9	:	10.8	62.3	78.7	44.4	50.1	:	57.0	54.8
Employment share of low-skilled (in %)																															
2003	:	27.7	29.2	12.0	28.0	7.2	20.0	15.6	10.8	43.1	51.6	29.1	30.3	45.3	30.6	15.9	11.5	33.2	15.4	69.6	30.6	18.9	13.1	77.4	17.8	5.7	21.4	17.5	12.5	18.9	32.4
2000	:	:	30.7	:	31.0	9.2	22.7	17.7	11.1	45.3	54.9	30.0	33.6	46.5	33.4	13.9	12.0	33.3	17.8	:	31.1	20.8	15.5	79.6	21.1	7.1	23.3	20.9	13.6	23.2	38.2
1998	:	:	42.3	:	31.1	9.7	23.5	:	12.5	49.0	58.6	32.2	:	50.8	:	14.8	13.0	:	18.8	:	30.9	22.1	:	79.9	23.8	9.9	25.3	22.0	:	21.2	37.6
Employment rate of high-skilled (in %)																															
2003	:	86.9	86.3	84.4	82.9	88.5	86.2	84.1	83.2	81.8	79.0	76.0	85.7	82.7	88.5	82.8	86.5	:	83.5	83.5	:	92.5	82.9	87.9	86.2	87.4	85.4	87.5	88.8	78.3	82.2
2000	:	:	83.4	84.9	85.8	87.6	88.8	84.0	86.1	81.1	75.6	79.0	86.9	82.8	86.0	82.3	80.6	80.7	83.3	:	86.9	85.3	86.0	91.5	86.7	85.4	84.3	84.2	88.7	78.2	84.8
1998	:	:	79.4	86.7	83.2	90.8	88.2	:	84.9	79.9	71.7	77.1	:	82.2	:	82.6	81.4	:	81.3	:	87.5	89.7	89.6	90.2	84.6	90.3	82.4	82.6	:	:	88.0
Employment rate of medium-skilled (in %)																															
2003	:	69.2	71.0	63.1	65.2	72.9	79.6	69.5	69.0	58.6	60.1	70.5	71.1	65.4	74.4	70.3	69.6	:	66.8	69.8	:	73.0	57.2	63.0	67.9	66.8	72.7	80.0	78.0	63.2	65.5
2000	:	:	70.3	65.5	66.2	73.5	80.6	70.4	66.0	56.5	55.0	69.1	72.7	63.8	69.9	63.7	62.9	64.2	66.9	:	79.3	74.2	62.8	64.8	69.9	65.3	72.7	78.3	78.0	59.5	68.7
1998	:	:	65.2	69.2	63.2	76.1	79.0	:	71.7	56.0	46.8	67.8	:	61.5	:	65.9	62.7	:	64.6	:	76.4	74.7	68.1	60.9	71.5	71.2	67.5	75.3	:	:	70.6
Employment rate of low-skilled (in %)																															
2003	:	47.5	50.5	27.8	41.0	24.8	59.2	42.9	31.6	53.2	54.0	48.2	50.5	46.8	56.0	36.5	30.9	:	28.7	49.4	:	47.3	26.3	71.8	43.3	15.5	50.0	59.2	55.1	29.4	54.2
2000	:	:	51.5	30.7	44.0	29.6	62.9	56.1	30.4	51.2	52.0	46.4	48.9	44.9	53.5	31.9	29.8	54.1	29.5	:	59.6	49.1	31.6	72.3	43.6	17.7	51.1	57.9	54.4	31.7	73.5
1998	:	:	48.9	34.7	40.4	33.2	61.7	:	36.2	51.9	48.3	46.0	:	45.2	:	37.2	36.1	:	28.2	:	55.3	48.9	37.5	70.7	47.7	23.4	46.1	56.1	:	:	74.0
Employment growth of high-skilled (in %)																															
1998-2003	:	:	25.1	13.1	11.3	15.9	26.2	:	-3.2	8.7	43.3	20.1	:	29.5	:	5.0	:	:	25.1	:	17.2	:	28.0	31.9	27.8	15.6	18.0	3.4	:	:	5.7
1998-2000	:	:	13.7	4.9	10.0	8.6	1.0	:	-5.3	1.4	21.3	11.3	:	11.4	:	4.5	-0.9	:	10.7	:	11.2	:	5.5	17.0	13.3	-2.5	16.2	9.9	:	:	2.6
2000-2003	:	8.0	8.0	9.0	1.1	6.7	25.0	0.6	2.1	7.2	18.2	7.9	27.3	16.3	27.2	0.5	:	3.7	13.0	:	5.5	13.5	21.4	12.8	12.8	18.5	1.6	-5.9	9.8	11.3	3.0
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	14.2	-3.7	9.1	-2.1	-4.3	:	-0.3	14.3	38.3	12.0	:	19.5	:	-1.0	:	:	9.2	:	7.8	:	-11.3	33.5	1.7	1.1	14.1	23.4	:	:	-10.7
1998-2000	:	:	7.1	-2.6	4.7	-4.0	1.2	:	-5.3	9.1	20.8	5.4	:	11.7	:	-5.6	-5.0	:	4.9	:	3.8	:	-3.6	21.5	0.0	-2.5	7.9	3.5	:	:	-3.1
2000-2003	:	3.1	4.3	-0.8	4.2	1.9	-5.4	1.7	5.2	4.8	14.5	6.3	2.4	6.9	5.8	4.9	:	5.7	4.1	:	3.9	0.1	-8.0	9.9	1.7	3.7	5.8	19.3	2.1	1.8	-7.8
Employment growth of low-skilled (in %)																															
1998-2003	:	:	2.2	-30.0	-5.9	-28.5	-14.2	:	-16.8	-11.4	6.6	0.0	:	-2.6	:	10.5	:	:	-12.2	:	29.6	:	-37.7	14.1	-24.5	-43.8	-5.2	-12.4	:	:	-27.8
1998-2000	:	:	0.1	-16.6	6.0	-10.1	-3.5	:	-16.5	-8.2	4.4	-3.4	:	-6.1	:	-11.5	-12.9	:	-1.9	:	4.6	:	-20.8	16.2	-14.2	-32.2	0.6	-0.1	:	:	-0.8
2000-2003	:	-1.6	-0.4	-10.4	-11.2	-20.5	-11.1	-13.5	-0.3	-3.4	2.1	3.5	-3.0	3.7	4.1	24.9	:	4.3	-10.4	:	23.9	-9.5	-21.3	-1.8	-12.0	-17.1	-5.8	-12.4	-4.8	-15.3	-27.2

Annex 6.5. Key employment indicators by sector (NACE-1) in the EU and the US, 1998-2003

Agriculture

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	2 275	9 601	5 983	3 366	67	211	83	830	35	588	913	1 049	98	987	13	139	263	:	210	4	:	200	2 303	422	59	129	119	92	332	279	2 938
2000	3 382	9 833	6 242	3 591	75	240	95	910	38	607	989	928	113	1 036	13	131	251	4	242	:	232	200	2 464	421	68	144	140	96	392	350	3 808
1998	3 378	:	6 567	1 292	85	264	92	942	55	636	1 023	943	117	1 115	:	170	274	5	265	:	239	220	:	473	86	178	148	103	427		3 589
Employment growth (in thousands)																															
1998-2003	582	:	-584	-246	-18	-53	-9	-112	-20	-48	-110	106	-19	-128	:	-31	-11	:	-55	:	:	-20	:	-51	-27	-49	-29	-11	-95	:	-651
1998-2000	-60	:	-325	-178	-10	-24	3	-32	-17	-29	-34	-15	-4	-79	:	-39	-23	-1	-23	:	-7	-20	:	-52	-18	-34	-8	-7	-35	:	219
2000-2003	642	-232	-259	-229	-8	-29	-12	-80	-3	-19	-76	121	-15	-49	0	8	12	:	-32	:	:	0	-161	1	-9	-15	-21	-4	-60	-71	-870
Employment growth (in %)																															
1998-2003	20,1	:	-8.9	-19.0	-21.2	-20.1	-9.8	-11.9	-36.4	-7.5	-10.8	11.2	-16.2	-11.5	:	-18.2	-4.0	:	-20.8	:	:	-9.1	:	-10.8	-31.4	-27.5	-19.6	-10.7	-22.2	:	-18.1
1998-2000	-2.1	:	-4.9	-13.8	-11.8	-9.1	3.3	-3.4	-30.9	-4.6	-3.3	-1.6	-3.4	-7.1	:	-22.9	-8.4	-20.0	-8.7	:	-2.9	-9.1	:	-11.0	-20.9	-19.1	-5.4	-6.8	-8.2	:	6.1
2000-2003	22.6	-2.4	-4.1	-6.4	-10.7	-12.1	-12.6	-8.8	-7.9	-3.1	-7.7	13.0	-13.3	-4.7	0.0	6.1	4.8	:	-13.2	:	:	0.0	-6.5	0.2	-13.2	-10.4	-15.0	-4.2	-15.3	-20.3	-22.8
Annualised employment growth (in %)																															
1998-2003	3.7	:	-1.8	-4.1	-4.6	-4.4	-2.0	-2.5	-8.6	-1.6	-2.2	2.2	-3.5	-2.4	:	-3.9	-0.8	:	-4.5	:	:	-1.9	:	-2.3	-7.3	-6.2	-4.3	-2.2	-4.9	:	-3.9
1998-2000	-1.0	:	-2.5	-7.1	-6.1	-4.7	1.6	-1.7	-16.9	-2.3	-1.7	-0.8	-1.7	-3.6	:	-12.2	-4.3	-10.6	-4.4	:	-1.5	-4.7	:	-5.7	-11.1	-10.1	-2.7	-3.5	-4.2	:	3.0
2000-2003	7.0	-0.8	-1.4	-2.2	-3.7	-4.2	-4.4	-3.0	-2.7	-1.1	-2.6	4.2	-4.6	-1.6	0.0	2.0	1.6	:	-4.6	:	:	0.0	-2.2	0.1	-4.6	-3.6	-5.3	-1.4	-5.4	-7.3	-8.3
Employment share (in %)																															
2003	2.7	5.1	3.7	11.8	1.7	4.5	3.1	2.3	6.2	15.1	5.5	4.3	5.6	4.5	4.1	14.2	18.2	:	5.4	2.7	:	5.4	17.2	8.9	6.7	6.0	5.0	2.2	1.2	9.9	33.5
2000	2.1	5.3	4.0	12.5	1.8	5.2	3.5	2.5	6.9	15.8	6.5	4.0	6.9	5.0	4.5	14.3	18.2	2.2	6.4	:	3.0	5.4	17.4	8.9	7.8	6.9	6.0	2.4	1.4	12.4	39.0
1998	2.3	:	4.3	4.4	2.2	5.5	3.5	2.7	9.2	16.5	7.5	4.3	8.0	5.6	:	17.7	18.8	2.9	7.3	:	3.3	6.1	:	10.5	9.8	8.1	6.8	2.7	1.6	:	35.8
Employment rate (in %)																															
2003	1.9	3.2	2.4	6.7	1.0	2.9	2.3	1.5	3.8	8.7	3.3	2.7	3.7	2.6	2.8	8.8	11.4	:	3.1	:	:	3.7	8.8	6.0	4.2	3.5	3.4	1.6	0.8	5.3	19.7
2000	1.6	3.3	2.5	7.2	1.1	3.4	2.7	1.7	4.1	8.8	3.6	2.5	4.5	2.7	3.0	8.2	10.8	1.4	3.6	:	2.2	3.7	9.6	6.1	4.9	3.9	4.1	1.7	1.0	6.4	25.0
1998	1.7	:	2.7	2.6	1.3	3.7	2.6	1.7	6.0	9.2	3.8	2.6	4.8	2.9	:	10.6	11.7	1.8	3.9	:	2.3	4.1	:	7.0	6.2	4.9	4.3	1.8	1.1	:	23.6
Employment share of high-skilled (in %)																															
2003	:	7.8	7.9	7.0	12.3	6.5	8.0	20.7	17.4	0.8	6.8	8.5	7.4	2.6	4.6	6.8	5.8	1.2	8.7	1.9	5.7	8.9	1.8	1.2	3.7	7.1	12.8	10.0	19.4	4.6	1.1
2000	:	:	6.6	:	10.2	6.0	4.8	17.3	10.4	0.9	5.0	6.7	4.5	2.3	2.4	5.6	20.2	3.0	5.8	:	5.3	7.7	1.3	0.5	2.5	5.0	12.3	8.8	14.2	4.0	1.1
1998	:	:	3.7	:	9.6	4.9	6.5	:	14.5	1.1	4.4	6.4	:	1.8	:	5.4	19.4	:	7.3	:	4.3	0.9	:	0.9	2.0	6.2	11.4	6.6	:	14.6	0.8
Employment share of medium-skilled (in %)																															
2003	:	37.1	32.6	63.4	37.7	80.6	58.5	59.4	59.5	12.5	9.7	53.4	30.9	22.2	23.1	54.9	63.6	54.8	57.6	5.0	46.9	54.5	60.8	1.3	38.4	76.2	51.6	53.0	53.8	38.4	32.6
2000	:	:	30.3	:	35.1	78.0	50.0	56.3	66.6	11.8	8.3	49.7	34.4	18.6	23.9	57.7	49.8	42.3	54.1	:	43.9	45.2	56.1	1.2	33.7	75.2	51.0	48.4	51.6	30.7	30.4
1998	:	:	24.2	:	38.6	77.4	57.0	:	60.4	9.3	7.0	46.6	:	16.6	:	60.0	47.1	:	53.9	:	48.1	52.4	:	2.3	31.1	70.1	47.7	50.4	:	49.8	29.0
Employment share of low-skilled (in %)																															
2003	:	55.1	59.5	29.6	50.0	12.9	33.5	19.9	23.1	86.6	83.5	38.1	61.7	75.3	72.3	38.3	30.6	43.9	33.7	93.1	47.4	36.6	37.3	97.5	57.9	16.7	35.6	37.0	26.8	56.9	66.3
2000	:	:	63.1	:	54.7	15.9	45.2	26.4	23.0	87.3	86.8	43.5	61.0	79.1	73.7	36.7	29.9	54.7	40.1	:	50.9	47.2	42.6	98.3	63.8	19.8	36.7	42.8	34.2	65.2	68.5
1998	:	:	72.0	:	51.8	17.7	36.6	:	25.1	89.6	88.6	47.0	:	81.5	:	34.6	33.5	:	38.7	:	47.5	46.7	:	96.8	66.9	23.7	40.8	43.1	:	35.7	70.2
Employment rate of high-skilled (in %)																															
2003	:	1.2	1.1	2.0	0.5	1.9	0.7	1.6	2.8	0.5	1.0	1.1	1.4	0.8	0.7	4.1	3.6	:	2.1	0.3	:	2.6	1.5	1.3	1.4	2.6	1.7	0.8	0.6	1.6	3.3
2000	:	:	1.0	2.5	0.5	2.2	0.6	1.5	1.9	0.6	0.9	0.9	1.2	0.8	0.4	3.3	6.9	0.3	1.8	:	0.6	2.5	1.5	0.6	1.2	2.4	1.9	0.7	0.6	1.8	5.0
1998	:	:	0.9	2.3	0.6	2.2	0.9	:	3.6	0.8	1.0	0.9	:	0.7	:	4.5	7.0	:	2.7	:	0.5	0.6	:	0.8	1.3	3.8	2.1	0.6	:	:	3.7
Employment rate of medium-skilled (in %)																															
2003	:	3.2	2.0	6.9	1.1	3.3	3.1	1.7	4.4	3.1	1.6	3.7	3.5	1.6	2.3	8.7	13.3	:	3.1	0.5	:	3.4	9.1	0.8	3.4	3.8	4.3	1.9	0.9	4.8	13.8
2000	:	:	2.0	7.1	1.2	3.8	2.8	1.8	5.3	3.1	1.6	3.2	4.4	1.4	2.2	8.3	14.1	1.4	3.6	:	2.3	3.2	9.2	0.8	3.6	4.2	5.2	2.2	1.0	4.4	17.3
1998	:	:	2.4	2.6	1.5	4.1	3.1	:	7.2	2.7	1.4	3.2	:	1.4	:	11.3	13.4	:	3.9	:	2.7	3.7	:	1.1	4.3	5.2	5.2	2.3	:	:	15.6
Employment rate of low-skilled (in %)																															
2003	:	4.9	4.2	10.1	1.3	2.1	3.4	1.4	4.4	18.4	5.1	2.8	6.8	3.8	7.2	13.3	16.0	:	3.4	1.6	:	5.2	14.4	11.9	12.0	2.8	4.4	3.2	1.4	10.0	43.5
2000	:	:	4.6	11.8	1.5	2.8	4.8	2.3	4.4	17.6	5.6	2.8	6.7	3.9	6.8	13.4	15.0	2.1	4.4	:	3.1	6.9	16.9	11.4	13.3	3.5	5.1	3.5	2.1	12.3	61.8
1998	:	:	5.0	3.3	1.5	3.5	3.7	:	7.0	17.7	5.8	3.0	:	4.0	:	17.3	18.8	:	4.3	:	2.9	6.9	:	8.1	16.7	4.7	5.4	3.4	:	:	59.8
Employment growth of high-skilled (in %)																															
1998-2003	:	:	39.3	-36.6	3.6	4.4	11.5	:	-22.1	-28.3	36.5	47.7	:	34.5	:	-3.2	:	:	-6.0	:	15.6	:	:	113.4	29.8	-16.5	-8.3	38.6	:	:	1.4
1998-2000	:	:	13.1	-12.6	-2.9	11.8	-26.1	:	-50.7	-17.8	7.8	3.1	:	18.1	:	-22.6	-1.9	:	-27.4	:	18.0	:	:	-18.4	-2.1	-34.8	2.3	33.9	:	:	43.2
2000-2003	:	9.3	16.6	-13.1	6.7	-6.6	50.8	7.5	57.9	-12.8	26.6	43.2	52.4	13.9	108.9	25.1	:	-65.1	29.5	:	-2.0	6.1	27.1	161.7	32.6	28.2	-10.3	3.5	13.3	-2.2	-29.2
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	12.2	-12.1	-20.9	-17.6	-7.8	:	-35.9	25.6	24.2	26.6	:	27.0	:	-28.6	:	:	-15.6	:	-15.2	:	:	-3.5	-14.8	-21.2	-11.9	-4.1	:	:	-14.9
1998-2000	:	:	0.0	-11.4	-17.2	-8.2	-12.7	:	-24.4	20.7	14.9	4.1	:	5.1	:	-28.0	-0.2	:	-7.8	:	-11.7	:	:	-14.7	-15.1	-13.5	1.2	-4.2	:	:	10.7
2000-2003	:	1.8	4.6	-0.6	-4.5	-10.3	5.6	-5.4	-15.1	4.1	8.2	21.7	-15.7	20.8	2.9	-0.8	:	12.6	-8.5	:	-4.0	10.5	-0.6	13.2	0.4	-8.9	-12.9	0.1	-13.6	6.2	-23.1
Employment growth of low-skilled (in %)																															
1998-2003	:	:	-5.8	-29.3	-22.0	-42.4	-17.8	:	-39.9	-10.3	-16.3	-10.4	:	-12.0	:	-13.5	:	:	-31.3	:	-13.3	:	:	65.2	-40.2	-48.8	-28.9	-21.8	:	:	-28.4
1998-2000	:	:	0.3	-17.9	-3.9	-18.1	22.9	:	-37.1	-7.2	-5.7	-9.7	:	-8.9	:	-20.4	-15.7	:	-4.5	:	3.7	:	:	61.2	-25.2	-32.6	-15.0	-0.8	:	:	3.2
2000-2003	:	-11.1	-8.5	-17.6	-18.9	-29.7	-33.1	-32.5	-4.4	-3.3	-11.3	-0.8	-5.1	-3.5	4.9	8.7	:	-30.2	-28.0	:	-16.4	-28.9	-19.6	2.5	-20.1	-24.1	-16.3	-21.1	-35.1	-25.9	-30.6

Industry total

	US	EU-25	EU15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	23 558	54 599	45 379	9 173	1 005	1 864	619	11 186	180	871	5 123	6 078	488	6 939	74	266	399	:	1 307	44	:	1 114	3 885	1 645	329	825	635	973	6 643	920	2 727
2000	26 295	55 256	45 649	9 607	1 061	1 853	681	12 093	193	881	4 734	6 065	473	6 603	69	248	378	37	1 281	:	1 585	1 116	4 477	1 698	333	775	657	999	6 977	936	2 807
1998	26 194	:	44 999	5 366	1 048	1 991	702	12 145	198	907	4 180	5 846	427	6 605	:	264	428	37	1 263	:	1 602	1 070	:	1 687	355	867	611	1 011	7 121	:	3 188
Employment growth (in thousands)																															
1998-2003	-2 636	:	380	-196	-43	-127	-83	-959	-18	-36	943	232	61	334	:	2	-29	:	44	:	:	44	:	-42	-26	-42	24	-38	-478	:	-461
1998-2000	101	:	650	-305	13	-138	-21	-52	-5	-26	554	219	46	-2	:	-16	-50	0	18	:	-17	46	:	11	-22	-92	46	-12	-144	:	-381
2000-2003	-2 737	-657	-270	-478	-56	11	-62	-907	-13	-10	389	13	15	336	5	18	21	:	26	:	:	-2	-592	-53	-4	50	-22	-26	-334	-16	-80
Employment growth (in %)																															
1998-2003	-10.1	:	0.8	-3.7	-4.1	-6.4	-11.8	-7.9	-9.1	-4.0	22.6	4.0	14.3	5.1	:	0.8	-6.8		3.5			4.1		-2.5	-7.3	-4.8	3.9	-3.8	-6.7	:	-14.5
1998-2000	0.4	:	1.4	-5.7	1.2	-6.9	-3.0	-0.4	-2.5	-2.9	13.3	3.7	10.8	0.0	:	-6.1	-11.7	0.0	1.4		-1.1	4.3	:	0.7	-6.2	-10.6	7.5	-1.2	-2.0	:	-12.0
2000-2003	-10.4	-1.2	-0.6	-5.0	-5.3	0.6	-9.1	-7.5	-6.7	-1.1	8.2	0.2	3.2	5.1	7.2	7.3	5.6		2.0			-0.2	-13.2	-3.1	-1.2	6.5	-3.3	-2.6	-4.8	-1.7	-2.9
Annualised employment growth (in %)																															
1998-2003	-2.1	:	0.2	-0.7	-0.8	-1.3	-2.5	-1.6	-1.9	-0.8	4.2	0.8	2.7	1.0	:	0.2	-1.4	:	0.7	:	:	0.8	:	-0.5	-1.5	-1.0	0.8	-0.8	-1.4	:	-3.1
1998-2000	0.2	:	0.7	-2.9	0.6	-3.5	-1.5	-0.2	-1.3	-1.4	6.4	1.9	5.2	0.0	:	-3.1	-6.0	0.0	0.7	:	-0.5	2.1	:	0.3	-3.1	-5.5	3.7	-0.6	-1.0	:	-6.2
2000-2003	-3.6	-0.4	-0.2	-1.7	-1.8	0.2	-3.1	-2.6	-2.3	-0.4	2.7	0.1	1.0	1.7	2.4	2.4	1.8	:	0.7	:	:	-0.1	-4.6	-1.1	-0.4	2.1	-1.1	-0.9	-1.6	-0.6	-1.0
Employment share (in %)																															
2003	18.0	28.9	28.2	32.3	25.0	40.1	23.2	31.5	31.7	22.3	30.9	24.9	28.0	32.0	23.3	27.1	27.7		33.5	29.7	:	30.0	29.0	34.7	37.5	38.2	26.7	22.7	23.6	32.6	31.1
2000	19.9	29.7	29.0	33.6	25.9	40.1	25.3	33.6	34.9	22.9	31.1	26.3	28.9	32.0	24.1	27.0	27.4	20.6	33.9	:	20.3	30.3	31.7	36.0	38.1	37.3	28.0	24.7	25.5	33.0	28.7
1998	20.6	:	29.8	18.3	27.3	41.7	26.5	34.5	33.3	23.5	30.7	26.4	29.2	32.9	:	27.6	29.4	21.8	34.9	:	21.8	29.8	:	37.5	40.4	39.5	28.2	26.0	26.8	:	31.8
Employment rate (in %)																															
2003	12.6	18.1	18.1	18.2	14.8	26.0	17.4	20.5	19.8	12.9	18.4	15.7	18.2	17.9	16.2	16.8	17.4	:	19.1	:	:	20.7	14.9	23.3	23.4	22.1	18.3	16.7	16.9	17.3	18.3
2000	14.7	18.5	18.4	19.3	15.8	26.1	19.3	22.0	21.1	12.8	17.5	16.3	18.6	17.1	15.8	15.5	16.3	12.9	18.9	:	14.8	20.8	17.5	24.6	23.9	21.0	19.1	17.5	18.1	17.0	18.5
1998	15.1	:	18.2	11.0	15.6	28.2	19.9	22.0	21.7	13.1	15.6	15.8	17.4	17.1	:	16.5	18.3	13.1	18.6	:	15.1	20.1	:	25.0	25.7	23.9	17.9	17.9	18.8	:	21.0
Employment share of high-skilled (in %)																															
2003	:	15.5	16.3	9.1	19.1	6.5	19.1	21.4	20.8	9.1	20.6	15.5	19.8	5.2	16.3	13.5	18.5	8.7	8.3	4.5	12.6	11.9	9.9	3.7	10.3	6.5	24.0	11.2	22.2	13.4	9.0
2000	:	:	15.8	:	19.4	6.2	15.0	21.0	22.5	9.4	18.6	15.1	15.6	4.5	12.4	13.9	36.8	8.5	7.4	:	12.2	11.1	7.3	3.0	9.8	5.5	24.3	17.2	20.8	11.6	8.8
1998	:	:	10.9	:	18.5	5.8	15.1	:	21.9	8.4	17.1	13.7	:	4.0	:	13.7	39.7	:	7.4	:	12.3	3.4	:	2.6	7.8	5.9	22.7	16.3	:	20.5	8.3
Employment share of medium-skilled (in %)																															
2003	:	51.1	48.0	77.3	43.0	84.8	57.5	61.9	63.1	39.0	17.1	52.0	44.3	36.9	40.1	68.7	73.2	39.7	72.0	13.0	47.3	68.2	80.5	8.7	67.3	87.7	51.9	65.7	63.6	66.5	79.3
2000	:	:	47.2	:	38.6	83.0	58.5	59.3	61.7	36.2	16.3	50.3	45.5	36.5	39.3	71.0	54.0	40.1	71.4	:	46.4	66.0	81.2	8.6	65.3	87.4	49.4	55.5	64.1	65.5	79.4
1998	:	:	37.3	:	40.2	83.2	56.7	:	63.0	34.6	15.1	49.9	:	33.8	:	73.1	50.4	:	71.1	:	46.5	72.6	:	7.0	66.4	83.9	48.7	53.9	:	55.8	78.2
Employment share of low-skilled (in %)																															
2003	:	33.4	35.8	13.6	37.9	8.6	23.4	16.8	16.1	51.9	62.3	32.5	35.9	57.9	43.6	17.8	8.3	51.6	19.7	82.5	40.1	19.9	9.6	87.5	22.4	5.8	24.1	23.1	14.2	20.2	11.8
2000	:	:	37.0	:	42.0	10.8	26.4	19.7	15.9	54.4	65.1	34.7	39.0	58.9	48.3	15.2	9.2	51.3	21.2	:	41.4	22.9	11.4	88.4	24.9	7.0	26.4	27.3	15.1	22.9	11.8
1998	:	:	51.8	:	41.3	11.0	28.2	:	15.1	57.0	67.8	36.4	:	62.1	:	13.3	9.8	:	21.5	:	41.2	23.9	:	90.5	25.8	10.2	28.6	29.8	:	23.7	13.4
Employment rate of high-skilled (in %)																															
2003	:	15.4	15.4	14.1	11.5	17.3	12.4	21.6	17.0	7.8	16.8	11.2	15.8	10.3	10.2	15.2	16.5	:	12.3	8.8	:	17.9	13.1	10.1	16.9	15.2	16.2	8.2	14.7	13.3	20.5
2000	:	:	15.8	15.0	12.9	17.3	13.7	23.0	20.6	8.6	15.9	12.4	15.6	9.8	8.9	14.6	17.4	6.7	12.2	:	8.7	18.2	14.1	9.8	18.4	14.2	17.0	11.6	15.8	13.0	22.0
1998	:	:	12.1	10.5	13.0	19.5	14.3	:	19.2	7.9	14.8	11.8	:	9.7	:	16.0	21.3	:	12.9	:	10.0	9.9	:	9.0	17.3	17.6	16.8	12.1	:	:	25.3
Employment rate of medium-skilled (in %)																															
2003	:	20.7	20.2	22.6	18.4	30.9	21.1	23.0	23.6	13.2	15.7	20.0	21.7	17.9	17.8	19.9	22.2	:	24.3	15.6	:	22.3	18.9	13.8	26.5	27.7	22.0	21.3	20.5	24.0	25.9
2000	:	:	20.8	24.2	18.4	30.9	22.5	24.5	24.7	12.4	14.5	20.4	22.7	17.3	16.1	18.3	21.2	11.8	24.6	:	16.5	22.9	22.2	15.8	27.2	26.4	22.9	21.5	22.0	23.1	25.9
1998	:	:	18.2	13.5	18.9	33.1	22.4	:	26.5	13.2	12.2	20.2	:	17.4	:	19.5	21.3	:	24.5	:	16.7	23.1	:	13.6	30.1	30.1	21.1	21.1	:	:	28.8
Employment rate of low-skilled (in %)																															
2003	:	16.1	17.2	8.8	13.9	12.3	16.6	15.0	15.4	14.8	20.7	13.1	16.9	19.6	19.2	11.4	6.3	:	12.5	17.5	:	14.8	5.8	27.1	20.5	6.2	15.1	18.1	15.2	10.2	6.0
2000	:	:	18.4	9.7	15.4	14.6	19.3	21.6	15.5	14.5	19.6	14.1	16.8	18.6	19.7	9.9	6.4	17.5	12.1	:	16.5	16.7	7.5	28.0	20.3	6.7	16.5	18.8	15.8	10.7	6.1
1998	:	:	17.5	5.8	14.6	16.1	20.3	:	15.0	14.6	17.5	13.6	:	18.6	:	9.5	8.2	:	11.4	:	16.1	16.2	:	30.1	21.1	9.7	15.1	20.2	:	:	7.8
Employment growth of high-skilled (in %)																															
1998-2003	:	:	23.7	-13.5	-0.9	5.4	11.9	:	-12.6	5.0	47.6	15.9	:	37.2	:	-0.2	:	:	16.4	:	-0.8	:	:	52.3	22.4	3.6	9.8	-34.1	:	:	-8.2
1998-2000	:	:	16.3	-6.5	6.3	-0.5	-3.8	:	0.4	9.5	23.3	14.1	:	11.7	:	-4.2	-18.3	:	1.7	:	-2.0	:	:	26.6	17.6	-16.6	14.9	3.8	:	:	-7.3
2000-2003	:	1.7	1.6	3.0	-6.7	5.9	16.3	-5.6	-13.0	-4.1	19.7	1.6	30.7	22.8	40.9	4.2	:	2.4	14.5	:	1.2	2.9	16.8	20.3	4.1	24.3	-4.5	-36.5	2.1	13.8	-0.9
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	9.5	0.1	3.0	-4.6	-10.4	:	-8.0	8.6	39.0	6.9	:	16.0	:	-5.0	:	:	4.9	:	-2.1	:	:	31.2	-5.9	-0.6	10.8	17.0	:	:	-13.3
1998-2000	:	:	4.8	-5.0	-2.8	-7.1	-0.5	:	-4.2	1.6	22.6	4.6	:	7.7	:	-8.2	-5.6	:	2.0	:	-1.4	:	:	32.7	-7.5	-6.9	8.9	1.4	:	:	-10.6
2000-2003	:	-1.1	0.0	-4.0	5.9	2.7	-9.9	-3.5	-4.0	7.0	13.4	2.2	0.1	7.7	9.3	3.5	:	-0.6	2.8	:	-0.7	-0.8	-14.3	-1.1	1.8	6.8	1.8	15.4	-4.9	-0.1	-3.1
Employment growth of low-skilled (in %)																															
1998-2003	:	:	-1.5	-16.5	-11.8	-26.7	-26.8	:	-2.2	-12.2	12.7	-8.5	:	-1.0	:	35.3	:	:	-5.4	:	-6.3	:	:	1.0	-19.2	-45.6	-12.2	-25.6	:	:	-25.2
1998-2000	:	:	0.0	-8.3	2.8	-8.6	-9.9	:	2.5	-7.3	8.7	-1.3	:	-5.4	:	8.0	-17.0	:	0.0	:	-0.5	:	:	5.5	-9.5	-38.0	-0.6	-9.5	:	:	-22.7
2000-2003	:	-5.6	-4.8	-10.6	-14.2	-19.9	-18.7	-21.2	-4.7	-5.3	3.6	-7.2	-5.5	4.7	-3.3	25.2	:	0.8	-5.4	:	-5.8	-16.7	-27.6	-4.3	-10.8	-12.2	-11.6	-17.8	-9.8	-13.5	-3.2

Annex 6.5. Key employment indicators by sector (NACE-1) in the EU and the US, 1998-2003

Services total

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	103 636	124 164	108 600	15 874	2 955	2 575	1 958	23 508	353	2 439	10 524	17 155	1 150	13 791	230	575	781	:	2 382	100	:	2 402	7 191	2 678	483	1 204	1 616	3 209	21 090	1 618	3 100
2000	103 005	120 174	104 747	15 427	2 957	2 520	1 911	22 974	322	2 352	9 476	16 027	1 039	12 981	204	540	754	138	2 258	:	5 498	2 364	7 204	2 592	466	1 159	1 547	2 952	19 963	1 533	3 149
1998	98 058	:	99 073	7 811	2 708	2 515	1 851	22 107	342	2 311	8 422	15 342	910	12 331	:	524	752	128	2 095	:	5 175	2 304	:	2 343	433	1 150	1 398	2 766	18 977	:	3 237
Employment growth (in thousands)																															
1998-2003	5 578	:	9 527	542	247	60	107	1 401	11	128	2 102	1 813	240	1 460	:	51	29	:	287	:	:	98	:	335	50	54	218	443	2 113	:	-137
1998-2000	4 946	:	5 674	208	249	5	60	867	-20	41	1 054	685	129	650	:	16	2	10	163	:	323	60	:	249	33	9	149	186	986	:	-88
2000-2003	632	3 990	3 853	347	-2	55	47	534	31	87	1 048	1 128	111	810	26	35	27	:	124	:	:	38	-13	86	17	45	69	257	1 127	85	-49
Employment growth (in %)																															
1998-2003	5.7	:	9.6	6.9	9.1	2.4	5.8	6.3	3.2	5.5	25.0	11.8	26.4	11.8	:	9.7	3.9	:	13.7	:	:	4.3	:	14.3	11.5	4.7	15.6	16.0	11.1	:	-4.2
1998-2000	5.0	:	5.7	2.7	9.2	0.2	3.2	3.9	-5.8	1.8	12.5	4.5	14.2	5.3	:	3.1	0.3	7.8	7.8	:	6.2	2.6	:	10.6	7.6	0.8	10.7	6.7	5.2	:	-2.7
2000-2003	0.6	3.3	3.7	2.2	-0.1	2.2	2.5	2.3	9.6	3.7	11.1	7.0	10.7	6.2	12.7	6.5	3.6	:	5.5	:	:	1.6	-0.2	3.3	3.6	3.9	4.5	8.7	5.6	5.5	-1.6
Annualised employment growth (in %)																															
1998-2003	1.1	:	1.9	1.4	1.8	0.5	1.1	1.2	0.6	1.1	4.6	2.3	4.8	2.3	:	1.9	0.8	:	2.6	:	:	0.8	:	2.7	2.2	0.9	2.9	3.0	2.1	:	-0.9
1998-2000	2.5	:	2.8	1.3	4.5	0.1	1.6	1.9	-3.0	0.9	6.1	2.2	6.9	2.6	:	1.5	0.1	3.8	3.8	:	3.1	1.3	:	5.2	3.7	0.4	5.2	3.3	2.6	:	-1.4
2000-2003	0.2	1.1	1.2	0.7	0.0	0.7	0.8	0.8	3.1	1.2	3.6	2.3	3.4	2.0	4.1	2.1	1.2	:	1.8	:	:	0.5	-0.1	1.1	1.2	1.3	1.5	2.8	1.8	1.8	-0.5
Employment share (in %)																															
2003	79.3	65.6	67.5	55.9	73.4	55.4	73.5	66.2	62.1	62.6	63.6	70.3	66.0	63.5	72.6	58.7	54.1	:	61.1	67.6	:	64.7	53.7	56.4	55.1	55.7	67.9	75.0	75.0	57.4	35.4
2000	78.0	64.7	66.6	53.9	72.2	54.6	70.9	63.9	58.2	61.3	62.3	69.6	63.5	63.0	71.3	58.8	54.6	76.7	59.7	:	70.4	64.2	50.9	55.0	53.4	55.8	65.8	72.9	72.8	54.1	32.2
1998	77.1	:	65.6	26.6	70.5	52.7	69.8	62.8	57.5	60.0	61.8	69.3	62.2	61.5	:	54.7	51.7	75.3	57.8	:	70.4	64.1	:	52.0	49.3	52.4	64.6	71.2	71.3	:	32.3
Employment rate (in %)																															
2003	55.4	41.2	43.4	31.5	43.5	35.9	55.2	43.0	38.7	36.3	37.9	44.2	42.9	35.6	50.2	36.2	34.0	:	34.9	:	:	44.7	27.6	38.0	34.4	32.3	46.6	55.2	53.8	30.5	20.8
2000	57.5	40.3	42.1	30.9	44.0	35.4	54.2	41.7	35.2	34.2	34.9	42.9	40.9	33.6	46.6	33.8	32.5	48.1	33.4	:	51.3	44.0	28.1	37.6	33.5	31.4	44.9	51.8	51.9	27.9	20.7
1998	56.7	:	40.1	16.0	40.4	35.6	52.6	40.0	37.5	33.3	31.5	41.6	37.1	31.9	:	32.7	32.1	45.4	30.8	:	48.9	43.2	:	34.8	31.3	31.8	40.9	48.9	50.1	:	21.3
Employment share of high-skilled (in %)																															
2003	:	29.3	29.7	24.2	41.6	18.3	34.3	27.8	38.7	29.5	35.6	31.6	36.7	18.5	39.2	24.3	36.9	26.6	24.9	17.9	28.6	21.3	26.5	17.1	26.1	19.4	37.4	31.4	34.1	36.5	21.2
2000	:	:	28.8	:	40.6	17.5	28.9	27.7	40.0	28.1	33.4	31.4	32.2	17.2	35.4	27.6	58.0	27.5	23.3	:	28.5	18.7	21.9	16.0	23.2	17.2	38.1	34.6	32.8	33.8	19.1
1998	:	:	26.6	:	40.6	15.8	28.6	:	39.3	29.0	31.3	29.9	:	16.4	:	26.6	55.6	:	22.3	:	27.6	12.8	:	16.1	22.8	17.1	36.2	33.4	:	22.8	18.1
Employment share of medium-skilled (in %)																															
2003	:	47.7	46.1	67.5	35.0	76.2	47.5	57.4	54.8	43.9	21.7	41.3	39.0	46.1	38.1	67.1	57.0	46.0	64.2	20.1	44.4	61.9	67.8	17.9	66.6	76.4	43.6	53.6	54.3	54.0	70.3
2000	:	:	46.0	:	33.7	75.5	51.2	56.2	53.5	43.9	21.0	41.5	40.4	46.6	40.4	66.0	35.5	45.8	63.8	:	44.7	64.4	71.1	16.1	67.6	77.4	41.4	47.7	54.7	54.6	70.2
1998	:	:	39.0	:	33.7	76.6	50.6	:	52.2	39.4	19.2	40.8	:	43.0	:	65.7	38.0	:	63.5	:	45.8	68.8	:	15.6	67.1	75.7	42.0	48.6	:	57.9	70.5
Employment share of low-skilled (in %)																															
2003	:	23.0	24.2	8.3	23.5	5.5	18.2	14.8	6.5	26.6	42.7	27.1	24.4	35.4	22.7	8.7	6.0	27.4	11.0	62.0	27.0	16.8	5.8	65.0	7.3	4.2	19.0	15.0	11.6	9.5	8.5
2000	:	:	25.2	:	25.7	7.0	19.9	16.1	6.5	28.0	45.6	27.1	27.4	36.2	24.1	6.4	6.5	26.8	12.9	:	26.8	17.0	7.0	67.9	9.3	5.4	20.5	17.7	12.6	11.5	10.7
1998	:	:	34.4	:	25.7	7.7	20.8	:	8.5	31.6	49.4	29.3	:	40.6	:	7.7	6.4	:	14.1	:	26.5	18.3	:	68.3	10.0	7.2	21.8	18.0	:	19.3	11.5
Employment rate of high-skilled (in %)																															
2003	:	69.9	69.4	68.2	70.9	69.3	73.0	60.9	63.4	73.5	61.2	63.3	68.4	71.6	77.6	63.4	66.5	:	69.0	74.4	:	72.0	68.2	76.6	67.2	69.4	67.2	78.5	73.3	63.3	58.3
2000	:	:	66.3	67.3	72.3	68.1	74.3	59.5	63.6	71.8	58.8	65.8	69.7	72.3	76.7	64.4	56.4	73.6	69.3	:	72.8	64.5	70.3	81.1	66.9	68.8	65.2	71.8	72.1	62.9	57.8
1998	:	:	66.1	36.9	69.6	69.0	72.9	:	62.1	71.2	55.9	64.4	:	71.8	:	62.1	53.2	:	65.7	:	74.3	79.2	:	80.5	65.4	69.0	63.3	69.8	:	:	59.0
Employment rate of medium-skilled (in %)																															
2003	:	44.9	48.4	33.6	45.7	38.7	55.3	44.9	41.0	42.3	42.7	46.3	45.7	45.9	54.3	41.7	34.1	:	39.4	53.7	:	47.2	29.2	48.3	37.6	35.2	46.0	56.7	56.5	34.3	25.8
2000	:	:	47.3	34.1	46.6	38.7	55.2	44.1	36.0	41.0	38.9	45.5	45.2	45.1	51.5	37.1	27.6	50.9	38.7	:	55.8	48.2	31.3	48.1	38.6	34.7	44.3	54.5	54.8	31.8	25.5
1998	:	:	44.3	17.4	42.8	38.8	53.1	:	37.9	40.1	33.2	44.4	:	42.8	:	35.1	28.0	:	36.2	:	54.1	47.9	:	46.2	36.7	35.9	41.1	51.8	:	:	26.3
Employment rate of low-skilled (in %)																															
2003	:	25.6	28.0	8.9	25.8	10.3	38.6	26.5	11.8	20.0	28.2	31.3	26.1	23.4	29.6	11.8	8.6	:	12.8	30.3	:	27.3	6.1	32.9	9.1	6.2	29.4	37.5	37.6	9.1	4.8
2000	:	:	28.2	9.2	27.1	12.1	38.6	32.2	10.5	19.0	26.7	29.5	25.1	22.4	26.9	8.6	8.4	34.4	13.0	:	35.8	25.5	7.1	32.9	9.7	7.4	29.3	35.5	36.3	8.5	5.7
1998	:	:	26.1	5.4	24.3	13.6	37.7	:	14.2	19.6	25.0	29.4	:	22.5	:	10.4	9.2	:	12.5	:	32.4	25.8	:	32.5	9.8	9.0	25.5	32.5	:	:	6.4
Employment growth of high-skilled (in %)																															
1998-2003	:	:	24.2	8.8	13.6	19.2	29.3	:	0.7	9.6	42.3	19.7	:	28.4	:	7.0	:	:	28.1	:	11.3	:	:	28.8	28.9	20.3	20.9	9.6	:	:	11.9
1998-2000	:	:	12.9	8.6	10.8	10.9	2.1	:	-4.4	0.8	21.0	10.9	:	11.2	:	8.7	6.2	:	14.0	:	9.6	:	:	16.2	13.0	2.9	17.0	10.9	:	:	4.4
2000-2003	:	9.1	9.0	11.1	2.5	7.5	26.6	2.9	5.4	8.7	17.6	8.0	26.7	15.4	25.2	-1.6	:	4.1	12.4	:	1.6	16.8	22.2	10.8	14.1	16.9	3.4	-1.1	11.6	11.8	7.2
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	15.2	10.0	12.8	1.7	-1.2	:	11.9	15.4	38.6	12.5	:	20.6	:	10.1	:	:	14.8	:	4.2	:	:	35.1	9.7	5.7	18.7	27.2	:	:	-5.4
1998-2000	:	:	8.2	2.4	8.7	-0.9	2.9	:	-2.3	10.7	20.3	5.8	:	13.6	:	3.0	-6.9	:	8.2	:	3.2	:	:	19.1	7.5	2.8	8.2	4.7	:	:	-3.2
2000-2003	:	5.0	5.8	1.4	3.7	2.6	-3.9	4.8	14.6	4.2	15.2	6.2	5.9	6.2	4.9	6.9	:	7.2	6.1	:	1.0	-0.1	-5.8	13.5	2.0	2.8	9.8	21.5	5.3	3.5	-2.3
Employment growth of low-skilled (in %)																															
1998-2003	:	:	2.4	-17.5	-1.3	-27.3	-8.4	:	-20.8	-11.8	7.6	1.8	:	-2.2	:	28.1	:	:	-11.7	:	9.3	:	:	13.5	-22.9	-41.8	1.1	-4.2	:	:	-25.5
1998-2000	:	:	0.0	-9.1	8.5	-10.0	-3.0	:	-26.6	-9.9	3.7	-3.8	:	-6.1	:	-14.3	-3.5	:	-2.8	:	7.3	:	:	14.9	-7.5	-26.0	4.6	6.0	:	:	-11.3
2000-2003	:	0.0	0.6	-1.6	-9.1	-19.2	-5.6	-6.9	7.9	-2.2	3.8	5.8	-2.1	4.2	9.3	49.4	:	7.5	-9.1	:	1.9	0.6	-18.6	-1.2	-16.7	-21.3	-3.3	-9.6	-2.7	-1.9	-16.0

Wholesale and retail trade

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	21 971	27 315	23 288	4 052	551	623	413	4 944	76	668	2 600	3 214	247	3 399	57	145	220	:	552	20	:	591	1 967	722	118	274	287	527	4 331	424	823
2000	22 319	27 217	23 215	4 002	578	601	377	5 124	71	664	2 476	3 020	233	3 267	52	142	197	23	548	:	1 190	585	2 013	703	119	259	279	494	4 211	401	904
1998	21 526		22 359	1 907	559	631	370	5 023	84	651	2 251	2 975	208	3 156	:	142	209	22	467	:	1 170	575	:	635	110	264	225	491	4 048	:	933
Employment growth (in thousands)																															
1998-2003	445	:	929	101	-8	-8	43	-79	-8	17	349	239	39	243	:	3	11	:	85	:	:	16	:	87	8	10	62	36	283	:	-110
1998-2000	793	:	856	30	19	-30	7	101	-13	13	225	45	25	111	:	0	-12	1	81	:	20	10	:	68	9	-5	54	3	163	:	-29
2000-2003	-349	98	73	30	-27	22	36	-180	5	4	124	194	14	132	5	3	23	:	4	:	:	6	-46	19	-1	15	8	33	120	23	-81
Employment growth (in %)																															
1998-2003	2.1	:	4.2	5.3	-1.4	-1.3	11.6	-1.6	-9.5	2.6	15.5	8.0	18.8	7.7	:	2.1	5.3	:	18.2	:	:	2.8	:	13.7	7.3	3.8	27.6	7.3	7.0	:	-11.8
1998-2000	3.7	:	3.8	1.6	3.4	-4.8	1.9	2.0	-15.5	2.0	10.0	1.5	12.0	3.5	:	0.0	-5.7	4.5	17.3	:	1.7	1.7	:	10.7	8.2	-1.9	24.0	0.6	4.0	:	-3.1
2000-2003	-1.6	0.4	0.3	0.7	-4.7	3.7	9.5	-3.5	7.0	0.6	5.0	6.4	6.0	4.0	9.6	2.1	11.7	:	0.7	:	:	1.0	-2.3	2.7	-0.8	5.8	2.9	6.7	2.8	5.7	-9.0
Annualised employment growth (in %)																															
1998-2003	0.4	:	0.8	1.0	-0.3	-0.3	2.2	-0.3	-2.0	0.5	2.9	1.6	3.5	1.5	:	0.4	1.0	:	3.4	:	:	0.6	:	2.6	1.4	0.7	5.0	1.4	1.4	:	-2.5
1998-2000	1.8	:	1.9	0.8	1.7	-2.4	0.9	1.0	-8.1	1.0	4.9	0.8	5.8	1.7	:	0.0	-2.9	2.2	8.3	:	0.9	0.9	:	5.2	4.0	-1.0	11.4	0.3	2.0	:	-1.6
2000-2003	-0.5	0.1	0.1	0.2	-1.6	1.2	3.1	-1.2	2.3	0.2	1.6	2.1	2.0	1.3	3.1	0.7	3.7	:	0.2	:	:	0.3	-0.8	0.9	-0.3	1.9	0.9	2.2	0.9	1.9	-3.1
Employment share (in %)																															
2003	16.8	14.4	14.5	14.3	13.7	13.4	15.5	13.9	13.4	17.1	15.7	13.2	14.2	15.7	18.0	14.8	15.2	:	14.2	13.5	:	15.9	14.7	15.2	13.5	12.7	12.1	12.3	15.4	15.0	9.4
2000	16.9	14.6	14.8	14.0	14.1	13.0	14.0	14.2	12.8	17.3	16.3	13.1	14.2	15.8	18.2	15.5	14.3	12.8	14.5	:	15.2	15.9	14.2	14.9	13.6	12.5	11.9	12.2	15.4	14.1	9.3
1998	16.9	:	14.8	6.5	14.6	13.2	14.0	14.3	14.1	16.9	16.5	13.4	14.2	15.7	:	14.8	14.4	12.9	12.9	:	15.9	16.0	:	14.1	12.5	12.0	10.4	12.6	15.2	:	9.3
Employment rate (in %)																															
2003	11.8	9.1	9.3	8.0	8.1	8.7	11.6	9.0	8.3	9.9	9.4	8.3	9.2	8.8	12.4	9.1	9.6	:	8.1	:	:	11.0	7.6	10.2	8.4	7.3	8.3	9.1	11.0	8.0	5.5
2000	12.5	9.1	9.3	8.0	8.6	8.5	10.7	9.3	7.8	9.7	9.1	8.1	9.2	8.5	11.9	8.9	8.5	8.0	8.1	:	11.1	10.9	7.8	10.2	8.5	7.0	8.1	8.7	11.0	7.3	5.9
1998	12.4	:	9.0	3.9	8.3	8.9	10.5	9.1	9.2	9.4	8.4	8.1	8.5	8.2	:	8.9	8.9	7.8	6.9	:	11.0	10.8	:	9.4	8.0	7.3	6.6	8.7	10.7	:	6.1
Employment share of high-skilled (in %)																															
2003	:	13.3	13.4	13.2	19.0	7.7	14.4	13.5	27.2	11.7	20.6	18.6	16.2	5.5	21.2	19.2	28.9	6.8	10.8	6.4	9.7	6.6	12.1	3.9	12.1	9.9	27.9	11.9	13.3	22.0	11.0
2000	:	:	12.8	:	18.6	8.3	8.1	14.4	28.7	12.3	19.4	17.2	11.1	4.5	23.1	20.6	47.0	10.9	10.2	:	8.3	8.2	8.8	2.7	10.0	9.0	26.7	15.9	12.5	16.9	11.1
1998	:	:	11.1	:	20.8	7.1	8.2	:	30.3	12.1	15.5	15.8	:	3.9	:	17.4	48.8	:	9.2	:	8.9	3.5	:	3.6	10.8	8.2	26.9	16.2	:	14.2	9.2
Employment share of medium-skilled (in %)																															
2003	:	56.3	54.2	79.8	48.3	87.1	59.5	69.1	68.9	57.0	25.4	52.4	51.6	45.5	49.3	73.2	66.6	52.0	81.3	14.2	48.8	74.7	82.8	18.6	82.9	87.4	47.3	65.9	68.6	69.7	80.6
2000	:	:	53.6	:	47.5	85.9	61.6	67.5	66.4	53.4	23.8	53.3	53.3	43.2	48.9	74.9	46.0	53.1	80.0	:	50.5	74.8	85.3	16.2	83.5	87.5	45.5	58.6	69.4	70.3	78.6
1998	:	:	42.6	:	44.8	86.1	63.4	:	61.5	48.5	21.9	51.5	:	38.6	:	75.9	47.1	:	79.1	:	52.1	77.4	:	15.2	82.6	87.1	43.6	54.2	:	61.5	78.9
Employment share of low-skilled (in %)																															
2003	:	30.3	32.4	7.0	32.8	5.2	26.1	17.4	3.9	31.3	54.0	29.0	32.2	49.1	29.6	7.6	4.5	41.1	7.9	79.4	41.5	18.7	5.1	77.5	5.0	2.8	24.7	22.2	18.1	8.3	8.4
2000	:	:	33.6	:	34.0	5.8	30.3	18.2	4.9	34.3	56.8	29.5	35.6	52.4	28.0	4.5	7.0	36.0	9.8	:	41.2	17.0	5.9	81.1	6.5	3.5	27.8	25.5	18.1	12.7	10.3
1998	:	:	46.2	:	34.4	6.8	28.5	:	8.2	39.4	62.6	32.6	:	57.5	:	6.8	4.2	:	11.7	:	39.0	19.1	:	81.1	6.6	4.7	29.5	29.5	:	24.3	12.0
Employment rate of high-skilled (in %)																															
2003	:	7.0	6.7	8.4	6.3	6.9	6.2	6.0	9.3	7.7	8.6	7.2	6.6	5.4	10.5	11.8	14.1	:	6.8	5.8	:	5.5	8.2	4.8	7.1	7.7	8.6	4.7	5.9	10.1	7.7
2000	:	:	6.5	8.5	6.8	7.5	4.0	6.7	9.8	8.6	8.7	7.0	5.5	4.9	12.8	12.2	11.5	5.3	7.2	:	4.5	7.1	7.7	3.8	6.7	7.7	8.0	5.4	5.8	8.2	9.0
1998	:	:	6.5	5.3	7.8	7.6	4.1	:	11.2	8.3	7.3	7.0	:	4.5	:	10.9	12.7	:	6.0	:	5.3	5.4	:	5.0	7.4	7.4	7.4	5.9	:	:	8.1
Employment rate of medium-skilled (in %)																															
2003	:	11.7	12.1	10.4	11.4	10.7	14.6	11.3	10.7	14.9	11.9	10.8	12.9	11.0	17.4	11.6	11.1	:	11.6	8.0	:	13.5	9.9	13.3	11.7	9.2	9.1	11.5	14.7	11.7	8.0
2000	:	:	12.1	10.6	12.5	10.4	13.0	11.7	9.8	14.0	11.2	10.8	13.1	10.3	15.4	10.9	9.4	9.6	11.8	:	13.5	13.7	10.5	12.7	12.4	8.8	9.0	11.3	14.5	10.6	8.2
1998	:	:	10.9	5.0	11.3	10.9	13.3	:	11.0	13.6	9.6	10.7	:	9.6	:	10.8	9.6	:	10.1	:	13.8	13.3	:	11.8	11.6	9.6	6.9	10.5	:	:	8.5
Employment rate of low-skilled (in %)																															
2003	:	7.5	8.3	2.0	6.6	2.5	12.3	6.9	1.6	6.9	9.2	6.3	7.8	8.3	10.4	2.6	1.9	:	2.1	7.9	:	7.7	1.6	10.9	1.6	1.0	7.0	9.4	12.9	1.9	1.3
2000	:	:	8.5	2.0	6.9	2.5	12.2	8.4	1.8	7.0	9.0	6.0	7.6	8.3	8.8	1.7	2.5	7.6	2.4	:	12.4	6.5	1.8	11.0	1.9	1.1	7.4	8.7	11.6	2.6	1.7
1998	:	:	8.2	1.1	6.5	3.2	10.8	:	3.4	7.4	8.8	6.3	:	8.4	:	2.6	1.7	:	2.3	:	11.2	6.9	:	10.7	1.7	1.4	5.7	9.9	:	:	2.0
Employment growth of high-skilled (in %)																															
1998-2003	:	:	29.4	-4.1	-10.1	7.9	96.1	:	-18.6	-1.1	54.0	26.2	:	54.8	:	13.6	:	:	39.5	:	6.5	:	:	28.2	19.5	25.1	32.5	-22.9	:	:	6.4
1998-2000	:	:	15.7	3.8	-7.1	11.3	-1.1	:	-19.0	3.9	38.2	9.9	:	19.4	:	18.1	-8.8	:	30.2	:	-5.4	:	:	-12.7	-0.2	7.8	23.0	-2.6	:	:	17.3
2000-2003	:	7.2	7.0	8.9	-3.2	-3.1	98.3	-9.1	0.4	-4.8	11.5	14.8	55.9	29.6	1.8	-3.8	:	-36.9	7.1	:	12.6	-18.5	34.0	46.8	19.8	16.0	7.8	-20.9	11.0	37.4	-9.3
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	15.2	9.6	6.3	-0.3	4.2	:	1.4	20.0	33.8	9.2	:	28.6	:	-0.8	:	:	21.8	:	-8.2	:	:	45.6	7.5	3.8	38.9	27.4	:	:	-9.9
1998-2000	:	:	8.4	2.0	10.4	-5.5	-3.0	:	-7.6	11.7	19.3	4.8	:	16.2	:	-1.7	-7.6	:	18.7	:	-2.0	:	:	23.4	9.1	-1.8	29.6	7.3	:	:	-3.4
2000-2003	:	3.0	3.6	0.9	-3.7	5.5	7.5	-0.7	9.8	7.5	12.2	4.3	3.1	10.7	12.0	0.9	:	-1.5	2.6	:	-6.4	0.9	-5.3	18.0	-1.4	5.7	7.1	18.7	3.2	5.0	-6.7
Employment growth of low-skilled (in %)																															
1998-2003	:	:	-2.7	-20.6	-5.9	-25.7	2.0	:	-56.7	-18.7	-0.4	-4.3	:	-6.9	:	15.2	:	:	-19.8	:	4.1	:	:	14.3	-18.1	-39.4	7.3	-21.1	:	:	-38.1
1998-2000	:	:	-1.8	-9.4	3.1	-19.0	6.4	:	-49.3	-11.7	-0.2	-8.3	:	-5.5	:	-33.5	58.8	:	-1.2	:	6.9	:	:	16.4	6.7	-27.5	16.8	-14.3	:	:	-17.2
2000-2003	:	-1.6	-1.2	-0.1	-8.7	-8.2	-4.1	-7.2	-14.5	-7.9	-0.2	4.4	-3.9	-1.4	17.3	73.3	:	14.7	-18.8	:	-2.6	11.5	-16.3	-1.9	-23.2	-16.4	-8.1	-7.9	4.7	-30.9	-25.3

Annex 6.5. Key employment indicators by sector (NACE-1) in the EU and the US, 1998-2003

Hotels and restaurants

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	10 329	7 466	6 688	770	123	163	63	1 204	18	277	1 049	800	114	886	28	26	31	:	145	12	:	212	232	253	36	79	80	121	1 191	133	118
2000	10 045	7 067	6 343	724	134	158	68	1 189	17	248	982	777	108	759	28	22	26	9	134	:	287	205	242	253	34	63	78	114	1 126	142	117
1998	9 571	:	5 913	448	133	171	73	1 101	15	243	828	712	96	653	:	18	23	8	123	:	238	205	:	248	38	60	60	104	1 210	:	149
Employment growth (in thousands)																															
1998-2003	758	:	775	50	-10	-8	-10	103	3	34	221	88	18	233	:	8	8	:	22	:	:	7	:	5	-2	19	20	17	-19	:	-31
1998-2000	474	:	430	6	1	-13	-5	88	2	5	154	65	12	106	:	4	3	1	11	:	49	0	:	5	-4	3	18	10	-84	:	-32
2000-2003	284	399	345	34	-11	5	-5	15	1	29	67	23	6	127	0	4	5	:	11	:	:	7	-10	0	2	16	2	7	65	-9	1
Employment growth (in %)																															
1998-2003	7.9	:	13.1	11.2	-7.5	-4.7	-13.7	9.4	20.0	14.0	26.7	12.4	18.8	35.7	:	44.4	34.8	:	17.9	:	:	3.4	:	2.0	-5.3	31.7	33.3	16.3	-1.6	:	-20.8
1998-2000	4.9	:	7.3	1.3	0.8	-7.6	-6.8	8.0	13.3	2.1	18.6	9.1	12.5	16.2	:	22.2	13.0	12.5	8.9	:	20.6	0.0	:	2.0	-10.5	5.0	30.0	9.6	-6.9	:	-21.5
2000-2003	2.8	5.6	5.4	4.7	-8.2	3.2	-7.4	1.3	5.9	11.7	6.8	3.0	5.6	16.7	0.0	18.2	19.2	:	8.2	:	:	3.4	-4.1	0.0	5.9	25.4	2.6	6.1	5.8	-6.3	0.9
Annualised employment growth (in %)																															
1998-2003	1.5	:	2.5	2.1	-1.6	-1.0	-2.9	1.8	3.7	2.7	4.8	2.4	3.5	6.3	:	7.6	6.2	:	3.3	:	:	0.7	:	0.4	-1.1	5.7	5.9	3.1	-0.3	:	-4.6
1998-2000	2.4	:	3.6	0.7	0.4	-3.9	-3.5	3.9	6.5	1.0	8.9	4.5	6.1	7.8	:	10.6	6.3	6.1	4.4	:	9.8	0.0	:	1.0	-5.4	2.5	14.0	4.7	-3.5	:	-11.4
2000-2003	0.9	1.8	1.8	1.5	-2.8	1.0	-2.5	0.4	1.9	3.8	2.2	1.0	1.8	5.3	0.0	5.7	6.0	:	2.7	:	:	1.1	-1.4	0.0	1.9	7.8	0.8	2.0	1.9	-2.2	0.3
Employment share (in %)																															
2003	7.9	3.9	4.2	2.7	3.1	3.5	2.4	3.4	3.2	7.1	6.3	3.3	6.5	4.1	8.8	2.7	2.1	:	3.7	8.1		5.7	1.7	5.3	4.1	3.7	3.4	2.8	4.2	4.7	1.3
2000	7.6	3.8	4.0	2.5	3.3	3.4	2.5	3.3	3.1	6.5	6.5	3.4	6.6	3.7	9.8	2.4	1.9	5.0	3.5	:	3.7	5.6	1.7	5.4	3.9	3.0	3.3	2.8	4.1	5.0	1.2
1998	7.5	:	3.9	1.5	3.5	3.6	2.8	3.1	2.5	6.3	6.1	3.2	6.6	3.3	:	1.9	1.6	4.7	3.4	:	3.2	5.7	:	5.5	4.3	2.7	2.8	2.7	4.5	:	1.5
Employment rate (in %)																															
2003	5.5	2.5	2.7	1.5	1.8	2.3	1.8	2.2	2.0	4.1	3.8	2.1	4.2	2.3	6.1	1.6	1.3	:	2.1	:	:	3.9	0.9	3.6	2.6	2.1	2.3	2.1	3.0	2.5	0.8
2000	5.6	2.4	2.6	1.5	2.0	2.2	1.9	2.2	1.9	3.6	3.6	2.1	4.3	2.0	6.4	1.4	1.1	3.1	2.0	:	2.7	3.8	0.9	3.7	2.4	1.7	2.3	2.0	2.9	2.6	0.8
1998	5.5	:	2.4	0.9	2.0	2.4	2.1	2.0	1.6	3.5	3.1	1.9	3.9	1.7	:	1.1	1.0	2.8	1.8	:	2.2	3.8	:	3.7	2.7	1.7	1.8	1.8	3.2	:	1.0
Employment share of high-skilled (in %)																															
2003	:	8.8	9.0	6.7	11.0	2.2	7.9	8.2	18.2	7.3	12.2	10.4	21.0	3.0	20.1	10.9	25.1	2.1	4.8	2.8	7.5	6.9	8.5	2.5	6.4	3.9	14.0	10.1	12.0	12.4	5.4
2000	:	:	8.0	:	9.4	1.9	4.1	7.8	25.7	5.8	10.6	10.1	13.2	2.5	11.1	8.4	30.5	4.5	4.7	:	4.6	5.1	4.0	1.7	3.3	2.1	13.7	11.7	10.8	8.5	2.3
1998	:	:	6.6	:	10.4	2.6	5.3	:	16.7	6.5	9.8	8.6	:	1.6	:	10.7	49.6	:	4.4	:	6.3	1.8	:	1.4	4.7	2.2	12.9	13.0	:	8.8	3.2
Employment share of medium-skilled (in %)																															
2003	:	49.1	46.4	80.5	44.3	90.9	49.8	58.7	72.8	43.4	18.9	50.2	47.0	40.2	40.4	80.7	71.6	39.0	79.5	15.7	41.5	61.6	83.6	11.8	85.2	88.6	64.2	54.2	69.2	77.8	81.5
2000	:	:	46.5	:	46.1	86.1	54.9	58.6	61.5	43.5	18.7	51.4	47.4	37.0	47.8	84.7	61.2	42.4	79.2	:	47.6	63.8	84.8	10.9	76.8	93.0	61.0	55.3	67.4	78.4	88.1
1998	:	:	36.3	:	45.2	86.2	60.2	:	74.9	38.0	16.5	49.1	:	32.4	:	76.2	44.3	:	79.7	:	49.6	65.2	:	8.9	79.9	88.0	64.2	56.2	:	49.7	83.4
Employment share of low-skilled (in %)																															
2003	:	42.1	44.6	12.8	44.7	6.9	42.3	33.1	9.0	49.3	68.9	39.4	32.1	56.8	39.6	8.5	3.3	59.0	15.7	81.5	51.0	31.5	7.9	85.7	8.4	7.5	21.8	35.7	18.8	9.8	13.1
2000	:	:	45.5	:	44.5	12.0	41.0	33.6	12.8	50.7	70.8	38.5	39.5	60.4	41.1	7.0	8.4	53.1	16.1	:	47.7	31.1	11.2	87.4	19.9	4.9	25.4	33.0	21.8	13.0	9.6
1998	:	:	57.1	:	44.4	11.2	34.5	:	8.4	55.5	73.6	42.3	:	66.0	:	13.1	6.0	:	16.0	:	44.1	33.1	:	89.7	15.4	9.8	22.9	30.7	:	41.5	13.4
Employment rate of high-skilled (in %)																															
2003	:	1.2	1.2	0.9	0.8	0.5	0.5	0.9	1.4	2.0	2.0	0.9	3.8	0.8	4.8	1.2	1.7	:	0.8	1.5	:	2.1	0.7	1.0	1.1	0.9	1.2	0.9	1.3	1.8	0.5
2000	:	:	1.1	0.7	0.8	0.5	0.4	0.8	2.0	1.5	1.9	1.1	3.0	0.6	3.2	0.8	1.0	0.8	0.8	:	0.6	1.6	0.4	0.8	0.6	0.4	1.1	0.9	1.3	1.5	0.2
1998	:	:	1.0	0.6	0.9	0.8	0.5	:	1.1	1.7	1.7	0.9	:	0.4	:	0.9	1.4	:	0.7	:	0.8	1.0	:	0.7	1.1	0.5	0.9	1.0	:	:	0.5
Employment rate of medium-skilled (in %)																															
2003	:	2.6	2.9	2.0	2.3	2.9	1.8	2.3	2.6	4.7	3.6	2.4	5.3	2.5	6.9	2.3	1.7	:	3.0	5.2	:	4.0	1.2	2.9	3.7	2.7	3.4	2.1	3.7	4.1	1.2
2000	:	:	2.8	1.9	2.8	2.7	2.0	2.3	2.1	4.3	3.5	2.7	5.3	2.0	8.0	1.9	1.6	2.9	2.9	:	3.0	4.3	1.3	3.0	3.3	2.3	3.3	2.5	3.6	4.2	1.2
1998	:	:	2.5	1.2	2.7	3.0	2.5	:	2.3	4.0	2.7	2.4	:	1.6	:	1.4	1.0	:	2.7	:	2.7	4.0	:	2.6	3.9	2.2	2.7	2.3	:	:	1.4
Employment rate of low-skilled (in %)																															
2003	:	2.8	3.1	0.7	2.0	0.9	3.0	3.2	0.8	4.5	4.7	2.0	3.5	2.5	6.7	0.5	0.2	:	1.1	4.8	:	4.7	0.3	4.1	0.8	0.8	1.7	3.4	3.3	0.7	0.3
2000	:	:	3.1	0.7	2.1	1.4	2.8	3.6	1.1	3.8	4.4	2.0	3.8	2.2	6.8	0.4	0.4	4.2	1.0	:	3.4	4.4	0.4	4.1	1.7	0.4	1.9	2.6	3.5	0.9	0.2
1998	:	:	2.7	0.4	2.0	1.4	2.6	:	0.6	3.9	3.8	1.9	:	2.0	:	0.6	0.3	:	0.8	:	2.6	4.3	:	4.5	1.4	0.7	1.2	2.1	:	:	0.4
Employment growth of high-skilled (in %)																															
1998-2003	:	:	46.5	3.0	-1.9	-20.8	26.4	:	30.2	28.0	57.4	26.0	:	162.5	:	46.7	:	:	28.8	:	43.2	:	:	96.2	28.8	131.2	44.3	-12.3	:	:	33.0
1998-2000	:	:	23.6	-11.6	-7.9	-31.3	-32.0	:	72.1	-8.4	27.9	28.5	:	84.6	:	-7.1	-32.9	:	16.3	:	-12.6	:	:	33.2	-36.6	-1.7	36.8	-0.8	:	:	-43.1
2000-2003	:	19.2	17.2	45.8	6.5	15.3	85.9	8.2	-24.3	39.8	23.1	-1.9	67.0	42.2	84.3	57.9	:	-57.2	10.8	:	63.9	34.1	104.5	47.3	103.1	135.3	5.5	-11.6	14.9	37.1	133.7
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	21.1	15.1	-8.8	0.1	-29.2	:	16.6	29.8	45.6	6.3	:	70.8	:	53.1	:	:	17.4	:	1.0	:	:	42.2	0.9	30.7	32.3	9.4	:	:	-22.9
1998-2000	:	:	16.9	1.6	4.1	-8.2	-19.9	:	-8.1	16.1	34.0	14.0	:	33.6	:	32.4	50.8	:	8.4	:	13.7	:	:	31.2	-14.6	9.8	22.5	8.7	:	:	-17.5
2000-2003	:	4.2	3.9	6.7	-12.4	9.0	-11.7	2.5	26.8	11.9	8.6	-6.8	4.1	27.9	-13.8	15.6	:	-14.8	8.3	:	-11.1	-4.6	-5.9	8.4	18.1	19.0	8.0	0.6	6.0	-6.3	-6.6
Employment growth of low-skilled (in %)																															
1998-2003	:	:	12.2	-14.0	-6.4	-41.2	5.1	:	29.3	0.8	18.9	-3.3	:	18.5	:	-6.3	:	:	16.1	:	39.6	:	:	2.7	-48.3	-0.2	26.0	31.5	:	:	-22.8
1998-2000	:	:	7.8	0.8	2.4	-1.8	4.5	:	71.3	-7.5	14.1	-0.8	:	7.0	:	-36.4	52.1	:	10.3	:	28.1	:	:	5.0	14.3	-47.3	43.2	18.4	:	:	-43.9
2000-2003	:	1.5	2.1	2.7	-8.6	-40.1	0.5	0.7	-24.5	9.0	4.2	-2.5	-14.7	10.8	-1.8	47.2	:	3.0	5.2	:	9.0	0.0	-33.0	-2.2	-54.7	89.3	-12.0	11.1	-11.1	-28.8	37.6

Transport and communication

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	5 790	11 968	9 986	1 961	321	348	191	1 987	59	247	1 008	1 580	109	1 148	17	93	92	:	300	13	:	243	831	208	59	149	167	277	1 983	221	455
2000	6 313	11 709	9 651	2 058	311	367	183	1 971	59	248	919	1 530	100	1 164	17	79	98	12	308	:	448	244	898	182	60	172	174	277	1 886	213	485
1998	5 886	:	9 045	1 123	268	371	187	1 910	55	242	813	1 426	86	1 070	:	78	99	12	295	:	441	230	:	175	51	174	181	258	1 749	:	522
Employment growth (in thousands)																															
1998-2003	-97	:	941	-23	53	-23	4	77	4	5	195	154	23	78	:	15	-7	:	5	:	:	13	:	33	8	-25	-14	19	234	:	-67
1998-2000	427	:	606	20	43	-4	-4	61	4	6	106	104	14	94	:	1	-1	0	13	:	7	14	:	7	9	-2	-7	19	137	:	-37
2000-2003	-524	259	335	-110	10	-19	8	16	0	-1	89	50	9	-16	0	14	-6	:	-8	:	:	-1	-67	26	-1	-23	-7	0	97	8	-30
Employment growth (in %)																															
1998-2003	-1.6	:	10.4	-2.0	19.8	-6.2	2.1	4.0	7.3	2.1	24.0	10.8	26.7	7.3	:	19.2	-7.1	:	1.7	:	:	5.7	:	18.9	15.7	-14.4	-7.7	7.4	13.4	:	-12.8
1998-2000	7.3	:	6.7	1.8	16.0	-1.1	-2.1	3.2	7.3	2.5	13.0	7.3	16.3	8.8	:	1.3	-1.0	0.0	4.4	:	1.6	6.1	:	4.0	17.6	-1.1	-3.9	7.4	7.8	:	-7.1
2000-2003	-8.3	2.2	3.5	-5.3	3.2	-5.2	4.4	0.8	0.0	-0.4	9.7	3.3	9.0	-1.4	0.0	17.7	-6.1	:	-2.6	:	:	-0.4	-7.5	14.3	-1.7	-13.4	-4.0	0.0	5.1	3.8	-6.2
Annualised employment growth (in %)																															
1998-2003	-0.3	:	2.0	-0.4	3.7	-1.3	0.4	0.8	1.4	0.4	4.4	2.1	4.9	1.4	:	3.6	-1.5	:	0.3	:	:	1.1	:	3.5	3.0	-3.1	-1.6	1.4	2.5	:	-2.7
1998-2000	3.6	:	3.3	0.9	7.7	-0.5	-1.1	1.6	3.6	1.2	6.3	3.6	7.8	4.3	:	0.6	-0.5	0.0	2.2	:	0.8	3.0	:	2.0	8.5	-0.6	-2.0	3.6	3.8	:	-3.6
2000-2003	-2.8	0.7	1.1	-1.8	1.1	-1.8	1.4	0.3	0.0	-0.1	3.1	1.1	2.9	-0.5	0.0	5.6	-2.1	:	-0.9	:	:	-0.1	-2.6	4.6	-0.6	-4.7	-1.4	0.0	1.7	1.2	-2.1
Employment share (in %)																															
2003	4.4	6.3	6.2	6.9	8.0	7.5	7.2	5.6	10.4	6.3	6.1	6.5	6.3	5.3	5.4	9.5	6.4	:	7.7	8.8	:	6.5	6.2	4.4	6.7	6.9	7.0	6.5	7.1	7.8	5.2
2000	4.8	6.3	6.1	7.2	7.6	7.9	6.8	5.5	10.7	6.5	6.0	6.6	6.1	5.6	5.9	8.6	7.1	6.7	8.1	:	5.7	6.6	6.3	3.9	6.9	8.3	7.4	6.8	6.9	7.5	5.0
1998	4.6	:	6.0	3.8	7.0	7.8	7.1	5.4	9.2	6.3	6.0	6.4	5.9	5.3	:	8.1	6.8	7.1	8.1	:	6.0	6.4	:	3.9	5.8	7.9	8.4	6.6	6.6	:	5.2
Employment rate (in %)																															
2003	3.1	4.0	4.0	3.9	4.7	4.9	5.4	3.6	6.5	3.7	3.6	4.1	4.1	3.0	3.7	5.9	4.0	:	4.4	:	:	4.5	3.2	3.0	4.2	4.0	4.8	4.8	5.1	4.2	3.0
2000	3.5	3.9	3.9	4.1	4.6	5.2	5.2	3.6	6.4	3.6	3.4	4.1	3.9	3.0	3.9	4.9	4.2	4.2	4.6	:	4.2	4.5	3.5	2.6	4.3	4.7	5.0	4.9	4.9	3.9	3.2
1998	3.4	:	3.7	2.3	4.0	5.2	5.3	3.5	6.0	3.5	3.0	3.9	3.5	2.8	:	4.9	4.2	4.3	4.3	:	4.2	4.3	:	2.6	3.7	4.8	5.3	4.6	4.6	:	3.4
Employment share of high-skilled (in %)																															
2003	:	15.3	15.8	11.0	20.0	6.1	19.6	14.0	23.8	13.2	24.6	18.0	19.6	6.0	29.4	16.9	22.6	13.1	10.2	8.8	15.6	8.5	12.0	9.1	12.2	6.1	19.8	11.2	18.6	20.2	13.9
2000	:	:	14.7	:	18.4	5.3	13.3	14.3	28.1	11.3	23.7	15.4	17.3	5.2	31.8	18.3	45.5	7.1	9.3	:	11.9	9.4	7.2	9.3	10.5	5.7	21.2	13.5	17.8	17.7	7.9
1998	:	:	12.5	:	16.2	4.0	15.0	:	25.0	15.2	21.6	13.6	:	4.4	:	14.4	41.2	:	7.6	:	11.6	2.3	:	9.3	9.3	5.2	18.2	13.1	:	15.5	5.9
Employment share of medium-skilled (in %)																															
2003	:	57.2	54.6	78.6	42.4	87.5	51.5	72.4	66.2	52.2	24.1	48.5	44.1	48.8	49.2	73.1	69.1	58.0	74.3	23.5	46.4	75.3	81.7	21.4	78.0	89.1	46.1	68.2	68.4	68.4	78.7
2000	:	:	54.0	:	41.6	85.8	58.6	68.9	65.4	52.4	23.6	50.4	42.8	48.0	47.1	71.5	46.1	58.6	72.8	:	48.2	70.3	83.8	17.8	78.4	88.4	45.2	61.5	67.6	67.9	82.1
1998	:	:	44.0	:	41.0	85.7	54.2	:	63.9	44.6	21.4	49.4	:	44.3	:	75.1	49.0	:	74.5	:	47.6	77.6	:	16.8	76.5	84.5	45.8	61.1	:	64.5	82.7
Employment share of low-skilled (in %)																															
2003	:	27.5	29.5	10.4	37.6	6.4	28.8	13.7	10.1	34.6	51.3	33.6	36.3	45.2	21.4	10.0	8.3	28.8	15.5	67.7	37.9	16.2	6.3	69.5	9.8	4.8	34.1	20.6	13.0	11.4	7.4
2000	:	:	31.3	:	39.9	8.9	28.1	16.7	6.4	36.4	52.7	34.1	39.9	46.8	21.1	10.3	8.5	34.3	17.9	:	40.0	20.3	9.1	73.0	11.0	5.8	33.5	25.1	14.6	14.4	10.0
1998	:	:	43.4	:	42.7	10.3	30.8	:	11.2	40.2	57.0	37.0	:	51.3	:	10.5	9.8	:	17.9	:	40.8	20.1	:	73.9	14.2	10.2	36.0	25.8	:	20.1	11.4
Employment rate of high-skilled (in %)																															
2003	:	3.4	3.3	3.7	3.8	3.0	3.9	2.5	6.2	3.2	4.0	3.5	3.5	2.0	4.2	6.7	4.7	:	3.5	5.0	:	2.9	3.4	3.1	3.6	2.6	3.5	2.3	3.5	4.8	5.3
2000	:	:	3.1	3.7	3.6	2.9	3.2	2.6	7.7	2.9	3.9	3.2	3.7	2.0	5.6	6.0	5.5	1.8	3.7	:	2.4	3.5	2.8	3.3	3.5	3.3	3.9	2.6	3.4	4.5	3.4
1998	:	:	2.9	2.3	2.9	2.5	3.8	:	6.2	3.8	3.6	2.8	:	1.7	:	4.9	5.1	:	3.1	:	2.6	1.4	:	3.6	2.9	3.1	3.9	2.5	:	:	2.9
Employment rate of medium-skilled (in %)																															
2003	:	5.0	5.0	4.9	5.8	6.0	5.9	4.7	7.9	5.0	4.4	5.0	4.9	3.9	5.0	7.5	4.9	:	5.7	8.3	:	5.6	4.1	4.3	5.5	5.1	5.1	6.3	6.2	5.9	4.3
2000	:	:	5.0	5.3	5.8	6.3	5.9	4.6	7.8	5.1	4.1	5.2	4.5	4.0	4.7	5.8	4.6	5.4	6.0	:	4.9	5.5	4.6	3.5	5.8	5.9	5.5	6.7	5.8	5.4	4.6
1998	:	:	4.5	2.9	4.9	6.3	5.7	:	7.6	4.6	3.4	4.9	:	3.7	:	5.8	4.8	:	6.0	:	4.7	5.3	:	3.6	5.0	6.1	5.8	6.1	:	:	5.0
Employment rate of low-skilled (in %)																															
2003	:	2.9	3.1	1.4	4.4	1.7	6.3	2.2	3.1	2.8	3.4	3.6	3.9	2.5	2.2	2.2	1.5	:	2.2	4.2	:	2.7	0.8	2.7	1.6	0.9	5.6	4.6	3.9	1.4	0.6
2000	:	:	3.2	1.6	4.3	2.4	5.4	3.0	1.9	2.7	3.1	3.5	3.6	2.6	2.1	2.1	1.5	3.7	2.5	:	4.5	3.3	1.2	2.5	1.6	1.2	5.5	4.8	3.8	1.5	0.9
1998	:	:	3.1	1.0	3.9	2.8	5.9	:	3.1	2.8	2.9	3.4	:	2.5	:	2.2	1.9	:	2.2	:	4.4	2.9	:	2.7	1.7	2.0	5.6	4.4	:	:	1.1
Employment growth of high-skilled (in %)																															
1998-2003	:	:	37.9	1.4	47.4	42.0	34.3	:	-0.3	-10.9	41.4	49.5	:	47.7	:	43.3	:	:	35.6	:	36.7	:	:	18.2	52.5	0.1	1.7	-7.6	:	:	105.2
1998-2000	:	:	19.5	18.6	31.3	31.5	-15.4	:	17.2	-23.7	24.5	22.0	:	30.0	:	29.0	8.0	:	26.5	:	3.4	:	:	4.9	32.5	7.9	13.2	11.9	:	:	24.0
2000-2003	:	10.9	11.5	8.0	12.3	8.0	58.7	-2.3	-14.9	16.8	13.5	22.6	24.6	13.6	-6.0	11.1	:	105.1	7.2	:	32.2	-13.1	54.2	12.7	15.1	-7.2	-10.1	-17.4	12.5	19.0	65.5
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	13.9	1.5	23.8	-3.8	-2.6	:	8.6	20.0	39.7	10.8	:	19.0	:	18.5	:	:	1.1	:	-0.7	:	:	53.8	18.7	-9.6	-6.2	20.7	:	:	-16.9
1998-2000	:	:	10.9	1.3	17.3	-0.2	2.9	:	6.6	20.5	24.8	9.5	:	17.6	:	-3.3	-8.1	:	1.8	:	2.8	:	:	10.8	20.0	2.7	-4.2	9.6	:	:	-7.5
2000-2003	:	2.5	4.8	-4.2	5.5	-3.5	-5.3	5.3	1.9	-0.5	11.9	1.2	13.2	1.2	6.0	22.5	:	9.4	-0.7	:	-3.5	3.3	-10.2	38.8	-1.1	-12.0	-2.0	10.1	9.0	4.8	-10.1
Employment growth of low-skilled (in %)																															
1998-2003	:	:	0.7	-25.3	5.7	-41.5	-4.1	:	-5.7	-11.7	11.7	2.4	:	-4.7	:	14.8	:	:	-12.1	:	-5.3	:	:	13.1	-19.7	-59.8	-11.4	-13.7	:	:	-43.5
1998-2000	:	:	0.4	-11.4	8.0	-14.6	-13.0	:	-40.3	-7.1	4.7	-1.0	:	-1.1	:	-1.1	-15.8	:	4.4	:	-0.5	:	:	3.4	-9.3	-43.9	-9.6	5.9	:	:	-18.2
2000-2003	:	-3.5	-2.1	-14.9	-2.2	-31.5	10.2	-18.1	57.9	-4.9	6.7	3.5	0.3	-3.7	2.6	16.1	:	-7.2	-15.8	:	-4.9	-23.2	-36.2	9.4	-11.5	-28.3	-2.0	-18.5	-4.6	-17.6	-30.9

Annex 6.5. Key employment indicators by sector (NACE-1) in the EU and the US, 1998-2003

Financial intermediation

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2 003	5 761	6 064	5 454	581	146	98	76	1 353	9	102	406	723	73	679	16	13	14	:	71	5	:	127	290	88	22	43	50	90	1 274	28	85
2 000	5 933	6 047	5 392	655	158	94	92	1 323	8	107	411	714	68	664	16	12	14	18	84	:	270	141	368	94	22	37	50	80	1 205	32	94
1 998	5 829	:	5 193	268	171	96	80	1 262	7	96	344	707	55	656	:	11	17	18	83	:	257	141	:	86	17	37	46	86	1 188	:	87
Employment growth (in thousands)																															
1998-2003	-68	:	261	2	-25	2	-4	91	2	6	62	16	18	23	:	2	-3	:	-12	:	:	-14	:	2	5	6	4	4	86	:	-2
1998-2000	104	:	199	3	-13	-2	12	61	1	11	67	7	13	8	:	1	-3	0	1	:	13	0	:	8	5	0	4	-6	17	:	7
2000-2003	-172	17	62	-79	-12	4	-16	30	1	-5	-5	9	5	15	0	1	0	:	-13	:	:	-14	-78	-6	0	6	0	10	69	-4	-9
Employment growth (in %)																															
1998-2003	-1.2	:	5.0	0.7	-14.6	2.1	-5.0	7.2	28.6	6.3	18.0	2.3	32.7	3.5	:	18.2	-17.6	:	-14.5	:	:	-9.9	:	2.3	29.4	16.2	8.7	4.7	7.2	:	-2.3
1998-2000	1.8	:	3.8	1.1	-7.6	-2.1	15.0	4.8	14.3	11.5	19.5	1.0	23.6	1.2	:	9.1	-17.6	0.0	1.2	:	5.1	0.0	:	9.3	29.4	0.0	8.7	-7.0	1.4	:	8.0
2000-2003	-2.9	0.3	1.1	-12.1	-7.6	4.3	-17.4	2.3	12.5	-4.7	-1.2	1.3	7.4	2.3	0.0	8.3	0.0	:	-15.5	:	:	-9.9	-21.2	-6.4	0.0	16.2	0.0	12.5	5.7	-12.5	-9.6
Annualised employment growth (in %)																															
1998-2003	-0.2	:	1.0	0.1	-3.1	0.4	-1.0	1.4	5.2	1.2	3.4	0.4	5.8	0.7	:	3.4	-3.8	:	-3.1	:	:	-2.1	:	0.5	5.3	3.1	1.7	0.9	1.4	:	-0.5
1998-2000	0.9	:	1.9	0.6	-3.9	-1.0	7.2	2.4	6.9	5.6	9.3	0.5	11.2	0.6	:	4.4	-9.3	0.0	0.6	:	2.5	0.0	:	4.5	13.8	0.0	4.3	-3.6	0.7	:	3.9
2000-2003	-1.0	0.1	0.4	-4.2	-2.6	1.4	-6.2	0.8	4.0	-1.6	-0.4	0.4	2.4	0.7	0.0	2.7	0.0	:	-5.5	:	:	-3.4	-7.6	-2.2	0.0	5.1	0.0	4.0	1.9	-4.4	-3.3
Employment share (in %)																															
2003	4.4	3.2	3.4	2.0	3.6	2.1	2.9	3.8	1.6	2.6	2.5	3.0	4.2	3.1	5.0	1.3	1.0	:	1.8	3.4	:	3.4	2.2	1.9	2.5	2.0	2.1	2.1	4.5	1.0	1.0
2000	4.5	3.3	3.4	2.3	3.9	2.0	3.4	3.7	1.4	2.8	2.7	3.1	4.2	3.2	5.6	1.3	1.0	10.0	2.2	:	3.5	3.8	2.6	2.0	2.5	1.8	2.1	2.0	4.4	1.1	1.0
1998	4.6	:	3.4	0.9	4.5	2.0	3.0	3.6	1.2	2.5	2.5	3.2	3.8	3.3	:	1.1	1.2	10.6	2.3	:	3.5	3.9	:	1.9	1.9	1.7	2.1	2.2	4.5	:	0.9
Employment rate (in %)																															
2003	3.1	2.0	2.2	1.2	2.1	1.4	2.1	2.5	1.0	1.5	1.5	1.9	2.7	1.8	3.5	0.8	0.6	:	1.0	:	:	2.4	1.1	1.2	1.6	1.2	1.4	1.5	3.2	0.5	0.6
2000	3.3	2.0	2.2	1.3	2.4	1.3	2.6	2.4	0.9	1.6	1.5	1.9	2.7	1.7	3.7	0.8	0.6	6.3	1.2	:	2.5	2.6	1.4	1.4	1.6	1.0	1.5	1.4	3.1	0.6	0.6
1 998	3.4	:	2.1	0.5	2.6	1.4	2.3	2.3	0.8	1.4	1.3	1.9	2.2	1.7	:	0.7	0.7	6.4	1.2	:	2.4	2.6	:	1.3	1.2	1.0	1.3	1.5	3.1	:	0.6
Employment share of high-skilled (in %)																															
2 003	:	33.5	33.5	34.5	57.9	29.0	29.2	24.9	72.9	40.0	52.7	44.2	48.5	22.2	60.0	33.6	55.7	29.9	29.4	11.7	31.9	15.6	42.7	31.0	30.9	36.4	58.3	29.6	33.9	63.7	38.4
2 000	:	:	31.1	:	53.8	22.2	19.5	25.4	60.0	37.1	46.7	39.7	41.6	18.7	47.5	38.9	63.8	33.3	29.5	:	34.2	14.1	31.8	29.4	32.7	32.8	56.6	33.2	30.4	43.0	34.8
1998	:	:	30.2	:	52.3	23.5	23.7	:	55.4	36.5	42.2	37.2	:	15.8	:	43.9	69.7	:	27.9	:	28.4	8.9	:	20.5	27.8	30.8	55.7	27.0	:	24.4	35.5
Employment share of medium-skilled (in %)																															
2003	:	58.0	57.7	63.1	33.8	70.1	67.4	68.4	27.1	53.3	32.5	40.3	46.6	67.9	36.6	66.4	44.3	60.1	66.4	52.2	52.6	77.3	57.1	48.7	66.3	63.6	28.7	60.8	62.8	34.5	60.9
2000	:	:	59.3	:	36.5	77.0	77.2	66.2	40.0	57.1	36.1	44.5	53.4	72.5	49.4	56.0	30.3	58.8	66.7	:	53.3	78.8	66.5	41.7	65.5	66.1	25.8	55.9	65.9	54.9	64.5
1998	:	:	54.7	:	36.8	75.1	71.5	:	43.5	55.3	37.7	44.7	:	71.9	:	54.8	30.3	:	68.1	:	55.7	84.1	:	48.6	68.2	67.9	23.6	62.7	:	67.1	62.2
Employment share of low-skilled (in %)																															
2003	:	8.5	8.9	2.4	8.3	1.0	3.4	6.6	0.0	6.7	14.9	15.5	4.9	9.8	3.4	0.0	0.0	10.0	4.2	36.1	15.5	7.1	0.2	20.3	2.7	0.0	13.0	9.6	3.3	1.8	0.7
2000	:	:	9.6	:	9.7	0.8	3.3	8.4	0.0	5.8	17.2	15.8	4.9	8.8	3.1	5.1	5.9	7.9	3.8	:	12.5	7.1	1.8	28.9	1.8	1.0	17.6	10.9	3.7	2.2	0.7
1998	:	:	15.1	:	10.9	1.3	4.8	:	1.1	8.2	20.1	18.1	:	12.3	:	1.2	0.0	:	4.0	:	15.9	7.1	:	31.0	4.0	1.3	20.8	10.3	:	8.5	2.3
Employment rate of high-skilled (in %)																															
2003	:	3.9	3.8	3.7	5.1	4.0	2.3	3.1	2.8	3.9	3.4	3.7	5.7	4.3	8.2	1.8	1.7	:	2.4	2.7	:	2.9	4.2	4.4	3.3	4.5	3.1	2.0	4.4	1.9	2.7
2000	:	:	3.7	3.7	5.3	3.1	2.4	3.1	2.3	4.1	3.5	3.8	5.9	4.1	8.2	1.9	1.1	12.7	3.2	:	4.2	2.9	5.0	5.3	4.0	4.0	3.0	1.8	4.1	1.7	2.9
1998	:	:	3.6	1.6	6.0	3.8	2.6	:	1.6	3.6	3.0	3.9	:	3.8	:	2.2	1.5	:	3.2	:	3.8	3.4	:	3.9	3.0	3.9	3.2	1.7	:	:	3.0
Employment rate of medium-skilled (in %)																															
2003	:	2.5	2.9	1.1	2.1	1.3	3.0	3.1	0.5	2.1	2.4	1.8	3.3	3.2	3.6	0.9	0.5	:	1.2	7.5	:	3.1	1.0	4.1	1.7	1.0	0.9	1.8	3.9	0.4	0.6
2000	:	:	3.1	1.4	2.6	1.5	4.0	3.0	0.7	2.4	2.8	2.1	3.8	3.5	4.8	0.7	0.4	8.3	1.5	:	3.2	3.4	1.5	4.3	1.8	0.9	0.9	1.7	4.0	0.7	0.7
1998	:	:	2.8	0.6	2.8	1.4	3.2	:	0.6	2.2	2.5	2.2	:	3.7	:	0.6	0.5	:	1.5	:	3.3	3.5	:	5.1	1.5	1.0	0.8	2.1	:	:	0.6
Employment rate of low-skilled (in %)																															
2003	:	0.5	0.5	0.1	0.4	0.1	0.3	0.7	0.0	0.2	0.4	0.7	0.3	0.3	0.3	0.0	0.0	:	0.1	0.9	:	0.6	0.0	0.3	0.2	0.0	0.6	0.7	0.7	0.0	0.0
2000	:	:	0.6	0.1	0.5	0.1	0.3	1.0	0.0	0.2	0.5	0.8	0.3	0.3	0.3	0.2	0.2	1.3	0.1	:	0.9	0.7	0.1	0.5	0.1	0.0	0.8	0.6	0.7	0.0	0.0
1998	:	:	0.5	0.0	0.6	0.1	0.4	:	0.0	0.2	0.4	0.8	:	0.4	:	0.0	0.0	:	0.1	:	1.0	0.6	:	0.6	0.2	0.1	0.9	0.6	:	:	0.0
Employment growth of high-skilled (in %)																															
1998-2003	:	:	25.1	8.7	-4.5	24.8	16.3	:	69.5	15.5	47.2	17.7	:	45.1	:	-13.5	:	:	-8.2	:	17.5	:	:	56.2	36.5	36.5	8.9	15.6	:	:	4.9
1998-2000	:	:	15.9	0.9	-4.6	-7.2	-6.6	:	34.3	13.5	32.5	7.7	:	19.4	:	-9.7	-26.1	:	8.5	:	25.9	:	:	59.2	43.9	6.0	6.4	14.3	:	:	5.0
2000-2003	:	8.4	8.5	8.1	0.2	34.5	24.5	0.8	26.2	1.7	11.1	9.2	23.5	21.6	24.6	-4.3	:	0.1	-15.3	:	-6.7	2.8	6.2	-1.9	-5.1	28.7	2.3	1.1	16.4	28.9	-0.1
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	-5.3	-3.0	-20.9	-5.4	-11.1	:	-19.6	1.7	1.7	-11.0	:	-2.5	:	36.9	:	:	-15.2	:	-1.4	:	:	3.4	19.1	8.1	26.6	2.3	:	:	-5.3
1998-2000	:	:	1.8	1.1	-8.1	1.1	22.7	:	13.9	15.5	14.8	0.2	:	1.8	:	4.3	-19.2	:	0.4	:	-0.2	:	:	-4.9	17.5	-3.2	14.4	-17.1	:	:	10.8
2000-2003	:	-4.1	-1.8	-19.1	-13.9	-6.4	-27.5	6.2	-29.5	-11.9	-11.4	-11.2	-7.5	-4.2	-26.9	31.2	:	14.0	-15.5	:	-1.1	-8.8	-32.2	8.8	1.4	11.7	10.6	23.4	-0.5	-45.3	-14.6
Employment growth of low-skilled (in %)																															
1998-2003	:	:	-15.6	-24.6	-34.3	-26.6	-32.5	:	-100.0	-12.7	-12.7	-15.2	:	-17.1	:	-100.0	:	:	-9.3	:	1.6	:	:	-32.4	-16.7	-100.0	-35.0	-2.5	:	:	-70.9
1998-2000	:	:	-12.2	2.8	-17.7	-40.2	-22.4	:	-100.0	-20.8	2.4	-12.2	:	-27.3	:	325.7	:	:	-2.2	:	-17.7	:	:	3.6	-45.3	-23.1	-11.3	-1.7	:	:	-67.4
2000-2003	:	-8.4	-7.1	-28.9	-20.2	22.8	-13.0	-19.1	:	10.1	-14.7	-3.4	4.7	14.1	8.7	-100.0	:	41.2	-7.3	:	23.5	-7.3	-92.8	-34.7	52.2	-100.0	-26.7	-0.7	-6.9	-26.8	-10.7

Business services

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	17 699	16 295	14 868	1 565	378	277	242	3 198	44	221	1 333	2 438	152	1 730	22	44	60	:	264	8	:	299	689	237	53	104	260	554	3 123	108	155
2000	17 182	14 829	13 612	1 217	346	257	249	2 855	38	193	1 094	2 153	142	1 454	17	44	43	13	201	:	923	266	490	211	42	85	234	480	3 019	90	133
1998	15 497	:	11 884	628	276	244	222	2 534	34	190	902	1 930	116	1 213	:	31	40	12	159	:	790	237	:	171	46	74	195	381	2 716	:	164
Employment growth (in thousands)																															
1998-2003	2 202	:	2 984	218	102	33	20	664	10	31	431	508	36	517	:	13	20	:	105	:	:	62	:	66	7	30	65	173	407	:	-9
1998-2000	1 685	:	1 728	82	70	13	27	321	4	3	192	223	26	241	:	13	3	1	42	:	133	29	:	40	-4	11	39	99	303	:	-31
2000-2003	517	1 466	1 256	340	32	20	-7	343	6	28	239	285	10	276	5	0	17	:	63	:	:	33	199	26	11	19	26	74	104	18	22
Employment growth (in %)																															
1998-2003	14.2	:	25.1	34.7	37.0	13.5	9.0	26.2	29.4	16.3	47.8	26.3	31.0	42.6	:	41.9	50.0	:	66.0	:	:	26.2	:	38.6	15.2	40.5	33.3	45.4	15.0	:	-5.5
1998-2000	10.9	:	14.5	13.1	25.4	5.3	12.2	12.7	11.8	1.6	21.3	11.6	22.4	19.9	:	41.9	7.5	8.3	26.4	:	16.8	12.2	:	23.4	-8.7	14.9	20.0	26.0	11.2	:	-18.9
2000-2003	3.0	9.9	9.2	27.9	9.2	7.8	-2.8	12.0	15.8	14.5	21.8	13.2	7.0	19.0	29.4	0.0	39.5	:	31.3	:	:	12.4	40.6	12.3	26.2	22.4	11.1	15.4	3.4	20.0	16.5
Annualised employment growth (in %)																															
1998-2003	2.7	:	4.6	6.1	6.5	2.6	1.7	4.8	5.3	3.1	8.1	4.8	5.6	7.4	:	7.3	8.4	:	10.7	:	:	4.8	:	6.7	2.9	7.0	5.9	7.8	2.8	:	-1.1
1998-2000	5.3	:	7.0	6.3	12.0	2.6	5.9	6.1	5.7	0.8	10.1	5.6	10.6	9.5	:	19.1	3.7	4.1	12.4	:	8.1	5.9	:	11.1	-4.4	7.2	9.5	12.2	5.4	:	-9.9
2000-2003	1.0	3.2	3.0	8.6	3.0	2.5	-0.9	3.9	5.0	4.6	6.8	4.2	2.3	6.0	9.0	0.0	11.7	:	9.5	:	:	4.0	12.0	3.9	8.1	7.0	3.6	4.9	1.1	6.3	5.2
Employment share (in %)																															
2003	13.5	8.6	9.2	5.5	9.4	6.0	9.1	9.0	7.7	5.7	8.0	10.0	8.7	8.0	6.9	4.5	4.2	:	6.8	5.4	:	8.0	5.1	5.0	6.0	4.8	10.9	12.9	11.1	3.8	1.8
2000	13.0	8.0	8.7	4.3	8.5	5.6	9.2	7.9	6.9	5.0	7.2	9.3	8.7	7.1	5.9	4.8	3.1	7.2	5.3	:	11.8	7.2	3.5	4.5	4.8	4.1	10.0	11.9	11.0	3.2	1.4
1998	12.2	:	7.9	2.1	7.2	5.1	8.4	7.2	5.7	4.9	6.6	8.7	7.9	6.0	:	3.2	2.8	7.1	4.4	:	10.8	6.6	:	3.8	5.2	3.4	9.0	9.8	10.2	:	1.6
Employment rate (in %)																															
2003	9.5	5.4	5.9	3.1	5.6	3.9	6.8	5.8	4.8	3.3	4.8	6.3	5.7	4.5	4.8	2.8	2.6	:	3.9	:	:	5.6	2.6	3.4	3.8	2.8	7.5	9.5	8.0	2.0	1.0
2000	9.6	5.0	5.5	2.4	5.1	3.6	7.1	5.2	4.1	2.8	4.0	5.8	5.6	3.8	3.9	2.8	1.9	4.5	3.0	:	8.6	4.9	1.9	3.1	3.0	2.3	6.8	8.4	7.9	1.6	0.9
1998	9.0	:	4.8	1.3	4.1	3.5	6.3	4.6	3.7	2.7	3.4	5.2	4.7	3.1	:	1.9	1.7	4.3	2.3	:	7.5	4.4	:	2.5	3.3	2.0	5.7	6.7	7.2	:	1.1
Employment share of high-skilled (in %)																															
2003	:	40.8	41.0	37.3	57.0	32.7	46.0	36.2	45.4	55.2	48.6	42.9	55.7	30.3	60.0	28.7	56.4	36.1	37.7	26.0	38.7	24.6	33.0	29.9	36.6	34.5	45.8	35.5	46.9	49.5	40.5
2000	:	:	40.5	:	56.2	33.6	38.7	36.0	57.9	56.7	46.8	42.0	52.0	28.6	57.7	38.5	68.5	43.9	34.7	:	39.2	25.0	26.4	25.6	33.6	28.3	46.7	44.0	45.9	56.3	39.6
1998	:	:	37.6	:	53.3	31.0	32.7	:	48.7	57.5	45.2	39.0	:	28.9	:	30.9	70.9	:	36.1	:	35.0	19.3	:	24.2	32.5	32.6	41.4	43.2	:	37.7	38.9
Employment share of medium-skilled (in %)																															
2003	:	42.6	41.8	56.4	27.0	64.3	42.3	49.7	46.9	36.3	20.1	35.0	31.5	50.1	32.5	58.1	42.6	35.9	53.0	25.1	40.2	57.8	59.1	28.7	54.0	63.8	38.0	51.3	45.1	46.1	54.3
2000	:	:	41.5	:	24.7	61.2	47.5	49.2	38.2	36.3	20.2	33.6	32.7	52.9	28.8	56.8	27.8	28.9	56.8	:	39.6	57.8	66.9	29.3	56.4	68.5	34.4	40.8	45.5	39.9	56.0
1998	:	:	37.8	:	27.1	64.6	52.1	:	44.4	34.5	18.7	35.2	:	49.0	:	61.8	24.0	:	54.1	:	42.6	60.9	:	26.1	55.5	65.8	36.9	42.1	:	50.9	57.0
Employment share of low-skilled (in %)																															
2003	:	16.6	17.3	6.3	16.0	3.0	11.7	14.1	7.7	8.5	31.3	22.1	12.8	19.5	7.5	13.2	1.0	28.0	9.3	49.0	21.0	17.6	7.9	41.4	9.4	1.7	16.2	13.2	8.0	4.4	5.2
2000	:	:	18.0	:	19.0	5.3	13.9	14.9	3.9	7.0	33.0	24.3	15.4	18.5	13.5	4.6	3.7	27.2	8.5	:	21.2	17.3	6.7	45.1	10.0	3.2	18.9	15.2	8.6	3.8	4.4
1998	:	:	24.6	:	19.6	4.4	15.3	:	6.9	8.0	36.1	25.8	:	22.1	:	7.3	5.2	:	9.8	:	22.5	19.8	:	49.8	12.0	1.6	21.7	14.7	:	11.4	4.1
Employment rate of high-skilled (in %)																															
2003	:	12.8	13.2	9.2	13.0	13.3	11.8	10.6	9.7	12.0	10.4	12.7	13.4	15.1	11.2	5.5	7.6	:	11.5	9.1	:	10.9	7.9	11.7	9.6	10.5	12.7	14.9	15.0	5.9	5.3
2000	:	:	12.2	7.3	12.3	13.3	12.8	9.4	10.6	11.4	9.3	12.3	15.4	13.9	10.3	7.3	3.7	11.9	9.1	:	16.5	9.3	5.7	10.5	8.1	8.0	11.7	14.6	15.7	6.2	4.8
1998	:	:	10.9	4.5	9.9	13.1	9.8	:	7.6	11.5	8.5	11.1	:	12.9	:	4.4	3.6	:	8.1	:	14.1	12.5	:	9.1	9.4	8.3	9.8	12.3	:	:	6.1
Employment rate of medium-skilled (in %)																															
2003	:	5.2	6.0	2.9	4.4	3.6	6.1	5.3	4.6	3.1	4.8	5.5	4.7	6.1	4.3	2.9	2.0	:	3.7	5.5	:	5.5	2.5	6.6	3.4	2.6	6.6	9.6	7.0	2.0	1.0
2000	:	:	5.5	2.4	3.9	3.2	6.6	4.8	3.1	2.7	4.2	4.9	4.8	5.6	2.9	2.6	1.2	2.9	3.1	:	8.2	4.5	2.1	6.8	3.0	2.3	5.7	7.8	7.0	1.4	0.9
1998	:	:	4.8	1.2	3.4	3.2	6.5	:	3.3	2.8	3.3	4.7	:	4.7	:	2.0	1.0	:	2.4	:	7.6	4.3	:	5.5	3.3	2.0	5.1	6.3	:	:	1.1
Employment rate of low-skilled (in %)																															
2003	:	2.6	2.8	0.9	2.2	0.7	3.3	3.6	1.9	0.6	2.7	3.6	1.8	1.7	1.0	1.4	0.1	:	1.2	1.9	:	3.8	0.9	1.8	1.4	0.2	4.2	6.0	4.1	0.3	0.1
2000	:	:	2.7	0.6	2.3	1.0	3.7	3.9	0.8	0.4	2.3	3.5	2.0	1.3	1.4	0.5	0.3	3.2	0.8	:	4.9	2.8	0.5	1.8	1.1	0.3	4.2	5.2	4.1	0.2	0.1
1998	:	:	2.2	0.3	1.8	0.8	3.5		1.2	0.4	2.0	3.2	:	1.2	:	0.6	0.4	:	0.7	:	4.4	3.0	:	1.8	1.3	0.1	3.7	3.8	:	:	0.1
Employment growth of high-skilled (in %)																															
1998-2003	:	:	43.0	38.1	47.3	20.1	55.2	:	26.5	10.9	58.8	40.2	:	50.7	:	30.5	:	:	73.2	:	30.4	:	:	74.5	28.8	51.7	47.0	18.6	:	:	-2.2
1998-2000	:	:	23.8	15.7	33.0	14.3	31.1	:	30.9	-0.8	25.5	20.3	:	19.1	:	73.2	2.4	:	21.5	:	30.6	:	:	34.2	-4.5	-0.4	34.9	28.4	:	:	-17.1
2000-2003	:	14.2	12.5	38.1	10.8	5.1	18.4	13.1	-3.3	11.9	26.6	16.5	12.0	26.6	34.5	-24.7	:	-0.9	42.5	:	-0.1	22.6	72.8	30.0	34.8	52.3	9.0	-7.7	5.0	5.5	18.0
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	33.9	34.5	36.9	13.3	-10.4	:	43.3	21.7	58.9	26.5	:	46.7	:	32.2	:	:	62.6	:	11.3	:	:	54.9	11.3	39.0	37.3	75.7	:	:	-10.3
1998-2000	:	:	15.4	11.5	14.8	-0.3	0.8	:	-5.3	6.1	31.2	6.5	:	29.5	:	27.8	22.9	:	32.3	:	8.5	:	:	42.0	-6.0	19.2	11.5	22.3	:	:	-19.8
2000-2003	:	13.1	11.9	22.0	19.2	13.6	-11.1	13.5	51.4	14.7	21.1	18.8	0.9	13.3	45.9	3.4	:	49.9	22.8	:	2.6	24.4	22.1	9.1	18.4	16.6	23.2	43.7	1.8	38.9	11.8
Employment growth of low-skilled (in %)																															
1998-2003	:	:	16.6	24.7	12.8	-22.3	-15.4	:	51.2	22.8	27.8	8.6	:	26.7	:	152.5	:	:	56.9	:	10.3	:	:	17.1	-9.9	59.3	-0.9	29.1	:	:	20.2
1998-2000	:	:	7.3	7.0	22.5	24.6	0.5	:	-37.4	-11.5	10.6	5.2	:	0.4	:	-12.3	-24.8	:	9.6	:	10.3	:	:	14.5	-22.5	133.2	4.2	30.3	:	:	-11.0
2000-2003	:	7.6	6.7	44.5	-7.9	-37.6	-15.7	6.6	141.5	38.7	15.5	3.3	-13.0	26.2	-28.4	187.8	:	23.9	43.2	:	0.0	27.0	61.9	2.3	16.3	-31.7	-4.9	-0.9	-5.1	37.5	35.0

Annex 6.5. Key employment indicators by sector (NACE-1) in the EU and the US, 1998-2003

Public administration

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	10 166	14 087	12 278	1 877	393	305	152	2 871	35	295	1 080	2 268	90	1 856	24	62	71	:	288	14	:	212	866	310	49	163	119	245	1 940	228	459
2000	9 649	13 726	11 978	1 748	412	305	158	2 978	30	292	966	2 134	77	1 827	26	72	74	20	263	:	528	228	765	319	53	160	115	214	1 710	194	428
1998	9 601	:	11 533	901	368	279	157	3 031	35	277	862	2 077	70	1 777	:	64	75	17	252	:	506	235	:	274	41	155	114	208	1 558	:	380
Employment growth (in thousands)																															
1998-2003	565	:	745	72	25	26	-5	-160	0	18	218	191	20	79	:	-2	-4	:	36	:	:	-23	:	36	8	8	5	37	382	:	79
1998-2000	49	:	445	56	44	26	1	-53	-5	15	104	57	7	50	:	8	-1	3	11	:	22	-7	:	45	12	5	1	6	152	:	48
2000-2003	516	361	300	115	-19	0	-6	-107	5	3	114	134	13	29	-2	-10	-3	:	25	:	:	-16	101	-9	-4	3	4	31	230	34	31
Employment growth (in %)																															
1998-2003	5.9	:	6.5	8.0	6.8	9.3	-3.2	-5.3	0.0	6.5	25.3	9.2	28.6	4.4	:	-3.1	-5.3	:	14.3	:	:	-9.8	:	13.1	19.5	5.2	4.4	17.8	24.5	:	20.8
1998-2000	0.5	:	3.9	6.2	12.0	9.3	0.6	-1.7	-14.3	5.4	12.1	2.7	10.0	2.8	:	12.5	-1.3	17.6	4.4	:	4.3	-3.0	:	16.4	29.3	3.2	0.9	2.9	9.8	:	12.6
2000-2003	5.3	2.6	2.5	6.6	-4.6	0.0	-3.8	-3.6	16.7	1.0	11.8	6.3	16.9	1.6	-7.7	-13.9	-4.1	:	9.5	:	:	-7.0	13.2	-2.8	-7.5	1.9	3.5	14.5	13.5	17.5	7.2
Annualised employment growth (in %)																															
1998-2003	1.1	:	1.3	1.5	1.3	1.8	-0.6	-1.1	0.0	1.3	4.6	1.8	5.2	0.9	:	-0.6	-1.1	:	2.7	:	:	-2.0	:	2.5	3.6	1.0	0.9	3.3	4.5	:	3.8
1998-2000	0.3	:	1.9	3.1	5.8	4.6	0.3	-0.9	-7.4	2.7	5.9	1.4	4.9	1.4	:	6.1	-0.7	8.5	2.2	:	2.2	-1.5	:	7.9	13.7	1.6	0.4	1.4	4.8	:	6.1
2000-2003	1.8	0.9	0.8	2.1	-1.6	0.0	-1.3	-1.2	5.3	0.3	3.8	2.1	5.3	0.5	-2.6	-4.9	-1.4	:	3.1	:	:	-2.4	4.2	-0.9	-2.6	0.6	1.1	4.6	4.3	5.5	2.4
Employment share (in %)																															
2003	7.8	7.4	7.6	6.6	9.8	6.6	5.7	8.1	6.2	7.6	6.5	9.3	5.2	8.5	7.6	6.3	4.9	:	7.4	9.5	:	5.7	6.5	6.5	5.6	7.5	5.0	5.7	6.9	8.1	5.2
2000	7.3	7.4	7.6	6.1	10.1	6.6	5.9	8.3	5.4	7.6	6.4	9.3	4.7	8.9	9.1	7.8	5.4	11.1	7.0	:	6.8	6.2	5.4	6.8	6.1	7.7	4.9	5.3	6.2	6.8	4.4
1998	7.6	:	7.6	3.1	9.6	5.8	5.9	8.6	5.9	7.2	6.3	9.4	4.8	8.9	:	6.7	5.2	10.0	7.0	:	6.9	6.5	:	6.1	4.7	7.1	5.3	5.4	5.9	:	3.8
Employment rate (in %)																															
2003	5.4	4.7	4.9	3.7	5.8	4.3	4.3	5.2	3.8	4.4	3.9	5.8	3.4	4.8	5.2	3.9	3.1	:	4.2	:	:	3.9	3.3	4.4	3.5	4.4	3.4	4.2	4.9	4.3	3.1
2000	5.4	4.6	4.8	3.5	6.1	4.3	4.5	5.4	3.3	4.2	3.6	5.7	3.0	4.7	5.9	4.5	3.2	7.0	3.9	:	4.9	4.2	3.0	4.6	3.8	4.3	3.3	3.8	4.4	3.5	2.8
1998	5.6	:	4.7	1.8	5.5	3.9	4.5	5.5	3.8	4.0	3.2	5.6	2.9	4.6	:	4.0	3.2	6.0	3.7	:	4.8	4.4	:	4.1	3.0	4.3	3.3	3.7	4.1	:	2.5
Employment share of high-skilled (in %)																															
2003	:	10.3	10.3	10.6	10.6	8.8	8.9	12.2	12.4	17.8	15.2	9.1	8.8	7.0	15.8	12.2	10.8	7.0	10.6	5.6	9.7	4.8	13.4	6.4	15.3	10.3	10.8	8.2	10.3	15.8	13.1
2000	:	:	10.0	:	11.2	8.2	6.9	13.1	14.6	17.6	15.3	8.5	7.1	6.7	19.9	12.7	16.7	6.1	9.9	:	9.9	5.3	8.9	6.1	16.5	9.3	10.5	8.0	8.7	15.1	12.7
1998	:	:	8.3	:	9.5	7.3	7.2	:	15.2	14.7	13.2	7.4	:	6.0	:	9.7	15.6	:	8.3	:	9.3	3.9	:	5.4	11.5	8.1	10.1	7.7	:	6.0	10.2
Employment share of medium-skilled (in %)																															
2003	:	83.6	83.3	87.0	79.3	89.9	90.2	84.9	86.8	76.2	75.0	80.4	87.4	79.9	80.5	85.7	88.5	79.5	85.1	58.8	85.4	92.7	85.5	72.4	83.9	88.7	87.3	90.3	88.3	77.0	83.5
2000	:	:	82.7	:	76.6	90.5	91.3	82.6	84.1	74.9	73.5	80.3	88.6	78.5	75.8	85.7	83.0	79.8	85.7	:	85.5	90.8	90.1	70.2	82.7	89.0	87.1	90.0	89.7	81.7	85.6
1998	:	:	80.7	:	78.0	91.0	90.8	:	83.4	77.6	75.0	80.2	:	77.4	:	88.7	83.1	:	86.4	:	86.1	92.1	:	70.9	86.2	89.3	87.4	90.4	:	91.2	87.8
Employment share of low-skilled (in %)																															
2003	:	6.1	6.4	2.4	10.1	1.3	0.9	3.0	0.8	6.0	9.8	10.5	3.8	13.1	3.7	2.1	0.7	13.6	4.3	35.6	4.9	2.5	1.1	21.2	0.8	1.0	1.9	1.5	1.4	7.2	3.4
2000	:	:	7.3	:	12.2	1.3	1.8	4.2	1.3	7.5	11.1	11.2	4.4	14.8	4.2	1.5	0.2	14.1	4.4	:	4.6	3.9	1.1	23.7	0.8	1.7	2.3	2.0	1.6	3.2	1.8
1998	:	:	11.0	:	12.5	1.8	2.0	:	1.4	7.7	11.8	12.5	:	16.6	:	1.6	1.3	:	5.4	:	4.6	4.0	:	23.7	2.3	2.5	2.5	1.9	:	2.8	2.0
Employment rate of high-skilled (in %)																															
2003	:	8.4	8.1	10.0	6.7	9.7	7.7	8.8	6.6	11.0	7.4	6.7	5.2	8.2	8.7	10.1	7.2	:	9.3	6.7	:	5.0	10.7	9.2	11.1	11.6	7.5	8.6	7.7	8.3	11.1
2000	:	:	7.6	9.1	7.1	9.2	7.2	9.1	7.2	11.0	7.3	6.6	4.6	8.5	10.1	9.4	6.5	5.5	9.3	:	8.3	5.5	9.3	9.9	12.8	11.8	6.9	7.0	6.5	8.4	11.3
1998	:	:	7.0	4.7	5.9	9.0	7.4	:	7.8	9.4	6.7	6.0	:	8.3	:	7.8	5.7	:	8.3	:	8.4	7.3	:	8.6	9.4	10.7	7.1	7.0	:	:	9.8
Employment rate of medium-skilled (in %)																															
2003	:	5.4	5.9	3.7	7.4	4.5	4.2	5.5	4.0	5.5	5.7	6.9	4.4	7.2	6.8	3.7	2.9	:	4.5	6.5	:	5.0	3.2	6.9	3.1	4.6	2.4	3.7	5.6	4.6	3.5
2000	:	:	5.9	3.8	7.8	4.7	5.1	5.7	3.1	5.4	5.0	6.8	4.4	7.2	8.1	4.9	2.1	8.6	4.3	:	5.8	5.2	3.2	7.8	3.6	4.6	2.5	3.3	5.2	4.1	3.3
1998	:	:	6.2	2.0	7.3	4.3	5.0	:	3.2	5.9	4.9	6.8	:	7.1	:	4.5	2.5	:	4.2	:	5.8	5.4	:	7.4	2.9	4.7	3.0	3.4	:	:	3.0
Employment rate of low-skilled (in %)																															
2003	:	2.3	2.5	0.7	3.9	0.7	0.8	1.9	0.5	1.2	1.9	4.3	1.3	2.6	1.4	1.0	0.4	:	1.6	4.6	:	1.3	0.4	3.5	0.3	0.5	1.2	1.7	1.7	1.9	0.6
2000	:	:	2.8	0.6	4.3	0.7	1.5	2.9	0.7	1.4	1.9	4.3	1.2	2.8	1.2	0.7	0.1	5.6	1.4	:	2.2	1.8	0.4	3.7	0.3	0.8	1.4	1.8	1.7	0.8	0.3
1998	:	:	2.8	0.5	3.9	0.9	1.6	:	0.8	1.3	1.8	4.4	:	2.9	:	0.8	0.7	:	1.6	:	2.0	1.7	:	3.6	0.7	1.1	1.2	1.6	:	:	0.4
Employment growth of high-skilled (in %)																															
1998-2003	:	:	31.5	17.9	25.4	27.6	35.5	:	-16.5	25.2	44.6	36.4	:	27.8	:	36.4	:	:	37.2	:	12.3	:	:	44.5	48.3	29.0	21.1	19.6	:	:	28.8
1998-2000	:	:	18.3	17.2	28.6	14.8	-2.3	:	-14.0	18.0	26.2	19.2	:	13.8	:	27.0	14.0	:	21.5	:	10.4	:	:	32.8	50.6	13.8	11.4	8.6	:	:	22.9
2000-2003	:	11.6	10.5	20.1	-2.4	11.1	38.6	-2.3	-2.9	6.1	14.6	14.4	46.0	12.3	6.7	7.4	:	18.9	12.9	:	1.8	-3.7	44.6	8.8	-1.5	13.4	8.7	10.1	28.8	8.7	4.8
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	9.7	8.0	8.1	5.9	-20.2	:	32.4	3.0	25.2	10.1	:	12.8	:	-22.5	:	:	12.3	:	7.0	:	:	20.4	14.5	4.5	-14.8	25.3	:	:	13.9
1998-2000	:	:	3.9	5.7	6.7	9.7	1.5	:	0.5	0.1	4.7	3.5	:	8.7	:	6.0	-19.9	:	3.3	:	-0.3	:	:	19.9	27.9	3.2	-15.6	-4.7	:	:	11.1
2000-2003	:	4.0	4.6	1.6	1.3	-3.4	-21.3	-0.6	31.8	2.9	19.6	6.4	4.9	3.8	-17.2	-26.9	:	9.6	8.7	:	7.4	-2.3	0.4	0.4	-10.5	1.3	0.9	31.5	9.6	7.6	2.5
Employment growth of low-skilled (in %)																															
1998-2003	:	:	-6.6	-24.2	-9.2	-23.7	-51.5	:	-39.6	-19.1	4.5	-6.5	:	-14.8	:	40.5	:	:	-14.5	:	15.9	:	:	8.2	-61.6	-61.2	-12.1	-9.3	:	:	70.0
1998-2000	:	:	-3.2	-25.2	7.0	-22.6	-9.2	:	-20.2	-4.1	2.6	-7.6	:	-9.9	:	-10.4	-79.5	:	-17.1	:	5.3	:	:	16.9	-65.6	-32.2	2.2	10.3	:	:	-13.1
2000-2003	:	-6.1	-6.4	24.6	-15.1	-1.4	-46.5	-25.9	-24.3	-15.6	1.8	1.2	2.7	-5.4	18.3	56.8	:	0.6	3.0	:	10.0	-31.7	-0.6	-7.4	11.7	-42.7	-14.0	-17.7	-6.5	128.4	95.6

Education

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	11 863	13 067	11 035	2 178	346	284	194	2 049	50	257	948	1 709	113	1 600	21	71	135	:	320	12	:	218	1 063	272	62	160	163	475	2 382	213	402
2000	11 186	12 605	10 504	2 101	348	289	181	1 902	42	241	839	1 742	101	1 497	17	81	160	12	309	:	470	231	985	280	57	161	162	322	2 188	210	436
1998	10 613	:	10 258	1 092	342	288	189	1 958	52	240	814	1 721	92	1 452	:	84	138	10	305	:	473	216	:	274	59	166	157	289	2 027	:	445
Employment growth (in thousands)																															
1998-2003	1 250	:	777	-10	4	-4	5	91	-2	17	134	-12	21	148	:	-13	-3	:	15	:	:	2	:	-2	3	-6	6	186	355	:	-43
1998-2000	574	:	246	7	6	1	-8	-56	-10	1	25	21	9	45	:	-3	22	2	4	:	-3	15	:	6	-2	-5	5	33	161	:	-9
2000-2003	676	462	531	65	-2	-5	13	147	8	16	109	-33	12	103	4	-10	-25	:	11	:	:	-13	78	-8	5	-1	1	153	194	3	-34
Employment growth (in %)																															
1998-2003	11.8	:	7.6	-0.9	1.2	-1.4	2.6	4.6	-3.8	7.1	16.5	-0.7	22.8	10.2	:	-15.5	-2.2	:	4.9	:	:	0.9	:	-0.7	5.1	-3.6	3.8	64.4	17.5	:	-9.7
1998-2000	5.4	:	2.4	0.6	1.8	0.3	-4.2	-2.9	-19.2	0.4	3.1	1.2	9.8	3.1	:	-3.6	15.9	20.0	1.3	:	-0.6	6.9	:	2.2	-3.4	-3.0	3.2	11.4	7.9	:	-2.0
2000-2003	6.0	3.7	5.1	3.1	-0.6	-1.7	7.2	7.7	19.0	6.6	13.0	-1.9	11.9	6.9	23.5	-12.3	-15.6	:	3.6	:	:	-5.6	7.9	-2.9	8.8	-0.6	0.6	47.5	8.9	1.4	-7.8
Annualised employment growth (in %)																															
1998-2003	2.3	:	1.5	-0.2	0.2	-0.3	0.5	0.9	-0.8	1.4	3.1	-0.1	4.2	2.0	:	-3.3	-0.4	:	1.0	:	:	0.2	:	-0.1	1.0	-0.7	0.8	10.4	3.3	:	-2.0
1998-2000	2.7	:	1.2	0.3	0.9	0.2	-2.1	-1.4	-10.1	0.2	1.5	0.6	4.8	1.5	:	-1.8	7.7	9.5	0.7	:	-0.3	3.4	:	1.1	-1.7	-1.5	1.6	5.6	3.9	:	-1.0
2000-2003	2.0	1.2	1.7	1.0	-0.2	-0.6	2.3	2.5	6.0	2.2	4.2	-0.6	3.8	2.2	7.3	-4.3	-5.5	:	1.2	:	:	-1.9	2.6	-1.0	2.8	-0.2	0.2	13.8	2.9	0.5	-2.7
Employment share (in %)																															
2003	9.1	6.9	6.9	7.7	8.6	6.1	7.3	5.8	8.8	6.6	5.7	7.0	6.5	7.4	6.6	7.2	9.4	:	8.2	8.1	:	5.9	7.9	5.7	7.1	7.4	6.8	11.1	8.5	7.6	4.6
2000	8.5	6.8	6.7	7.3	8.5	6.3	6.7	5.3	7.6	6.3	5.5	7.6	6.2	7.3	5.9	8.8	11.6	6.7	8.2	:	6.0	6.3	7.0	5.9	6.5	7.7	6.9	8.0	8.0	7.4	4.5
1998	8.3	:	6.8	3.7	8.9	6.0	7.1	5.6	8.7	6.2	6.0	7.8	6.3	7.2	:	8.8	9.5	5.9	8.4	:	6.4	6.0	:	6.1	6.7	7.6	7.3	7.4	7.6	:	4.4
Employment rate (in %)																															
2003	6.3	4.3	4.4	4.3	5.1	4.0	5.5	3.7	5.5	3.8	3.4	4.4	4.2	4.1	4.6	4.5	5.9	:	4.7	:	:	4.1	4.1	3.9	4.4	4.3	4.7	8.2	6.1	4.0	2.7
2000	6.2	4.2	4.2	4.2	5.2	4.1	5.1	3.5	4.6	3.5	3.1	4.7	4.0	3.9	3.9	5.1	6.9	4.2	4.6	:	4.4	4.3	3.8	4.1	4.1	4.4	4.7	5.7	5.7	3.8	2.9
1998	6.1	:	4.2	2.2	5.1	4.1	5.4	3.5	5.7	3.5	3.0	4.7	3.8	3.8	:	5.2	5.9	3.5	4.5	:	4.5	4.1	:	4.1	4.3	4.6	4.6	5.1	5.3	:	2.9
Employment share of high-skilled (in %)																															
2003	:	62.6	63.4	55.1	76.8	46.8	66.8	65.7	67.2	83.0	82.7	62.8	74.1	42.5	87.0	51.3	58.2	70.1	61.9	58.0	73.6	57.3	61.0	56.2	60.7	44.9	66.7	61.7	62.8	70.7	43.4
2000	:	:	63.8	:	78.2	43.0	67.8	66.3	60.1	81.7	82.0	62.9	73.7	43.1	87.2	45.2	76.1	69.3	61.9	:	75.7	59.0	63.7	55.9	55.5	39.7	68.7	71.1	62.1	69.1	42.4
1998	:	:	62.4	:	76.7	39.8	69.4	:	60.8	82.3	80.7	62.0	:	42.0	:	50.2	69.6	:	58.7	:	75.4	48.4	:	57.8	53.8	39.6	65.5	69.4	:	40.0	40.6
Employment share of medium-skilled (in %)																															
2003	:	28.0	27.0	38.2	14.3	48.8	24.5	28.0	28.7	12.5	8.2	24.3	14.6	43.5	10.4	42.4	35.7	19.3	27.9	16.9	19.3	35.7	33.2	11.9	32.9	50.7	25.4	31.7	30.5	20.8	50.0
2000	:	:	26.0	:	11.6	50.6	23.7	26.5	35.2	13.5	7.6	23.4	14.3	45.5	8.4	48.7	18.7	23.7	25.4	:	17.3	34.6	31.1	10.0	37.5	53.5	23.1	21.7	29.9	22.0	49.9
1998	:	:	25.5	:	13.4	52.7	21.1	:	33.2	13.0	7.2	24.0	:	45.8	:	44.7	24.8	:	29.0	:	18.7	44.9	:	11.6	39.4	50.6	27.0	20.1	:	47.6	50.5
Employment share of low-skilled (in %)																															
2003	:	9.3	9.6	6.7	8.9	4.5	8.8	6.2	4.1	4.5	9.1	13.0	11.4	13.9	2.6	6.3	6.1	10.6	10.2	25.1	7.1	7.1	5.8	31.9	6.4	4.3	7.9	6.6	6.8	8.6	6.6
2000	:	:	10.2	:	10.2	6.4	8.5	7.2	4.7	4.8	10.4	13.6	12.0	11.4	4.3	6.0	5.1	7.0	12.6	:	7.0	6.4	5.2	34.2	7.0	6.8	8.3	7.2	8.0	8.9	7.7
1998	:	:	12.1	:	9.8	7.6	9.5	:	6.0	4.7	12.1	14.0	:	12.2	:	5.1	5.6	:	12.3	:	5.9	6.7	:	30.7	6.7	9.8	7.5	10.5	:	12.4	8.9
Employment rate of high-skilled (in %)																															
2003	:	16.0	15.1	20.9	15.9	19.2	13.9	12.3	16.3	20.9	12.5	12.9	13.8	19.4	15.5	15.6	18.1	:	22.8	29.1	:	18.6	22.3	25.2	18.6	20.7	11.5	22.1	15.5	16.3	14.7
2000	:	:	14.8	22.4	17.1	19.1	16.3	11.6	12.7	20.4	12.4	14.8	15.7	21.4	15.2	16.1	15.8	17.0	24.8	:	16.2	19.3	27.2	30.2	17.8	21.3	11.8	15.7	15.4	17.4	16.6
1998	:	:	17.1	11.0	17.6	19.7	17.8	:	14.6	20.4	13.6	15.7	:	22.4	:	18.9	12.2	:	25.0	:	18.2	28.3	:	34.9	20.0	22.5	12.4	14.7	:	:	17.3
Employment rate of medium-skilled (in %)																															
2003	:	2.8	2.9	2.5	2.1	2.8	2.9	1.9	3.2	1.2	1.4	2.7	1.7	4.9	1.3	3.3	3.8	:	2.3	5.3	:	2.5	2.1	3.1	2.4	3.1	2.8	5.1	3.6	1.7	2.4
2000	:	:	2.7	2.4	1.8	3.0	2.4	1.7	3.2	1.3	1.2	2.7	1.5	5.0	0.8	4.3	3.2	2.2	2.1	:	1.8	2.4	1.9	3.0	2.7	3.4	2.6	2.7	3.4	1.7	2.5
1998	:	:	3.1	1.5	2.1	3.1	2.2	:	3.8	1.3	1.1	2.9	:	5.2	:	3.8	3.4	:	2.4	:	2.0	2.9	:	3.9	3.0	3.5	3.0	2.2	:	:	2.6
Employment rate of low-skilled (in %)																															
2003	:	1.2	1.2	1.1	1.1	1.0	2.0	1.0	1.2	0.4	0.6	1.5	1.2	1.1	0.3	1.1	1.6	:	1.6	1.4	:	1.1	1.0	1.6	1.1	0.9	1.3	2.5	2.7	1.0	0.5
2000	:	:	1.2	1.1	1.2	1.4	1.6	1.3	1.1	0.4	0.6	1.6	1.1	0.8	0.4	1.3	1.6	0.7	1.8	:	0.8	0.9	0.8	1.8	1.0	1.4	1.3	1.6	2.8	0.9	0.6
1998	:	:	1.0	0.7	1.1	1.6	1.8	:	1.6	0.3	0.6	1.5	:	0.8	:	1.2	1.5	:	1.6	:	0.7	0.9	:	1.8	0.9	1.8	1.0	2.0	:	:	0.7
Employment growth of high-skilled (in %)																															
1998-2003	:	:	8.8	5.6	0.9	15.7	0.8	:	10.1	8.3	19.2	0.0	:	11.6	:	-13.4	:	:	11.1	:	0.2	:	:	-2.3	17.0	9.7	5.7	46.8	:	:	-3.3
1998-2000	:	:	3.9	7.1	3.6	9.2	-8.1	:	-18.8	-0.2	4.7	2.5	:	5.4	:	-10.5	30.3	:	7.3	:	-0.4	:	:	-0.3	-1.8	-2.3	8.2	15.0	:	:	2.1
2000-2003	:	5.4	6.2	2.3	-2.6	6.0	9.8	6.7	35.5	8.6	13.8	-2.5	13.1	5.8	26.3	-3.2	:	13.7	3.6	:	0.6	1.0	3.3	-2.0	19.1	12.3	-2.2	27.6	10.0	4.3	-5.2
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	9.4	-3.0	7.7	-8.9	21.5	:	-13.6	3.0	32.2	0.0	:	4.8	:	-19.4	:	:	1.5	:	6.2	:	:	3.4	-13.7	-3.1	-2.1	161.3	:	:	-10.4
1998-2000	:	:	-0.7	-3.8	-12.5	-3.1	5.5	:	-12.8	4.2	9.0	-1.1	:	2.3	:	8.4	-10.2	:	-10.7	:	-8.0	:	:	-11.2	-9.4	3.0	-11.8	21.6	:	:	-3.1
2000-2003	:	10.1	11.0	7.5	23.1	-6.0	15.2	13.8	-1.0	-1.2	21.3	1.1	14.6	2.5	55.6	-25.6	:	-8.4	13.6	:	15.4	7.4	15.1	16.3	-4.7	-6.0	11.0	114.9	10.9	-4.0	-7.5
Employment growth of low-skilled (in %)																															
1998-2003	:	:	3.4	-24.8	-8.8	-42.3	-2.8	:	-32.0	2.9	-12.1	-8.4	:	26.2	:	3.8	:	:	-12.6	:	24.4	:	:	4.5	-2.0	-57.5	9.4	3.3	:	:	-32.2
1998-2000	:	:	-1.4	-7.0	5.5	-14.8	-15.2	:	-35.8	2.5	-11.0	-1.4	:	-4.0	:	16.9	8.7	:	4.4	:	18.0	:	:	14.7	-0.8	-32.5	14.0	-23.1	:	:	-15.1
2000-2003	:	0.6	1.3	-0.1	-13.6	-32.2	14.6	-7.1	6.0	0.3	-1.2	-7.1	6.5	31.5	-23.9	-11.2	:	69.6	-16.2	:	5.4	15.1	21.8	-8.8	-1.3	-37.0	-4.0	34.3	-8.5	-2.2	-20.1

Annex 6.5. Key employment indicators by sector (NACE-1) in the EU and the US, 1998-2003

Health and social services

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	14 623	17 507	15 675	1 765	518	291	487	3 887	33	170	980	2 783	165	1 311	14	62	95	:	268	10	:	313	800	289	46	146	352	691	3 188	156	376
2000	13 959	16 813	14 992	1 821	487	281	471	3 585	27	182	808	2 408	131	1 259	11	46	91	14	246	:	1 056	293	927	253	46	146	326	757	2 963	165	316
1998	13 436	:	14 330	855	415	260	455	3 370	32	184	736	2 329	112	1 273	:	50	92	12	237	:	984	290	:	194	41	143	305	754	2 918	:	341
Employment growth (in thousands)																															
1998-2003	1 186	:	1 345	86	103	31	32	517	1	-14	244	454	53	38	:	12	3	:	31	:	:	23	:	95	5	3	47	-63	270	:	35
1998-2000	522	:	662	28	72	21	16	215	-5	-2	72	79	19	-14	:	-4	-1	2	9	:	72	3	:	59	5	3	21	3	45	:	-25
2000-2003	664	694	683	-66	31	10	16	302	6	-12	172	375	34	52	3	16	4	:	22	:	:	20	-127	36	0	0	26	-66	225	-9	60
Employment growth (in %)																															
1998-2003	8.8	:	9.4	10.1	24.8	11.9	7.0	15.3	3.1	-7.6	33.2	19.5	47.3	3.0	:	24.0	3.3	:	13.1	:	:	7.9	:	49.0	12.2	2.1	15.4	-8.4	9.3	:	10.3
1998-2000	3.9	:	4.6	3.3	17.3	8.1	3.5	6.4	-15.6	-1.1	9.8	3.4	17.0	-1.1	:	-8.0	-1.1	16.7	3.8	:	7.3	1.0	:	30.4	12.2	2.1	6.9	0.4	1.5	:	-7.3
2000-2003	4.8	4.1	4.6	-3.6	6.4	3.6	3.4	8.4	22.2	-6.6	21.3	15.6	26.0	4.1	27.3	34.8	4.4	:	8.9	:	:	6.8	-13.7	14.2	0.0	0.0	8.0	-8.7	7.6	-5.5	19.0
Annualised employment growth (in %)																															
1998-2003	1.7	:	1.8	1.9	4.5	2.3	1.4	2.9	0.6	-1.6	5.9	3.6	8.1	0.6	:	4.4	0.6	:	2.5	:	:	1.5	:	8.3	2.3	0.4	2.9	-1.7	1.8	:	2.0
1998-2000	1.9	:	2.3	1.6	8.3	4.0	1.7	3.1	-8.1	-0.5	4.8	1.7	8.2	-0.6	:	-4.1	-0.5	8.0	1.9	:	3.6	0.5	:	14.2	5.9	1.0	3.4	0.2	0.8	:	-3.7
2000-2003	1.6	1.4	1.5	-1.2	2.1	1.2	1.1	2.7	6.9	-2.2	6.6	4.9	8.0	1.4	8.4	10.5	1.4	:	2.9	:	:	2.2	-4.8	4.5	0.0	0.0	2.6	-3.0	2.5	-1.9	6.0
Employment share (in %)																															
2003	11.2	9.3	9.7	6.2	12.9	6.3	18.3	10.9	5.8	4.4	5.9	11.4	9.5	6.0	4.4	6.3	6.6	:	6.9	6.8	:	8.4	6.0	6.1	5.2	6.8	14.8	16.1	11.3	5.5	4.3
2000	10.6	9.0	9.5	6.4	11.9	6.1	17.5	10.0	4.9	4.7	5.3	10.5	8.0	6.1	3.8	5.0	6.6	7.8	6.5	:	13.5	8.0	6.6	5.4	5.3	7.0	13.9	18.7	10.8	5.8	3.2
1998	10.6	:	9.5	2.9	10.8	5.5	17.2	9.6	5.4	4.8	5.4	10.5	7.7	6.3	:	5.2	6.3	7.1	6.5	:	13.4	8.1	:	4.3	4.7	6.5	14.1	19.4	11.0	:	3.4
Employment rate (in %)																															
2003	7.8	5.8	6.3	3.5	7.6	4.1	13.7	7.1	3.6	2.5	3.5	7.2	6.1	3.4	3.1	3.9	4.1	:	3.9	:	:	5.8	3.1	4.1	3.3	3.9	10.2	11.9	8.1	2.9	2.5
2000	7.8	5.6	6.0	3.7	7.2	4.0	13.4	6.5	2.9	2.6	3.0	6.5	5.2	3.3	2.5	2.9	3.9	4.9	3.6	:	9.9	5.5	3.6	3.7	3.3	4.0	9.5	13.3	7.7	3.0	2.1
1998	7.8	:	5.8	1.7	6.2	3.7	12.9	6.1	3.5	2.7	2.7	6.3	4.6	3.3	:	3.1	3.9	4.3	3.5	:	9.3	5.4	:	2.9	3.0	3.9	8.9	13.3	7.7	:	2.2
Employment share of high-skilled (in %)																															
2003	:	38.0	38.9	24.2	51.1	20.4	43.8	32.7	36.5	52.3	57.3	34.8	46.5	34.4	63.3	21.4	32.3	23.3	23.1	26.7	29.3	40.8	27.6	28.6	37.0	18.5	40.1	34.8	47.3	67.4	21.6
2000	:	:	39.0	:	52.3	20.1	38.4	34.2	48.3	47.3	57.5	38.4	45.0	32.6	56.5	29.6	67.4	23.6	22.0	:	31.4	22.0	22.2	29.8	35.6	17.1	43.2	37.3	45.7	61.2	20.8
1998	:	:	38.2	:	53.0	19.0	37.3	:	48.9	49.9	56.2	38.4	:	32.2	:	27.0	64.9	:	21.1	:	32.1	17.2	:	29.0	31.7	16.6	37.7	37.9	:	21.5	20.2
Employment share of medium-skilled (in %)																															
2003	:	44.8	43.4	66.4	31.5	72.7	45.2	53.3	54.6	31.3	21.8	37.5	30.5	41.2	24.6	70.6	59.7	50.8	63.6	21.2	52.5	46.4	67.5	14.5	54.3	75.0	47.3	55.4	43.8	25.2	68.6
2000	:	:	43.2	:	27.4	72.4	46.8	50.5	46.2	35.6	21.1	36.5	32.0	46.0	30.6	64.3	25.2	47.9	60.8	:	50.4	63.5	69.9	13.7	53.9	75.7	44.4	49.9	44.0	29.6	69.5
1998	:	:	39.4	:	27.9	74.3	46.5	:	40.3	31.2	19.2	35.1	:	40.6	:	64.2	27.3	:	59.6	:	51.1	66.5	:	12.7	57.2	75.4	48.5	52.1	:	60.7	67.6
Employment share of low-skilled (in %)																															
2003	:	17.2	17.7	9.5	17.4	6.9	11.0	13.9	9.0	16.3	20.9	27.7	23.0	24.5	12.1	8.1	7.9	25.9	13.3	52.2	18.2	12.8	4.9	56.8	8.7	6.4	12.6	9.8	8.9	7.4	9.8
2000	:	:	17.8	:	20.3	7.5	14.8	15.3	5.5	17.0	21.4	25.1	22.9	21.4	12.9	6.1	7.4	28.5	17.2	:	18.1	14.5	7.9	56.6	10.5	7.2	12.5	12.8	10.3	9.2	9.7
1998	:	:	22.4	:	19.2	6.7	16.2	:	10.7	19.0	24.7	26.5	:	27.2	:	8.8	7.8	:	19.3	:	16.8	16.4	:	58.3	11.1	8.0	13.7	10.1	:	17.9	12.2
Employment rate of high-skilled (in %)																															
2003	:	12.7	13.3	7.5	15.9	8.6	22.4	11.5	5.5	8.8	9.0	11.6	12.4	12.9	7.6	5.7	7.0	:	7.1	11.3	:	18.5	7.6	13.6	8.6	7.7	15.0	18.0	15.2	11.4	6.9
2000	:	:	12.8	8.1	16.0	8.6	24.0	11.2	6.3	9.0	8.4	12.5	12.3	13.6	6.4	5.8	7.8	7.1	7.0	:	15.1	9.6	8.9	14.5	9.3	8.3	15.0	19.2	14.7	12.1	5.9
1998	:	:	13.4	4.4	14.7	8.4	22.9	:	7.3	9.5	8.6	13.2	:	15.1	:	6.2	7.6	:	7.0	:	16.1	13.5	:	12.4	8.1	8.1	13.9	20.8	:	:	6.6
Employment rate of medium-skilled (in %)																															
2003	:	5.9	6.6	3.7	7.0	4.2	13.1	6.9	3.8	2.1	3.9	6.6	5.0	3.8	2.1	4.8	4.4	:	4.4	5.6	:	4.6	3.3	4.0	3.0	4.2	11.1	12.7	6.8	1.6	3.1
2000	:	:	6.3	3.9	6.0	4.1	12.3	6.2	2.6	2.5	3.2	5.9	4.3	4.2	2.0	3.1	2.4	5.4	4.0	:	12.0	5.8	4.0	3.7	3.1	4.3	10.2	14.7	6.4	1.8	2.6
1998	:	:	6.1	1.8	5.2	3.9	11.8	:	2.9	2.4	2.7	5.7	:	4.1	:	3.3	2.5	:	3.9	:	11.3	5.7	:	3.0	3.0	4.5	10.4	15.1	:	:	2.7
Employment rate of low-skilled (in %)																															
2003	:	2.8	3.1	1.1	3.3	1.6	6.2	4.3	1.6	0.9	1.3	5.1	3.6	1.6	1.0	1.2	1.5	:	1.7	2.4	:	2.9	0.6	3.1	1.1	1.2	4.4	5.5	4.6	0.6	0.7
2000	:	:	2.9	1.3	3.4	1.5	7.4	5.0	0.8	0.9	1.1	4.0	2.7	1.3	0.8	0.7	1.3	3.7	1.9	:	4.8	2.8	1.1	2.7	1.2	1.3	3.9	6.7	4.6	0.8	0.6
1998	:	:	2.4	0.7	2.7	1.3	7.5	:	1.8	1.0	1.1	4.0	:	1.6	:	1.2	1.4	:	1.9	:	4.1	3.0	:	2.4	1.1	1.3	3.6	5.1	:	:	0.8
Employment growth of high-skilled (in %)																															
1998-2003	:	:	14.5	-1.7	20.7	21.0	26.6	:	-24.9	-2.1	35.8	7.2	:	10.0	:	-3.5	:	:	23.8	:	2.3	:	:	48.6	32.1	13.9	23.2	-15.5	:	:	18.3
1998-2000	:	:	6.4	6.4	16.1	14.8	5.2	:	-19.1	-5.7	12.6	3.2	:	0.0	:	-0.5	2.8	:	8.1	:	5.3	:	:	34.9	26.1	5.4	22.6	-0.8	:	:	-4.0
2000-2003	:	7.6	8.2	1.1	4.0	5.4	20.3	3.5	-7.2	3.8	20.7	3.9	30.4	10.0	46.0	-3.0	:	0.5	14.6	:	-2.9	101.2	7.5	10.1	4.8	8.0	0.5	-14.9	13.3	4.7	23.2
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	13.5	18.9	41.7	10.5	4.9	:	36.4	-6.3	51.4	26.3	:	4.5	:	34.2	:	:	20.7	:	15.1	:	:	72.2	7.4	1.3	13.1	-2.4	:	:	12.1
1998-2000	:	:	6.4	3.2	15.6	5.8	2.8	:	-6.1	13.6	20.9	7.5	:	11.8	:	-8.9	-8.8	:	5.8	:	6.0	:	:	41.3	5.5	2.4	-2.0	-3.5	:	:	-4.3
2000-2003	:	7.5	9.3	-1.5	22.6	4.5	2.0	14.2	45.2	-17.4	25.2	17.4	20.5	-6.5	4.9	47.3	:	7.8	14.1	:	8.6	-20.5	-16.4	21.8	1.8	-1.1	15.4	1.2	8.9	-19.0	17.1
Employment growth of low-skilled (in %)																															
1998-2003	:	:	11.5	-10.0	13.5	16.3	-26.4	:	-15.5	-19.6	12.8	23.8	:	-7.2	:	12.3	:	:	-22.1	:	21.4	:	:	46.4	-11.8	-18.3	6.7	-10.5	:	:	-11.1
1998-2000	:	:	-0.9	-5.0	24.5	21.3	-6.6	:	-57.9	-10.8	-4.3	-2.2	:	-22.2	:	-36.8	-6.8	:	-7.5	:	15.8	:	:	27.4	5.1	-8.5	-2.7	28.5	:	:	-26.1
2000-2003	:	6.1	8.0	-17.2	-8.8	-4.1	-21.2	-1.3	100.7	-9.9	17.9	26.6	26.7	19.3	22.4	77.5	:	-7.8	-15.8	:	4.9	-3.6	-46.3	14.9	-16.1	-10.7	9.6	-30.4	-5.0	-23.7	20.2

Other services and households

	US	EU-25	EU-15	NMS10	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO
Total employment (in thousands)																															
2003	4.2	4.5	4.7	3.8	3.9	3.9	4.9	5.3	5.1	3.8	4.1	4.1	4.4	4.4	5.4	5.6	3.9	:	4.4	4.1	:	4.5	3.3	3.1	4.2	3.6	5.6	5.3	5.4	3.7	2.5
2000	4.9	4.5	4.6	3.8	3.5	3.5	4.7	5.3	5.2	3.2	3.8	4.3	4.4	4.3	4.5	4.5	3.7	2.8	4.3	:	4.1	4.2	3.6	3.1	3.9	3.5	5.4	5.3	5.5	3.1	2.2
1998	4.8	:	4.5	1.9	3.9	3.6	4.2	5.0	4.7	3.5	3.7	4.2	4.5	4.2	:	4.6	4.0	2.9	4.7	:	3.9	4.4	:	3.1	3.3	3.3	5.1	5.0	5.3	:	2.0
Employment growth (in thousands)																															
1998-2003	-663	:	782	36	7	10	19	114	1	17	176	60	11	114	:	11	-2	:	4	:	:	12	:	7	8	4	24	34	120	:	19
1998-2000	319	:	484	-18	-8	-8	14	134	1	-9	79	58	6	30	:	-3	-7	0	-6	:	34	-2	:	10	5	0	16	20	95	:	16
2000-2003	-982	244	298	-6	15	18	5	-20	0	26	97	2	5	84	4	14	5	:	10	:	:	14	-64	-3	3	4	8	14	25	17	3
Employment growth (in %)																															
1998-2003	-10.9	:	11.5	6.3	4.6	5.8	17.0	6.5	3.6	12.8	35.0	6.4	16.7	13.4	:	25.0	-3.4	:	2.4	:	:	7.6	:	5.1	27.6	5.5	21.8	17.6	8.5	:	9.5
1998-2000	5.2	:	7.1	-3.1	-5.3	-4.7	12.5	7.6	3.6	-6.8	15.7	6.2	9.1	3.5	:	-6.8	-12.1	0.0	-3.6	:	11.8	-1.3	:	7.2	17.2	0.0	14.5	10.4	6.7	:	8.0
2000-2003	-15.3	2.9	4.1	-0.6	10.5	11.0	4.0	-1.1	0.0	21.0	16.7	0.2	6.9	9.6	30.8	34.1	9.8	:	6.1	:	:	9.0	-12.6	-2.0	8.8	5.5	6.3	6.6	1.7	19.5	1.4
Annualised employment growth (in %)																															
1998-2003	-2.3	:	2.2	1.2	0.9	1.1	3.2	1.3	0.7	2.4	6.2	1.3	3.1	2.6	:	4.6	-0.7	:	0.5	:	:	1.5	:	1.0	5.0	1.1	4.0	3.3	1.6	:	1.8
1998-2000	2.6	:	3.5	-1.6	-2.7	-2.4	6.1	3.7	1.8	-3.4	7.6	3.1	4.4	1.8	:	-3.5	-6.2	0.0	-1.8	:	5.7	-0.6	:	3.6	8.3	0.0	7.0	5.1	3.3	:	3.9
2000-2003	-5.4	1.0	1.3	-0.2	3.4	3.6	1.3	-0.4	0.0	6.6	5.3	0.1	2.3	3.1	9.4	10.3	3.2	:	2.0	:	:	2.9	-4.4	-0.7	2.9	1.8	2.1	2.1	0.6	6.1	0.5
Employment share (in %)																															
2003	4.2	4.5	4.7	3.8	3.9	3.9	4.9	5.3	5.1	3.8	4.1	4.1	4.4	4.4	5.4	5.6	3.9	:	4.4	4.1	:	4.5	3.3	3.1	4.2	3.6	5.6	5.3	5.4	3.7	2.5
2000	4.9	4.5	4.6	3.8	3.5	3.5	4.7	5.3	5.2	3.2	3.8	4.3	4.4	4.3	4.5	4.5	3.7	2.8	4.3	:	4.1	4.2	3.6	3.1	3.9	3.5	5.4	5.3	5.5	3.1	2.2
1998	4.8	:	4.5	1.9	3.9	3.6	4.2	5.0	4.7	3.5	3.7	4.2	4.5	4.2	:	4.6	4.0	2.9	4.7	:	3.9	4.4	:	3.1	3.3	3.3	5.1	5.0	5.3	:	2.0
Employment rate (in %)																															
2003	2.9	2.9	3.0	2.1	2.3	2.5	3.7	3.4	3.2	2.2	2.4	2.6	2.9	2.5	3.7	3.5	2.4	:	2.5	:	:	3.1	1.7	2.1	2.6	2.1	3.9	3.9	3.9	2.0	1.5
2000	3.6	2.8	2.9	2.2	2.1	2.3	3.6	3.4	3.2	1.8	2.1	2.7	2.8	2.3	3.0	2.6	2.2	1.7	2.4	:	3.0	2.9	2.0	2.1	2.4	2.0	3.7	3.7	3.9	1.6	1.4
1998	3.5	:	2.8	1.2	2.3	2.4	3.2	3.2	3.1	1.9	1.9	2.5	2.7	2.2	:	2.7	2.5	1.8	2.5	:	2.7	2.9	:	2.0	2.1	2.0	3.2	3.4	3.7	:	1.3
Employment share of high-skilled (in %)																															
2003	:	26.3	26.7	21.5	29.3	15.5	28.1	29.4	39.6	22.1	31.0	29.1	29.0	11.9	34.4	20.5	31.9	18.3	24.1	11.9	31.6	21.7	20.7	12.9	22.3	13.2	28.2	28.7	29.9	24.0	21.9
2000	:	:	25.8	:	26.4	14.4	22.9	28.3	31.1	14.7	27.9	30.0	22.8	10.2	29.3	27.3	50.8	18.4	20.1	:	32.6	22.0	15.0	9.5	21.0	15.3	27.0	32.0	29.7	28.8	19.4
1998	:	:	21.1	:	30.9	13.7	26.9	:	38.0	16.3	24.5	25.5	:	8.5	:	31.3	45.6	:	17.5	:	33.4	13.8	:	7.5	21.6	16.8	34.6	28.1	:	24.6	24.5
Employment share of medium-skilled (in %)																															
2003	:	50.0	48.5	67.9	43.5	75.5	46.3	55.9	54.4	46.8	26.4	46.5	41.0	43.5	37.3	70.2	59.0	56.7	63.6	11.9	43.7	61.6	71.4	16.5	69.0	80.4	48.8	51.0	58.0	54.5	63.9
2000	:	:	48.8	:	45.2	76.4	52.6	55.7	53.3	49.0	26.5	46.9	40.0	44.1	33.6	64.8	43.6	63.0	64.8	:	44.6	60.8	73.2	17.9	68.1	74.8	50.2	45.0	57.3	52.7	55.7
1998	:	:	40.6	:	41.2	75.0	45.5	:	51.9	43.3	23.2	46.3	:	39.8	:	60.2	44.3	:	65.1	:	41.7	67.7	:	18.2	65.6	74.4	40.5	49.4	:	59.6	56.3
Employment share of low-skilled (in %)																															
2003	:	23.7	24.8	10.6	27.2	9.0	25.7	14.7	6.0	31.1	42.6	24.4	30.0	44.6	28.2	9.3	9.1	25.0	12.4	76.2	24.7	16.7	7.9	70.6	8.7	6.4	23.0	20.3	12.1	21.5	14.2
2000	:	:	25.3	:	28.4	9.3	24.5	16.0	15.6	36.4	45.6	23.2	37.3	45.7	37.1	7.9	5.6	18.7	15.2	:	22.7	17.3	11.8	72.6	10.9	10.0	22.8	23.0	13.0	18.5	24.9
1998	:	:	38.3	:	28.0	11.3	27.7	:	10.1	40.4	52.3	28.2	:	51.7	:	8.6	10.1	:	17.4	:	24.9	18.4	:	74.3	12.8	8.9	24.9	22.5	:	15.8	19.2
Employment rate of high-skilled (in %)																															
2003	:	4.5	4.5	3.9	2.8	4.1	3.9	5.1	5.6	3.9	3.9	3.8	3.9	3.4	6.1	5.0	4.2	:	4.9	3.0	:	5.2	3.2	3.4	4.1	3.2	4.1	4.9	4.9	2.8	4.1
2000	:	:	4.3	3.7	2.4	3.7	3.9	5.0	4.7	2.7	3.4	4.3	3.6	3.1	4.4	4.8	3.4	2.1	4.3	:	4.9	5.4	3.3	2.8	4.1	3.8	3.7	4.7	5.1	3.0	3.8
1998	:	:	3.5	2.4	3.2	4.1	4.1	:	4.8	2.9	2.9	3.8	:	2.7	:	6.1	3.4	:	4.2	:	5.0	5.9	:	2.2	4.0	4.5	4.6	4.0	:	:	4.7
Employment rate of medium-skilled (in %)																															
2003	:	3.6	4.0	2.5	3.1	2.8	3.7	3.7	3.6	3.6	4.7	4.5	3.5	3.3	6.3	4.7	2.8	:	2.9	1.9	:	3.4	2.0	3.1	3.1	2.6	4.6	3.9	4.8	2.3	1.7
2000	:	:	3.9	2.5	3.1	2.6	3.9	3.9	3.5	3.3	3.8	4.4	3.3	3.1	3.8	2.9	2.4	3.0	2.9	:	3.3	3.3	2.4	3.2	2.9	2.2	4.6	3.8	4.7	1.7	1.5
1998	:	:	3.4	1.3	2.9	2.7	2.9	:	3.2	3.3	3.0	4.2	:	3.0	:	2.8	2.7	:	3.0	:	2.9	3.4	:	3.2	2.5	2.3	3.3	3.7	:	:	1.4
Employment rate of low-skilled (in %)																															
2003	:	3.0	3.3	0.9	1.9	1.3	4.3	2.6	1.1	2.4	4.1	4.1	2.7	2.9	6.0	1.6	1.5	:	1.1	2.2	:	2.4	0.6	4.8	0.9	0.7	3.3	3.7	3.8	1.3	0.6
2000	:	:	3.3	1.0	1.9	1.1	3.6	3.2	2.5	2.2	3.9	3.9	2.8	2.7	4.8	1.0	0.5	3.8	1.1	:	1.9	2.3	0.9	4.9	0.9	0.9	2.9	3.4	3.7	0.8	1.2
1998	:	:	3.2	0.6	1.6	1.5	3.6	:	1.5	2.4	3.6	3.8	:	2.8	:	1.1	1.2	:	1.3	:	2.1	2.3	:	4.6	1.0	0.7	2.6	2.9	:	:	0.8
Employment growth of high-skilled (in %)																															
1998-2003	:	:	32.1	6.5	0.3	18.7	23.5	:	15.6	54.8	70.5	20.4	:	61.2	:	-16.7	:	:	41.6	:	8.5	:	:	88.8	31.3	-16.5	-0.8	20.7	:	:	-2.7
1998-2000	:	:	18.7	0.0	-18.9	0.5	-5.4	:	-7.8	-14.9	32.0	24.4	:	25.0	:	-17.1	0.5	:	10.6	:	10.5	:	:	43.5	13.8	-9.0	-11.5	27.2	:	:	-15.1
2000-2003	:	8.1	7.6	13.9	23.6	18.1	30.5	3.4	25.4	81.9	29.1	-3.2	38.9	29.0	51.4	0.4	:	33.6	28.0	:	-1.8	1.7	22.1	31.5	15.4	-8.2	12.1	-5.1	3.4	0.6	14.6
Employment growth of medium-skilled (in %)																															
1998-2003	:	:	18.4	11.9	11.7	5.6	20.2	:	16.3	23.5	53.3	5.8	:	25.7	:	48.0	:	:	0.8	:	20.1	:	:	-0.2	33.7	14.3	47.1	22.0	:	:	23.6
1998-2000	:	:	12.4	-0.7	4.3	-2.3	28.5	:	15.9	7.2	32.5	7.2	:	14.8	:	2.4	-11.3	:	-3.7	:	21.0	:	:	11.3	21.3	0.5	41.2	1.9	:	:	6.4
2000-2003	:	2.8	3.5	-0.1	7.1	8.2	-6.5	-0.1	0.4	15.2	15.7	-1.3	11.9	9.5	43.2	44.6	:	20.4	4.7	:	-0.8	4.3	-13.9	-10.3	10.2	13.8	4.2	19.8	4.0	24.8	16.2
Employment growth of low-skilled (in %)																															
1998-2003	:	:	1.1	-18.7	2.9	-17.3	9.5	:	-34.5	-12.0	9.5	-8.9	:	-1.0	:	38.1	:	:	-26.5	:	14.0	:	:	4.6	-13.6	-23.9	12.7	6.5	:	:	-19.8
1998-2000	:	:	-4.4	-13.1	-3.5	-21.7	-1.6	:	73.9	-14.7	1.1	-13.0	:	-8.5	:	-12.7	-50.4	:	-15.5	:	3.4	:	:	10.8	-0.6	12.2	4.4	14.0	:	:	39.1
2000-2003	:	0.5	2.2	-16.1	6.6	5.7	11.2	-8.2	-62.4	3.2	8.3	4.7	-12.2	8.2	-1.9	58.1	:	78.9	-13.0	:	10.2	-0.3	-41.5	-5.6	-13.1	-32.2	7.9	-6.6	-4.1	39.7	-42.3

Chapter 4

Labour market transitions and advancement: temporary employment and low-pay in Europe[1]

1. Introduction

The acceleration of technological innovation and the emergence of the knowledge society, the globalisation process and the development of the service sector have caused the European economies to undergo a particular process of structural change since the 1970s. This evolution in the economy as been mirrored by changes in society at large: the individualisation of social and economic relations, the evolving role and aspirations of women, the growing importance of new family arrangements (such as lone parent families and cohabitation), and greater opportunities derived from better education and health.

The consequence of all these factors on the labour market has been to transform both working lives, which are now more complex, and working patterns that have become more diverse and irregular. This means that individuals now have to face a greater number of transitions, including those from school to work, between jobs and working statuses, between work and training, between career breaks and care periods, between working life and retirement[2].

The three complementary and mutually supportive objectives of the European Employment Strategy (i.e. full employment, quality and productivity at work, and social cohesion and inclusion) can only be achieved through increased adaptability to anticipate, trigger and absorb this economic and social change, with labour market flexibility as a key component of the adaptability agenda. The greater flexibility needed to face the increasing transitional nature of today's labour market need to be combined with security in terms of long-term employability of the workforce.

2. The policy context

These issues are at the core of the European Employment Strategy. Guideline 3 of the 2003 *Employment Guidelines* aims at addressing change and promoting adaptability in the labour market. It calls on Member States to "review and, where appropriate, reform overly restrictive elements in employment legislation that affect labour market dynamics…and undertake other appropriate measures to promote: diversity of contractual and working arrangements, including arrangements on working time, favouring career progression, and a better balance … between flexibility and security". It also highlights the importance for workers, in particular low-skilled workers, to have access to training and to promote occupational mobility and remove obstacles to geographical mobility.

Aspects related to the long-term employability of the workforce and to individual life chances in the labour market have been recognised as central dimensions of quality in work. The European Commission identified ten dimensions of job quality in a Communication in 2001[3]. For each of these, one or more indicators have been proposed – and adopted at the Laeken Council in December 2001 – as a means of assessing the quality of work in Europe and monitoring its evolution over time[4].

These indicators include the transitions by pay level and contract status (used to monitor the intrinsic job quality dimension); the shares of employees voluntarily and involuntarily in part-time work and fixed term-contracts (used to monitor the flexibility and security dimension); the labour market transitions by main activity status and of unemployed people into employment and training (used to monitor the inclusion and access to the labour market dimension)[5].

The need to promote flexibility combined with security has been further stressed by the report of the

1 *This chapter has been written with the invaluable contribution of Stefano Gagliarducci, European University Institute, Florence.*
2 *For an overview of recent research on transitional labour markets, see G. Schmid and K. Schomann (eds), 2003,* The concept of Transitional Labour Markets and Some Policy Conclusions: the State of the Art*, tlm.net working paper.*
3 *European Commission (2001),* Employment and social policies: a framework for investing in quality*, COM (2001) 313 final.*
4 *European Council (2001),* Indicators of quality in work*, Report by the Employment Committee to the European Council, 14263/01.*
5 *Figures presented in this report do not necessarily coincide with those related to the structural indicators due to definitional differences. In particular, in this chapter economic status is classified using self-defined main activity status and pay levels as proportions of median gross hourly pay. Structural indicators used to monitor the Employment Guidelines are published each year in the Joint Employment Report by the Council of the European Union and the European Commission (see http://europa.eu.int/comm/employment_social/employment_strategy/employ_en.htm).*

Employment Taskforce chaired by Wim Kok where it is stated that better responsiveness of EU economies to change requires a high degree of flexibility in labour markets, in particular through modern work organisation and a diversity of contractual and working arrangements. However, it is pointed out that greater flexibility can only succeed if combined with adequate security for workers. In particular, in the dynamic framework that is needed to capture the increasing transitional nature of today's labour markets, security is increasingly associated not with the fact of preserving a job for life, but rather with building and preserving people's ability to *remain and progress in the labour market*, while using the welfare system as an instrument of last resort.

More specifically, the report urges Member States and social partners to ensure that there is adequate security for workers under all forms of contracts and to prevent the emergence of a two-tier labour market[6]. It has been pointed out that the risk of segmentation of the labour market is not only between non-employed ('outsiders') and employed ('insiders'), but also between permanently employed 'insiders', who can look forward to a life of continuous employment and careers offering promotion and raising incomes and precariously and informally employed 'outsiders'[7]. In other words, between employment and non-employment, attention has been drawn to that grey area represented by workers in precarious employment. Due to market and institutional failures, these individuals "at the lower end" of the labour market suffer from discontinuous employment, little improvement in their human capital and, consequently, few opportunities to move up the job ladder[8].

If it is true that "the best safeguard against social exclusion is a job", as stated in the conclusions of the Lisbon Council, it is also important to note that social exclusion can also be seen as not having the prospect of a career that evolves over time, not having access to the resources needed to ensure employability and not being able fully to participate in all spheres of social life because of a lack of secure employment prospects[9].

3. Key issues

The focus of this chapter will be on the issue of employment security and in particular on the two key aspects of job retention and advancement. The former refers to the capacity of individuals to remain in employment, either by holding the same job or by moving between jobs. However, transitions in the labour market are not restricted to those between employment and non-employment (either inactivity or unemployment). Transitions between different types of employment (either temporary or permanent) and between employment and self-employment or education and training are also taken in consideration.

Self-employment can be an effective way for individuals to respond to changes in labour demand, to fully utilise their entrepreneurial potential or to adjust to changes in personal circumstances. At the same time, this category often includes hybrid forms of contractual arrangements that are open to potential abuse. This category has been referred to as 'pseudo self-employment' or 'dependent self-employment' and includes characteristics of both dependent employment, such as primarily personal work, continuity over time, single client, tasks subject to direction, and of self-employment proper, such as pay related to results and no social security[10].

Lifelong learning is considered as an essential response to technological and structural changes in the economy. Re-skilling is often required to facilitate reintegration into the labour market in the face of a job loss, while on-going education and training is essential to prevent skills obsolescence and to increase the continuing employability of individuals. Therefore this chapter will look at education and training as an integral part of labour market transitions and not just as a one-off period that takes place before entry in the labour market.

Job advancement is a multi-dimensional concept that could include upward wage and occupational mobility, increased productivity, improved skills, better quality in work and life-work balance. Since some of these aspects have been analysed in other Commission reports[11] this chapter will focus on upward wage mobility, which can be taken as a proxy for several other dimensions of the job ladder. In particular, special attention will be paid to the lower end of the wage distribution and to the condi-

6 *Particular attention is drawn to social protection systems that need to be adapted to support mobility in the labour market and facilitate transitions between different statuses, such as work, training, career breaks or self-employment (job-to-job insurance).*

7 *Page 2 in Schmid G. and Schömann K. (eds), 2003,* The concept of Transitional Labour Markets and Some Policy Conclusions: the State of the Art*, tlm.net working paper.*

8 *OECD (2002),* Upgrading the skills of the low-qualified: a new local policy agenda*, LEED programme and OECD 2001 and 2003 Employment Outlook, Paris.*

9 *For a comprehensive analysis of these issues, see G. Schmid and B. Gazier, 2000,* The Dynamics of Full Employment: Social Integration through Transitional Labour Markets*, Edward Elgar.*

10 *For a thorough presentation of these issues see Perulli A., 2003,* Economically dependent/ quasi subordinate (parasubordinate) employment: legal, social and economic aspects*, A study for the European Commission. See also: Schmid G., 2000,* Towards a theory of transitional labour markets*, in Schmid and Gazier (2000) op. cit.*

11 *In particular, see the* Employment in Europe *reports 2002 and 2003 and European Commission (2003)* Improving quality in work: a review of recent progress *COM(2003) 728 final.*

tions that may help workers to exit from a low-pay status.

Section one of this chapter looks at employment retention and the diversity of contractual arrangements. Section two concentrates on the incidence of low pay and career advancement. Section three will use econometric models to assess the key determinants of labour market transitions, highlighting the role of education and training and of public employment services to facilitate job search and labour market attachment. Finally, the annex reports on the key findings in the academic literature concerning the effectiveness of temporary contracts to secure long-term employability and their possible role as stepping-stones towards more stable and permanent forms of contract.

The main data source for this chapter, except where otherwise specified, is the European Community Household Panel survey for the years 1994 to 2001. The ECHP is the only comparable longitudinal data source at the European level and for this reason it is used in this chapter on labour market dynamics. Therefore, figures reported in this chapter may slightly differ from those presented elsewhere in this report[12], due to different survey design and definitions used. In particular, it should be noted that in this chapter employment is defined as "working 15 hours per week or more" due to the survey design and data robustness. All other definitions are specified where relevant. The analysis in this chapter will be restricted to the EU15 since the ECHP is not available for the new Member States.

Table 45 - Main activity status by year[14] – EU total – (row percentages)

	1995	1997	1999	2001
Permanent work	42.3	42.7	44.4	45.4
Temporary work	6	6.2	6.1	6.9
Self-employment	9.3	9.1	8.9	9.1
Not employed	32.7	32.1	30.9	29
Education/training	9.8	10	9.7	9.7

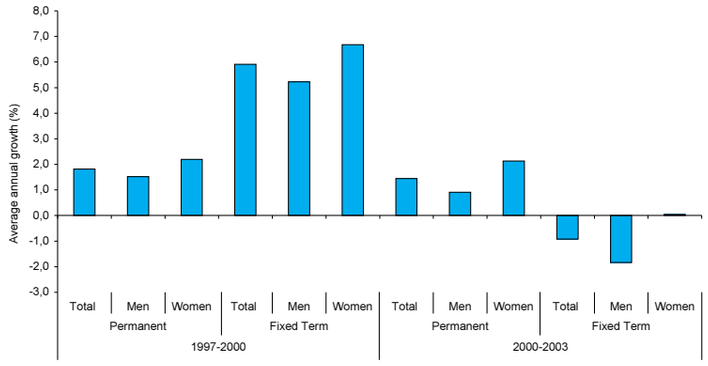
Source: ECHP UDB version December 2003.
Notes: data for SE not available.

4. Employment retention and diversity of contractual arrangements

By looking at the European Community Household Panel (ECHP) survey for the period from the mid-nineties to 2001 (the last year of the survey), two facts are immediately evident (see table 45)[13]. The first one is the decrease by approximately four percentage points in the percentage of the working age population that is not employed. This decrease is reflected in the corresponding increase in the percentage of employed individuals, while the percentages of those who are self-employed and in education or training remain roughly constant during the same period.

The second fact is that working as an employee with a permanent contract remains by far the most important form of employment and it continues to increase. However, temporary employment has increased twice as fast as permanent employment, by almost 15% in the period under consideration against a 7.3% growth for permanent employment. This means that if we look at employees only, the proportion of those with a permanent contract is decreasing.

Chart 81 - Developments in average growth in permanent and fixed-term employment in the EU15 in the two periods 1997-2000 and 2000-2003



Source: Eurostat, LFS

12 For figures on fixed-term employment for the EU25 based on the Labour Force Survey, see chart 21 chapter 1.

13 This classification is based on self-defined main activity status. The first two categories include those working with an employer in paid employment of 15 hours or more per week. Temporary work includes employees with fixed-term or short-term contracts, casual work with no contract and some other working arrangements. Self-employment includes both self-employed workers and unpaid workers in a family enterprise, in both cases only those working 15 hours or more per week. The "not employed" category includes the unemployed, retired, inactive and those working less than 15 hours per week. Those in education and training include also those working with an employer in paid apprenticeship and special schemes related to employment of 15 hours of more per week. In all cases, the 15 hours or more per week restriction has been used because of the classification used in the ECHP that distinguishes the contract type only for those in this group.

14 The classification by contract type is not available in the ECHP for 1994.

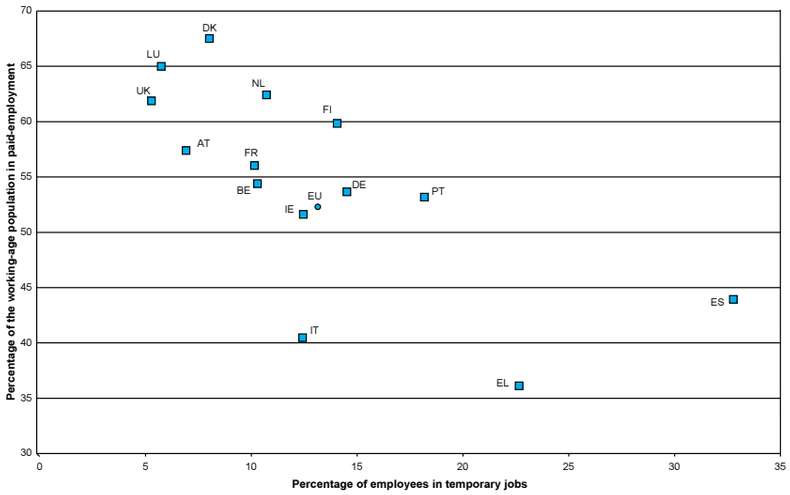
Further insights on growth trends in temporary and permanent employment can be gained if we consider the two periods 1997-2000 and 2000-2003[15] separately. The late 1990s represent a period of strong employment growth in the EU-15, as opposed to the early years of the following decade, when employment growth has been sluggish. Chart 81 looks at the average annual growth in permanent and fixed-term employment for the two periods. Fluctuations in fixed-term employment over the two periods are much more marked than for permanent employment. In particular, the former follows a clear procyclical trend, with relatively strong growth of almost 6% over the 1997-2000 period and a 1% contraction in the following one. On the other hand, permanent employment grows in both periods, albeit at a slower pace in 2000-2003.

Table 46 - Main activity status by country - 2001 (row percentages)

	Permanent	Temporary	Self-employed	Not-employed	Educ./training
DE	45.9	7.8	6.4	28.5	11.4
DK	62.2	5.4	5.2	14.4	12.8
NL	55.8	6.7	4.5	25.0	8.0
BE	48.8	5.6	7.8	26.2	11.6
LU	61.3	3.8	5.2	27.9	1.9
FR	50.3	5.7	5.6	27.3	11.1
UK	58.5	3.3	8.1	27.3	2.9
IE	44.9	6.4	8.5	29.7	10.5
IT	35.3	5.0	13.9	35.6	10.2
EL	27.9	8.2	21.4	32.8	9.7
ES	29.6	14.4	11.4	31.7	13.0
PT	43.6	9.7	15.7	22.2	8.8
AT	53.4	4.0	9.5	24.8	8.4
FI	51.4	8.4	8.6	21.0	10.6
Total	**45.4**	**6.9**	**9.1**	**29.0**	**9.7**

Source: ECHP UDB version December 2003.
Note: data for SE not available.

Chart 82 - Percentage of the working age population in paid employment vs. percentage of employees in temporary jobs – 2001



Source: ECHP UDB version December 2003.
Notes: data for SE not available.

The average picture for the EU as a whole hides wide variations between countries. In particular, the percentage of the working age population who are neither working nor in education or training varies from 14.4% in Denmark to 35.6% in Italy. It is also interesting to note that countries with the highest percentage of the working age population in paid employment, including Denmark, Luxembourg, the Netherlands and the UK have some of the lowest proportions of employees with temporary contracts, while the opposite is true for countries with low employment rates including Spain, Greece, Italy and Portugal (table 46 and chart 82).

The percentage of working age individuals who are self employed is the highest in the southern countries (Greece, Portugal, Italy and Spain) and lowest in the Netherlands, Denmark, Luxembourg, and France. Finally, the proportion of those who are in education or training ranges from over 12% in Spain and Denmark to less than 3% in the UK and Luxembourg.

The main activity status of the working age population in Europe also differs markedly according to personal characteristics, such as gender, age and the highest level of education attained (table 47). Women are twice more likely than men to be non-employed. The probability of being self-employed is also much lower, standing at 5.3% as opposed to 12.9% for men, while the proportion of those in education or training is similar for the two groups. Finally, the probability of having a temporary contract is about two percentage points higher for female employees

15 Data for 2001 is not available.

Table 47 - Main activity status by personal characteristics – EU total - 2001 - (row percentages)						
	Permanent	Temporary	Self-employed	Not-employed	Education or training	Temporary/ all employees
Male	52.3	7.2	12.9	18.4	9.3	12.1
Female	38.7	6.6	5.3	39.3	10.1	14.5
16-24	21.0	10.2	1.6	16.0	51.2	32.6
25-34	54.5	10.5	7.5	20.7	6.9	16.1
35-54	57.6	5.7	12.4	23.6	0.7	9.0
55-64	25.0	2.7	9.0	63.2	0.2	9.7
Highly qualified	59.2	7.6	9.4	16.4	7.5	11.3
Medium qualified	46.7	6.9	8.4	25.2	12.9	12.9
Low qualified	37.3	6.5	9.5	38.5	8.3	14.8

Source: ECHP UDB version December 2003.
Notes: high qualifications correspond to recognised third level education (ISCED 5-7), medium level qualifications correspond to second stage of secondary level education (ISCED 3) and low level qualifications to less than the second stage of secondary education (ISCED 0-2).

rather than for male ones (14.5% vs. 12.1% respectively).

More than half of those aged 16-24 are in education or training and this percentage drops drastically in the late 20s reaching less than 1% for those aged over 35. Conversely, the proportion of those that are neither working nor in education or training increases with age, from 16% for those in the age group 16-24 to around 63% for those aged 55-64. Self-employment is most prevalent among workers aged 35-54 and only 1.6% of those aged 16-24 undertakes this activity. Young entrants in the labour market are more likely than any other age group to have a temporary contract with roughly one in three employees aged 16-24 having this type of contract. The importance of temporary employment decreases with age, with approximately 16% of those aged 25-34 having this type of contract against around 9% of those over 35.

The main activity status of the working age population also correlates with the level of qualification. For example, those with a medium level of qualifications are more likely to be in education or training than those with high or low qualifications. The fact of not being in employment is inversely correlated with the level of qualification, its probability being more than twice as high for the low qualified as opposed to the highly qualified. Furthermore, the incidence of temporary employment among employees is inversely correlated with the level of qualifications, ranging from 11% to 15%, approximately.

In conclusion, in the period 1995-2001 temporary employment increased twice as fast as permanent employment and tends to show a pro-cyclical behaviour, suggesting that it might be used, at least partially, as a buffer to deal with changes in demand that are perceived as temporary[16]. The incidence is higher for women and for young people for whom it may be used as a probationary period to select workers with the necessary skills or for the young people themselves to experiment with different types of jobs. Finally, temporary employment is more prevalent among low-qualified workers, possibly pointing to their relative disadvantage in the labour market in finding more stable forms of employment[17].

4.1. Labour market dynamics: employment transitions

An important issue relating to temporary employment is whether it leads to more employment, in the form of either permanent or fixed-term contracts, or to some other status, in particular unemployment or inactivity. More generally, it is useful to analyse transitions over time between the various possible economic statuses to assess the capacity of individuals to remain in

16 *For a different interpretation based on the screening function of temporary contracts, see Varejão J. and P. Portugal, 2003,* Why do firms use fixed-term contracts*?, mimeo.*

17 *This is particularly worrisome as evidence shows that workers on temporary contracts tend to receive less on-the-job training than those on permanent contracts (see* Employment in Europe 2003*, p. 127; Storrie D., 2002,* Temporary agency work in the European Union*, European Foundation for the Improvement of Living and Working conditions; Wallette M., 2004,* Temporary jobs and on-the-job training in Sweden – is there a trade-off*?, mimeo). In particular Wallette finds that although the incidence of on-the-job training for temporary jobholders is lower than for corresponding open-ended jobholders, conditioned on that a worker receives on-the-job-training, it is not automatically the case that the amount of training is lower for all jobholders This points to the importance of the distinction within temporary jobs between probationary jobs on the one hand – normally used to screen workers and generally with intensive training – and project temporary jobs and on-call jobs on the other hand.*

the labour market or to undertake periods of education or training, possibly to enhance their future employability.

Table 48 shows one-year transitions between the five economic statuses in consideration for the two periods 1995 to 1996 and 2000 to 2001. It is interesting to point out that when comparing the mid-1990s to the beginning of 2000, the transition probabilities are rather similar. Therefore, in the analysis that follows, data will be pooled for all years to increase reliability. A possible interesting difference is a slight increase in the probability of temporary and self-employed workers to remain employed and of those in education or training to move into paid employment.

Looking in more detail at the transitions between 2000 and 2001, it can be seen that over a one-year period there is a high degree of persistence for people on a permanent contract (as it might be expected), for the self-employed and for those that are not employed or in education or training: around 91%, 88% and 85% of individuals in these three groups respectively are still in the same group one year later. Around 46% of workers on a temporary contract are still in that status one year later, with 30% of them managing to obtain a more stable form of employment but around 17% of them leaving work: the probability of loosing the job is therefore more than three times higher for those with a temporary contract than for those on a permanent one. Approximately 72% of those in education or training are still in that category a year later, while 16% of them have started paid employment of 15 hours or more.

Transition probabilities between different economic activity statuses differ according to the personal characteristics of the individuals (see table 49). Looking at the gender dimension, a first point to note is that working women are more likely to move out of employment than their male counterparts. This applies to those on permanent contract (6.4% of whom leave their job as opposed to 4.3% for men), on temporary contracts (20.8% as opposed to 16%) and in self-employment (13.1% vs. 4.9%). On the other hand, the probability for men on temporary contracts to move to a more stable job is around two percentage points higher than for women. This suggests that for men a temporary job is more likely to be a first step towards stable employment, while for women it is more likely to represent a period of work in a rather more intermittent career path.

Considering the different age groups, it should be noted that the lowest degree of persistence in permanent jobs is for those aged 16-24 or 55-64. In the former case this is probably due the fact that young workers need to experiment more before they find the "right" job for them, and in the latter case due to older workers exiting the labour market (16.2%) probably indefinitely. The same applies to those in temporary employment, the difference with prime age workers explained mainly by a greater proportion of young workers moving to further education or training (10.8% of them) and for older workers leaving the labour market (29.5% of them). Persistence in education or training is highest for the youngest age group with an increasing percentage moving to a job or non-employment as age increases. Education and training increases the likelihood of obtaining a job, compared to the same likelihood for those that were initially not employed or in education or training - and this for all age groups except for those aged 16-24. Finally, the proportion of those moving from education or training to non-employment increases with age.

The analysis of transitions by levels of qualification highlights once more the importance of education for labour market outcomes. The likelihood of temporary workers to move to more stable employment increases with the level of qualifica-

Table 48 - Transitions by economic activity status – 1995/96 and 2000/01 – EU total (row percentages)

		Permanent	Temporary	Self-employed	Not employed	Education/ training
		1996				
1995	Permanent	**90.6**	2.6	1.1	5.1	0.6
	Temporary	28.5	**44.3**	3.1	19.8	4.4
	Self employed	3.5	2.0	**85.3**	8.8	0.4
	Not employed	5.9	4.6	2.2	**85.1**	2.2
	Educ./ training	7.5	5.4	1.1	14.4	**71.7**
		2001				
2000	Permanent	**90.6**	3.2	0.9	4.8	0.5
	Temporary	30.5	**45.8**	2.8	17.1	3.9
	Self employed	3.8	1.9	**87.7**	6.2	0.3
	Not employed	6.6	4.5	2.0	**84.6**	2.3
	Educ./ training	8.4	7.6	0.9	11.3	**71.8**

Source: ECHP UDB version December 2003.
Notes: data for SE not available.

Table 49 - 1-year transitions by main economic status and by personal characteristics – EU total (row percentages)					
	Permanent employment	Temporary employment	Self employment	Not employed	Education/ training
t	t + 1				
Total					
Permanent	**90.4**	2.9	1.0	5.2	0.6
Temporary	31.4	**43.8**	2.6	18.2	4.1
Self employed	4.0	1.9	**86.3**	7.4	0.4
Not employed	6.1	4.7	2.2	**84.8**	2.1
Educ./training	7.7	7.0	0.9	12.6	**71.8**
Male					
Permanent	**91.1**	2.8	1.3	4.3	0.6
Temporary	32.2	**44.5**	3.2	16	4.1
Self employed	4.2	2.0	**88.6**	4.9	0.3
Not employed	8.6	7.2	3.4	**77.5**	3.3
Educ./training	8.2	7.3	1.2	12.9	**70.4**
Female					
Permanent	**89.5**	3.0	0.6	6.4	0.6
Temporary	30.3	**43.1**	1.8	20.8	4.0
Self employed	3.6	1.8	**81**	13.1	0.6
Not employed	5.0	3.7	1.6	**88.1**	1.6
Educ./training	7.2	6.7	0.7	12.2	**73.2**
16-24					
Permanent	**82.9**	6.6	0.8	6.5	3.3
Temporary	30.4	**39.9**	1.4	17.4	10.8
Self employed	8.8	7.1	**69.4**	10.7	4.1
Not employed	14.1	14.2	2.3	**56.4**	13.1
Educ./training	5.6	6.1	0.6	11.3	**76.4**
25-34					
Permanent	**90.4**	3.6	1.3	4.0	0.7
Temporary	32.5	**45.3**	2.7	16.8	2.8
Self employed	6.6	3.0	**83.6**	6.1	0.7
Not employed	11.0	8.5	3.1	**74.5**	2.8
Educ./training	14.1	11.6	2.5	15.6	**56.2**
35-54					
Permanent	**93.0**	2.2	0.9	3.7	0.3
Temporary	31.9	**45.6**	2.8	18.3	1.4
Self employed	3.5	1.5	**89.0**	5.8	0.1
Not employed	6.4	4.2	2.8	**85.7**	0.8
Educ./training	28.0	8.9	3.5	26.4	**33.2**
55-64					
Permanent	**80.5**	2.4	0.8	16.2	0.1
Temporary	24.4	**40.1**	5.6	29.5	0.3
Self employed	1.7	1.0	**83.6**	13.8	0.0
Not employed	1.0	0.7	0.9	**97.2**	0.1
Educ./training	22.6	4.2	1.1	**45.1**	26.9
Low qualified					
Permanent	**88.8**	3.2	1.1	6.4	0.6
Temporary	27.2	**45.7**	2.8	21.0	3.3
Self employed	3.2	2.0	**86.0**	8.5	0.3
Not employed	4.1	4.0	1.8	**88.8**	1.3
Educ./training	7.2	6.1	0.6	12.4	**73.8**
Medium qualified					
Permanent	**90.5**	3.0	0.8	5.0	0.7
Temporary	35.3	**39.8**	2.3	17.4	5.3
Self employed	4.2	1.6	**87.8**	5.9	0.5
Not employed	7.1	5.0	2.2	**82.7**	3.0
Educ./training	8.0	7.4	1.2	11.5	**71.9**
High qualified					
Permanent	**92.4**	2.3	1.1	4.0	0.3
Temporary	34.5	**46.3**	2.8	13.2	3.3
Self employed	5.2	2.0	**85.6**	6.8	0.4
Not employed	11.9	6.6	3.9	**74.7**	2.9
Educ./training	11.5	10.4	2.0	14.9	**61.1**

Table 50 - Multi-year transitions by main economic activity – EU total (row percentages)

		Permanent	Temporary	Self employed	Not employed	Education/ training
				t + 2		
	Permanent	**86.5**	3.3	1.5	8.0	0.7
	Temporary	**41.4**	32.4	3.3	19.5	3.5
t	**Self employed**	6.3	2.4	**81.2**	9.8	0.4
	Not employed	9.0	5.5	2.8	**80.4**	2.2
	Educ./ training	14.5	10.5	1.5	16.4	**57.0**
				t + 4		
	Permanent	**80.9**	3.6	2.4	12.5	0.7
	Temporary	**51.0**	22.3	4.7	19.7	2.3
t	**Self employed**	9.8	3.0	**73.3**	13.6	0.3
	Not employed	14.5	6.0	3.8	**73.8**	1.8
	Educ./ training	28.9	14.0	3.1	17.0	**37.0**
				t + 6		
	Permanent	**76.7**	4.0	3.1	15.8	0.5
	Temporary	**55.0**	16.4	6.4	20.7	1.5
t	**Self employed**	12.5	2.9	**68.3**	15.8	0.5
	Not employed	18.7	6.1	4.8	**69.0**	1.3
	Educ./ training	**41.6**	13.4	4.8	16.1	24.1

Source: ECHP UDB version December 2003. Pooled data 1995-2001
Notes: data for SE not available.

tions, from 27.2% for the low-qualified to 34.5% for the high-qualified. Also, regardless of the type of contract, the probability that workers loose or leave their job decreases with the level of qualifications of the individual.

As might be expected, transitions become more frequent as we extend the time horizon to a multi-year period (Table 50). In particular, the probability of remaining in temporary employment is reduced with time, but in a *non-linear* way. This probability, which is around 44% after one year, drops by around 11 percentage points after one more year, then by 10 points to 22% in the following two years and then only by a further 6 points in the following two years, bringing the likelihood of having a temporary job after six years down to around 16% in the EU as a whole.

This non-linear decrease in the probability of remaining in a temporary job is mirrored by a non-linear increase in the probability of moving to permanent employment. The likelihood of obtaining a permanent job increases by 10 points between t+1 and t+2, from around 31% to 41%, and then by a further 10 points after two more years and finally by 4 percentage points in the last two years, to 55%. These trends seem to suggest that there is a considerable percentage of temporary workers that manage to obtain a more stable form of employment relatively early on. At the same time, after six years a high proportion of temporary workers (around 37%) are still in precarious employment, or bouncing in and out of employment, with their chances of moving to stable employment reduced over time.

Another interesting point that emerges when looking at multi-year transitions is the high persistence in a non-employment status. Almost 70% of individuals that are neither working nor in education or training at any one point in time are in the same position six years later, following a long period of inactivity or of transitions in and out of the labour market.

Differences between countries are presented in chart 83 that ranks Member States according to their degree of mobility between economic statuses as summarized by the MT index[18]. Austria presents an average degree of mobility for the EU15 with the UK, Luxembourg, Denmark, Finland, the Netherlands, Germany and Ireland characterised by high mobility, while Belgium, France, Portugal, Greece, Italy and Spain showing

18 *The mobility index MT measures the difference between the observed transition matrix P and the limiting matrix of the Markov process which has all the n rows equal to the invariant distribution: this represents a situation of equal outcomes in which the transition probabilities to move to a certain class is the same independent of the class of origin. Consequently, to be compared across countries, they require similar limiting distributions. In particular,*

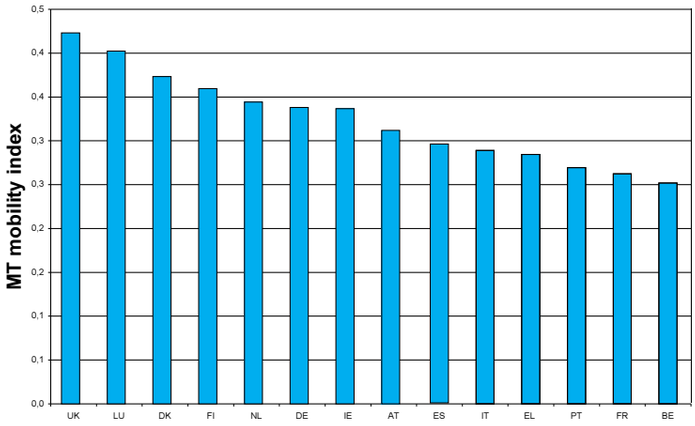
$$MT = (n - \text{trace}(P))/(n - 1)$$

In case of perfect mobility the trace is equal to 1 and MT is equal to 1 while in case of perfect immobility the trace is equal to n and MT tends to zero. Alternative mobility indices, MD and ML, are based on the determinant and the second largest eigenvalue with the former leading to similar results, while the latter present a few differences, with Ireland, Luxembourg and Austria at the bottom of this classification before France and Belgium.

the least mobility. If we compare the most mobile country, the UK, with the least mobile, Belgium, we find an almost 70% difference in the MT mobility indices.

A simple cross-tabulation between the MT index and the employment rate (see chart 84) shows a marked degree of correlation between labour market mobility and employment performance. In particular, highly mobile countries tend to have above-average employment rates[19] while countries with little mobility all have below-average employment rates, with Portugal as the only exception.

Chart 83 - MT mobility index by country – 1-year pooled transitions 1995-2001

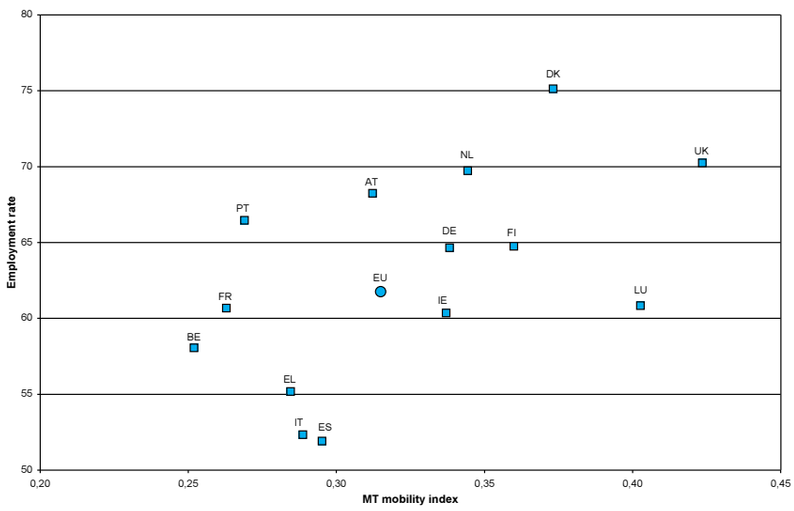


Source: ECHP UDB version December 2003. Note: data for SE not available.

5. The incidence of low pay and career advancement

From the perspective of the individual, the best safeguard against social exclusion is a job, which implies that high employment rates are a key objective for the European economies. However, to foster individual living standards and social inclusion from a life-cycle perspective, it is essential that employment guarantees fair remuneration and that individuals have the opportunity to move up the job ladder in line with their productivity. Although the job ladder may refer to several dimensions of job quality, including occupational status, access to training and better working arrangements, this chapter will concentrate on wages as an illustrative element of career advancement.

Chart 84 - employment rates vs. MT mobility index by country 1995-2001



Source: ECHP UDB version December 2003 for the mobility index (pooled data 1995-2001) and Labour Force Survey for the employment rates (average of the annual employment rates by country for the period 1995-2001).

Here low pay is defined as earning less than two-thirds of the median hourly gross wage (for more details see note 20). Any definition of low pay is necessarily arbitrary. However, the main focus of the analysis here is on low-pay trends, the relative incidence of low pay by geographic, personal and socio-economic characteristics and the transitions in and out of low pay, and not so much in its absolute level per se. Therefore, the main results presented in the following section are, broadly speaking, robust to small variations in the choice of a low-pay threshold.

As table 51 shows, low pay concerns roughly 15% of EU workers in paid employment of 15 hours or more per week. When observing three-year moving averages, it emerges that there has been little variation in the incidence of low pay between 1995 and 2000, with a decrease from 15.6% in 1995 to 14.9% in 1998, rising again but only marginally in 1999 and 2000 to 15.1%.

Once again, EU averages hide wide variations between different Member States, with the highest incidence of low pay in the UK and

19 *With the only possible exclusion of Ireland and Luxembourg, whose labour market mobility is actually the lowest after France, Belgium and Austria when measured by the ML index – see previous footnote.*

Table 51 - The incidence of low-pay[20] by country and year (percentages)						
COUNTRY	1995	1996	1997	1998	1999	2000
DE	14.3	13.9	13.8	13.9	15.0	15.7
DK	9.0	8.6	8.9	8.6	8.8	8.6
NL	13.3	14.4	15.4	15.6	15.8	16.6
BE	13.4	12.9	13.2	12.9	12.4	12.2
FR	15.8	15.5	15.4	15.5	16.2	15.6
UK	20.9	20.6	20.0	19.4	19.4	19.4
IE	21.8	21.7	21.6	21.2	20.2	18.7
IT	10.4	10.1	9.9	10.0	9.8	9.7
GR	16.1	15.4	15.7	15.5	15.8	16.0
ES	18.9	18.5	17.8	16.9	16.0	15.6
PT	14.4	13.6	12.9	12.7	11.8	10.9
AT	:	13.9	12.4	12.2	11.5	11.2
FI	:	:	11.3	11.4	11.0	10.8
Total	**15.6**	**15.3**	**15.0**	**14.9**	**15.1**	**15.1**

Source: ECHP UDB version December 2003.
Notes: 3 year moving averages. Data for SE and LU is not available.

Ireland (19.4% and 18.7% respectively in 2000), and lowest in Denmark and Italy (8.6% and 9.7% respectively). In general it is not possible to identify a strong trend for each individual country, except for a rather marked decline in Spain (from 18.9% in 1995 to 15.6% in 2000), in Portugal (from 14.4% to 10.9%) and to a lesser extent in Austria (from 13.9% in 1996 to 11.2% in 2000). On the other hand, the Netherlands experienced an appreciable increase in the incidence of low pay, which rose from 13.3% in 1995 to 16.6% in 2000, while in Germany there has been a rather strong increase in the two last years of the survey, from 13.9% in 1998 to 15.7% in 2000.

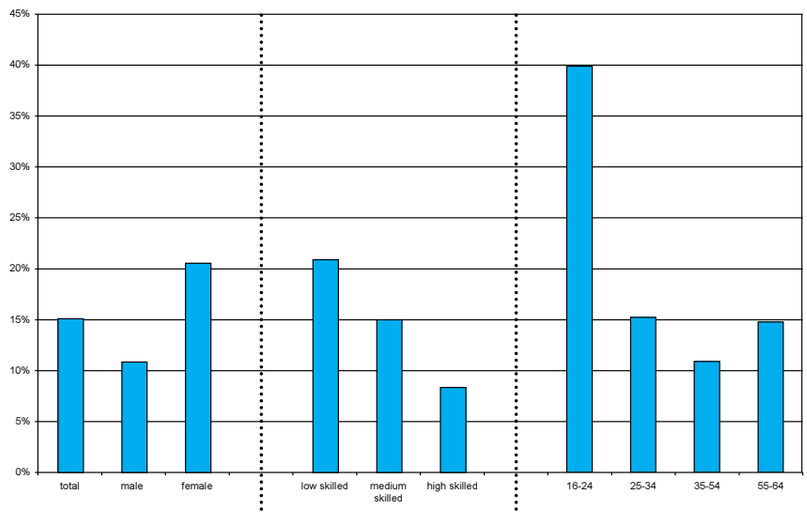
Chart 85 below looks at the incidence of low pay by personal characteristics. The first striking feature is that low-pay is twice as high for female employees than for male ones. The difference is particularly high for the UK, the Netherlands and Austria (where it corresponds to 14.4, 12.7 and 12.3 points respectively) and low in Italy, Finland and Denmark (2.8, 3.2 and 4.6 points respectively). The incidence of low pay is also correlated with the highest qualification obtained, ranging from 8.3% for those with high qualifications to 15.0% for those with medium level qualifications and 20.9% for those with a low level of qualifications.

The difference between the high and the low qualified is largest in Denmark, Ireland and Greece (21.5, 20.6 and 18.9 points respectively) and smallest in the Netherlands, Finland and France (7.2, 9.4 and 10.1 respectively).

Although in the computation of low-pay figures we are excluding individuals working with an employer in paid apprenticeships or under special training schemes, the low pay incidence is particularly high (39.9 %) for young employees aged 16-24. Those aged 25-34 and 55-64 have a similar degree of low pay incidence at approximately 15%, roughly 5 points higher than for employees aged 35-54.

The incidence of low pay differs not only in relation to the personal characteristics of the individual employees but also to labour market conditions. Chart 86 measures the low-pay incidence in relation to contractual arrangements, type of occupation and sector of the econ-

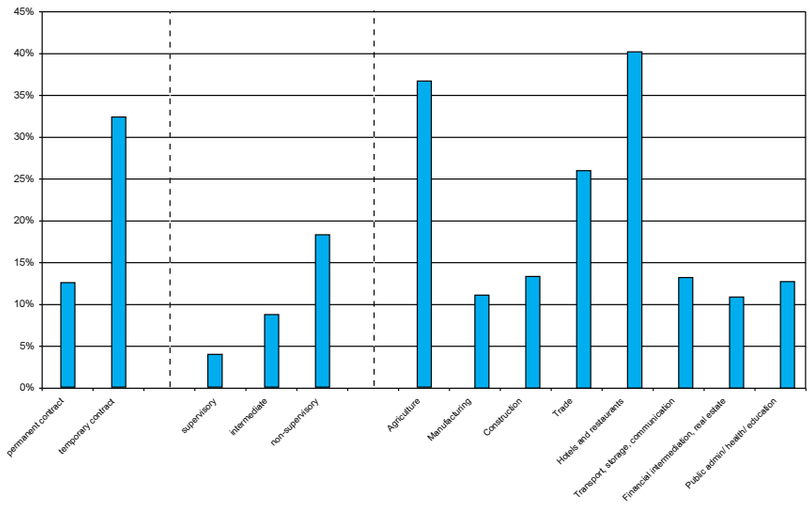
Chart 85 - Incidence of low pay by personal characteristics – 2001 – EU



Source: ECHP UDB version December 2003.
Notes: high qualifications correspond to recognised third level education (ISCED 5-7), medium level qualifications correspond to second stage of secondary level education (ISCED 3) and low level qualifications to less than the second stage of secondary education (ISCED 0-2).

20 The low-pay threshold is defined as two-thirds of the median hourly gross salary and it is country-specific. The low-pay incidence is computed for paid employees working more than 15 hours per week, excluding those in paid apprenticeship and in training under special schemes related to employment. Only those working 15 or more hours per week have been considered because of data reliability.

Chart 86 - Incidence of low pay by type of contract, occupation and economic sector – 2001 – EU



Source: ECHP UDB version December 2003.

omy. In 2001, employees in temporary contracts were almost three times as likely as their counterparts in permanent contracts to be low-paid. At the same time the incidence of low-pay among employees in supervisory roles was only around 4% as opposed to just over 18% for those in non-supervisory roles. In relation to sectoral differences, agriculture is characterised by the highest incidence of low-pay at 37%, followed by the service sector at 16% and industry at 11%. However, within the service sector there are remarkable differences with 40% and 26% of low-paid employees in hotels/ restaurants and trade respectively against around 10.9% in financial intermediation and real estate and 12.8% in public administration, education and health.

Table 52 - 1-year pay transitions – EU (row percentages)

		No pay	Low pay	Medium pay	High pay
		1996			
1995	No pay	88.8	4.7	5.6	0.9
	Low pay	17.6	52.4	28.2	1.7
	Medium pay	7.2	5.4	79.3	8.1
	High pay	4	0.3	14.7	81
		2001			
2000	No pay	87.7	5.1	6.4	0.9
	Low pay	17.5	51.1	30	1.4
	Medium pay	6	5.7	79.7	8.7
	High pay	4.5	0.6	14.3	80.6

Source: ECHP UDB version December 2003.
Notes: low pay is defined as less than 2/3, medium pay between 2/3 and 4/3 and high pay as over 4/3 of median hourly gross wages. Data for LU and SE is not available. No pay here is defined using the ILO employment definition as opposed to the self-defined main activity status used in the previous section. It also includes those working less than 15 hours, those in paid apprenticeship and under special training schemes.

5.1. Labour market dynamics: pay transitions

The extent of low pay at any one point in time is a cause for concern as it measures the proportion of workers lagging behind in the wage distribution with negative consequences for their relative living standards and social inclusion. It is also important for the economy as a whole inasmuch as it signals the corresponding extent of low productivity or low quality jobs. The issue, however, becomes even more crucial in a dynamic context, in the case of workers that are trapped in low paid jobs and do not have the prospect of a career that evolves over time.

Table 52 shows pay transitions for workers in paid employment of 15 or more hours per week in 1995-96 and 2000-01. In the five-year period, 1995-2000, there is very little variation in the transition rates[21], the only small difference being a slight improvement in the likelihood of moving out of low pay. Focusing on the lower part of the table, it can be seen that approximately half of those that were low paid in 2000 are still in the same situation one year after, while 31% of them have seen their pay increase above the low-pay threshold. However, 17.5% of them end up without employment: this probability is almost three times greater than that for medium paid workers and four times that of high paid ones. Roughly 80% of both medium and high-paid workers remain in the same wage bracket one year later.

Table 53 reports on difference in transition rates by personal characteristics. Not only is the incidence of low pay higher among female, young and low-skilled workers, but their chances of improving their situation are also more limited. Female workers are less likely than their male counterparts to move up the wage ladder: 54.5% of female low-paid workers are still low-paid a year after (as opposed to 45.9% of males) and only approximately

21 Therefore, in the following tables we will concentrate on pooled data for the whole period 1994-2001 to increase data reliability.

26% of them manage to exit low pay towards a higher wage bracket (the corresponding figure for men is just below 38%). At the same time, the probability for female low-paid workers to leave employment one year after is three percentage points higher than for men.

Low-paid employees aged 16-24 have roughly the same probability as those aged 35-54 to exit low pay by increasing their relative salary (around 30%), but they are also more likely to leave employment (the probability being around 22% against 15% for those aged 35-54). The highest probability of moving up the wage ladder is associated with low paid employees aged 25-34, since they are at the beginning of their career and at the same time have more experience and qualifications than younger workers. The most disadvantaged group with fewer improvement prospects are low-paid older workers, 56.2% of whom are still low paid a year later, while 26.7% of them leave the labour market. While it may be expected that older workers are more likely to leave the labour market, within the 55-64 age bracket the exit probability of low-paid employees is 12 percentage points higher than for high paid employees in the same age bracket.

Finally, transitions out of low pay and into higher pay increases with the level of qualification obtained and the probability of low-paid employees leaving the labour market is about four percentage points lower for the highly qualified than for those with a medium or low level of qualifications. Furthermore, upper wage mobility increases with the level of qualifications not only for those starting on low pay, but also for those on medium pay.

Although persistence in low pay decreases with time, the increasing probability of exiting low pay is reflected not only in an increase in the percentage of those moving up the wage ladder (from 30.7% after one year to 44% after seven years)

Table 53 - 1-year pay transitions by personal characteristics - EU (row percentages)

		No pay	Low pay	Medium pay	High pay
			t + 1		
			Total		
t	No pay	**88.2**	4.9	6.0	0.9
	Low pay	18.2	**51.1**	29.5	1.2
	Medium pay	6.9	5.4	**79.3**	8.4
	High pay	4.4	0.4	14.5	**80.6**
			Male		
t	No pay	**84.1**	5.6	8.9	1.4
	Low pay	16.5	**45.9**	35.9	1.7
	Medium pay	6.4	4.6	**79.3**	9.7
	High pay	4.1	0.4	13.8	**81.8**
			Female		
t	No pay	**90.4**	4.6	4.4	0.6
	Low pay	19.4	**54.5**	25.3	0.8
	Medium pay	7.5	6.5	**79.2**	6.8
	High pay	5.0	0.6	16.2	**78.2**
			16-24		
t	No pay	**84.0**	8.1	7.4	0.5
	Low pay	22.2	**47.4**	29.8	0.6
	Medium pay	11.3	11.4	**73.6**	3.7
	High pay	9.7	3.6	34.0	**52.7**
			25-34		
t	No pay	**79.1**	7.3	11.9	1.7
	Low pay	16.3	**46.6**	35.6	1.5
	Medium pay	6.2	5.2	**80.3**	8.3
	High pay	3.2	0.6	19.3	**76.8**
			35-54		
t	No pay	**88.4**	4.3	6.0	1.4
	Low pay	15.1	**55.6**	27.9	1.3
	Medium pay	4.9	4.6	**80.9**	9.6
	High pay	2.9	0.3	13.5	**83.3**
			55-64		
t	No pay	**98.2**	0.8	0.7	0.2
	Low pay	26.7	**56.2**	16.0	1.1
	Medium pay	17.0	5.2	**71.3**	6.5
	High pay	14.7	0.3	10.6	**74.4**
			Low qualified		
t	No pay	**90.9**	4.5	4.3	0.3
	Low pay	18.6	**52.7**	28.1	0.6
	Medium pay	7.8	6.8	**80.1**	5.4
	High pay	6.1	1.1	22.3	**70.6**
			Medium qualified		
t	No pay	**86.7**	5.0	7.4	0.8
	Low pay	18.6	**50.1**	30.2	1.0
	Medium pay	6.3	4.7	**81.4**	7.6
	High pay	4.2	0.4	19.3	**76.1**
			Highly qualified		
t	No pay	**80.3**	5.7	10.1	3.9
	Low pay	14.3	**49.0**	33.3	3.4
	Medium pay	6.0	4.2	**73.5**	16.2
	High pay	4.0	0.3	9.4	**86.3**

Source: ECHP UDB version December 2003. Pooled data 1994 -2001
Notes: data for SE and LU not available.

but also in the likelihood of leaving employment, from 18.2% after one year to 29.8 after seven years.

The probability of exiting low pay increases with time, as is shown in table 54, but at a decreasing rate. This is evident in charts 87a, 87b and 87c that show the probability of moving up the wage ladder and out of low pay for those that stay in employment by country. In general, countries with the lowest incidence of low pay (Denmark, Italy, Finland, Portugal and Austria), also present the highest probabilities of exiting low pay. Their probabilities curves are rather steep especially in the first four intervals; in all of them after six years employees that were low paid at the beginning of the period have more than a 70% chance of being in a higher paid job.

Even within this group of countries, of course, there are several differences. For example, Denmark and Finland present a rather flat curve, with exiting probabilities of around 50% to start with and very little improvement in the probability after four years. On the other hand Austria has the lowest one-year exiting probability of just over 35%, but then it increases markedly reaching almost 80% after six years.

Particularly high exiting probabilities towards the end of the seven year period are also characteristic of the Netherlands and Ireland in the high incidence group, while Spain, Belgium and France in the middle incidence group tend to have rather high initial probabilities, but a less steep improvement in the longer term.

Finally, Germany and the UK show the lowest exiting probabilities both in the short and in the longer term. In Germany, low paid employees have just 30% chances of moving to a better-paid job after one year, and this probability does not reach 50% even after seven years.

To conclude, the low-pay incidence at any one point in time is only one

Table 54 - Multi-year transitions by pay level – EU (row percentages)

		No pay	Low pay	Medium pay	High pay
			t+1		
t	No pay	**88.2**	4.9	6.0	0.9
	Low pay	18.2	**51.1**	29.5	1.2
	Medium pay	6.9	5.4	**79.3**	8.4
	High pay	4.4	0.4	14.5	**80.6**
			t+3		
t	No pay	**78.2**	7.4	12.4	2.1
	Low pay	23.3	**36.9**	37.8	2.0
	Medium pay	11.8	5.3	**71.1**	11.8
	High pay	9.8	0.6	15.5	**74.1**
			t+5		
t	No pay	**70.1**	8.8	17.7	3.4
	Low pay	26.9	**29.9**	39.7	3.4
	Medium pay	15.3	5.1	**65.7**	13.9
	High pay	14.6	0.7	15.3	**69.4**
			t+7		
t	No pay	**62.4**	9.1	22.7	5.8
	Low pay	29.8	**26.2**	39.2	4.8
	Medium pay	17.4	5.2	**61.3**	16.1
	High pay	17.0	0.9	17.0	**65.1**

Source: ECHP UDB version December 2003. Pooled data 1994 -2001.
Notes: data for SE and LU not available.

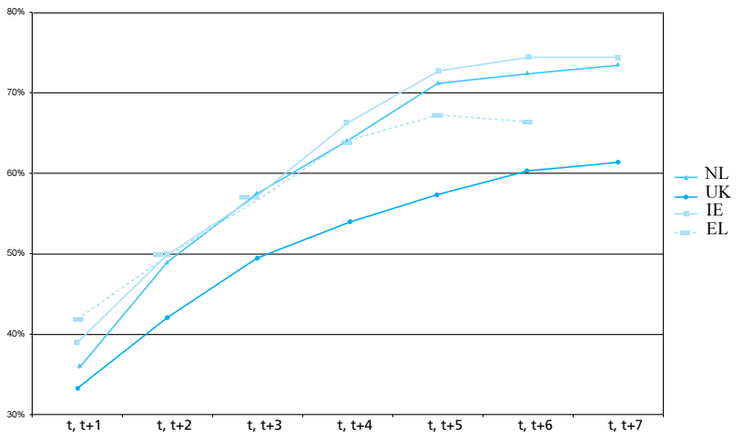
Table 55 - 1-year labour market transitions by country (percentages)

	Move into employment	Stay in Employment	Temporary to permanent	Low pay to higher pay
DE	13.9	91.5	37.2	25.4
DK	21.1	92.6	36.3	36.2
NL	15.5	93.7	44.9	29.4
BE	9.6	95.4	41.7	39.4
LU	8.6	95.1	57.9	.
FR	14.1	92.4	20.7	34.5
UK	18.4	92.3	44.5	28.0
IE	15.5	92.4	38.0	30.9
IT	9.2	92.9	30.6	34.2
EL	11.2	92.4	28.0	33.7
ES	14.0	89.8	23.5	35.8
PT	15.7	94.0	29.4	39.5
AT	13.5	93.5	50.6	31.6
FI	20.2	92.2	28.5	39.4
EU total	**13.0**	**92.3**	**31.4**	**30.7**

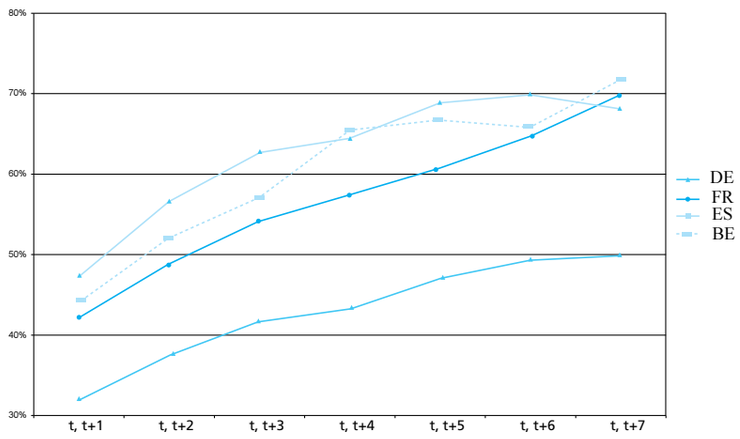
Source: ECHP UDB version December 2003. Pooled data 1995 -2001 (1994-2001 pooled data for low pay to higher paid transitions). Data for SE is not available.

Chart 87 - Comparing exit probabilities low-pay to higher-pay by country and intervals – pooled data 1994-2001

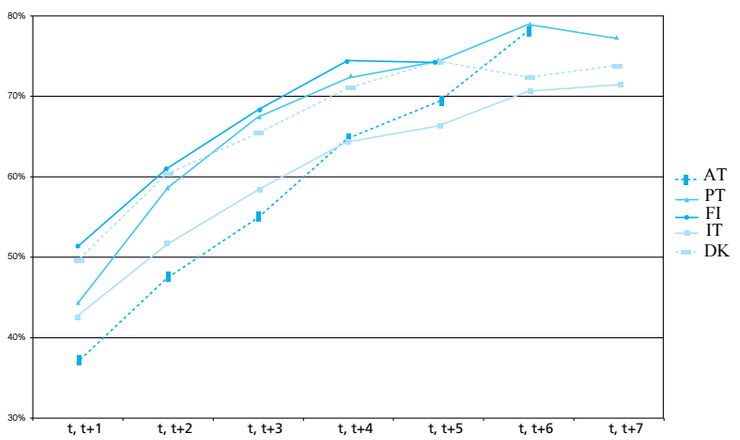
a - Countries with high incidence of low pay (16% or more)[22]



b - Countries with average incidence of low pay (between 12% and 16%)



c - Countries with low incidence of low pay (less than 12%)



Source: ECHP UDB version December 2003. Notes: data for SE and LU not available.

of the aspects that should be taken into account. Another is the probability of exiting low pay, both in the short and in the long term. So for example, in countries like Ireland and the Netherlands that are characterised by a relatively high incidence of low pay, it is also relatively easier to move up the job ladder, while this is not the case in the UK. And although Germany is characterised by an average incidence of low-pay, it is relatively rather hard for employees in that situation to move to a higher pay bracket.

Mobility out of low pay should be seen together with the other aspects of job retention and advancement to have a more complete assessment of national labour markets. The mobility index presented in chart 83 is a measure of the overall dynamicity of the labour market, but it does not disentangle the different dimensions related to the openness of the labour market, to employment security in terms of remaining in employment and moving to a job with a permanent contract, and to labour market advancement for those in low pay. Table 55 summarizes 1-year transition by country[23], focusing on the probabilities to enter employment, to remain in employment, to move from temporary to permanent employment and to exit low-pay by moving over the low-pay threshold.

Denmark, Finland, the UK, Portugal, Ireland and the Netherlands have rather open labour markets, with the highest percentages of working age individuals entering employment in any one year. However, these countries differ in terms of mobility within employment: the Netherlands, the UK and Ireland present a relatively high probability of moving from temporary to permanent employment, but the UK presents little upward wage mobility, while the reverse is true for Portugal and Finland, countries with relatively lower probabilities of moving from temporary to per-

22 The categorisation into high, intermediate and low incidence of low pay has been introduced for purely illustrative purposes and to facilitate the presentation of the results since the cut-off points are rather arbitrary and should only be seen in relative terms.

23 Similar results, in particular the points emphasised in the text, are also true if we consider two-year transitions.

manent employment, but the two highest probabilities of moving out of low pay.

Countries with the highest degree of in-year employment retention, such as Belgium and Luxembourg, also present the most closed labour markets in terms of working age individuals moving into employment. These countries are also characterised by a good degree of in-work mobility in terms of movement to more stable employment and, in the case of Belgium, upward wage mobility.

The remaining countries present different sets of issues in relation to short-term access to the labour market, employment retention and advancement. In particular, France is characterised by relatively low transitions from temporary to permanent employment. Germany has relatively low employment retention and mobility out of low pay. Italy and Greece have a relatively closed labour market with difficult access to employment and more limited opportunities to move from temporary to permanent employment. Spain has low employment retention and access to stable contracts. Finally, Austria is characterised by transition probabilities which are close to the EU15 average, apart from a relatively high 1-year probability to move from temporary to permanent employment.

6. Determinants of labour market transitions

The following section will look in more detail at the relative effect of several factors on the probability of the employment and pay transitions described in the previous sections. For this purpose several discrete-choice econometric models have been estimated for the working age population in the EU15.

The specification of the models below is based on four main theoretical arguments. The first one is a *human capital* accumulation argument. According to this, labour market experience, over and above educational attainment, helps in improving the workers' human capital (because of learning-by-doing, on-the-job training, and the accumulation of social capital) and this in turn may facilitate the search for a better job or an increase in the pay level[24]. Secondly, *labour market institutions* (employment protection legislation, public employment programmes, the legal contractual framework as well as publicly provided training schemes) have a strong impact on wage progressions and job status transitions, especially for the so-called "outsiders"[25]. Thirdly, *job-search* theory is useful to explain the interaction between the macroeconomic environment and individual labour market advancements[26]. Finally, the costs associated with labour market transitions, both in-work and out-of-work, may differ in relation to specific characteristics of either the employee or the employer, as analysed in transaction costs theories of the labour market.

The variables that have been included in the econometric models relate to specific social, economic and demographic characteristics of the individuals, to the type of jobs they are holding and to the macroeconomic framework. The variables in the first group are: gender, age group, highest level of education attained, whether the individual has children less than 15 years old, whether the individual is married or not, whether the job he/she is holding is their first one or not, whether he/she attended a training or vocational course since January in the year of the survey, whether s/he registered to a public employment service for work, whether s/he was in receipt of unemployment benefits prior to employment and tenure in employment. In the second group, the variables considered are: whether of not the individual undertook on-the-job training, whether s/he was in casual employment (without contract), the type of occupation, the sector of the economy (agriculture, industry and services; public and private), and the size of the firm (0-19, 20-99 and 100 or over employees). The unemployment rate[27] was also included as a measure of the tightness of the labour market.

At the risk of oversimplifying the analysis, the first group of variables can be interpreted as the expression of supply-side conditions, and the second group as structural/demand factors. Within these two groups, it is also useful to identify a set of variables that represent key labour market policies. The first variable is **skills level** that in the models has been differentiated into three different categories: highest level of education attained, vocational or training courses, and on-the-job training. The second variable is whether the individual is in receipt of **unemployment benefits**. In particular, receiving unemployment benefits may have a contrasting effect on labour market outcomes: on the one hand they can create labour supply disincentives, but on the other hand they can facilitate the job-search process and lead to a better match between individuals and jobs. The third variable shows whether the individuals have been using **Public Employment Services** in their job search. Finally, the **unemployment rate** is at least partly influenced by the macroeconomic management of policy makers.

All models include country dummies, to control for different employment regimes, in particular

24 *Mincer J. and Ofek H., 1982,* Interrupted work careers: depreciation and restoration of human capital*, The Journal of Human Resources n. 17, 3-24.*

25 *Bertola G., Blau F. D. and Kahn L. M., 2003,* Labor market institutions and demographic employment patterns, mimeo.

26 *Mortensen D.T. and Pissarides C.A., 1994,* Job creation and job destruction in the theory of unemployment*, Review of Economic Studies, vol.61, 397-415.*

27 *The unemployment rate used is the annual unemployment rate for each country from the Labour Force Survey.*

Table 56 - Logit models for transitions from "Non-working" to "Working" – EU – pooled data 1994-2001

Transition from "Non-Working" to "Working" - Europe - logit models

	1-year transitions		3-year transitions	
	(1) odds ratio	(2) odds ratio-fe panel	(3) odds ratio	(4) odds ratio-fe panel
male	1.68 ***	2.02 ***		
age 16-24	1.44 ***	1.20	1.59 ***	0.64 *
age 25-34	1.32 ***	1.17	1.47 ***	0.86
age 55-64	0.38 ***	1.33	0.20 ***	0.36 ***
low education	0.86 ***	1.01	0.78 ***	1.04
high education	1.36 ***	1.47 ***	1.30 ***	1.10
have children 0-15	1.00	0.86 **	1.09 ***	0.69 ***
married	0.97	0.82	0.91 ***	1.38
unemployment benefit	1.30 ***	0.82 ***	1.26 ***	0.96
training last year	1.34 ***	1.21 ***	1.54 ***	1.09
public employment office	1.09 ***	1.29 ***	1.01	1.14
unemployment rate	-0.01+ ***	-0.02+ ***	-0.02+ ***	-0.01+
n. of observations:	41568	14305	25503	5301
n. of groups:		5118		1941
Pseudo R2:	0.053		0.074	

Notes: Source: ECHP UDB version December 2003, 1994-2001. SE missing for all the years because some variables missing. Individuals between 16 and 64 years. Also controlled for time and country dummies. Reference category: female, between 35 and 54, medium education, not married, no children 0-15, no unemployment benefit, no training, no public employment office. 1995, Germany. (*), (**), (***): significant at 10%, 5% and 1% respectively. odds ratio tell how the odd of observing Y=1 changes when X changes from 0 to 1 (1 if no change). odds ratio - fe panel is for the conditional fixed-effects logit model. +For unemployment rate marginal effects computed at the average sample value. Standard errors computed with the Huber/White/sandwich robust variance estimates (not for panel estimates).

employment protection legislation, and year dummies, to control for the business cycle, and are estimated for individuals aged between 16 and 64 at the time of the interview.

The models presented below can be divided into different groups. The first models consider the determinants of transitions from non-employment into work (Table 56). Then, in-work transitions are considered, namely from temporary to permanent jobs (Table 57) and from low pay to higher pay (Table 58). These binary choice models are then extended to consider all possible labour market transition simultaneously from temporary employment and from a status of non-employment (Table 59 and 60).

The first specification in table 56 shows the effect of the variables listed on the probability of moving from a situation of non-working to working. The odds ratio quantifies the change in that probability when the individual has the characteristics represented by the variable, where 1 means no change in the probability, less than 1 a reduction in that probability, and values over 1, an increase[28]. Thus male individuals of working age have a 68% greater chance than female counterparts to move into work after one year. This effect is highly significant from a statistical point of view, and is indicated in the table with three asterisks.

Compared to those aged 35-54, younger individuals have a greater probability of moving into work, with an increase of 44% and 32% respectively for those aged 16-24 and 25-34. On the contrary, older workers aged 55-64 are considerably less likely to find employment – the estimated reduction in the probability being around 62%. The level of qualification attained also has a strong and statistically significant impact on the likelihood of finding work, with a reduction of 14% and an increase of 36% for those with a low and high level of education respectively. Having children or marital status do not seem to have a significant impact on the likelihood of finding work.

Considering the effect of the three policy related variables - receipt of unemployment benefits, attendance at a training course in the year prior to the survey or registration with the public employment services for work - all have a significant impact on moving into work, increasing this likelihood by 30%, 34% and 9% respectively. In particular, having attended a training or vocational course in the year prior to the survey has almost as strong an effect on the short-term probability of moving into work as higher educational qualifications[29]. Finally, as expected, the overall national unemployment rate has a significant adverse effect on the probability of finding a job thus reflecting a demand-side

28 *Marginal effects are computed for continuous variables such as the unemployment rate and length of tenure. In this case any deviation from 0 must be interpreted as a negative/positive percentage effect.*

macroeconomic constraint to employment opportunities.

The variables included in the model may have an impact on the final outcome through other unobservable characteristics that are associated with that variable. For example more able or motivated individuals may "self-select" themselves into higher level education courses so that higher employment probabilities may actually be determined, at least partially, by the unobservable motivation or ability rather than education per se. Model 2 uses a panel estimation technique that controls to some extent for this unobservable heterogeneity among individuals[30].

Looking at model 2 in table 56, it should be noted that the effect of low educational qualifications become insignificant, while that of higher education is increased, possibly showing that differences in unobservable characteristics such as motivation or ability are important in the case of low qualified individuals, but not in the case of higher qualifications. The effect of receiving an unemployment benefit becomes negative (compared to the positive impact in model 1), producing a reduction of roughly 18% in the probability of moving into employment. This may suggest that the effect of the unemployment benefit depends mainly on the fact that the people claiming them could be more motivated to find a job, possibly due to the lack of other non-wage income, the unemployment benefit acting as a job-search subsidy. But once we, at least partially, control for these differences in motivation and other personal characteristics, the effect of the unemployment benefit is to reduce the chance of finding a job due to the financial disincentive it causes. The effect of a training course is reduced, showing that the fact that the individual does some training also captures other personal unobservable characteristics linked to the individual which facilitate his or her entry into work. On the contrary, the role of public employment services is enhanced once we account for time-invariant personal characteristics. In this case, one possible explanation could be that only the most disadvantaged individuals use public employment services as a way of entering the labour market, and given their pool of customers, PES actually tend to perform rather well.

Similar results are also found when analysing the same models for three year transitions. The main difference concerns the effect of being registered at a public employment office that becomes insignificant – this is probably due to the fact that the individual is not necessarily actively looking for a job through the public employment services, or is even still registered after three years.

Table 57 analyses transitions from temporary to permanent employment. Being male and in the younger age bracket have a limited but highly significant effect on moving to a more stable employment. Education also has an influence on the likelihood of getting a permanent contract, with a significant (and negative) effect for low-qualifications in the first model and a significant (and positive) effect for higher-qualifications in the fixed-effects model, compared to medium-level qualifications. If the temporary job held is the individual's first, this reduces the likelihood of getting a permanent contract by approximately 37% when we account for unobserved heterogeneity. Tenure has a significant impact on transitions to a permanent contract, particularly marked in the second model.

Being in temporary employment of a specifically casual nature with no contract further reduces the odds of getting stable employment, even if this reduction is rather limited. The model estimates simultaneously the effects of vocational and training courses on the one hand and on-the-job training on the other: while the former does not seem to have a significant impact on the likelihood of moving from temporary to permanent employment, the latter increases it by around 30%. This could be explained in two possible ways. Employers may give more value to specific work-related training done within the firm, rather than general vocational courses, when they decide whether to offer a permanent position: in other words, they see on-the-job training as either more effective in increasing the employees' human capital or as a better way of screening employees. Alternatively, on-the-job training is particularly intensive in temporary jobs of a probationary nature that are most likely to lead to a permanent position, hence the correlation between this type of training and a move to a permanent post.

Concerning occupational status[31], manual and managerial ones, as opposed to intermediate occupations, appear to limit the chances of moving to a permanent post, even

29 It is perhaps important to express a note of caution on the results presented here. Household surveys such as the ECHP contain only limited information on the variables used in the model and their estimated effects represent only broad averages across a very heterogeneous group of, for example, educational qualifications or training courses. Therefore, before drawing strong policy conclusions on, say, the effectiveness of training courses it is important to consider all relevant differences between their type, their length, their quality etc. as clearly not all training courses would have the same impact on the probability of finding employment.

30 To control for time-invariant unobservable heterogeneity fixed-effects logit models have been used. Essentially the idea behind them is that the effect of certain variables may be driven by other unobservable factors. By exploiting the longitudinal characteristics of the survey, fixed-effect techniques estimate the marginal effect of the various variables dropping out the time-invariant unobservable heterogeneity between individuals, once it is assumed, continuing with the example in the text, that personal ability or motivation do not change over time.

Table 57 - Logit models for 1-year and 3-year transitions from temporary to permanent jobs – EU - pooled data 1994-2001

Transition from TC to PC in Europe - logit model				
	1-year transitions - pooled		3-year transitions - pooled	
	(1) odds ratio	(2) odds ratio - fe panel	(3) odds ratio	(4) odds ratio - fe panel
male	1.10 ***		1.11 ***	
age 16-24	1.17 ***	0.99	1.26 ***	0.77
age 25-34	1.18 ***	1.20	1.18 ***	0.76
age 55-64	0.88	0.94	0.77 **	0.29 **
low education	0.84 ***	0.88	0.74 ***	0.94
high education	1.06	2.07 ***	1.08	2.51 ***
have children 0-15	1.01	1.16	1.05	1.27
married	1.11 ***	0.98	1.05	0.78
first job	1.00	0.63 ***	1.00	0.56 **
tenure	0.01+ ***	0.03+ ***	0.01+ ***	-0.01+
casual contract	0.93 ***	0.92	0.77 ***	0.91
training last year	1.08 *	0.96	1.08	1.01
on-the-job training	1.34 ***	1.31 ***	1.44 ***	1.08
manual occupation	0.86 ***	1.16	0.72 ***	0.75
managerial occupation	0.78 ***	0.85	0.74 ***	0.86
public	0.55 ***	0.71 ***	0.56 ***	1.31
agriculture	0.48 ***	1.26	0.37 ***	1.15
industry	0.97	1.02	1.05	1.71 **
Firm size 0-19	0.98	1.26 ***	0.84 ***	1.19
Firm size 100+	1.06	1.11	1.13 **	1.07
unemployment rate	-0.02+ ***	-0.02+ ***	-0.03+ ***	-0.01+
n. of observations:	19319	6845	10540	2009
n. of groups:		2577		775
Pseudo R2:	0.052		0.07	

Notes: Source: ECHP UDB version December 2003, 1995-2001. UK, SE, LU and FR missing for all the years because some variables missing. Individuals between 16 and 64 years. Also controlled for time and country dummies. Reference category: female, between 35 and 54, medium education, not married, no on-the-job training, no training, fixed-term contract, already worked, intermediate occupation, private sector, services, firm size 20-99, 1995, Germany. (*), (**), (***): significant at 10%, 5% and 1% respectively. odds ratio tell how the odd of observing Y=1 changes when X changes from 0 to 1 (1 if no change). odds ratio - fe panel is for the conditional fixed-effects logit model. +For tenure (measured in years) and unemployment rate marginal effects computed at the average sample value. Standard errors computed with the Huber/White/sandwich robust variance estimates (not for panel estimates).

if their effect disappears in the fixed-effect model, while firm size does not seem to have a significant effect. In relation to economic sector, the public sector offers significantly fewer chances of moving to permanent employment, and the same applies to a certain extent to agriculture, while there is no significant difference between industry and services – the reference category. Finally, the unemployment rate adversely affects the probability of obtaining a permanent contract in all models.

The same models have been estimated for 3-year transitions between temporary and permanent employment and the results are presented in columns (3) and (4). The results are similar to those for the one-year transitions, with a few differences. In particular, the effect of being an older worker becomes highly significant and it reduces the probability of moving onto a permanent contract in a three year horizon by 23%. In addition, firm size becomes significant when working in a small firm with 0 to 20 employees reduces the chances of obtaining a permanent contract by around 16% compared to those in a medium-size firm. The effect is reversed for larger firms with a 13% increase.

Table 58 looks at the determinants of transitions up the wage ladder. If we focus on 3-year transitions in column (3), the odds of moving out of low-pay are greatly increased for males (+91%) and for those in the 16-24 and 25-34 age brackets (+73% and +59% respectively), while they are significantly reduced for individuals aged 55-64 (-29%). The effect of education is highly significant, both for the low-qualified, for whom the chances of exiting low-pay are 19% lower, and for the highly qualified, for whom they are 27% higher. Tenure does not

31 Managerial occupations include legislators, senior officials, managers and professionals, intermediate occupations include technicians, associate professionals, clerks, service workers, shop and market sales workers, skilled agricultural and fishery workers, and manual occupations include craft and trades workers, plant and machine operators and assemblers and elementary occupations.

Table 58 - Logit models for 1-year and 3-year transitions from low-pay to higher-pay – EU - pooled data 1994-2001

Transition from "Low-pay" to "Higher-pay" - Europe - logit models

	1-year transitions		3-year transitions	
	(1) odds ratio	(2) odds ratio - fe panel	(3) odds ratio	(4) odds ratio - fe panel
male	1.63 ***		1.91 ***	
age 16-24	1.30 ***	0.85	1.73 ***	1.34
age 25-34	1.32 ***	0.87	1.59 ***	1.28
age 55-64	0.77 ***	0.20 ***	0.71 ***	0.76
low education	0.81 ***	0.93	0.81 ***	0.79
high education	1.21 ***	1.65 *	1.27 ***	0.42
have children 0-15	1.02	1.17	0.96	1.01
married	1.14 ***	0.90	1.13 ***	1.28
first job	0.77	0.62 **	0.74 ***	1.86 **
tenure	0.00+	0.08+ ***	0.00+ *	0.00+
fixed-term contract	1.00	0.72 **	1.15 ***	1.33
casual contract	0.80 ***	0.70 **	0.78 ***	1.19 *
training last year	1.03	0.88	1.20 ***	0.82
on-the-job training	1.18 ***	1.08	1.12 *	1.03
manual occupation	0.90 ***	1.11	0.80 ***	1.12
managerial occupation	1.43 ***	1.47	1.77 ***	0.80
public	1.19 ***	0.82	1.25 ***	0.91 *
agriculture	0.52 ***	1.14	0.45 ***	2.01
industry	1.11	0.99	1.17 ***	1.43
Firm size 0-19	0.70	0.85	0.69 ***	1.22
Firm size 100+	1.24	1.50 **	1.22 ***	1.27
unemployment rate	-0.02+ ***	-0.03+ ***	0.00+	0.00+
n. of observations:	16470	5606	8979	1861
n. of groups:		2056		689
Pseudo R2:	0.048		0.075	

Notes: Source: ECHP UDB version December 2003, 1995-2001. UK, SE, LU and FR missing for all the years in (1) and (2) because some variables missing. Individuals between 16 and 64 years. Also controlled for time and country dummies. Reference category: female, between 35 and 54, medium education, not married, no on-the-job training, no training, worked already, intermediate occupation, private sector, services, firm size 20-99, 1995, Germany. (*), (**), (***): significant at 5%, 10% and 15% respectively. odds ratio tell how the odd of observing Y=1 changes when X changes from 0 to 1 (1 if no change). odds ratio - fe panel is for the conditional fixed-effects logit model. +For tenure (measured in years) and unemployment rate marginal effects computed at the average sample value. Standard errors computed with the Huber/White/sandwich robust variance estimates (not for panel estimates).

strongly affect the chances of exiting low-pay, once we control for the fact that the individuals holds his/her first job which reduces the odds by an estimated 26%. With regard to contractual arrangements, the likelihood of moving out of low pay is reduced by holding casual employment with no contract, while the fixed-term nature of a contract increases the odds by 15%.

Training or vocational courses have a strong and significant effect (+20% likely to exit low-pay after three years), while on-the-job training has a more limited and less statistically significant role. However, the relative importance of on-the-job training and vocational courses is reversed once we consider shorter, 1-year transitions. Indeed, on-the-job training has a far more important role in increasing the probability of increasing the wage over the low-pay threshold in the short term, with a highly significant coefficient corresponding to an 18% increase in probability. Once controlling for on-the-job training, the effect of training courses on the short-term probability of not being low paid any longer becomes insignificant.

Employees in manual occupations have a reduced probability of moving out of low pay, while the converse is true for those in managerial posts (the respective odds ratio being 0.80 and 1.77). With respect to the economic sector, the odds of moving up the wage ladder are greater in industry (1.17) and lower in agriculture (0.45), once we compare them with those in the services sector. Working in the public sector or in large-size firms also improves the chances of low-paid employees. Results for 1-year transitions are similar with the only interesting difference being in terms of the effects of training mentioned above.

So far, we have been looking at binary choice models, with transitions between two specific statuses only. We will now look at the determinants of moves from, in turns, temporary employment and non-employment to all other possible economic statuses in a multinomial-logit framework where competing transitions are estimated simultanously. For presentational

Table 59 - Multinomial logit models for 1-year transitions from temporary employment – EU - pooled data 1994-2001

Transition from TC to every other state in 1 year (pooled) - Europe
multinomial logit model (base category TC)

	TC-PC odds ratio		TC-SE odds ratio		TC-NW odds ratio		TC-TR odds ratio	
male	1.10	***	2.30	***	0.60	***	0.87	**
age 16-24	1.16	***	0.62	***	0.94		5.77	***
age 25-34	1.17	***	1.12		0.97		1.59	***
age 55-64	0.84	**	0.98		2.02	***	0.51	
low education	0.84	***	0.75	***	1.05		0.78	***
high education	1.06		0.96		0.69	***	0.62	***
have children 0-15	1.01		1.15	*	1.02		1.13	*
married	1.09	***	1.23	***	1.12	***	0.55	***
first job	1.01		1.20	*	1.15	***	1.84	***
tenure	0.01+	***	0.00+		-0.03+	***	-0.04+	***
casual contract	0.94	**	2.29	***	1.18	***	0.98	
training last year	1.09	**	0.77	*	1.13	**	0.87	
on-the-job training	1.35	***	0.99		0.71	***	0.84	**
manual occupation	0.85	***	0.77	***	1.18	***	0.77	***
managerial occupation	0.77	***	1.49	***	0.59	***	0.88	
public	0.56	***	0.56	***	1.02		0.81	***
agriculture	0.48	***	1.16		0.95		0.52	***
industry	0.97		0.96		0.80	***	0.78	***
Firm size 0-19	0.98		2.01	***	1.14	***	1.10	
Firm size 100+	1.06		1.19		0.84	***	0.99	
unemployment rate	-0.02+	***	0.00+		0.00+		-0.02+	***
n. of observations:	24837							
Pseudo R2:	0.084							
Hausman test for IIA:	Accepted							

Notes: Source: ECHP UDB version December 2003, 1995-2001. UK, SE, LU and FR missing for all the years because some variables missing. Individuals between 16 and 64 years. Also controlled for time and country dummies. Reference category: female, between 35 and 54, medium education, not married, no on-the-job training, no training, worked already, intermediate occupation, private sector, services, firm size 20-99, 1995, Germany. (*), (**), (***): significant at 10%, 5% and 1% respectively. odds ratio tell how the odd of observing Y=1 changes when X changes from 0 to 1 (1 if no change). +For tenure (measured in years) and unemployment rate marginal effects computed at the average sample value. Standard errors computed with the Huber/White/sandwich robust variance estimates. TC: temporary contract; PC: permanent contract; SE: self-employed; NW: not-working. TR: training and education. In the "Hausman" test the H_0 means that the Irrelevance of Independent Alternatives hypothesis holds.

purposes, specific attention will be drawn on the main policy variables of interest.

Table 59 considers transitions out of temporary employment. Low educational attainment significantly reduces the probability of moving to a permanent post, self-employment or training and education, while a high level of educational qualifications reduces the chances of moving out of employment or back into education or training. For those employees whose temporary job is also the first one they have, the likelihood of leaving employment or moving into education or training are significantly higher (+15% and +84% respectively), while the converse is true for tenure.

If the temporary post is also of a casual nature, the employee has a much higher probability of moving into either self-employment or out of employment altogether. On-the-job training reduces the chances of moving either into non-employment or education or training, whilst increasing those of obtaining a permanent contract. Finally, a higher unemployment rate reduces the odds of moving either into permanent employment or education and training.

The role of skills in employment transitions is also supported by the results presented in table 60, showing the determinants of moves out of non-employment. Low educational attainment reduces the odds of transition into all alternative states, including permanent and temporary employment, self-employment and education or training, while the reverse is true for both higher educational attainment and training or vocational courses. As shown in table 56, individuals receiving unemployment benefits are more likely to move into employment, with no particular difference with respect to the contractual arrangement. Concerning the role of public employment services, they do facilitate entry into employment as well as education or training, but the likelihood is much higher for temporary rather than permanent employment (+47% vs. +12%). Finally, higher unemployment rates reduce the odds of finding a job, especially a permanent one.

Table 60 - Multinomial logit models for 1-year transitions from "not-working" – EU - pooled data 1994-2001

Transition from NW to every other state in 1 year (pooled) – Europe
multinomial logit model (base category NW)

	NW-PC odds ratio	NW-TC odds ratio	NW-SE odds ratio	NW-TR odds ratio
male	2.07 ***	1.67 ***	3.97 ***	1.29 ***
age 16-24	1.85 ***	1.74 ***	0.72 ***	4.91 ***
age 25-34	1.48 ***	1.29 ***	1.04	1.64 ***
age 55-64	0.27 ***	0.35 ***	0.3 ***	0.29 ***
low education	0.67 ***	0.85 ***	0.67 ***	0.57 ***
high education	1.39 ***	1.49 ***	1.46 ***	1.53 ***
have children 0-15	0.98	1.01	0.90	0.96
married	0.92 *	0.93 *	1.15 *	0.43 ***
unemployment benefit	1.51 ***	1.58 ***	1.03	0.95
training last year	1.58 ***	1.33 ***	1.56 ***	1.41 ***
pub. employment office	1.12 **	1.47 ***	0.70 ***	1.26 ***
unemployment rate	-0.02+ ***	-0.01+ ***	0.00+	0.00+
n. of observations:	38520			
Pseudo R2:	0.094			
Hausman test for IIA:	Accepted			

Notes: Source: ECHP UDB version December 2003, 1994-2001. SE missing for all the years because some variables missing. Individuals between 16 and 64 years. Also controlled for time and country dummies. Reference category: female, between 35 and 54, medium education, not married, no children 0-15, no unemployment benefit, no training, no public employment office. 1995, Germany. (*), (**), (***): significant at 10%, 5% and 1% respectively. odds ratio tell how the odd of observing Y=1 changes when X changes from 0 to 1 (1 if no change). +For unemployment rate marginal effects at the average sample value. Standard errors computed with the Huber/White/sandwich robust variance estimates. NW: not-working; TC: temporary contract; PC: permanent contract; TR: education or training. In the "Hausman" test the H_0 means that the Irrelevance of Independent Alternatives hypothesis holds.

Box 3 - Duration dependence in the exits from temporary jobs: a European overview

This section[32] presents some results from the estimation of a duration model (see the annex for a description) for the transition out of temporary jobs in the European Labour market. This type of model allows controlling for all the standard determinants, as well as for duration dependence, which is the pure effect of time spent in temporary employment on the probability of moving to another state.

This empirical analysis is based on the European Community Household Panel (ECHP), waves 1995-1999. Since it is very likely that different career prospects arise according to the skills and behaviour of the individuals, the probability of leaving temporary jobs is estimated on an annual basis and for two different destination states, permanent contracts and non-employment. The analysis is performed separately for men and women.

In doing this, a discrete-time setting is assumed, thus specifying the hazard function (which is the probability of leaving a specific state conditional to the time spent time on it) as a multinomial-logit and allowing for unobservable heterogeneity, assumed to follow a discrete distribution with two points of support (non-parametric). This last feature is particularly useful since it offers the opportunity of controlling for spurious or "true" state dependence in the hazard rate and, in addition, it does not imply the IIA (Independence of Irrelevant Alternatives) assumption that is implicit in the multinomial-logit model (such an approach is referred to in the statistics literature as a competing risks model). Moreover, a completely flexible baseline hazard function is used (which is the pure effect of time on the exit probability) by allowing the hazard to vary freely on each interval of one year (using a set of time dummies instead of a predetermined function).

The sample consists of individuals starting a temporary job during their participation in the 1994-1999 waves of the ECHP. The model has then been estimated first on the whole set of EU member countries, excluding Sweden, Germany and Luxembourg for which there is no data on temporary employment.

32 The findings in this section are based on A. D'Addio and M. Rosholm, 2004, Exits from temporary jobs in Europe: a competing risks analysis*, a study for the European Commission, DG Employment and Social Affairs.*

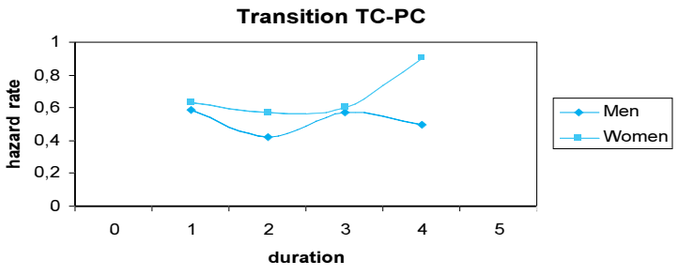
Table 61 - A competing-risks model with flexible duration dependence - EU

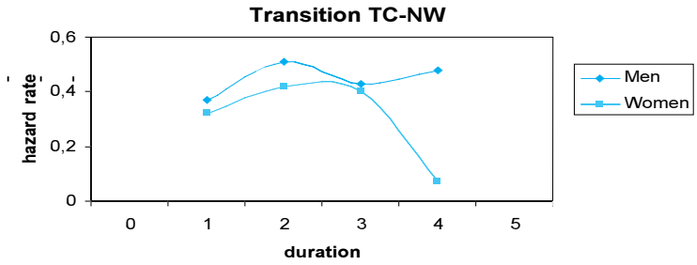
	TC to PC		TC to NW	
	Men	Women	Men	Women
	Coefficient	Coefficient	Coefficient	Coefficient
Unemployment before	-0.42 **	-0.56 **	0.95 **	0.67 **
Receiving training	0.17	0.04	0.18	-0.02
Secondary Education	0.22 **	0.11	-0.23	0.19
Higher Education	-0.04	-0.14	-0.87 **	-0.08
Age 55-64	-0.54	-1.96 **	0.81 **	0.47
Having children 0-12	0.08	0.14	-0.16	0.33 **
Duration dependence:				
1 year tenure dummy	-5.76 **	-12.25 **	-6.77 **	-14.04 **
2 years tenure dummy	-5.93 **	-11.98 **	-6.33 **	-13.38 **
3 years tenure dummy	-4.64 **	-11.45 **	-5.43 **	-12.94 **
4 years tenure dummy	-5.33 **	-11.44 **	-5.94 **	-12.15 **

Notes: (**) and (*) mean respectively significant at 1% and 5%. Also control for occupational level, other age dummies, unemployment rate, marital status, sector, experience, health, working hours, public or private sector, firm size, country dummies, non-parametric unobservable heterogeneity (two factors loading function).

Some of the results point to very important features of the European labour market. Indeed, it appears that the passage through a flexible work arrangement at the EU level is a different experience for men and women. The hazard rate, measuring the conditional probability of exiting temporary jobs, reported in the charts below shows that women with longer temporary contracts are more likely to get a permanent job, while for men, after a duration of three years, there is a clear negative path: transition rates into non-employment increases after that moment. At the same time, while for men longer temporary jobs are in general associated with higher job insecurity, the contrary is true for women[33].

Previous labour market status is important in determining the probability of job instability (and therefore of exclusion) implying that past unemployment has a severe penalty on subsequent job tenure. Furthermore, for those individuals entering a temporary job after a period of unemployment, a fixed-term contract is more likely to be a synonymous of a dead-end job instead of a stepping-stone. The same is true for older workers, irrespective of their gender, and to some extent for less educated people. Some occupational categories are likely to be more affected than others. It is generally the case for manual occupations and low-skilled individuals. At the same time women with young children and older workers are more exposed to the risk of unemployment after the experience of a temporary job.





33 *This pattern is not easily deducted by looking at the parameters attached to the tenure dummies because duration dependence is influenced by both sets of parameters – into permanent contracts and non-employment – through the denominator of the multinomial specification.*

7. Summary and conclusions

Diversity in terms of contractual arrangements is an increasing feature of European labour markets, with firms increasingly using temporary employment, either to meet uncertainty and cyclical fluctuations in demand or to screen employees. Even if temporary employment remains the smallest component of the active labour force, it is the one that has been growing most rapidly in recent years. This development calls for a close scrutiny of the temporary form of contractual arrangements to ascertain whether the greater flexibility they offer is also matched by an adequate degree of security. However, static measures, such as the incidence at any one point in time of precarious employment, are not an adequate measure of security, since what is most important is continuous employment rather than a job for life. For this reason, this chapter has looked at the dynamics over time.

Apart from the main activity status and contractual arrangements, this chapter has analysed pay levels and dynamics as an illustrative element of in-work upward mobility. Low pay is relevant as a measure of both employees' welfare and social cohesion. Although the incidence of low pay does not seem to have increased in the EU in the second half of the Nineties, it still remains at roughly 15% and it has noticeably increased in the Netherlands and in Germany between 1998 and 2000.

Labour markets are characterised by a high degree of mobility, roughly one third of those in temporary employment finding a more stable job after only one year. However, it is also true that even after six years, the longest time horizon allowed by data available, around 16% of those that were in precarious contractual arrangements are still in the same situation and, more worryingly, 20% of them have moved out of employment, more than for any other category of workers.

Similar conclusions emerge from the analysis of pay levels, where persistence is in any case higher than for temporary employment. 44% of the low-paid manage to increase their pay above the low-pay threshold, but only after an average of seven years. In contrast, 30% of the low-paid are no longer working after seven years, a probability of moving out of employment almost 13 percentage points higher than for those that were initially highly paid.

Furthermore, this average picture hides important differences. In particular, it has been shown that certain categories of individuals, including women, the low-skilled, older – and to a certain extent younger – workers, not only have a weaker position in the labour market at any one point in time, both in terms of precarious contractual arrangements and low pay, but they also have fewer chances to improve their position in the labour market relative to the other groups.

In the econometric analysis presented, this chapter identified four sets of factors that influence labour market transitions and in particular the probability of an individual to move into work and once in work from a precarious to a stable job and from low pay to higher pay. These factors are: the overall macroeconomic labour market performance, here captured by the unemployment rate; individual characteristics, such as gender, age, marital status, skills; labour market policies (training, public employment services and unemployment benefits); and demand/structural factors, such as sector, occupation, public vs. private sector, firm size.

All these factors have a strong impact on the upward mobility of individuals in the labour market, calling for a comprehensive set of policies. These include effective active labour market policies to reintegrate individuals in the labour market and support upward mobility, and a proper implementation of income support policies, including unemployment benefits, to financially support job-seekers without creating disincentives to work. Sound macroeconomic policies are also needed, given the negative impact of high unemployment rates on the opportunities to enter, remain and progress in the labour market. Evidence shows that public employment services can play an important role in (re)integrating individuals in the labour market, even if they seem to facilitate entry into temporary rather than permanent employment (see table 60).

Besides policy-related variables, demand/structural features of the economy also have a strong impact on the ability of individuals to progress in the labour market, with large firms and those in the industrial sector offering more opportunity for career advancement than those in the (growing) service sector.

It is essential that labour market policies take into account the gender dimension since female employment is characterised by the highest incidence of precarious contractual arrangements and low pay. This is further exacerbated by the fact that women are also at a disadvantage in terms of moving out of low pay and precarious employment, suggesting that they suffer relatively more from intermittent labour market trajectories.

While younger workers have the highest incidence of both temporary employment and low pay, they also have a relatively higher probability of moving up in the labour market. This shows that, in most cases, the weaker position of younger workers is due to the fact that they are starting their working life. However, there is a risk that, for young people, long spells of unemployment or highly intermittent, low skilled work experience may have a long-term negative impact on the individuals' employa-

bility or career opportunities. Older workers, by contrast, have a better position at any one point in time in terms of low pay and precarious contractual arrangements than younger workers, but in a dynamic context they have the greatest difficulty to remain or progress in the labour market.

Skills, as a vast literature has proved, are a key factor to improve labour market outcomes and the long-term employability of individuals. However, the term "skills" is too broad to represent any real guidance for the design of specific policies and there are several key issues that need to be considered when looking at education and training, including the role of general education vs. training, vocational courses vs. on-the-job training, type, length and quality of education or training, who finances it, etc.

This chapter has explored this issue to a certain extent by differentiating between educational qualifications, training or vocational courses and on-the-job training. The most interesting results are that educational qualifications, and to a lesser extent training courses, are particularly important to move into employment. Concerning in-work transitions, on-the-job training is strongly correlated with the likelihood of moving from temporary to permanent employment[34], with training courses having little effect in this respect. Finally, in relation to moving out of low pay, on-the-job training has a stronger effect on 1-year transitions than training courses, while training courses have a more important role for longer-term transitions, hinting that training courses, possibly if they lead to some sort of recognised qualification, serve as good 'signals' for prospective employers.

National labour markets are characterised by different degrees of mobility with respect to the main economic activity of their working age population, namely temporary employment, permanent employment, self-employment, and education or training. Countries with the highest mobility include the UK, Denmark, Finland, the Netherlands and Germany, those with the lowest mobility are: Belgium, France, Portugal, Greece, Italy and Spain, while the position of Luxembourg, Ireland and Austria varies according to the index used. Furthermore, it appears that mobility is correlated with labour market performance, where countries with the highest overall mobility also tend to have the highest employment rates, with the converse being true for countries with more limited mobility.

Four crucial dimensions of mobility have been identified and analysed separately. These are related to the labour markets' openness or easiness to access employment, to the degree of employment security in terms of remaining in employment and moving to a job with a permanent contract, and to the likelihood of labour market advancement for those in low pay.

Considering either one or two year labour market transitions, the probability of moving into employment is particularly low in Luxembourg, Italy, Belgium and Greece while that of moving out of employment is relatively higher in Spain, and Germany. Spain, together with France and Greece, is also characterised by one of the lowest probability of moving from temporary to permanent employment. Finally, Germany and the UK present the fewest opportunities for those in low pay to move above the low pay threshold.

At the same time, short-term transitions into employment are relatively easier in Denmark, Finland and the UK, while the probability to move from temporary to permanent employment is particularly high in Luxembourg, Austria, the Netherlands and the UK. Countries where it is easier to move out of low pay and into higher paid employment are Portugal, Finland and Belgium.

The transition rates into employment and, once in employment, the opportunities to remain and progress in the labour market, vary considerably between individuals according to specific characteristics, between occupations and sectors of the economy and between countries, in certain instances with high persistence rates in precarious and low pay employment even after several years. Concerns have been expressed[35] that this may lead to the emergence of a two-tier labour market, with "insiders" benefiting from a high level of employment protection and career opportunities and "outsiders" recruited under competing forms of contract. This calls for a comprehensive set of policies to promote flexibility combined with security in the labour market.

34 As it is generally the case, these models show correlations rather than causality. So, in this instance, on-the-job training may, for a number of reasons, facilitate the move to a permanent contract; at the same time, temporary contracts may be of a probationary nature with an implicit goal of a move to a permanent contract and, in view of this, temporary employees receive in their initial period more training.

35 See for example the report of the Employment Taskforce chaired by Wim Kok, where it is emphasised that long-sequences of consecutive fixed-term contracts are considered an abuse.

8. Annex to chapter 4: Are temporary contracts stepping-stones? Some findings[36]

The recent growth of temporary employment observed in many European countries has raised concerns that temporary jobs may be crowding out more stable forms of employment and thus creating an additional source of insecurity for workers. In this sense, it is feared that temporary jobs may amplify the dualism in the labour market between workers who are employed on a permanent basis and workers who are not, especially if workers experiencing temporary employment, particularly early in their careers, continue in a precarious condition for a long time before moving to a permanent contract.

The main question therefore is the following one: to what extent does a temporary job increase the probability of finding a permanent job?

Existing theory suggests different answers to this question. On the one hand, as has been well explained in the economic literature on career interruptions starting with Mincer and Ofek (1982)[37], job interruptions might imply human capital depreciation and consequently productivity to fall. Moreover, temporary jobs usually do not provide as much as - or as good as - on-the-job training as permanent ones do. On the other hand, there might be a positive effect represented by the increase in workers' human capital through the accumulation of general skills. In addition temporary employment is a way of connecting the worker to a network that could help him or her find a permanent job.

At the same time, there may also be a "signalling" argument. Temporary work experiences can be seen by a potential employer as a signal of unconditioned willingness to work, but when they are too long and too many, they can be interpreted as a signal for low skills.

Lastly, there is a concern that some employers may be using temporary employment as a short-term buffer to deal only with temporary changes in demand. As a consequence, they will always be reluctant to move temporary workers to a permanent position, regardless of their human capital. This behaviour could be exacerbated when occurring in a labour market with an excess supply of labour, or in one that is already regulated by stringent security provisions for permanent jobs.

This section summarises some recent studies on this issue, which try to analyse transition patterns out of temporary employment using micro data. These studies can be classified into two main groups, according to the different questions they want to address and consequently to the different econometric techniques used. On the one hand, following a programme evaluation approach, many authors have tried to assess whether temporary employment, as opposed to unemployment, help workers to get a permanent job. On the other hand, increasing attention has been paid to the analysis of duration patterns in temporary employment, i.e. the effect time spent in a temporary contract has on the probability of exiting towards a stable occupation.

8.1. A "programme evaluation" approach

Concerning the first approach, there have so far been only a few studies looking at the causal effect, rather than simple correlation, of temporary employment on the probability of getting a stable job. Two very recent papers have contributed to this debate by providing new evidence on European labour markets: the first is a paper by Hagen (2004)[38] which applies to Germany, and the second is a paper by Ichino, Mealli and Nannicini (2004)[39], which applies to Italy.

Both papers attempt to investigate the employment effects of a temporary job experience on an unemployed individual using *matching methods*, which have been developed in the evaluation of active labour market programmes (see Heckman, Lalonde and Smith[40], 1999 for a survey). Entry into different types of contract (namely, temporary or permanent) might in principle be driven not only by observable characteristics, such as qualifications, experience, socio-demographic factors or the state of the economy, but also by unobservable ones, such as individual propensity for risk, ability, etc. In other words, there might be a "self-selection" of individuals into different types of jobs according to their unobservable preferences, attitudes or characteristics. Matching methods allow for at least partial control of this problem.

In particular, matching estimators are based on the "potential outcome" approach to causality (see

36 *Most of the papers mentioned in this section have been presented at an academic workshop organised by DG Employment and Social Affairs in Brussels on 12/13 February 2004 with the title* Temporary employment in Europe: determinants, trends, perspectives*.*

37 *Mincer J. and H. Ofek , 1982,* Interrupted work careers: depreciation and restoration of human capital*, in The Journal of Human Resources n. 17, 3-24*

38 *Hagen T., 2003,* Do fixed-term contracts increase the long-term employment opportunities of the unemployed?*, ZEW Discussion Paper n. 03-49.*

39 *Ichino A., F. Mealli and T. Nannicini, 2004,* Temporary Work Agencies in Italy: A Springboard to Permanent Employment?*, mimeo.*

40 *Heckman J. J., R. J. Lalonde and J. A. Smith, 1999,* The economics and econometrics of active labor market programs*, in Ashenfelter A. and D. Card eds.,* Handbook of Labour Economics*, vol. 3A, chapter 31, 1865-2097.*

Roy, 1951 and Rubin, 1974[41]). According to this method, two groups of individuals are identified, both groups having similar observable characteristics (the degree of similarity is here synthesised with the *propensity score*, which is computed as the probability of belonging to a "similar" group) and then assuming that their unobservable characteristics (the so-called unobservable heterogeneity) are also similar. One group then receives a certain "treatment" (e.g. participates in a specific labour market programme) while the other does not. The outcomes for the two groups are then compared, where the outcome for the "non-treated" group can be interpreted as the potential outcome for the first group, should they have not undertaken the treatment. In the present context, for example, the outcome (e.g. labour market status) of individuals who have had a temporary job after unemployment is compared with the outcome of similar individuals that were also initially unemployed, but who did not have a subsequent experience as temporary workers.

In Hagen (2003), the central issue is whether or not temporary work really increases the long-term employment prospects of unemployed people entering into temporary work in terms of future permanent employment relationships. In particular, this paper investigates the effects of the transition from unemployment to fixed-term jobs on an individual's future employment opportunities in the West German labour market, by using the GSOEP dataset for the period 1991-2001.

The empirical findings of the paper can be summarised as follows. Entering into temporary jobs increases the future employment probability (between +4% and +17% for an exit to another temporary contract, and between +3% and +16% for an exit to a permanent contract) but this effect varies according to different time horizons, with a higher probability observed at the beginning for a renewal into a fixed-term job and later for a renewal into a permanent job. These findings are compatible with the hypothesis that temporary employment may be a stepping-stone towards a permanent contract.

The paper by Ichino, Mealli and Nannicini (2004) is similar in scope and techniques, even if it refers to a different country (Italy) and to a different typology of fixed-term contracts (Temporary Working Agencies - TWAs). As for the previous paper, the general aim of the paper is to understand whether, and to what extent, TWA work-placements represent a springboard toward a permanent job, or a "trap" in endless precariousness. In this case both samples of treated and control subjects are composed of residents in nine provinces of Tuscany and Sicily, aged between 18 and 40, and the control sample is composed of other atypical workers (proper fixed-term contracts, training contracts, etc.) and unemployed individuals. A particular feature of the paper is that it exploits, in the estimation of the initial propensity score, a potentially exogenous characteristic (the geographical distance of the worker from the agency) which may ensure a better control for any source of endogeneity.

Key results are as follows: for temporary workers, the probability of finding a permanent job 18 months after the TWA work placement doubles with respect to the counterfactual case of no placement (from 14% to 28%). Other temporary contracts produce the same individual effect, but if TWA employment had completely crowded out other types of non-permanent employment, the aggregate effect would have been zero. The effect of the treatment on the individual probability of finding any kind of job is greater in absolute terms, but lower in relative terms (from 48.5% to 68.5%). Moreover, while 51% of TWA workers had been informed by employers interviewed in the survey that they may be hired on a permanent basis at the end of the mission, only 32% of them were effectively hired by the firms. This suggests that screening and flexibility are complementary motivations for firms to hire TWA workers. The study concludes, much like the other study, that TWA employment seems not to be, at least in Italy, a "trap" of endless precariousness, but an effective springboard towards permanent employment. However, a similar springboard is offered by other types of non-permanent labour contracts and it is not equally effective everywhere.

Summing up, according to these two studies, temporary employment seems not to be a "trap" of endless precariousness, but it is an effective springboard towards permanent employment. However, these results should be interpreted with caution since the samples for the analyses were quite small (between 349 and 239 treated in Hagen, and between 305 and 162 in Ichino et al.). Moreover, matching estimators, as opposed to instrumental variable or Heckman-type estimators can only reduce the bias but they cannot account for any source of endogeneity which might affect the probability of finding a job.

8.2. A duration analysis approach

"Duration analysis" represents the second strand of literature that looked at transition patterns into temporary employment. While programme evaluation tells us whether a temporary contract, as opposed to any other counterfactual situation, helps in getting a permanent job, duration techniques help identify the effect of time spent in temporary employment. However, in duration analysis there is usually no counterfactual: since the sample is composed

41 *Rubin D.B., 1974,* Estimating causal effects of treatments in randomised and non-randomised studies*, in Journal of Educational Psychology n.66, 688-701.*

only by people holding a temporary contract in time t, any attempt to compare temporary employment as opposed to unemployment is completely disregarded here.
Despite the increasing number of studies analysing duration patterns in temporary employment, the most representative, at least for the European labour market are two recent studies: Booth, Francesconi and Frank (2002)[42] and Guell and Petrongolo (2003)[43] (but see also box 3).

Using a UK dataset (waves 1 to 7 of the BHPS), Booth et al. (2002) specify a model that relates the exit process to a number of individual- and job-specific characteristics. The estimation is carried out separately for two different types of temporary jobs: fixed-term contracts and seasonal-casual contracts.

Concerning the first type of temporary contracts, the results of the paper show that the transition from fixed-term to permanent work differs for men and women. For men, only age, part-time employment status, and a few occupational groups (craft, sales and machine operatives) appear to be good predictors for this exit. The evidence for women is rather different. The strong positive effect of any educational qualification on this exit rate is likely to be spurious, as it disappears (except for higher and university degrees) once unobserved heterogeneity is controlled for. The negative effect of being employed in a part-time job may also not be genuine for the same reason. However, women employed in any organisation of the public sector have a much lower exit rate than those employed in the private sector, even after controlling for education and occupation. A higher number of previous layoffs increases the exit rate into permanency. This may capture vintage effects, as suggested by the lower risk of exit for the youngest cohort of workers.

Regardless of a worker's gender, both part-time work and living in an area with adverse labour market conditions reduce the chance of exiting seasonal-casual work and finding permanent employment. The paper also documents some striking gender differences. For men, a strong occupational gradient is found, with workers in managerial, technical and craft occupations having a higher risk of leaving seasonal and casual work than workers in semi-skilled and unskilled occupations. However, for women the occupational gradient is clearly less pronounced with other factors playing a major role. In particular, those employed in the local government sector and non-profit organisations are significantly less likely to gain permanency than those employed in the private sector, and so are workers in the youngest age group compared to those in the 35-44 age group. Interestingly, women (but not men) who work in union-covered organisations have a higher chance of leaving their seasonal-casual jobs.

A more detailed analysis of duration patterns in temporary employment comes instead from the paper by Guell and Petrongolo (2003). In particular, they estimate a duration model of temporary employment using the panel version of the Spanish Labour Force Survey (EPA), starting in 1987. Moreover, the advantage of using the EPA data is that the length of the period covered by the survey is extremely long (from 1987 to 2002), which allows for an assessment in the conversion pattern of fixed-term contracts introduced in 1984, as well as an analysis of the effects of the later reforms.

Concerning the timing of permanent promotions, they find both early and late spikes in the renewal rates of temporary contracts, around durations of one and three years, respectively. The later spike is relatively more important for men and for the less skilled. If anything, the screening use of fixed-term contracts seems to apply more to women than to men, most likely so as to assess the women's job attachment of women, and to the skilled rather than the less-skilled, who can more easily be replaced by new temporary workers at the legal duration limit of their contracts.

These results seem to suggest that there are alternative reasons why firms opt for temporary workers, other than simply for covering jobs whose underlying nature is temporary. On the one hand, a fixed-term contract can in fact be used as a screening device when it is not known whether the skills of the applicant best suit the vacant post or when the productivity of a worker is not initially observable. In this case the temporary contract may be renewed into a permanent one as soon as the uncertainty is resolved, especially if firms perceive a real trade-off between using the two types of contract. In fact, while temporary contracts are cheaper in several respects, they may discourage worker motivation, retention, and specific human capital investment if the worker can credibly threaten to leave the employer. On the other hand, for workers who cannot credibly threaten their employers, and for jobs which do not require specific human capital, fixed-term contracts may simply be used as a cheaper alternative to permanent positions up to their legal duration limit of three years. Low conversion rates, mostly concentrated around the legal limit, would be in line with this second explanation, while earlier spikes in renewal would be more consistent with the screening explanation for the use of temporary employment.

To sum up, it seems that the results of both papers suggest an increasing trend in the probability of exiting temporary contracts towards a permanent position. However, there is a consistent heterogeneity

42 *Booth A., Francesconi M. and Frank J., 2002,* Temporary jobs: stepping stones or dead ends?*, in The Economic Journal, vol. 112, June,189-213.*

43 *Guell M. and B. Petrangolo, 2003,* How binding are legal limits? Transitions from temporary to permanent work in Spain*, IZA Discussion Paper n.782*

around these results, since the timing of this pattern can change drastically depending on institutional settings, gender and educational attainments of the workers under consideration.

However, it is important to note that the search for a permanent job may simply require one spell of temporary employment, but it can also entail a sequence of temporary jobs, sometimes inevitably staggered with unemployment or periods of inactivity. In this case, looking at a single transition it might not be possible to capture the more complex dynamics arising when repeated spells occur over time: for example, young workers may need more than one temporary job in order to acquire the right expertise and be promoted to a permanent job.

This concept has been recently developed in a paper by Gagliarducci (2003)[44], who applies duration techniques to an Italian prospective panel, the ILFI survey (1997 interview). In particular, he uses a multiple-spell specification that allows controlling for lagged duration dependence, as well as for state and duration dependence. The main results are as follows: as in the studies outlined above, the probability of moving from a temporary job to a permanent one increases with the duration of the contract, but not linearly. Moreover, repeated temporary jobs and in particular unemployment interruptions reduce it. This suggests that it is not exactly temporary employment per se but job interruptions that harm employment prospects.

44 Gagliarducci S. , 2004, What is really bad in temporary employment?, *mimeo*

Chapter 5 Globalisation and Labour Markets: a European perspective

1. Introduction

With 7% of the world's population, the European Union accounts for over one third of global trade in goods and services[1] and a third of the world's GDP. The EU is a major global player and Europeans are among the primary beneficiaries of opening up to trade; chapter 2 of this report recalls some of the main benefits of openness (defined as increased international competition in product markets)[2]; however its effects on employment are ambiguous[3] because it increases exposure to international shocks, its undesirable distributional effects continue to be felt and require further attention. Trade is certainly the area in which the European Union has abolished barriers most effectively and from there encouraged further integration in a broader sense.

The nineties have witnessed a strong intensification of the integration of EU countries into the global economy; the first part of this chapter will illustrate such a trend. However important issues remain on the agenda, such as identifying the winners and losers from trade liberalisation and globalisation; the labour market effects, the immigration issue and the links between trade, employment and wages[4] continue to be hot topics among economists, policy makers and the public at large. The fears voiced in the media and public opinion echoed this lack of completeness in the sharing of the benefits of globalisation. Extending the benefits of globalisation to all is clearly the policy aim at European level, which was underlined in a recent communication by the European Commission on the Social Dimension of Globalisation[5] (box 4). In the context of 'globalisation', increased integration among EU-economies implies not only liberalisation of trade among its Member States, but also further cohesion among Member States and better employment conditions throughout the EU. **Therefore the present chapter will focus on 'globalisation' and some of its manifestations that may have an impact on labour markets, namely the dynamics of further integration and offshoring**.

Having illustrated the phenomenon of 'globalisation' through an analysis of the nature of changes in international trade in the 1990s, this chapter looks at the enlargement process as a move towards further integration at the EU level, continuing the process of lowering barriers and deepening the links between countries – from the Single Market project leading to the present form of the European Union, which goes far beyond a mere free-trade area. We show that the EU25 increases product diversity, to the benefit of all since it increases specialisation and therefore trade and growth. From there we assume that further integration can be viewed as a 'model' of global integration. Throughout the chapter, the labour market issues and implications of such moves will be underlined. With a view to safeguarding both a dynamic economic environment and a supportive labour market, we should emphasise that the EU has established standards and regulations in the field of employment and social policies that contain compensating mechanisms at European level to help those most affected, thus counterbalancing some of the potential negative distributional effects resulting from further economic and monetary integration.

1 *Imports and exports of goods and services by the EU amount to approximately 6,000 bn constant US $ out of 18,000 bn constant US $ worldwide (Source: World Bank, WDI latest available year, in constant US $ - basis 1995); this is valid if intra-EU trade is included (approx. 35%), it represents one fifth of world foreign trade (20%) otherwise (Eurostat). This trend has shrunk by 3 % from 1993 to 2003 (using Eurostat data, Ameco database, measuring the share of EU-trade relative to foreign trade).*

2 *International competition in product markets affects the wage and price formation mechanisms, limiting price inflation in the economy and reducing the pressure for rent-seeking. Chapter 2 uses the sum of exports and imports divided by GDP as a proxy for 'openness'.*

3 *In a macro-economic perspective such as the one adopted in chapter 2 of this report, openness leads to positive effects on employment when openness reduces rent seeking behaviour, while effects of openness can be negative when it increases the demand for protective intervention (demand for insurance against unemployment and income risk), and/or increases the bargained wage.*

4 *The link between trade, employment and wages is an empirical issue – these variables are endogenous. Indeed despite many attempts to disentangle the effects of trade (per se) on the labour market variables, no robust evidence on this topic can be found in the economic literature.*

5 *http://trade-info.cec.eu.int/doclib/docs/2004/may/tradoc_117580*

The chapter goes on to highlight **sectoral patterns and more specifically points to the sectors and workers that are potentially adversely affected by the negative effects of globalisation**. The chapter then also attempts to shed light on the definition of outsourcing and offshoring, the nature and scale of such a phenomenon, since this is precisely the type of 'negative effect' that worries workers throughout the EU. In employment terms, **the chapter finally explores the skill-content of employment creation throughout the EU and by sector** in order to tentatively track the potential **tensions or 'pressures'** that globalisation generates at sectoral level. Data on the extent of job creation are presented by sector and by skills in order to assess the nature and magnitude of changes that workers are faced with in the EU, as well as the opportunities offered by the European labour market.

Overall, the aim of this chapter is to offer a balanced view of the debate over the distributional effects of 'globalisation', specifically in an age of offshoring. This will be achieved by taking stock of the whole literature on trade and growth and acknowledging its unambiguously positive effects through specialisation on growth, while focusing on the potential strengths of the European labour market and the issues that still need to be addressed.

Box 4 - Key messages of the communication on the social dimension of globalisation

In May 2004, the European Commission published a communication on how it intends to contribute to maximising the benefits and minimising the costs of globalisation. It highlights the need to strengthen policy coherence at all levels in order to promote mutually reinforcing economic, employment, social and environmental policies. The Communication is partly in response to the publication in February 2004 of the findings of the ILO World Commission on the Social Dimension of Globalisation.

In its Communication, the Commission states that it wants to ensure that the EU makes an active contribution to harnessing globalisation to serve social as well as economic goals both in the EU and elsewhere. It notes the efforts made so far in the EU to ensure that economic and social progress go hand in hand, but states that more can be done and calls for a move from debate to action. The Communication briefly describes the current range of actions undertaken in the framework of the EU regarding the social dimension of globalisation and makes proposals for certain changes.

The Communication states that the EU has a key role to play at the international level and that enhancing dialogue with its bilateral partners on the social dimension of sustainable development policy is a means of securing progress. It says that the EU will also seek to promote social development through its agreements with other regions and countries, its development and external cooperation, its trade policy including its unilateral preferential market access scheme (its Generalised System of Preferences) and indicates that a forthcoming revision of this scheme will seek to ensure a continued commitment to fostering the implementation of core labour standards.

The Commission believes that further efforts are required to encourage greater corporate social responsibility (CSR); the Communication states that efforts should also be made to ensure that CSR initiatives respond transparently to the concerns of consumers and social partners.

Finally, the document highlights the role of international institutions as being central to progress in achieving the goal of decent work for all. It states that there should be increased coherence between the different systems of 'global governance' and that developing countries should participate more effectively in key rule-making bodies, such as the World Trade Organisation. There should also be a greater involvement of social partners and broader civil society in these bodies. The EU commission will continue to improve dialogue with its stakeholders on the follow-up of the social dimension of globalisation.

The Communication is intended as a first contribution to the debate which was started by the publication of the World Commission on the Social Dimension of Globalisation's report and in particular to the discussion on its follow-up to be held at the ILO and elsewhere.. The Commission believes that some of World Commission's proposals should also be discussed at other fora which have responsibility for financial, economic and trade issues.

http://www.eiro.eurofound.eu.int/2004/06/inbrief/eu0406201n.html
http://europa.eu.int/comm/employment_social/news/2004/may/socialglobal_en.html

The issue is the following: there are perceived effects of globalisation, some are negative and there are grounds for concern; on the other hand, globalisation also brings about large overall benefits. Public concerns over increased insecurity, job relocations, and the negative impact on the low-skilled are to be taken seriously by decision makers. Therefore policy advice is needed to find a way of spreading those benefits more evenly, as well as to bridge the gap between perceptions and reality.

2. Defining the issue

2.1. What is 'globalisation'?

Although the term 'globalisation' is widely used, very few actually perceive this process as it is usually defined, namely the trend of ongoing international integration. Globalisation is not only about trade and FDI; indeed it encompasses much broader mechanisms such as the intensification of links between countries (trade, FDI, exchange through ICT means, transportation, opening up to other countries and deepening the links with them[6]); there is a qualitative difference between 'trade liberalisation' and 'globalisation' which stems from the deepening, intensification and broadening of the process. Economists tend to agree on the significant gains from trade liberalisation and on the distributional consequences (winners and losers in standard trade theory); however there is a lack of systematic empirical evidence on the groups affected by the negative distributional aspects of 'globalisation' in the broad sense[7].

From a European perspective, globalisation means simultaneously further integration of the world economy and within-Europe integration (further enlargement) – this is an ongoing challenge. Globalisation can be understood to have an 'intra-EU' (East-West or 'within'-EU) dimension reflecting the recent enlargement as well as a truly global/worldwide perspective[8]. For a variety of reasons, greater integration of the world economy leads companies to internationalise their production processes, which in addition to the vertical division of the production process – has a significant impact on the international division of labour. At European level, further integration, through increased specialisation, intra-EU trade intensification, investment and growth, should ultimately lead to an increase in wealth and highly paid and highly qualified jobs due to constant innovation and the consequent upgrading of European products.

2.2. Global labour flows?

Globalisation has mainly been driven by the free movement of goods, services, capital flows, investment and technological change. Labour flows on the other hand have never been a driving force (Ghose, 2003); the realm of globalisation now extends beyond this definition if we understand it as further integration; labour flows are 'formally absent' from the globalisation process although it should theoretically improve the long-term outcomes[9]. This does not mean that labour market developments have had no effect on the process itself. Even though international trade models usually assume full employment and fully flexible labour market adjustment mechanisms (through wages), trade economists have questioned these assumptions. Indeed a country's labour market situation (including labour costs, the skill composition of labour and tax-benefit systems) affects its competitive position, its attractiveness to FDI (Foreign Direct Investment) and acts as a 'push-' or 'pull-factor' thus triggering migration flows[10]. The very fact that one does not talk about 'global labour markets' is telling. For, in reality, there is no such thing as a 'global labour market'. Nevertheless migration, be it legal or illegal, has increasingly become an area of interest[11]. In Europe, where wages are rather 'sticky', the major short-term focus is the impact of migration on employment (if the wage variable is 'sticky', meaning that wages are not flexible downwards, then employment bears all the brunt of adjustment in case of economic shocks affecting labour market outcomes).

2.3. Causes for concern

'Because the growth of North-South manufactured trade constitutes the core of globalisation, its primary effects are on employment and wages in manufacturing industries' (Ghose 2003). This statement[12] and the bulk of the empirical literature

6 UNCTAD has recently published a very comprehensive report on various indicators of development and globalisation 'Development and Globalization: Facts and Figures' (2004), http://www.unctad.org/en/docs//gdscsir20041_en.pdf.

7 some economists also disagree, especially when examining the case of Least Developed Countries locked in the export of non-fuel primary goods with deteriorating terms of trade.

8 ILO, Ghose (2003) presents detailed conclusions about globalisation and labour markets in a North-South perspective.

9 See the literature on optimal currency areas, especially applied to the European case.

10 Labour flows are usually hindered by country borders and language barriers; in the US and Brazil – two Federal States – those barriers have largely been removed and there are substantial flows of labour between regions.

11 Commission Communication on Immigration, Integration and Employment (2003). Migration is increasingly likely and necessary in the context of an ageing labour force.

12 Changes in the manufacturing sector are often studied in greater detail because data on wages and employment are both available on a relatively comparable basis throughout countries.

fail to acknowledge that globalisation now extends to all other activities and sectors, (trade in goods[13], services, financial services, and movement of capital) therefore all sectors should potentially expect to be part of this global trend and should all be prepared to manage changes in the international division of labour.

It is worth noting here that globalisation has brought significant benefits to many through the creation of higher quality and higher earning jobs; however these benefits are not shared equally[14]. While trade openness brings 'gains from trade' according to traditional trade literature, it also brings 'pains from trade'[15]. If this aspect of globalisation is taken in isolation, then 'globalisation' scares workers[16]. Workers can potentially be severely hit by 'economic adjustment' and this aspect is especially relevant at times when public debate focuses on relocation of firms, resulting in fear of job losses at local/regional level. In the past, the manufacturing sector has been particularly hard hit by this trend which has mostly affected the unskilled. Now it is extending to the high-skilled, white-collar workers too. Replacement of such activities is less obvious than the replacement of manufacturing by service jobs, but does develop. The qualitative aspects that are witnessed in recent years point to the broader nature of 'globalisation' when compared to pure international trade.

Assuming that in the long-term the 'compensation mechanism' is sustainable, the analytical presumption is then that 'those most affected' can be compensated in one way or another, for instance through a variety of policy instruments without exhausting the gains from trade. Such a policy debate is especially relevant within the EU, as the 'compensation mechanism' which is built in our regional integration model rests upon the welfare state (social protection systems) that allows for national transfers to occur and redistribution mechanisms at pan-European level to balance out regional disparities. One of the underlying questions is whether this combination of a Single Market and the 'European Social Model' is sufficient in an enlarged Europe and also whether such a setting can be reproduced elsewhere.

Such a debate on globalisation and jobs is entirely relevant in EU policy terms, since the distribution effects will be monitored in the context of enlargement. The EU Social Model and its capacity to manage the negative consequences of globalisation on labour are a core aspect of future policy developments, with a view to safeguarding social cohesion by alleviating the pressure on those sectors and workers exposed to competitive forces. The examples of Greece, Portugal, Spain and Ireland are successes in terms of real convergence mostly resulting from the combination of economic integration and structural funds[17].

2.4. Perceptions

The gap between the views shared by economists (who most frequently focus on trade *per* se) and those expressed by workers and the perception of globalisation by the public at large is 'the ferment of political backlash'[18] which creates doubts and uncertainties about the long-term prospects for further integration worldwide.

For many, globalisation is perceived as 'increased change' (accelerated change) and therefore increased insecurity. 'Individuals that perceive globalisation contributing to their own economic insecurity are much more likely to develop policy attitudes hostile towards economic integration'[19]. Increases in perceived economic insecurity stem from fast reallocation of FDI and the activity of MNCs (multinational corporations) in general[20]. The uncertainty about the winners and losers from trade integration and further liberalisation, the difficulty in identifying who is moving from one sector

13 *The fact that agriculture is still a highly regulated sector should also be of concern while discussing potential gains from lowering barriers in this sector. However, this specific issue is not tackled in this chapter.*

14 *The report of the World Commission on the Social Dimension of Globalisation,* A fair globalisation: creating opportunities for all*, February 2004, ILO, notes that the benefits are not shared equally across countries and groups, and concludes that without an effective system of global governance, globalisation will continue to generate unbalanced outcomes.*

15 *Sapir (2000),* Who is afraid of globalisation? The challenge of domestic adjustment in Europe and America*, CEPR Discussion Paper n°2595.*

16 *Since the protests in Seattle 1999, anti-globalisation movements have fuelled concerns about the perceived consequences of trade with emerging markets. A number of concerns were prominent among the issues raised: first, whether cheap labour in China, India or Brazil would wholly displace highly paid workers in 'industrialised countries'; second, whether MNCs (multinational corporations) would simply close down in the industrialised countries and set up factories in countries where they can employ children. Both concerns are linked to the perceived effects of trade on labour market outcomes (employment and wages). Child labour is one of the core labour standards agreed upon at the ILO. This chapter will therefore not dwell on the issue and its purpose is to concentrate on the issue of competition with providers of 'cheaper labour'.*

17 *Third Cohesion Report. See: http://europa.eu.int/comm/regional_policy/sources/docoffic/official/reports/cohesion3/cohesion3_en.htm*

18 *Verdier (2004),* Socially responsible trade integration: a political economy perspective*, paper presented at the ABCDE meeting organised in May 2004 by the World Bank in Brussels.*

19 *Scheve K., Slaughter M.J. (2002),* Economic insecurity and the globalisation of production*, http://ssrn.com/abstract=386625*

20 *Scheve K., Slaughter M.J. (2002),* Economic insecurity and the globalisation of production*, op. cit., 'Insecurity' is measured as 'less satisfaction' from a given job, as the authors have coded a survey by inserting values from 1 to 7 according to job satisfaction and then used as the dependent variable for econometric estimations. See also Scheve and Slaughter (2001), www.iie.com, on the US case.*

21 *There is a time inconsistency problem (once trade gains accrue to a country/government, they are less likely to be redistributed to compensate the losers). There are also information constraints that hinder the compensation process.*

to the other and the relative position of workers in the income distribution are precisely what remains unclear in the current debate. Furthermore, economic literature is also unclear about the impact of trade on the capacity and willingness to redistribute its gains[21] through appropriate adjustment policies (such as employment and social policies). However, the 'negative' perception of globalisation is not shared unanimously; gathering feedback throughout the EU yields the following comments[22]: for instance, 56% of the people surveyed in the EU15 see globalisation as an opportunity for national economies, while 39% perceive it as a threat.

What seems clear, in light of the theoretical, empirical literature and case studies, is that trade integration should not be pursued on its own. The explicit choice of the EU's founders was to reconcile economic gains with political feasibility. The same type of approach could also be applied to reconcile expectations of globalisation's benefits – which are high[23], with perceptions of its negative effects – that need to be carefully understood and addressed with appropriate, timely and well-tailored policies. Globalisation could be made more encompassing than previously if the benefits of international trade and deeper integration were more evenly shared while simultaneously taking into account the compensation mechanisms and labour market concerns.

Starting with the changing nature of international trade, the chapter assesses the EU's position as a 'major global player' in the global division of production. This fact has consequences on the demand for and supply of labour.

Table 62 - Merchandise trade (shares in % by country group)					
Region	**1960**	**1970**	**1980**	**1990**	**2000**
Developing countries	24.7	19.2	29.4	24.1	32
CEEs	10.6	10.1	8.0	5.0	4.2
Developed countries	64.7	70.7	62.6	70.8	63.8

Source: UNCTAD

Table 63 - GDP growth per capita (average annual growth rates of real GDP per capita in %)				
Region	**1980-85**	**1985-1990**	**1990-1995**	**1995-2000**
World	0.6	1.9	0.5	1.7
Developing countries	0.3	2.4	3.3	2.3
CEEs	2.1	0.6	-7.1	2.1
Developed countries	1.9	3.0	1.1	2.2
Europe	1.4	2.8	0.9	2.3

Source: UNCTAD
Note: in the above table, country groupings are the ones used by the United Nations25; i.e. the EU15 is a subset of 'developed countries and NMS are a subset of CEEs. 'Developed economies' encompasses the EU15, Canada, the US, Japan, Australia and New Zealand;' CEEs' include Albania, Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia, Bosnia and Herzegovina, Croatia, Slovenia, former Macedonia and Yugoslavia; 'Developing economies' include Africa, Asia and the Pacific (excluding Japan, Australia, New Zealand, and the Asian parts of the CIS) and Latin America and the Caribbean.

3. The changing nature of international trade

EU integration in global trade

In the past four decades, international trade in goods and services has increased tremendously and some developing countries have increased their participation in worldwide trade, notably China, India and Brazil, who make up for a large part of the increase in the figures for 'developing countries' as broadly reported in table 62. Indeed the share of exports and imports of the grouping named 'other Asia(n)' countries in the United Nations' classification, which includes China and India, has risen from 7.9% in 1980, 12.9% in 1990 to 19.7% in 2000[24].

International trade has, no doubt, brought about large gains in terms of long-term growth of the world economy (table 63). This assertion is based on the body of empirical literature on trade and growth: more open countries grow faster and attain higher levels of income than countries that hinder international trade[26]. The impact of economic openness usually feeds through to income per capita or the growth rate of GDP. All studies find that countries with more open trade policies have tended to grow faster. As shown in chapter 2 of this

22 http://europa.eu.int/comm/public_opinion/flash/FL151bGlobalisationREPORT.pdf, *Eurobarometer (2003).*
23 *Verdier (2004), see graph on pros and against trade (Annex): only in the Netherlands do the 'pro-trade' outstrip the 'against'.*
24 *UNCTAD,* Handbook of Statistics 2003.
25 http://unpan1.un.org/intradoc/groups/public/documents/un/unpan008092.pdf
26 *Dollar, D. (1992),* Outward-oriented developing economies really do grow more rapidly: evidence from 95 LDCs, 1976-85 *Economic Development and Cultural Change, pp. 523-544; Sachs, J. and Warner, A. (1995)* Economic reform and the process of global integration*, Brookings papers on economic activity, 1, pp. 1-118; Harrisson A. (1996)* Openness and growth: a time-series, cross-country analysis for developing countries*, Journal of Developing Economics, 48, pp. 419-447; Edwards S. (1998)* Openness, productivity, and growth: What do we really know?*, Economic Journal, 108 (March), pp. 383-398.*

report, in a macro-economic setting, the long-term impact of 'openness' on the employment rate is unambiguously positive: an increase in the degree of openness by 10% is associated with an increase of 1% to 3% in the employment rate[27].

We shall first review some trade indicators for the EU and then discuss other components that need to be discussed when focussing on 'globalisation' in a broad sense.

3.1. The enlarged EU in the world economy

In 2003, the EU is US's main trading partner (ranking n°1 in US's imports and n°2 in USA's exports; conversely, the US ranks n°39 in the EU's imports and n°30 in EU's exports)[28]. Bilateral trade in services between the EU and the US represents 35% of world flows. The EU's share of world trade in goods (18.9%) and services (25.2%) surpasses that of the US in services (20.3%), whereas the US represents 21.3% of the world's trade in goods, and both surpass Japan to a large extent (goods: 7.7% and services: 7.3%).

3.1.1. Characteristics of EU trade

All sectors of the economy are subject to an increased competitive pressure and moreover this process is not new: the gradual opening up to trade has witnessed this increase in competitive pressure for decades[29]. The enlargement process puts pressure on the NMS (New Member

Table 64 - Broad trade indicators

Trade (% of GDP)	**1991**	**2001**
China	35.52	49.24
India	18.05	29.08
Japan	18.28	20.26
Switzerland	68.59	86.60
US	20.64	26.20+
EU15	76.43	90.97*
Exports of goods and services (% of GDP)	**1991**	**2001**
China	19.43	25.83
India	8.73	13.65
Japan	9.95	10.44
Switzerland	34.98	45.47
US	10.15	11.24+
EU15	38.08	46.87**
Imports of goods and services (% of GDP)	**1991**	**2001**
China	16.09	23.41
India	9.32	15.43
Japan	8.34	9.81
Switzerland	33.61	41.13
US	10.49	14.95+
EU15	38.34	44.10
Foreign direct investment. net inflows (% of GDP)	**1991**	**2001**
China	1.16	3.82
India	0.03	0.71
Japan	0.04	0.15
Switzerland	1.38	3.49
US	0.39	1.30
EU15	1.67	6.71
Foreign direct investment. net inflows (% of gross capital formation)	**1991**	**2001**
China	3.33	10.07
India	0.13	3.17
Japan	0.11	0.59
Switzerland	5.43	16.17
US	2.42	15.13+
EU15	7.62	65.83+

Source: WDI. World Bank.

*Notes: * excluding Luxembourg; ** using 2000 data for Greece and Luxembourg; + in 2000 due to missing data. Figures for the EU15 include intra-EU trade and are not strictly comparable.*

27 Although price stickiness leads to a negative response of the employment rate in the short-term (indeed there is a trade-off between adjustment through wages and adjustment through employment).

28 All data used in this paragraph comes from Eurostat, Comext database.

States) to proceed quickly with restructuring and reforms. Further integration in the global economy is putting *the whole EU25* under intense competitive pressure, forcing Europe to change rapidly.

A closer look at the composition of EU trade with the rest of the world shows that a large majority of the trade is carried out *within* the EU. Yet one should also underline the fact that the EU15 is a major player in world trade relations (table 64).

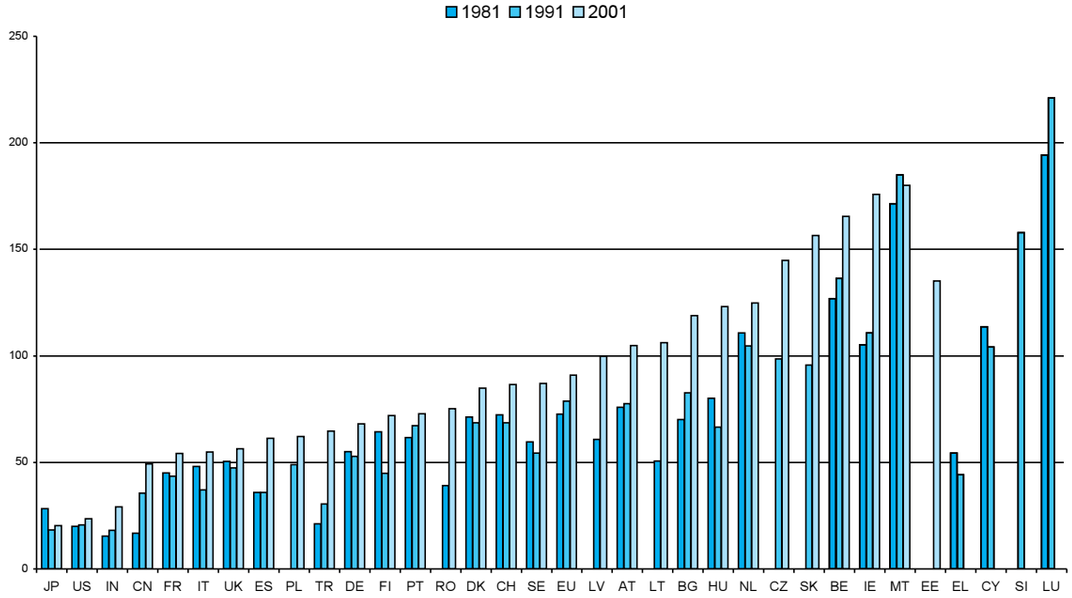
Trade in goods clearly represents a growing share of GDP for the smaller countries, such as Switzerland, Belgium, countries of Eastern Europe (chart 88), while the picture is slightly different for the US, China and India in the 1990s.

One typically notes the divide between large countries and smaller countries in the chart below, with smaller countries necessarily being more open than large ones and also witnessing the relative importance of intra-European trade in the 1990s.

Overall the EU's trade increased so considerably in the 1990s that it is today (data for 2002) a frontrunner with regard to its volume of trade (20% of world trade) and FDI (22.5% of inflows and 32.5% of outflows). The liberalisation of capital markets at the beginning of the 1990s (and the end of the 1980s, depending on the country) has obviously played a prominent role in deepening integration and this is a new feature of European integration in the 1990s. It still seems that most of the trade is concentrated among industrialised countries ('North-north' type of trade, intra-industry trade, i.e. trade in similar products).

As regards the impact of different types of trade and factor mobility on wages, incentives for inter- versus intra-industry trade include higher product diversity, and efficiency gains through competition. Intra-industry trade does not affect the supply of and demand for factors, because of similar factor endowments or due to an increase in the variety of goods traded, thus explaining mainly trade among economies that are similar in terms of their stage of development; meanwhile, inter-industry reflects the predictions of standard trade model (box 5). Skill upgrading in the countries of the EU's main trading partners will benefit the Union, as it will be trading similar products (intra-industry trade) and this should not affect the supply and demand for factors, and ultimately will not affect factor prices. Adjustment costs in that case are considered to be much smaller than those deriving from inter-industry specialisation. As shown in chart 89, intra-industry trade characterises

Chart 88 - Trade (% GDP)



Source: WDI database, World Bank. Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product. Data from the World Bank national accounts data, and OECD National Accounts data files.

29 E.g. in the 1960s the automobile industry feared the development of a new competitor, Japan.

Box 5 - The two outcome variables - Employment and Wages

Standard trade theory (Heckscher-Ohlin, Stolper-Samuelson theorems) would predict that further integration of the world economy leads to further inter-industry specialisation and for industrialised countries this means in relative terms:
- wages: a decrease in wage of the unskilled where less in demand or endowed (if wages are flexible)
- employment: a decrease in employment of the unskilled (if wages are not flexible), by net destruction of jobs or skill mismatch.

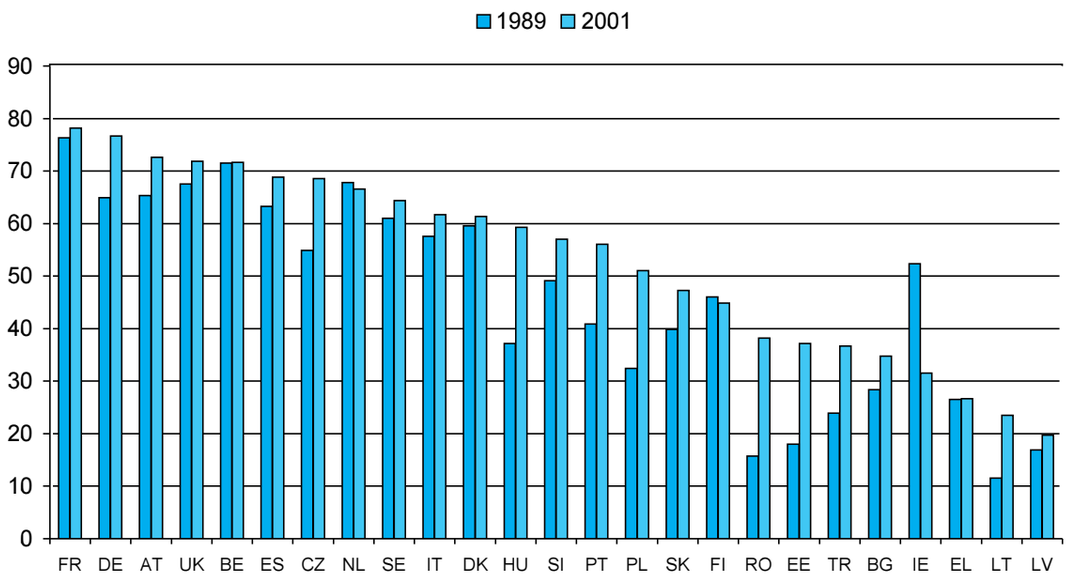
Intra-industry trade: simultaneous imports and exports within the same industries (trade in similar products) should not lead to major changes in factor prices and adjustment costs are smaller.

Assessing the impact of **trade integration on wages and employment** for various sets of 'industrialised' countries (looking at trade between 'labour-abundant' and 'capital-abundant' countries), it seems that trade integration matters, but has relatively varied effects depending on the time-period under scrutiny. Overall in the 1980s, negative effects on employment and wages dominate. In the 1990s, however, there were positive labour market outcomes. The effect on employment variables seems more prominent than the effect on wages. Adding data on low-skill and high-skilled industries, the negative effect also vanishes in the latter period. The standard trade Heckscher-Ohlin framework is not backed by sufficient evidence to address the issue in a comprehensive way; indeed after trade has been liberalised, labour market changes are essentially caused by technological change and productivity changes, which makes the issue more complex.

In the European case*, during the period from *1980 to 1989*, a negative effect of trade on employment was observed (inter-industry trade dominates, trade in different products). Then intra-industry trade (trade in similar products) takes over: the years from *1990 to 1996* witnessed a positive effect on employment; trade in similar products, vertical integration of firms and fragmentation of production process, out sourcing thus triggering savings and reinvestment of profits in the home country led to positive outcomes on labour market variables. Overall, employment effects were larger than the effect on wages.

** Source: Landesmann M., Stehrer R., Leitner S. (2002),* Trade liberalisation and labour markets: perspective from OECD economies*, Employment paper 2002/41, ILO.*

Chart 89 - Intra-industry trade



Source: data from Djablik M. (2004), UN. Data is missing for LU, CY and MT; data starts in 1992 for EE, SI, LT, LV and 1993 for CZ.
Note: Intra-industry trade is measured as of % of manufactured products traded with the EU15.

European countries, and this should be a very positive element of European specialisation.

Hereafter a more specific review of trade in manufacturing goods, services, foreign direct investment, international production patterns – stress the specific features of the 1990s and the changing environment of trade relations.

3.2. Manufacturing

The loss of manufacturing jobs has attracted attention in the EU but is strikingly higher in the US. After the recession in early 2000, the US manufacturing jobs decreased by 7.8%, much more than after the 1990-1991 recession, when they declined by 2.2%. However the decline in manufacturing jobs is not new. During the past fifty years (between 1950 and 2000), employment shares declined in manufacturing and increased in the services sector both in the EU and in the US, although there are slight country specificities: industrial employment shares (in % of total employment) declined from 33.3% to 21.6% in the US, from 46.5% to 22.8% in the UK, and from 39% to 27% (somewhat higher percentage) in France and Germany (see chapter 3 for more details on this point).

Table 65 - Distribution of world manufacturing value-added, at current prices (in %)

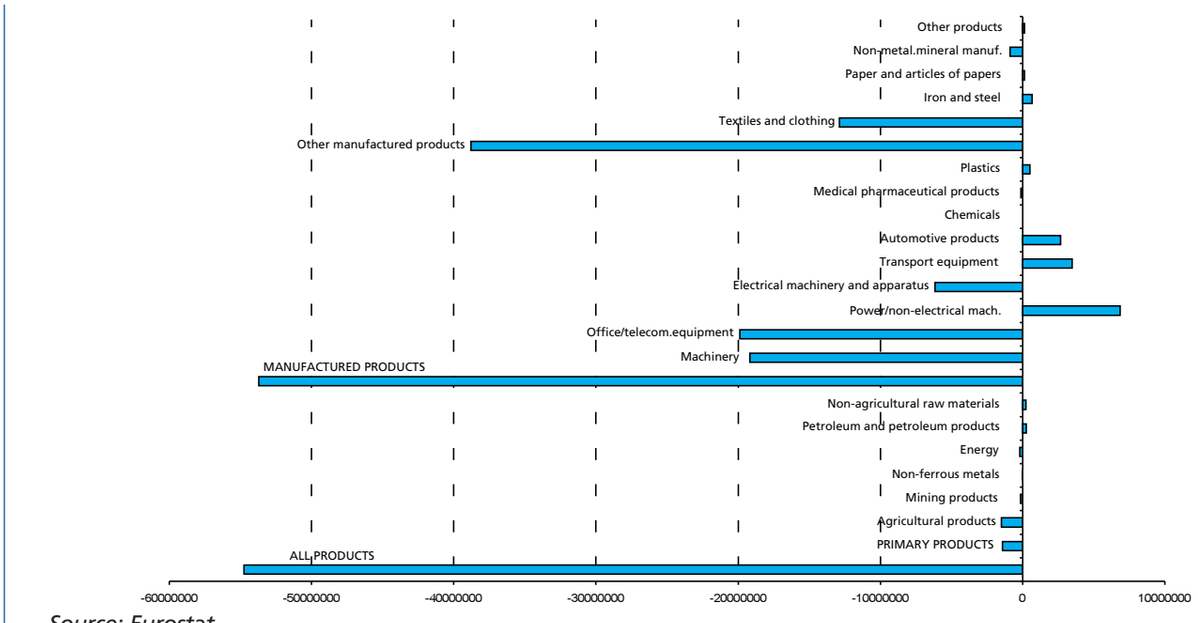
Region	1980	1990	2001
Developing countries	13.7	14.4	23.7
CEEs	19.3	8.9	2.7
Developed countries	67.0	76.7	73.6
Western Europe	32.1	34.0	26.2
China	3.9	2.6	7.2
North America	22.1	23.3	30.1

Source: UNCTAD

It is often thought that the very nature of manufacturing goods somehow leads to the relocation of production sites to areas closer to potential demand and/or where demand is increasing and in large numbers (regarding China and India – the market access argument and the demographic arguments are mutually supportive here) and because demand is largely satisfied in the EU, US and other 'developed economies' (satiation point). As a result - many contend - that product upgrading, innovation, replacement activities and the expansion of leisure activities could be the way out. The trade balance of the EU with China, for instance, bears out the first part of this claim (chart 90), however the market access argument fares less well. This could be due, *inter alia*, to remaining high trade barriers with China. Consequently, the search for a level-playing field in the context of trade relations needs to be accelerated. As China has joined the World Trade Organisation, its impact should be felt rapidly.

It is indeed the structure of manufacturing trade that has changed substantially in the past couple of decades. Notably the share of electronics doubled to reach almost one fourth of the share of world trade in manufactured goods. Moreover, developing countries are now net exporters of manufacturing goods (especially visible for China; table

Chart 90 - EU 25 trade balance with China in 2002 (mio €)



Source: Eurostat.

65), while developed economies have become net importers of such goods.

To many, the negative impact of globalisation on labour markets is net job destruction, with job destruction outweighing job creation, especially in the manufacturing sector. Indeed, relocation in this sector has led to heavily localised job losses, concentrated on specific types of workers. This conclusion could easily be reached if the charts above were considered in isolation (which illustrates the large trade deficit of the EU with China and the changing 'location' of the distribution of value-added for the manufacturing sector).

Behind this conclusion lies the following reasoning about trade liberalisation (strictly speaking): low labour-cost countries exist, labour-intensive jobs should go to emerging economies; we then import labour-intensive goods. Through this substitution effect, unskilled labour is presumably 'destroyed' in the home economies. Since the high-value-added products that we export to the emerging economies are not very labour-intensive, the balance between jobs that are created and jobs destructed is obviously negative. This reasoning is based on the assumption that an economy hosts a fixed amount of jobs and that whichever job is offshored is a job destroyed and a lost employment spell[30]. In fact, this is not the way the labour market works; indeed jobs spells are constantly being created or destroyed and it is not a fixed amount. In addition, not all of the jobs destroyed are offshored, since job destruction is also partly due to 'restructuring', brought about by increases in productivity for instance[31].

One other underlying assumption behind fears of massive job losses is that trade surpluses are 'good' while trade deficits are 'bad', which unveils a few remaining misunderstandings of the mechanisms of international economics as well as an over simplistic view of world trade. For instance, catching-up economies usually display a current account deficit, given that they need to attract foreign capital and to import investment goods in order to engage on an upward investment path.

As a corollary to increased trade, countries producing different types of goods have come across increased specialisation of production. However harmful this process may seem to the lower-skilled workers in import-competing sectors, this process has overall led to more growth through the additional demand created by the opportunity offered by trade, to greater product diversity (utility gains) and to increased competitiveness (efficiency gains).

3.3. Services

Increased diversity also plays its part in the changing aspects of services which are provided. Increased demand, driven by increases in income, then outsourcing opportunities (e.g. services to industry) and increasing trade in services (in the international framework for liberalising services) are factors that modify the nature of our 'service sector'. This sectoral classification encompasses more and more diverse activities. As for the impact of trade on services, some services remain non-tradable and therefore difficult to relocate, while others can be relocated more easily, both phenomena coexist.

Service sector jobs are mostly 'non-outsourceable' and therefore job creation could gain from focusing on those jobs that require geographical proximity. Owing to the ageing population, job creation will be increasingly needed in health-care and personal services[32] - such jobs can hardly be delocated. Boosting job creation in high quality high paying jobs could become a paramount objective of more advanced economies, as wages implicitly contain information about worker 'quality'.

Again, when illustrating trade in services, a very diverse picture emerges from the chart 91 (% change in trade in goods and services 1997-2002). The EU15 still exports goods as well as services and no clear-cut differentiation can be achieved. Actually services can differ in their very nature. Most services trade relates to tourism (30%), transport (25%), business services (12%) and financial services (6%). Trade intensity of OECD countries is 2 to 7 times higher in goods than in services[33]. This is also due to the non-tradable nature of services (a hairdresser is less likely to export services than an insurance company). In addition, the influence of geography/location and market size may differ for trade in goods and trade in services.

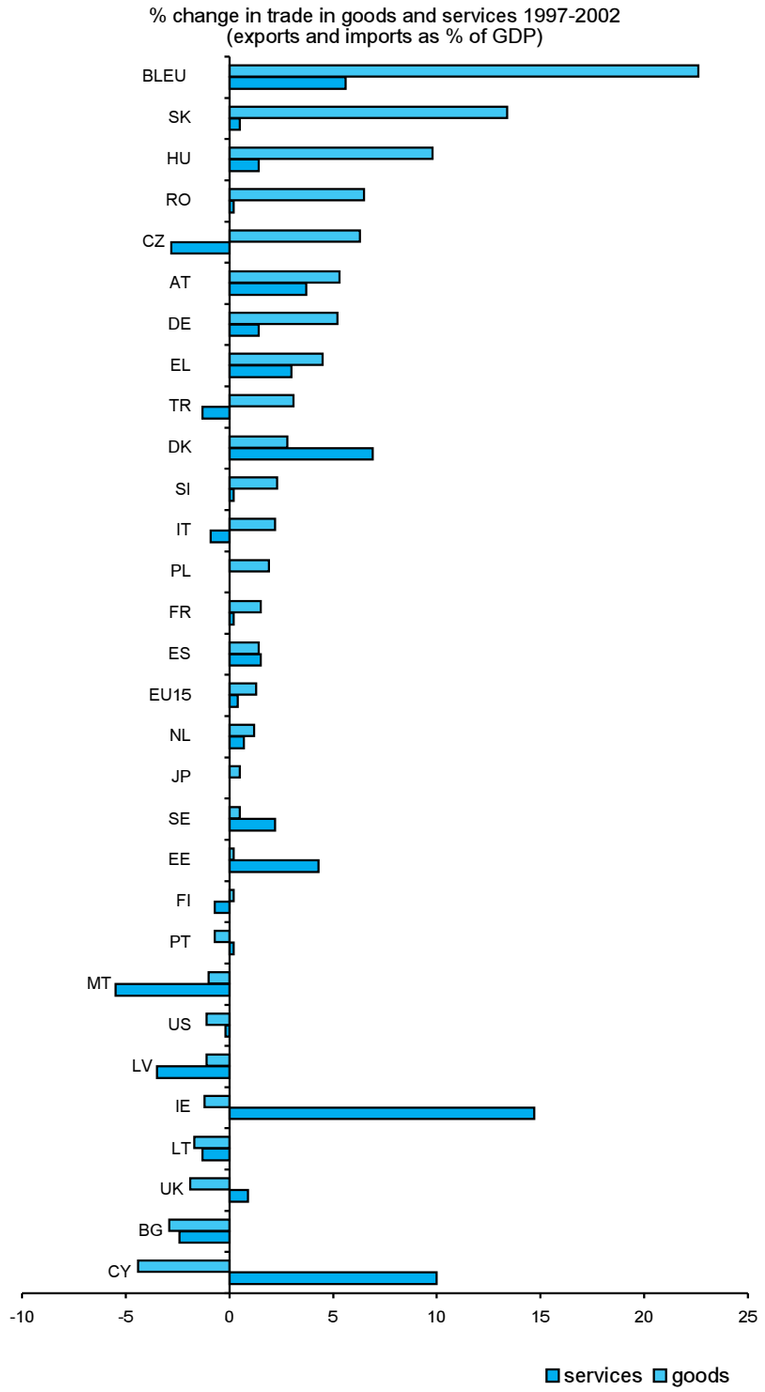
30 The illusion that the output of an economy and, hence the total amount of work available are fixed, is called the 'lump of labour fallacy'. In the past, the most commonly asked question was whether all agricultural jobs would be lost, now it is becoming whether all manufacturing and service jobs will also be destroyed. These questions are based on the assumption that the stock of jobs in the economy is fixed. However, reporting on job destruction (the media is usually less prompt at reporting success stories and job creation) only feeds into anti-free-trade arguments, and fails to take into account the positive aspects of such dynamics on job creation. Indeed the worldwide number of jobs is not a fixed amount and the labour market consists of jobs being constantly destroyed and created.

31 This 'restructuring' trend is beginning to appear in China, incidentally, a note by the Conference board (www.conference-board.org/utilities/pressDetails.cfm?press_ID=2432) underlines the fact that 'China is losing more manufacturing jobs than the US, adding service jobs at a rapid pace'. Indeed between 1995 and 2002, China lost 15 million manufacturing jobs, compared with 2 million in the US.

32 Such jobs have so far been created more in the public sector. However, incentives are gradually being set across the EU in order to foster job creation of such services by Small and Medium-Sized Enterprises (SMEs).

33 This is also partly due to the fact that trade in services has not yet been completely liberalised.

Chart 91 - Trade in goods and services (1997-2002)



Source: Eurostat. Note: BLEU stands for Belgo-Luxembourg Economic Union.

Moreover imported services cannot substitute services of the same type of factor. The whole supply chain could be affected if tasks are imperfectly performed in the host country. Services (traded) are imperfect substitutes; specific inputs and local knowledge of markets in both countries are needed (e.g. airports, telecom exchange, computers, tourism, banking, insurance). Such inputs (including labour) from two countries need to interact to engage in trade in services. Consequently increased trade in services may lead to a certain amount of job creation.

This does not negate the fact that where services can be easily standardised, risk of outsourcing and possibly relocation may also prevail.

An empirical study for the US has searched evidence of outsourcing in services, by examining the relationship between imports of services by the US and the international sourcing of services production activities using a number of different panel data estimators for various categories of services[34]. Using indirect measures of trade in services, the author shows that international in- and outsourcing is taking place, and that trade substitutes for investment in local services. However investment in non-service sectors is simultaneously found to stimulate imports of services indicating complementarity at the aggregate level. Finally there is a positive effect on the volume of trade (imports of services increase from US outward investment in services), which is consistent with international insourcing resulting in the return flow of imports into the US.

Overall, the employment composition of services is diverse: services require both highly skilled labour and labour with lower levels of skills. On the other hand, a growing number of services, such as childcare and personal services, lifelong learning services, cultural services, social integration services are being created; such a need for 'new' services is brought about by new demand and societal changes.

(See Chapter 3 of this report which provides a comprehensive description of the services sector).

34 *Van Welsum (2004),* In search of outsourcing – evidence from US imports of services*, draft, Birkbeck College.*

Table 66 - FDI stocks as %GDP

		1990	2000	2002
Austria	Inward	6.1	16.1	20.6
	Outward	2.6	13.2	19.5
Belgium and Lux	Inward	27.8	79.1	81.8*
	Outward	19.4	72.8	72.9*
China	Inward	7.0	32.3	36.2
	Outward	0.7	2.4	2.9
Cyprus	Inward	20.5	44.2	47.7
	Outward	0.2	6.0	7.2
Czech Republic	Inward	3.9	42.1	54.8
	Outward	n.a.	1.4	2.1
Denmark	Inward	6.9	42.0	41.7
	Outward	5.5	41.6	43.4
Estonia	Inward	n.a.	51.5	65.9
	Outward	n.a.	5.0	10.5
Finland	Inward	3.8	20.2	27.0
	Outward	8.2	43.4	52.8
France	Inward	7.1	19.9	28.2
	Outward	9.1	34.1	45.8
Germany	Inward	7.1	25.2	22.7
	Outward	8.8	25.9	29.0
Greece	Inward	6.7	11.2	9.0
	Outward	3.5	5.2	5.3
Hungary	Inward	1.7	42.5	38.2
	Outward	0.6	4.4	7.3
India	Inward	0.5	4.1	5.1
	Outward	0.1	0.3	0.5
Ireland	Inward	72.3	124.4	129.1
	Outward	24.5	29.3	29.9
Italy	Inward	5.3	10.5	10.6
	Outward	5.2	16.8	16.4
Japan	Inward	0.3	1.1	1.5
	Outward	6.6	5.8	8.3
Latvia	Inward	n.a.	29.1	32.4
	Outward	n.a.	3.4	0.8
Lithuania	Inward	n.a.	20.9	31.4
	Outward	n.a.	0.3	0.5
Malta	Inward	20.1	83.4	73.8
	Outward	n.a.	5.7	5.4
Netherlands	Inward	23.3	66.7	74.9
	Outward	36.3	83.3	84.7
Poland	Inward	0.2	21.7	23.9
	Outward	0.3	0.7	0.7
Portugal	Inward	14.8	26.9	36.0
	Outward	1.3	16.2	26.2
Slovakia	Inward	0.5	23.6	43.2
	Outward	n.a.	1.9	1.7
Slovenia	Inward	3.5	15.5	23.1
	Outward	1.2	4.4	4.8
Spain	Inward	12.8	25.8	33.2
	Outward	3.0	29.4	33.0
Sweden	Inward	5.3	41.0	46.0
	Outward	21.3	53.8	60.5
UK	Inward	20.6	30.5	40.8
	Outward	23.2	63.1	66.1
USA	Inward	6.9	12.4	12.9
	Outward	7.5	13.2	14.4

Source: UNCTAD, DITE database.
*Notes: * 2001 data.*

3.4. Foreign Direct Investment

Only in the early 1990s did financial market liberalisation actually start to occur; in the EU the Single Market project drove this process forward. From then on, its effects were widely felt and the increase in FDI bears witness to this development. Additional data shows that in the first half of the 1990s, the economic slowdown also translated into relatively low rates of cross-border investment flows; however, after 1995 FDI picked up again.

Table 66 not only shows the magnitude of FDI stocks accumulated in each of the EU countries with respect to other 'global players', but it also underlines the fact that the magnitude of the stocks of FDI driven by European countries is considerable. FDI is itself a strong driver for trade creation and hence the EU can indeed be attributed a place in the front seats of the globalisation process.

3.5. Internationalisation of production

The internationalisation of production plays an increasing role in the global system. One way of 'evaluating' the impact of such a feature is to acknowledge the activity of foreign affiliates of MNCs (multinational corporations; table 67) and to assess their role in the global economy. While the headquarters of those MNCs are mostly located in the EU or North America, employment of foreign affiliates has grown in the past few years.

Then at EU level, although not much data is available, this growing importance of foreign affiliates becomes apparent, notably through its increased impact on investment and labour productivity. On average, the number of people employed per enterprise in foreign-controlled enterprises is much larger than in nationally controlled enterprises and labour productivity (value-added divided by number of employees) is higher in foreign-con-

trolled enterprises (chart 92) in both manufacturing and services[35].

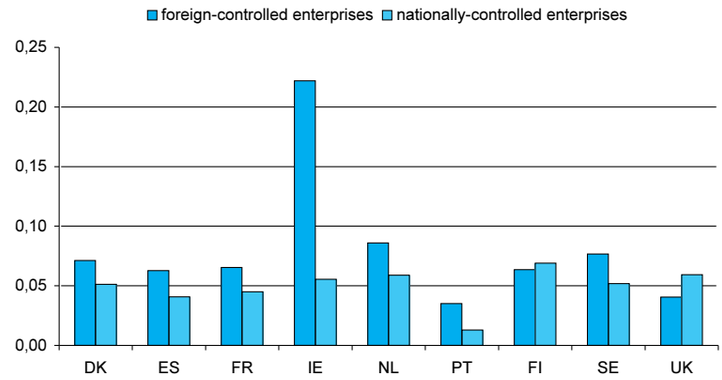
3.6. A short run vs. long run story?

However the above-mentioned characteristics of 'globalisation' in the 1990s, namely increasing FDI and the activity of MNCs, seem to increase the feeling of insecurity of the economic environment. Economic insecurity increases with the globalisation of production[36]. Particularly at risk are groups of workers, who are more vulnerable to change, such as the less skilled, the less adaptable, those threatened by early retirement, and those out of the labour force and/or for whom it is harder to find jobs again. Globalisation can indeed create massive short-term disruptions, which are widely reported in the press, such as localised and sudden[37] plant closures.

Short-term effects seem to be fairly heavily concentrated in a few sectors – at first sight, textiles and clothing, steel, occasionally the automobile industry – and have spread more recently to electronics and digitizable services. Short-term effects are also strongly localised. Long-term effects can be sector-specific as comparative advantage shifts towards new industries and activities. However, it is usually difficult to pinpoint the long-term effects, which are more dispersed, such as a general (across the board) upgrading due to rising income levels and growing demands for more diversity and increased quality of goods (many European countries have a comparative advantage in fine clothing, food, drink, tourism, etc.). Indeed the benefits from integration fall on workers as well as on consumers, the set of work opportunities changes, and the consumption set is enlarged. Increased opportunities in terms of jobs and increased opportunities in terms of consumption bundles (varieties) are benefits which are difficult to perceive, and these benefits are rarely attributed to their source.

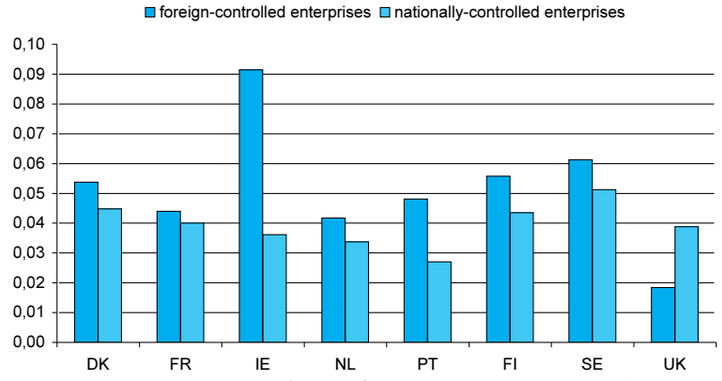
An open economy leads to costs

Chart 92 - Labour productivity in manufacturing



Source: Eurostat, NACE C-F. Data for other countries are not available.

Labour productivity in services



Source: Eurostat, NACE G-I, K. (data refer to 2000; the unit is in million €, the apparent labour productivity reported here is the average value-added per enterprise in units divided by the number of employed persons per enterprise in million €; data for ES is not available)

Table 67 - Average annual growth rate (in %) in foreign affiliates

Indicator	1986-1990	1991-1995	1996-2000
Sales	16	10.1	10.9
Gross product	17.3	6.7	7.9
Exports	13.5	7.6	9.6
Employment	5.5	2.9	14.2

Source: UNCTAD

35 *However these differences in labour productivity may also be due to the much larger size of foreign-controlled enterprises, due to the scale effects. Data from Eurostat, Statistics in Focus 21/2004,* Characteristics of foreign-owned enterprises*, by Michaela Schneider.*

36 *Scheve, K. F. and Slaughter, M. J. (2002),* Economic Insecurity and the Globalization of Production*. Tuck School of Business at Dartmouth Working Paper No. 03-09. http://ssrn.com/abstract=386625*

37 *Only recently, ST Microelectronics announced its decision to leave its French location in Rennes and move to Asia, leaving behind workers that need to find jobs elsewhere or to relocate. Elsewhere, British newspaper the Financial Times reports: 'Companies such as General Electric or IBM gain many jobs – again, higher-paying headquarters and research jobs – in the US by adding jobs in other countries. Those jobs outside the US meanwhile both secure market access for goods produced by US companies and increase global demand for these goods by reducing production costs.' (24/03/2004).*

being concentrated on certain categories of workers / sectors, while the benefits of trade liberalisation are dispersed but are very significant in the long term. Again referring to chapter 2 of this report, the degree of openness does not permanently modify the cost competitiveness but raises the employment rate. This suggests that the advantages of economic integration are related not only to increases in price competition (that moderate price and wage inflation) but also to the diffusion of innovation and knowledge (productivity gains are transferred in the long term into higher real wages). 'Adjustment costs' which arise in the short to medium term, include 'job losses' or 'worker dislocation' at local, regional, national level, depending on the perspective and size of the consequent 'adjustment' which is needed. In theory and in practice, such costs are transitory and so far have been found empirically to be small compared with total changes in economic activity[38]. Although aggregate costs of adjustment may be relatively small in theory, and at best quite difficult to measure, no one would deny that the individual costs of dislocation or unemployment are relatively high. There is a stark contrast and imbalance between aggregate effects and individual effects.

There are concerns and reservations about the interpretation of studies on the impacts of globalisation on labour markets. The central issue is to sort out the long-term aggregate employment effect (looking at aggregate outcome variables) from the short- to medium-term effects which occur mostly at sectoral / regional / local level. Short- and medium-term challenges with regard to employment and wage developments are to be carefully assessed in order to take account of key facts and arguments.

In the long-term, economic theory and empirical studies predict that trade openness increases growth (see chapter 2), but empirical attempts to test this hypothesis hinge upon methodological issues, notably the endogeneity bias, as trade policy is endogenous to economic performance and the issue of omitted variables, notably well-functioning institutions that could also be strong drivers of economic growth[39]. Nevertheless trade and growth are intrinsically related through the driving mechanism of specialisation, especially for smaller countries[40].

However, overlaps between structural change (a combination of changing demand patterns and technological change) and trade liberalisation (or further globalisation) seem not to have been taken into account. Both trends are concomitant, and the consequences of each phenomenon overlaps with the other, creating confusion and misunderstanding; since employment and wages are endogenous, it is quite difficult to assess which job losses are caused by 'restructuring' and which are caused by 'globalisation' *per se*.

Policy makers should therefore be concerned about short-term adjustment costs, for the very reason that it takes time to reap the benefits of international trade[41]; however the medium- to long-term gains from trade are solid grounds on which the longer-term policy perspective should build. This longer term perspective is reflected in the European Construction (the principles of a market economy and free competition are deeply enshrined in the articles of the founding Treaties[42]) and in the multilateral trading system.

In this section, we have illustrated the fact that the nature of international exchange has been tremendously altered in the 1990s, gradually shifting away from mere trade in goods and moving towards much more complex links between the economies. There is much more to 'globalisation' than *just* trade opening and that the long-term perspective must be adopted while discussing such an issue.

4. Regional integration and labour markets

Regional integration as a regulating device responding to pressure from globalisation.

It is clear, when examining broad trade indicators, that the world has become more global in the 1990s compared to the 1980s for instance (chart 93). At individual country level, dependency on trade has increased and at European level both trade in goods and services - and FDI flows - have increased substantially. The magnitude and nature of intra-European trade will be illustrated in the next section.

As a starting point, chart 93 illustrates the changes that occurred in Europe in the Nineties compared to the Eighties. The opening up of Eastern and Central Europe in the

38 *Klein, Schuh, Triest, 2003,* Job creation, job destruction and international competition*, the Upjohn Institute for Employment Research.*

39 *See Theo Eicher. The OLS estimator used in earlier studies is biased in such cases, therefore the relationship between openness and growth often vanishes once all the appropriate control variables are integrated into the modelling strategy. Attempts have been made to develop methodologies to test the growth-trade nexus avoiding the endogeneity problem, among them, A. K. Fosu (1996),* Primary exports and economic growth in developing countries*, the World Economy, vol. 19, n°4, pp. 465-475. However the aim of this chapter is not in any way to cover the whole debate of trade and growth. See also http://papers.nber.org/papers/w10244.pdf,* Fooling ourselves: evaluating the globalisation and growth debate*, Hallak J.C., Levinsohn J. (2004).*

40 *On the questioning of economists regarding the sources of growth and prosperity: Easterly W. ((2002),* The Elusive Quest for Growth*, MIT Press, 332 p.*

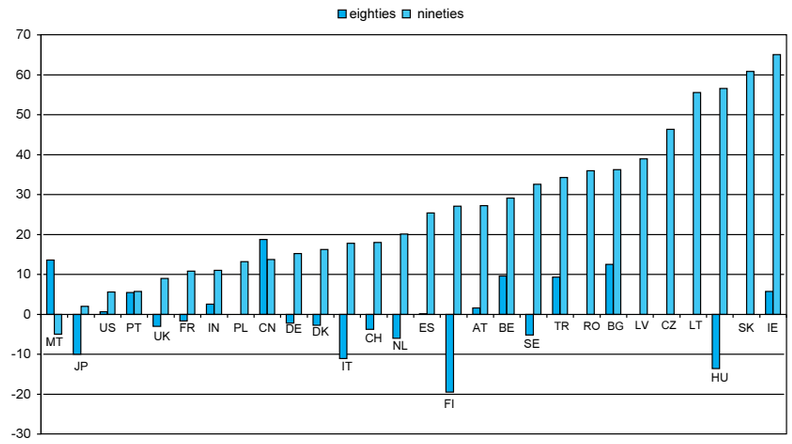
41 *Davidson C., Matusz D. (2002),* Globalisation, Employment and Income, Analysing the Adjustment Process*, in* Trade, Investment, Migration and Labour Market Adjustment*. D. Greenaway, R. Upward, and K. Wakelin eds., Palgrave Macmillan, pp. 66-92.*

42 *Official Journal C 191 of 29 July 1992.*

Nineties subsequent to the Europe Agreements is obviously an important part of the story but overall it seems that Europe has especially intensified its role as a major trading partner.

The EU is undeniably a driving force for globalisation and such a prominent role naturally confers upon it a responsibility to contribute to 'better governance' of globalisation. All the more since the EU is a unique experiment, in the sense that some competencies have been transferred to the 'supra-national' level. As global phenomena lie by nature beyond the realm of strictly national policies, it seems that the EU has the lead in terms of the mechanisms of governance it creates.

Chart 93 - Change in trade (% GDP)



Source: WDI, World Bank. Trade is measured as exports plus imports of goods and services as a percentage of GDP.

4.1. Regional integration, a mini-globalisation'

European integration could be thought of as a laboratory experiment, a 'mini-globalisation' given that it displays all the features of this complex process. For 50 years, European policy makers have liberalised the internal market and freed the movement of factors within the EU, but this has not translated into more labour mobility. The access to EU labour markets is still not guaranteed in all EU15 for workers coming from the NMS, although this would be a logical move towards a more efficient and equitable economic integration process.

An additional phase of the EU's enlargement was completed on 1 May 2004, this very recent development will be taken as an example of the 'integration' process in the following paragraphs, in order to illustrate what 'further integration' entails. (In this section, and for the sake of the example, we consciously distinguish between EU15 and NMS). However *de facto*, trade liberalisation (in industrial goods) with the NMS had already occurred to a large extent since the opening up of these countries in 1990. The overall macroeconomic impact is likely to be positive, but small in the short term. Some 75 million potential consumers have been added to the EU15's internal demand in one go, representing a positive potential demand shock at the macroeconomic level and benefiting all EU exporters (table 68). Moreover demand for 'more sophisticated' goods is expected to grow as purchasing power in the NMS increases in the coming years. Nonetheless the share of NMS in EU trade is small (chart 94) so the overall effect of their integration will not be huge[43]. There are also likely to be winners and losers from this integration process in specific regions or sectors. One of the policy challenges of enlargement is to find ways of compensating those who will lose out without burdening others too heavily.

An enlarged internal market should boost economic growth in the NMS and this effect will eventually be transmitted EU-wide[44]. This should be good news for businesses, as larger markets and lower costs usually offset potential competitive threats; indeed, in many NMS, local industry is partly owned or operated by Western businesses (through foreign direct investment, mergers and acquisitions, joint ventures, etc.).

During the run-up to the EU's enlargement on 1 May 2004, the impact of enlargement on European labour markets was measured. On the whole for the 10 new countries *'a noticeable impact of their integration on the prices and goods, and hence on wages and employment, is limited to only a few sectors in a few regions.'*[45]

However, the potential growth in trade with the EU is large. Indeed the EU15 currently runs a trade surplus with the NMS, which is likely to raise employment and wages of employees in the exporting sectors[46]. Imports from the NMS remain low because of the lower quality of products, not yet fully tailored to

43 The impact of Eastern enlargement on Employment and labour markets in the EU Member States, *(2001), by the European Integration Consortium (CEPR, DIW, FIEF, IAS, IGIER)* http://europa.eu.int/comm/employment_social/employment_analysis/impact_en.htm

44 *This transmission effect works through the traditional demand channel.*

45 The impact of Eastern enlargement on Employment and labour markets in the EU Member States, http://europa.eu.int/comm/employment_social/employment_analysis/impact_en.htm

Table 68 - Comparative indicators

	Total population in 2004 (Mio)	GDP in 2002 (bn euros)	Real GDP per capita (PPS)*	Annual growth of GDP (2003/2002)	% Gross Value Added in Agriculture	% Gross Value Added in Industry	% Gross Value Added in Services
EU-25	455	9,613	91	0.5	2.1	27.2	70.7
EU-15	381	9,169	100	0.4	2	27	71
CZ	10.2	78	62	3.4	3.2	37.3	59.5
EE	1.3	7	40	4.6	5.4	29.3	65.3
CY	0.7	11	77	2.2	4.1	20.3	75.6
HU	2.3	9	35	7.3	4.7	24.7	70.6
LV	3.4	15	39	8.8	7.1	30.5	62.4
LT	10.1	69	53	2.9	3.7	30.7	65.6
MT	0.4	4	69	1.9	2.8	28.1	69.1
PL	38.2	202	41	3.9	3.1	30	66.9
SK	2	23	69	2.3	3	35.2	61.8
SI	5.4	26	47	4.2	4.4	31.1	64.5

*Source : Eurostat, Ameco. *EU-15 = 100. Data is mostly for the year 2002 since there were missing observations for 2003.*

Western European demand. Nevertheless the NMS are expected to progressively catch up with their trade growth potential.

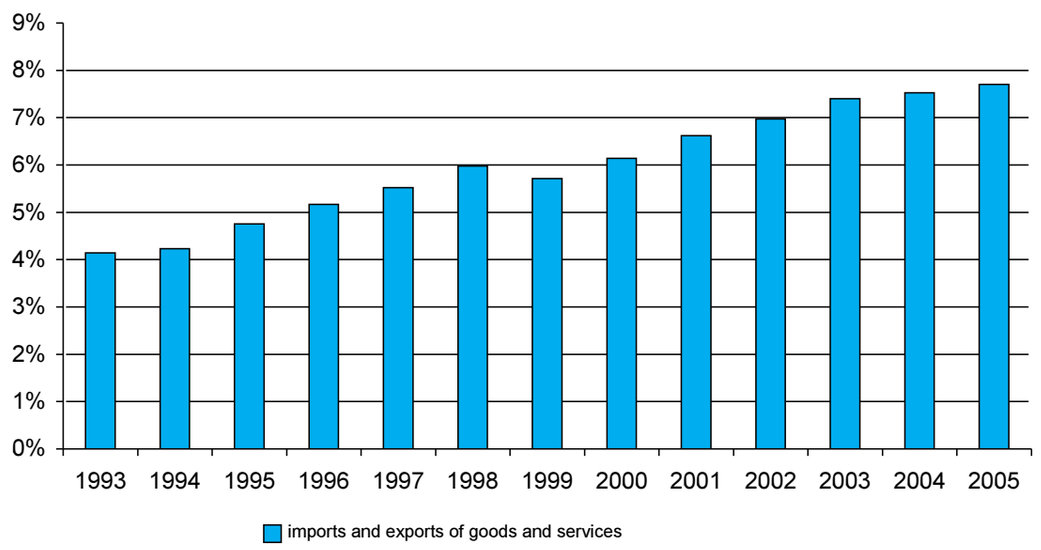
Last but not least, as illustrated by chart 95, integration is a move which matters enormously from the NMS's perspective. Indeed, if they represent only a small share of trade compared to the EU15, for the NMS, the EU25 is paramount and the 'internal market' is the first import and export market for their goods.

4.2. Changing specialisation patterns

Two very different outcomes could emerge in the enlarged EU: either the NMS develop those sectors that are progressively being abandoned by the EU15, or the NMS move quickly to a 'modern' economic structure and those activities are further shared with developing or emerging economies (provided product markets are opened accordingly).

In this respect European integration can be thought of as a 'mini-globalisation'. Thus if the macroeconomic situation improves steadily and living standards (and wages) catch up with the former EU15, then what is perceived as a negative consequence of globalisation namely 'the competitive threat' should diminish over time. At the same time, since

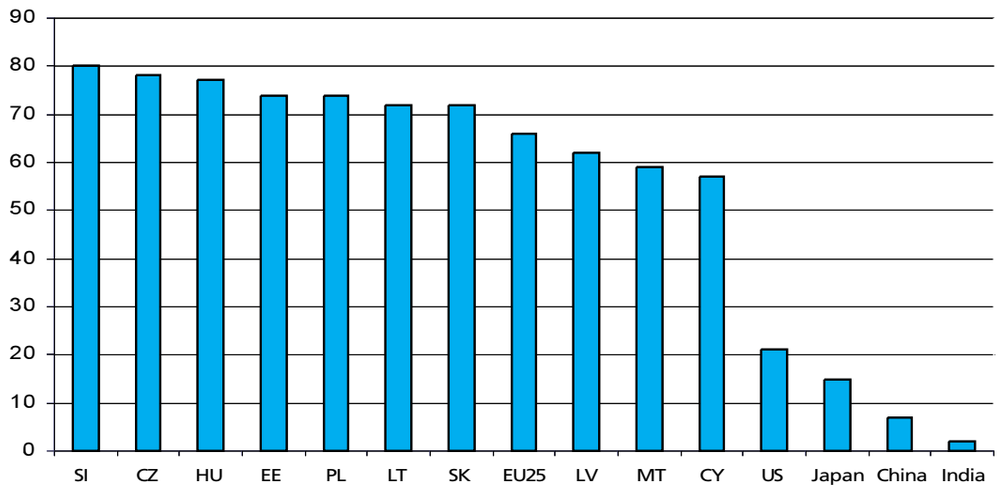
Chart 94 - Share of the NMS' trade in the EU15's total trade (%)



Source: Eurostat.

46 Even though so far in the NMS an increase in export growth has not necessarily improved the employment situation, e.g. the Polish case, this may happen in the short-term. In the long-term though, one would expect increased trade to increase employment growth.

Chart 95 -Trade with EU 25 as % value of total trade, 2002



Source: Eurostat.

the NMS only represent 5% of the EU total aggregate GDP, the positive effect is likely to be small at the aggregate EU level and will largely go unnoticed[47]. However for individual NMS this positive effect of integration are potentially very large.

The EU15 are expected to lose part of their 'traditional activities', although it is unlikely that they will disappear completely since every segment of production has to be taken into account while assessing the capacity of goods to export and compete internationally. Such a process is part of the 'natural' upgrading of the production process, as know-how is accumulated and the segment becomes more competitive. Some of these activities could move to the NMS and would increase the number of higher skilled jobs there, thus triggering a progressive upgrading of their production or some of them could even move to countries that are not part of the EU. Restructuring in the EU15 and the NMS is an ongoing process and in a broad sense – activities have already 'shifted' towards a modern industrialised structure; in a way, economies are in perpetual 'transition'. However, the share of services in gross value-added remains somewhat lower in the NMS than that in the EU15. This automatically increases the 'dissimilarity' or the 'diversity' between economic structures of NMS with respect to the EU15 (table 69).

Growing disparities also show in the field of labour markets, as documented in the chapter on candidate countries in *Employment in Europe* 2002.

There are clear imbalances between the shares of employment and value-added across sectors, notably in agriculture for Poland, Latvia, Lithuania, and to some extent in Slovenia pointing to expected improvements in terms of productivity. In essence, the magnitude of changes that were achieved in agriculture between 1990 and 2002 is large, in terms of the contribution to value-added, but - as illustrated in the last column of table 69 - this did not necessarily translate into comparable changes in terms of employment. Even in industry, if we take the EU15 as a benchmark, value-added in industry is higher than the share of employment in industry; this is not necessarily the case for the NMS, e.g. the Czech Republic and Slovakia. According to this reading of the table, Hungary and Slovakia for instance seems to come closer to EU15 structures. The Czech Republic for instance clearly has a potential to restructure further. However, these observations disregard the variability in employment rates. In addition, the magnitude of the difference in the contribution of industry to total value-added (5 to 10 percentage points higher in NMS than in the EU15) suggests that further restructuring is foreseeable. One could also argue that some countries within the EU25 will retain more features of an 'industrialised economic structure' while others will display predominantly the distinctive features of 'service-led economies'.

In employment terms, figures for employment as a percentage of the working age population clearly indicate that the full potential labour supply is not participating actively in economic activity. This observation is also valid for the EU15. Differences seem to follow suit in the composition of the workforce itself.
The pie charts (chart 96) point to the fact that the **skill structure in NMS is more polarised** than in the existing MS and that 'non-manual' groups

47 The impact of Eastern enlargement on Employment and labour markets in the EU Member States, http://europa.eu.int/comm/employment_social/employment_analysis/impact_en.htm

Table 69 - Structure of employment and value-added			
Gross Value-Added (% GDP)	**agriculture**	**industry**	**services**
EU-15	2.5	27.8	69.8
CZ	5.6	37.0	57.4
EE	5.8	33.4	60.9
CY	4.4	20.1	75.5
LV	7.5	32.3	58.5
LT	8.9	34.8	56.3
HU	5.4	34.8	59.6
PL	2.0	36.9	57.6
SI	3.3	39.4	57.3
SK	5.4	31.6	63.0

Source: Eurostat , data for 2002.

	Employment (% of total employment)			**Employment (% of population aged 15-64)**		
	agriculture	**industry**	**services**	**agriculture**	**industry**	**services**
EU15	4.1	25.0	70.9	2.6	15.9	45.0
CZ	4.8	39.7	55.5	3.1	25.8	36.1
EE	6.9	31.2	61.9	4.2	18.9	37.4
CY	9.1	20.7	70.2	6.0	13.6	46.1
LV	15.1	24.4	60.5	8.7	14.0	34.8
LT	17.6	27.4	54.9	10.4	16.2	32.4
HU	6.2	34.1	59.7	3.5	19.2	33.6
PL	19.3	28.6	52.0	10.6	15.7	28.6
SI	11.2	37.5	51.4	7.0	23.6	32.3
SK	5.0	34.5	60.5	2.8	19.6	34.3

Source: Eurostat, QLFD, annual average, 5/8/2004
Note: latest data for CY 2000.

seem to be underrepresented. Indeed the share of non-manual workers amounts to 64% of the total employed in the EU15 while to only 48% in the NMS. Together with the fact that the unskilled have suffered most from the loss of employment, this suggests that there is room for structural upgrading, notably for the high-skilled and mid-skilled, compared to other MS.

Table 70 relates products to their technological content as classified by the OECD: *low technological content (LT), medium-low technological content (MLT), medium high technological content (MHT), or high technological content (HT).*

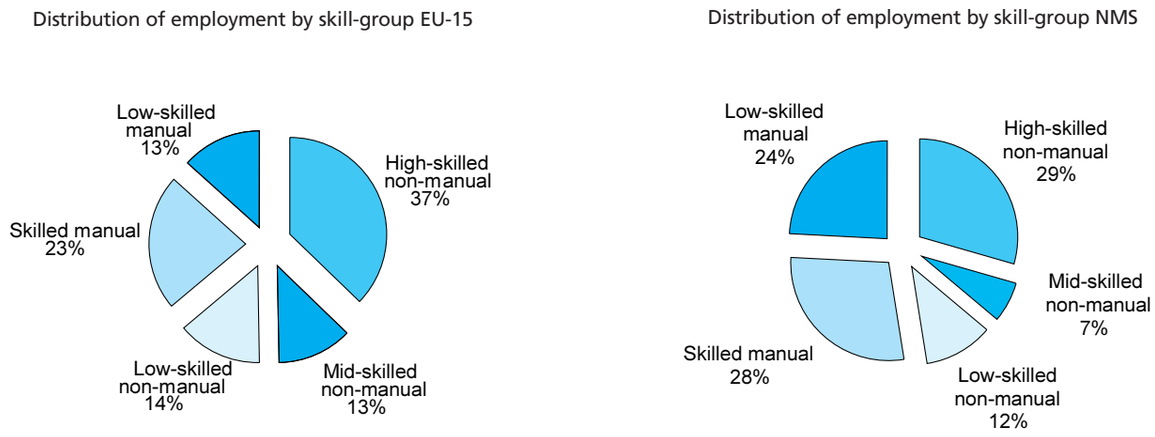
From table 70, and bearing in mind that overall the EU15 had a trade surplus with the NMS, it seems that the products which make up this surplus are processed and require on average higher technology content than the products imported from the NMS[48].

Table 70 - Main exports from the NMS to the EU15 and from the EU15 to the NMS				
	Main exports from the NMS to the EU15		**Main exports from the EU15 to the NMS**	
1	furniture, bedding, lamps etc	LT	computers, machinery, turbo-jets, nucl.reactors….	HT
2	wood and articles of wood	LT	plastics and articles thereof	MLT
3	men's apparel articles etc	MLT	pharmaceutical products	HT
4	energy	MLT	motor cars, vehicles, except railway, prts	MHT
5	women's apparel articles etc	MLT	paper & paperboard etc	LT
6	rubber and articles thereof	MLT	miscellaneous chemical products	MHT
7	textile art; needlecraft sets; worn text art	LT	tanning & dye ext etc; dye, paint, putty etc; inks	MLT
8	aluminum and articles thereof	MLT	optic, photo, medic instrments etc	HT
9	railway or tramway stock etc; traffic signal equipment	MLT	essential oils etc; perfumery, cosmetic etc preps	HT
10	organic chemicals	MHT	impregnated etc text fabrics; tex art for industry	LT
11	fertilizers	MLT	raw hides and skins (no furskins) and leather	LT
12	footwear, gaiters etc. and parts thereof	LT	manmade staple fibers, incl yarns & woven fabrics	LT
13	telecom, tv and sound equip	HT	aircraft, spacecraft, and parts thereof	HT
14	meat and edible meat offal	LT	cotton, including yarn and woven fabric thereof	LT
15	articles of iron or steel	MLT	miscellaneous articles of base metal	MLT

Source: Eurostat for the data and ranking, and OECD's main industrial indicators.

48 This confirms previous arguments on intra-industry trade within the EU (see section 2.1).

Chart 96 - Distribution of employment by skill (2003)



Source: Vienna Institute for International Studies (WIIW) data.

Research results show that the most advanced of the NMS already display shares of intra-industry trade comparable to those of Italy, Spain or Sweden[49] (chart 89). European integration was accompanied by sharp increases in intra-industry trade. A thorough study of intra-European trade flows suggests that intra-industry trade in qualities (different quality segments) has increased and that a qualitative division of labour has emerged in the EU, with some countries specialising in up-market products, and others on the low- and medium- quality products. This analysis is confirmed by an analysis of market shares[50], which shows that the EU-integration move has already gone hand in hand with increased trade in similar products but different quality segments. This is good news for labour market outcomes as stressed in this chapter's previous section, as well as for guaranteeing that industrial activities will not disappear from the European landscape. Indeed this type of analysis shows that, conditional on the EU's capacity to benefit from growth in third countries and on continuous upgrading, both industrial and service activities can be maintained within the EU.

In the 1990s, countries that have experienced evident increases in intra-industry trade with the EU15 are the Czech Republic, Hungary, Poland, Estonia and to some extent Slovenia and Lithuania, thus enhancing the EU's long-term growth potential. However one should note that inter-industry trade remains a characteristic of trade with some other NMS[51], which indeed could hurt the unskilled. At the same time, the share of trade with other transition and developing countries is significantly lower. Hence it seems that trade in similar goods is increasing with the NMS while trade in different types of goods is still predominant in trade with other transition and developing countries[52].

In a report on the location of European industry[53], specialisation indices show the growing divergence in the EU's production structures. This trend will continue with further enlargement of the Union. The report shows that 20% of this increased specialisation is due to the amplification of initial cross-country differences in production structures, while 80% is due to what the authors call 'differential change', meaning that countries move in and out of an industry (which could also be a definition of 'restructuring').

In the aforementioned report on the impact of EU enlargement on labour markets, the authors compare the revealed comparative advantage (RCA) of the EU15 relative to the NMS of Central and

49 *Fidrmuc, Djablik (2003),* Intraindustry trade between the EU and CEECs*, OENB. The authors use the Grubel-Lloyd index of intraindustry trade (Grubel, Lloyd, 1971) which represents the share of the absoplute value of intraindustry trade in trade turnover. An index value of 0 shows that there is exclusive inter-industry trade (i.e. complete specialisation on different products for each country), while an index of 1 indicates complete intraindustry trade (i.e. countries exclusively trade similar products). They show for instance that intraindustry trade can be taken into consideration while assessing convergence between catching up economies and more developed countries. They also hint towards the specialisation of NMS in lower quality segments of products.*

50 *Fontagné L. (1997),* Trade patterns inside the Single Market*, CEPII working paper.*

51 The impact of Eastern European Enlargement on the Labour markets of the EU Member States *(2001) Report for the European Commission's DG Employment and Social Affairs, by the European Integration Consortium (CEPR, DIW, FIEF, IAS, IGIER).*

52 *This analysis is confirmed by a very recent study by the CEPII-CIREM, which was commissioned by DG Trade of the European Commission. The report, by Fontagné L. et alii (July 2004),* European industry's place in the international division of labour: situation and prospects*, rests upon an analysis of market shares and sectors.*

53 *Midelfart-Knarvik et ali,* The Location of European Industry *(2000), report prepared for the DG for Economic and Financial Affairs, European Commission.*

Eastern Europe. The RCA is computed as the share of a given sector in national exports over the share of that sector in world exports.

For the NMS, analysis of RCAs confirms that the NMS have high and increasing comparative advantage in shipbuilding, basic metal industry (iron and steel) and to a lesser extent in textiles, clothing and footwear (the last section of this chapter shows similar findings in terms of employment trends)[54] with respect to the EU15. The EU15's RCA markedly stems from high R&D intensive industries (pharmaceuticals, computers), industries with a high degree of product differentiation and scale- and capital-intensive industries (chemicals, rubber and plastic, motor vehicles), although this RCA is on a slowly declining trend.

The pivotal question is which sectors stand to benefit or lose. Trade was initially characterised by marked but declining differences in inter-industry specialisation (leading to trade in different types of goods). Now, a strong increase in intra-industry trade within same product categories is taking place and more intra-industry trade is, in theory, neutral to relative factor prices[55]. However, empirically, the factor content of traded goods can differ considerably even within the same commodity groups or industries. For NMS, declining differences in inter-industry specialisation go hand-in-hand with a vertical specialisation in different quality and price segments of specific markets. These differences in product quality correspond to differences in the factor content of trade so they should have the same impact as inter-industry trade.[56] Ultimately this should put pressure on certain groups of workers (among the unskilled).

However, the main limitation of the factor content analysis of trade (import and exports) is that it does not take into account the pressure towards further specialisation which derives from international trade and notably does not account for the change in prices (i.e. the framework of analysis is static). Analysis carried out for France[57] shows that in 1978-1990 the balance for employment is negative, whilst 1990-1997 the balance turns positive (and benefits both the skilled and the unskilled). Over a 20-year period, trade liberalisation seems to have been labour neutral.

Given the patterns of specialisation displayed by the EU it seems that increased diversity of production structures could mitigate the impact of globalised trade flows. This is precisely the result that one would derive from trade theory. Differences in factor endowments (types of labour by skills for instance) may trigger the specialisation of EU15 and NMS in different price and quality segments, leading to increases in real income of all factors in the EU and NMS, given that so far we know little about the substitutability of goods produced on both sides, but – from the above - it is likely that they are weak substitutes. In the course of 'catching up', upgrading of products should occur and intra-industry trade develop thus limiting further the extent of the impact on wages and employment. In some cases, EU enlargement could even slow down the tendency for activities to be relocated outside the EU in the medium term. With an increase in the diversity of production structures and product variety/segments, trade in low-skilled goods tends to be diverted from outside to within the EU boundaries (this was supported by the aforementioned report on EU enlargement), and therefore within-EU relocations become 'internal mobility of production units'.

So far, it seems that overall gains from trade integration were reaped by the EU15. Public opinion shows some concern about the pace of integration with the NMS, namely wider differences in production structures should trigger further and maybe more rapid changes in the production and employment structures. Will this lead to larger adjustment costs than during past episodes of EU integration? This remains an open question.

4.3. The role of Foreign Direct Investment

FDI flows between EU Member States (intra-EU FDI) rose by 13% in 2002 whereas extra-EU FDI contracted (minus 49% in 2002 compared to 2001). In the late 1990s and beginning of 2000 intra-EU FDI stocks increased tremendously[58].

Foreign Direct Investment (FDI) plays a double role in the NMS, increasing the investment rate and thus growth of GDP and ultimately employment quite visibly, as well as triggering the transfer of know-how, skills and technology; the more so as FDI in the NMS of Central Europe do not seem to have substituted for exports and thus should not harm employment[59]. The differentiated overview of FDI has

54 *Conversely the EU15 has a RCA in food and agriculture, the RCA in agriculture is slightly artificial since it relies heavily on the high level of policy intervention. Source:* The impact of Eastern enlargement on Employment and labour markets in the EU Member States*,* http://europa.eu.int/comm/employment_social/employment_analysis/impact_en.htm

55 *as demonstrated in textbooks by Helpman and Krugman.*

56 *– confirming standard trade predictions between labour-intensive and human-capital intensive sectors.*

57 *Guimbert S., Lévy-Bruhl F. (2002),* La situation de l'emploi en France face aux échanges internationaux*, Economie et Prévision, n°152-153, pp. 189-206.*

58 Statistics in focus, EU15 FDI in 2002*, March 2004.*

59 *Di Mauro F. (2000),* Economic integration between the EU and the CEECs: a sectoral study'*, CEPS and ULB,* http://www.etsg.org/ETSG2000/Papers/diMauro.pdf*, gives a comprehensive account of the redirection of trade and FDI in the 1990s for the NMS.*

implications for the labour market, such as labour demand pressures for certain categories of skills, notably relatively high skilled workers. The scope for increasing FDI in higher-skill activities is still large. So far, FDI has had a direct employment effect in the NMS as the affiliates of MNCs (multinational corporations) create jobs or continue to employ workers of previous companies in the host country (or have directly contributed to the privatisation process), which has an unambiguously positive employment effect in the host country and acts as a catalyst for growth.

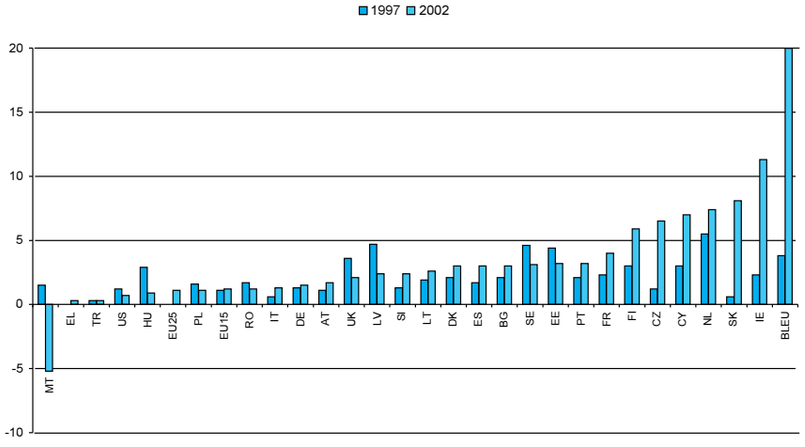
Since FDI was mostly seen as a catalyst for restructuring in the NMS, with investors flowing into the NMS already in the early 1990s, the effect of FDI inflows into the NMS could potentially act as a signal indicating the rate at which the States are restructuring. However the effects of FDI are most felt in border regions such as the Bratislava/Vienna region (Eastern Austria altogether) or the Finnish/Estonian border, where potential gains to be reaped from integration are particularly high[60]. Again NMS remain too small to affect factor rewards and EU-wide factor prices. Crowding-out of investments within the EU15 is negligible. Market-seeking investments complement rather than substitute for trade, as FDI raises the added value of parent companies in their home countries. FDI reinforces the specialisation pattern across the EU25 and hence the specialisation in human-capital-intensive or labour-intensive activities. Consequently, FDI increases trade in intermediate goods and services (through vertical integration) and within industries and firms – however, such effects are concentrated in a few sectors at present (electrical and other machinery, measuring instruments, rubber and plastic products, and other transport equipment).

FDI increases the capital endowment of NMS and also expected growth through technology transfers, transfers of know-how, knowledge and human capital. FDI affects the change in relative wages in NMS rather than in the EU15.

Several studies on MNCs and affiliates of foreign companies show that relative wages (in line with productivity levels) and skill levels are higher relative to workers' wages in 'local' companies. Wages are indeed 20 to 30% above average, which suggests that FDI may increase wages for skilled labour relative to unskilled labour in the NMS and thereby reduce the incentives for migration by skilled workers out of the NMS. MNCs, which are usually large companies, are especially more productive in manufacturing industries in the EU[61]. The investment that MNCs are able to leverage per person employed, as they are frequently able to raise capital more easily, feeds positively into the host countries.

Although FDI illustrates the growing interdependence between Western European economies and the NMS, the presence of FDI remains uneven across Central and Eastern Europe (chart 97). Hence it is assumed that the role it performs in the upgrading process will also be uneven, unless investment patterns change and also move up the 'quality ladder'. Manufacturing industry has been an important target of FDI (attracting nearly half of total FDI), but further disaggregation shows that FDI is attracted in the medium/high-tech branches[62], therefore helping certain branches to upgrade the productivity and quality, and ultimately their export performance.

Chart 97 - FDI intensity



Source: Eurostat.
Note 1: the scale of this graph has been modified in order to be meaningful, however it should be noted that for BLEU (Belgo-Luxemburg Economic Union) the actual figure for 2002 is 51.4.
Note 2: FDI intensity is a structural indicator and it is measured as the average value of inflows and outflows of FDI over GDP times 100.

60 Vienna Institute for International Studies (WIIW) report for DG Employment and Social Affairs and conference presentations, http://europa.eu.int/comm/employment_social/employment_analysis/impact_en.htm
61 Statistics in Focus *21/2004,* Characteristics of foreign-owned enterprises*, by Michaela Schneider.*
62 See WIIW Structural Report 2003 on Central and Eastern Europe, October 2003.

The increased diffusion of technological change (notably ICT; table 71), which is the main internal driver to growth, increases sectoral reallocations and, as such, can be viewed as a channel through which globalisation has an impact on the economy.

NMS will move more rapidly to a 'modern production' pattern (i.e. services-driven), which will probably follow increased demand (i.e. potential changes in consumer behaviour as illustrated in table 71) but there is still a large market potential. NMS within the EU25 are moving fast towards service-led post-industrial economies. Some are already there, while for others, more time is needed (PL, LT) and wages should slowly increase alongside.

Overall, economies that are catching-up should experience large increases in FDI thus triggering an upgrading of their products and labour force. This is what happened in the NMS in the 1990s with no major labour market impact on Western European labour markets and this is what could happen now with China and India as well, albeit to a lesser extent in view of chart 98, in which FDI as a percentage of gross fixed capital formation can be interpreted as the 'degree of openness' of a country[63].

Changes of employment by skill category (chart 99) are consistent with this picture of catching-up economies and qualitative upgrading. Indeed, the NMS differ most from the largest EU15 with respect to the reduction in low-skilled manual labour and the increase in the low-skilled non-manual labour over the period 1997 to 2003[64].

Some regions are catching up in terms of industrial upgrading; they are successful in attracting FDI, while other regions are locked in low-skill areas, with low shares of well-educated people.
Differentiation across countries and regions constitutes a real challenge and will have implications on cohesion of the EU25.

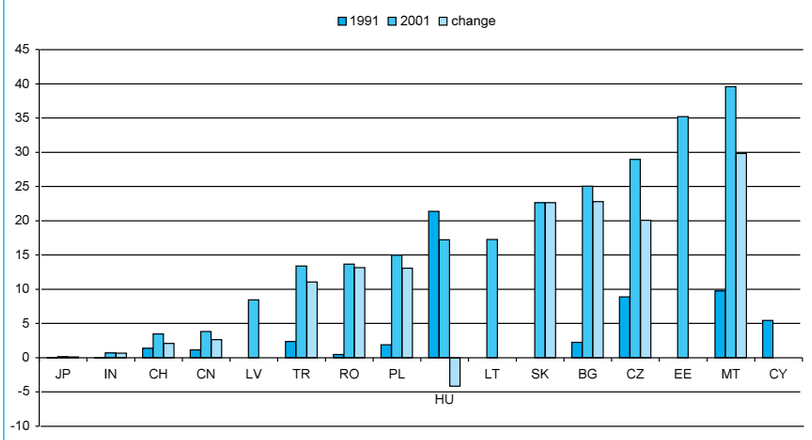
Given the modest share of exports from foreign MNCs based in the NMS, table 72 suggests that most MNCs enter the NMS in order to gain market access (not necessarily seeking lower labour costs) and supply internal demand (not intended for the processing of intermediate inputs to be directly re-exported). In the opposite case, a larger proportion of exports would be observed. Comparing table 72 to Eurostat data on employment in foreign-owned enterprises for EU countries[65], a rough conclusion would be that Slovenia is closely in line with Western Europe in terms of the activity of the MNCs that

Table 71 - Indicators of technological change

	Number of cars per 100 inhabitants	Number of mobile phones per 100 inhabitants	Number of personal computers per 100 inhabitants	Number of internet users per 100 inhabitants
EU25	46	74	31	33
EU15	49	78	34	36
CZ	34	84	18	26
EE	30	65	21	33
CY	37	58	27	9
HU	25	39	17	13
LV	33	47	11	14
LT	24	68	11	16
MT	50	70	26	21
PL	27	36	11	23
SK	44	77	30	38
SI	24	54	18	16

Source: Eurostat, Newcronos, April 2004.

Chart 98 - FDI (% of capital formation)



Source: World Bank data from WDI; Note: in this chart, FDI is measured as % of GFCF (Gross Fixed Capital Formation).

63 Here one should note nevertheless, that FDI inflows in 'less developed economies' can have a negative impact, namely they might substitute foreign for national capital and also increase the dependence of the economy on foreign capital (risk of reversal of capital flows is present especially in less stable economic and political environments).

64 In this chart we look at the change in the structure of skills in the EU15 and in the NMS, whereas the pie-charts displayed earlier-on in this chapter display the distribution of skills in 2003 only. The comparative change enables to show which kinds of skills are actually 'catching-up' or in demand in the NMS in particular.

65 Eurostat, Statistics in focus, op. cit.

have invested there whereas in the three other NMS there is still scope for foreign involvement, which should progressively occur as production structures evolve. In terms of employment, the situation is diverse. Even though data are available only for four countries, it seems that employment in foreign affiliates represents quite a variable share of employment in the NMS, thus FDI has a differential impact depending on the percentage of workers involved.

In terms of the structure of trade of foreign affiliates based in the NMS, in Hungary in 2000, 67.1% of the trade of affiliates of foreign MNCs were directed towards the EU and 14.6% towards other NMS. For Hungary and the Czech Republic[66] data strongly suggest that FDI from foreign companies is concentrated in specific industries such as motor vehicles, electronic equipment (for the industrial sectors) and telecoms and distributive trade in the tertiary sector. Data on several dimensions of FDI was gathered by the United Nations Conference on Trade and Development (UNCTAD) for several of the NMS, the concentration of affiliates of MNCs can be found in the manufacturing and tertiary sectors essentially and a striking aspect is that exports of affiliates of foreign MNCs are heavily concentrated in manufacturing (83.2% in 1999 for the Czech Republic, 85.4% in 2000 for Slovenia and 91.9% in 2000 for Poland)[67].

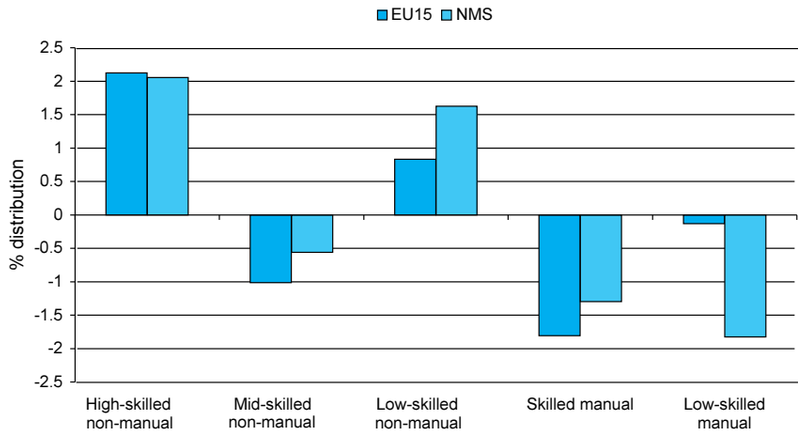
Economies that are catching-up need to and should experience large increases in FDI that trigger the upgrading of their production and labour force. This process took place in the NMS in the 1990s, for instance, and such changes were found not to have a major impact on Western European labour markets.

Table 72 - Employment in foreign affiliates (selected NMS)

		Affiliates of foreign MNCs	Employment in foreign affiliates as % of total
CZ	Employment 1999	469,800	10%
HU	Employment 2000	606,749	15.85%
PL	Employment 2000	648,323	4%
SI	Employment 2000	46,775	5%

Source: Unctad, DITE and Eurostat QLFD data.

Chart 99 - Comparative change in the structure of skills (1997-2003)



Source: Vienna Institute for International Studies (WIIW).
Note: NMS excluding CY and MT.

4.4. Too small to matter?

Since the early 1990s the 'Europe Agreements' have provided the institutional framework for bilateral trade relations between the EU and countries of Central and Eastern Europe. Already 70% of NMS's exports are directed to the EU15 and growth remains strong compared to the EU15. Similarly the EU's trade with the NMS grew steadily in the last decade, already reaping the major part of the benefits from trade liberalisation. Altogether the EU has a high trade surplus with the NMS. The NMS are catching up, therefore they need capital inflows and import investment goods, which shows up as a current account deficit, but this should not be a source of concern as long as the catch-up is under way.

The trade implications of EU enlargement at a very aggregate level seem to point to little differences in trade terms between the former EU15 and the EU25 (table 73, chart 100).

In the aforementioned report[68], the authors adopt an 'intra-EU' perspective and assess the impact of EU enlargement on trade in goods and services within the Union. According to the report, enlargement has provided the NMS with a huge stimulus for economic reform.

66 *UNCTAD data, country profiles on www.unctad.org.*
67 *Further details on the profits, value-added and structure of trade of foreign MNCs in the NMS as well as in the EU15 can be found on the above-mentioned UNCTAD website*
68 The impact of Eastern enlargement on Employment and labour markets in the EU Member States, *http://europa.eu.int/comm/employment_social/employment_analysis/impact_en.htm.*

In theory, for integration to matter, size is critical: taking into account trade in goods and services, the integration of NMS has no impact on wages and employment of the EU15 if other countries outside the EU15 remain marginal suppliers in the respective markets (since the 'trade diversion' impact –consequent to integration - is too small).

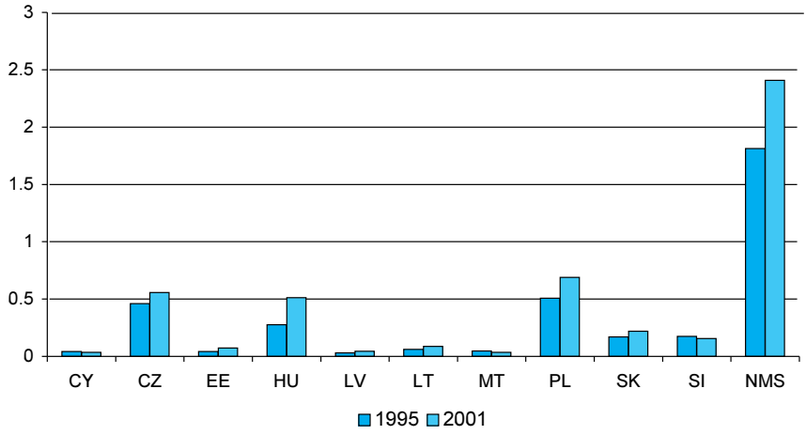
Conversely, in physical-capital intensive and human-capital intensive industries, large export surpluses from the EU15 bear witness to the difference in specialisation and largely 'compensate' for competitive threats in more specific sectors.

Table 73 - Trade implications of EU enlargement

	EU 15	EU 25
GDP – billion Euros	9,275	9,712
GDP - % of world GDP	26.9%	28.7%
GDP per capita	24,100	21,100
Total trade/GDP (degree of international trade openness)	28.6%	26.9%

Sources: Ameco, IMF, Comext, March 2004. Latest data available is 2003.

Chart 100 - Share of imports and exports of goods in world trade (%) (1995 and 2001)



Source: Ameco, 2004.

Empirical findings confirm the fact that NMS are too small to have an impact on wages, labour mobility employment and unemployment risks EU-wide. However, effects are felt more strongly in some sectors (as mentioned earlier in the chapter), because trade has increased most in these sectors and NMS are becoming larger players in these specific markets or even market segments. There is a clear trend towards specialisation of EU15 in capital and human-capital intensive goods, whereas the NMS still tend towards labour-intensive production processes.

Trade creation outweighs the negative effects of trade diversion in a longer term perspective. The vast majority of FDI is driven by market access. Crucial to MNCs in the 1990s was to gain first-mover advantage; this relates to the timing of offshoring, and means that it is essential to enter a market first, before the competitors flow in. Once the market has been entered though, 'clustering forces' can continue to attract enterprises who wish to benefit from spillover effects.

The successive waves of enlargement have widened the scope of intra-European trade and, as such, have triggered structural change.

From the early 1980s onwards the industrial structures of the EU economies have become more diverse. Standard and new trade theories alike have predicted this move as a consequence of further economic integration. It is a long-lasting process (similar to overall structural change). Strong drivers for specialisation are inherent to economies. Specialisation led gradually to product diversification. Studying the concentration or dispersion of activities reveals no clear pattern, because inter- and intra-industry trade coexist. Increasing diversity of the economic structure and integration of the EU should become an advantage since it may well cushion the effects of adverse asymmetric shocks by spreading the risks across the area. In addition, increased demand in the EU25, brought about by the gradual integration of countries of East and Central Europe and the subsequent enlargement of the EU, together with continuous product upgrading and diversification (across different quality segments), should lead to increased long-term trade and growth opportunities.

5. Delocalisation, relocation and outsourcing

So far, the pace of economic integration has been rather gradual and changes were accompanied by supporting policies to compensate for adjustment costs. The following section explores the above-mentioned concern: if 'change' occurs rapidly, will it be associated with large and sudden adjustment costs in the labour market? It attempts to shed light on the definition of outsourcing and offshoring, the nature and scale of such a phenomenon, since this is precisely the type of 'sudden negative effect' that worries workers and enterprises throughout the EU.

There are two distinct dimensions to the issues of delocalisation, relocation and outsourcing: the first concerns all possible 'delocalisations' from the former EU15 to the NMS – essentially an 'intra-EU' issue; the second issue concerns offshoring to countries outside the EU. Both issues raise the same fears among European public opinion. The subject of "offshore outsourcing" has produced a highly controversial debate in industrialised countries and especially in the US. Although a stable picture of the extent and impact of outsourcing is difficult to obtain, some evidence can be instrumental in feeding this debate.

Specific concern arose against the background of country-specific and also very diverse cases, such as, for instance, the offshoring of call centres from Scotland to India, the impact of the removal of trade barriers on the textile industry in Portugal, the offshoring of R&D functions (boxes 6,7,8). These three examples relate to different stories, one of which is a pure 'offshoring' story, the other a consequence of the removal of barriers to trade (pure trade story) and the latter a case of offshoring of highly-skilled white-collar / research jobs.

In other cases, specific technological 'niches' attract enterprises in regions such as Northern Italy for instance, or the South-east of France. In such cases, companies relocate in order to make use of certain skills (e.g. the Silicon Valley; call centres in Scotland before moving to Asia). This functional concentration leads firms to locate to the same area to share the same type of labour, but this does not always coincide with sectoral concentration. In a way, this resembles a labour market pooling argument[69], whereby labour market considerations play an important role in the location decision of firms - interested not only in the cost of labour, but rather in the concentration of certain types of skills. Empirical analysis identifies underlying forces that determine industrial location as a combination of factor costs and geographical considerations[70]. For example, the location of R&D intensive industries has become increasingly responsive to countries' R&D endowments of researchers (these industries move to research abundant locations); non-manual labour-intensive industries remains sensitive to the proportion of countries' labour force with secondary and higher education; central locations are increasingly attracting industries higher up the value-added chain; industries with increasing returns to scale locate in central regions; services are more dispersed than manufacturing (the general shift into services, including the catch-up of poorer countries where the service sector is initially smaller – both reinforce this trend towards a higher dispersion of services).

The supply of skilled labour or researchers is an increasingly important factor in attracting some industries to move to a particular country well endowed with these types of workers. On the other hand, labour-intensive industries tend to locate where the supply of skills necessary is abundant and therefore relatively cheaper. Increased dissimilarity comes as a result, but the rate of structural change is sufficiently slow to produce no large adjustment costs in the short run and overall gains in the long run.

5.1. 'Offshoring, the global cousin of outsourcing'

Outsourcing pertains to the broader 'FDI' category. Out of three types of FDI (market-seeking; resource-asset-seeking and efficiency-seeking[71]) outsourcing can be thought of as one of the external drivers to

Box 6 - Call centres in Scotland

Some categories of workers can clearly be identified as losers from outsourcing strategies. Research carried out by Philip Taylor, University of Stirling for Unifi, focused on the heavy concentration of call centres in Scotland. Some 48% of the jobs created in the UK during the three-year duration of this study on the ICT sector were created in the call centre services. Taylor shows that insecurity for such routine processes (call centre jobs, some financial services, IT helpdesk jobs, back office jobs) has risen with globalisation, because of low labour cost in English-speaking India. However he concludes that it is not a foregone conclusion that all jobs will leave; some companies have chosen to remain and in such cases, ethical agendas and corporate social responsibility have played their part. *(among other articles on this topic: 'An assembly line in the head', Industrial Relations Journal 30:2 (1999))*

69 Robert-Nicoud F. (2003), CEPR Discussion Paper 3875.
70 main results : see Midelfart-Knarvik, Overmann, Redding, Venables (2000).
71 N. Campos, CEPR, see several working papers on the issue of FDI, http://ideas.repec.org/e/pca133.html.

Box 7 - The IT and telecoms sector is outsourcing R&D to India

More companies are relying heavily on India to serve their R&D needs. The R&D outsourcing market in India is estimated to grow from 1.3 billion dollars to about 9 billion dollars by year 2010 (estimates by Frost and Sullivan). Mostly R&D on computing architecture, encryption and network security, human computer interface, programming language and software engineering are being offshored. In telecoms, both service providers and manufacturers are projected to carry out further R&D abroad in business support systems, video servers and wireless as growing opportunities. (cf Nortel, that makes switches and other equipment that power most networks both in the service provider and user side and even though the company does not have an R&D centre of its own in India, it works with partners Infosys, Sasken and TCS, providing engineers).
http://www.enterblog.com/200404290800.html)

Box 8 - Textile industry in Portugal

The sector most affected by restructuring in Portugal has been textiles and clothing. Job losses, often hitting women and poorer regions have prompted much criticism and debate (especially late 2002). According to a study for EIRO (the European Industrial Relations Observatory online) both enlargement and globalisation are great challenges to the Portuguese textile and clothing industry. There is a large structural component in the sense that this follows from a long-term declining trend of the textile industry; however, the study shows that the Portuguese compete with the Germans and the Danes, rather than with lower-cost countries. Clearly, in the case of Portugal, within-EU competition tells the trade story of lowering barriers in a greater internal market, thus triggering need for further upgrading of skills and qualifications of the Portuguese industry to be able to face such a competition. *(www.eiro.eurofound.eu.int)*

the further international division of labour. FDI has employment effects and knowledge spillover effects (through trade in goods) and depending on the country, sector, types of workers, one effect may dominate the other. In the presence of spillovers and externalities (knowledge spillovers, technology etc.), FDI can be seen as a driver of technological transfer.

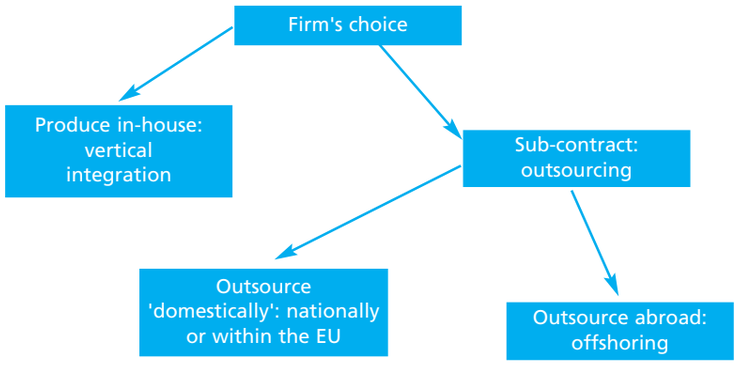
'We live in an age of outsourcing'[72]. Indeed, outsourcing is more than just 'global production sharing', it implies stronger relationships between the contractor and the sub-contractor. Offshoring is the global cousin of outsourcing[73], which is a feature of labour market and industrial flexibility.

How a company arrives at the point where it chooses to offshore is illustrated in diagram 1.

A cost-benefit analysis of outsourcing and offshoring points to many additional 'turnover' costs that are factored in before the outsourcing decision is made[74].

The costs, for example, of co-ordination, customisation (adapt products to local demand or to demand for the re-exported goods), managerial uphold, transportation costs, and the costs related to the labour force (hiring, firing, recruiting, providing extra or specific training, maintaining workforce and legal security) need to be carefully assessed before outsourcing is decided. Differences in costs affect the pattern of trade according to the old trade theory; however turnover costs have a non-negligible impact on equilibrium outcomes. At this point the efficiency wage theory and search theory provide frameworks that can help think about outsourcing in a labour-market perspective. Search frictions and additional costs could for instance explain why some companies choose not to outsource.

Diagram 1



72 *Grossman G., Helpman E. (2002),* Outsourcing Versus FDI in Industry Equilibrium*, CEPR Discussion Paper 3647, and Grossman G., Helpman E. (2002),* Outsourcing in a Global Economy*, NBER Working Paper 8728.*

73 *Glenn Hubbard, Financial Times, 24/03/2004.*

74 *Antras and Helpman (2003), http://www.nber.org/papers/w10082 use a theoretical model to show that the most productive firms will 'outsource' in the 'South', whilst the least productive ones will offshore in the South. However it would be an empirical question to determine which way the causality runs.*

On the benefits side, cost-saving considerations mix with market access considerations and vertical integration considerations, such that it is likely that outsourcing benefits firms when they can concentrate on innovation tasks or task delivering high value-added products.

Overall, in choosing between a domestic and a foreign supplier of parts, a final-good producer trades off the benefits of lower variable costs (if the firm outsources to low-wage countries) against the benefits of lower fixed costs per unit in the home country.

The extent of outsourcing itself varies across sectors, industries, and establishments; it depends on the extent to which firms export goods, use intermediate inputs, are affected by changes in exchange rates and would like to escape fluctuations, and by barriers to trade (including non-technical barriers to trade); it also varies according to the extent to which products compete with imports, i.e. according to their degree of substitutability.

In short, the debate sets innovation against relocation: competition increases innovation (in a defensive way) so where it is difficult to innovate (often the case in the least productive companies), firms choose to relocate parts of their activity to low-cost countries (which may also be the only way out if the company intends to remain in a similar market segment[75]).

It should be borne in mind that the 'pure strategies' described in table 74 can be combined: for example Corami, a French textile industry used both outsourcing / relocation of its large series of standardised goods (it produces swim-suits) to Tunisia, and concentrated on the production of high-quality differentiated products (produced in smaller series) in France – where it could guarantee more responsiveness to changes in demand.

Therefore, depending on the type of strategy chosen by firms and on the various differentiated impacts that such strategies have on employees, vertical strategies, those most often used in 'capital-abundant' to labour-abundant' delocalisations, have the largest negative impact on home country labour markets, especially on unskilled labour. Policies aimed at securing jobs in the home economy should target their response following a careful analysis of the initial situation and of the direct and indirect effects of international trade.

5.2. Outsourcing and vertical integration

Outsourcing, which implies a subcontracting party or the relocation of activities in a broader sense, is actually part of the fragmentation of the production process and consequently part of a greater debate on the location of activities. For instance for an EU company, this implies either choosing to outsource within its own home country, within the EU15, within the EU25 or outside the EU25.

The fragmentation of production processes and growth of MNCs affects factor prices[76]. The purpose of 'disintegrating vertically' is to achieve the lowest cost across countries in the production of intermediate and final goods. Evidence shows that cost is not the only factor to be taken into consideration, especially when transport costs and other barriers to trade are still high. Moreover, if 'outsourcing' is viewed strictly as a contractual way of subcontracting activity[77], then the extent of international outsourcing strongly depends on: the 'thickness' of the domestic and foreign market for input suppliers (the number/variety of suppliers on the market segment); the relative cost of searching in each market; the relative cost of customising inputs, and the nature of the contracting environment in each country. Therefore, a broad set of factors pertaining to the economic and social environment are considered when taking an outsourcing decision.

The economic theory behind outsourcing lies in answering a very simple question about whether to 'make it in-house' or to 'buy it'[78]. This is a fundamental question in industrial organisation and 'outsourcing'. Furthermore 'offshoring' (which implies more extensive transportation costs), is more prevalent in some industries than others (e.g. 'parts' in the car industry, call centres, business services[79]). But even in a given industry the mode of organisation can vary from one region or country to another. Vertical integration forces managers to spend time on both production and innovation activities[80] thus creating an overload. Outsourcing of some production activities helps alleviate tasks, and if the value of innovation is high, then it encourages outsourcing. The production of standardised products or services is usually 'outsourceable' while the production of specific parts is kept in-house. For instance, French telecommunications equipment company Alcatel is now seen as a 'fab-less' company (meaning that the whole production has been outsourced) and made this strategic choice not to produce its products but rather to concentrate on the design and R&D. However, this 'traditional' view of the nature of outsourced

75 *Therefore many concerns are voiced in the press and in the public at large referring to companies that are 'forced' to relocate.*
76 *Venables (1999).*
77 *As defined by Grossman, Helpman (2002),* Outsourcing versus FDI in Industry equilibrium*, Quarterly Journal of Economics, vol. 117-1, pp. 85-120.*
78 *Grossman, Helpman, (2002) op.cit.*
79 *Outsourcing seems to be on the rise in recent years, Abraham and Taylor (1996) document a rise of outsourcing of business services, etc. Outsourcing requires large cost advantages (reason for locating in low-cost countries), and depends on the degree of competition on the market (who bears the costs of co-ordination).*
80 *Acemoglu (2002), NBER WP 9191.*

Table 74 -Typology of corporate strategies and labour market effects		
Strategy	**Impact**	**Long-term effects**
Extending **market access** to other countries in the case of non-tradable services (energy, transport, banks, trade, food industry, tourism), i.e. relocate to markets where large demand is located (horizontal strategy)	Negligible impact on labour market (no substitution effect) **e.g. Carrefour** in China	Positive. Through increased demand for goods and services provided by an investor. Thus also positive effects on employment in both the home and host economies.
Semi-processed and re-exportable goods, such as cars and motor vehicles, steel, chemicals, etc. (horizontal strategy)	Indirect effect (non-job-creation) because activities are not being created in the home country. Possible substitution effects. **e.g. Renault** producing its new 5'000 car in Slovakia.	Possibly positive depending on the way in which savings are re-invested at home. Potential job creation in the host economy, with positive effects on overall demand.
Relocate in order to reduce labour costs, goods that are 'highly' re-exportable, standardised, labour-intensive production processes (textiles, software components, automobile parts, electronic services) – **cheap labour** argument, (vertical strategy)	Substantial impact on local labour markets in the short run. Complete substitution by the host economy's labour force. **e.g. Nike**	Negative on the low-skilled. Always at risk of further delocalisation / relocation to where labour is cheapest.
Relocate in order to benefit from highly skilled or specialised categories of labour (scientific skills, researchers, specific technical skills, etc.) – **labour pooling** argument, (vertical strategy)	Quite a substantial impact on local labour markets and on the demand for certain types of skills. **e.g. 'Silicon Valley'**	Upgrading of the labour force as well as of the quality of products / research or services produced leading ultimately to higher productivity and growth.
In response to this fragmentation of the production process ('relocation' strategies chosen by firms), other firms choose to 'innovate'. Such radically different strategies may lead to varied labour market outcomes, as follows:		
Innovation: opening up to competitive forces drives innovation to anticipate losses in competitiveness, leads to skill-biased technological change.	Capital/labour substitution to reduce costs (reduce number of unskilled workers). Increases demand for skilled labour. **e.g. Alcatel**	Overall positive. Difficult to disentangle pure 'exogenous' innovation from innovation triggered by competitive pressure.
Product differentiation: Avoid competitive pressure by creating monopoly power on a specific market segment. Either increase product quality/technology content, or improve the image / presentation.	Highly qualified labour force in demand, with specific technical skills or design abilities. Unskilled labour usually looses from this process. **e.g. Corami**	Positive. The production of non-standardised products at home secures a certain number of jobs.

goods or services is somewhat challenged by evidence: nowadays, even the most knowledge-led segments of the production process are being outsourced.

If the inputs can either be produced domestically or abroad, differences in factor endowments across countries lead to movements in capital and to changes in the demand for skilled labour, resulting in goods that used to be produced domestically being outsourced[81]. In both theoretical cases, firms are perfectly competitive. Hence vertical disintegration is a function of trade costs or differences in factor endowments. Even with zero trade costs and equal factor endowments, vertical disintegration can be a result of technological characteristics[82]. If the opportunity of firms to outsource *part* of their production process is taken into account, it shows that different types of firms (vertically integrated or more disintegrated) can coexist, depending on their cost structure and the stage of development of their technological/production processes. In the development stages, firms are likely to be vertically integrated, but then as learning by doing improves, standardisation of various stages of the production process leads to outsourcing possibilities[83].

5.2.1. Outcome for employment and wages

Alongside employment, the impact on wages is the variable of concern in the debate on globalisation and labour markets. Wage differentiation according to skills (production vs. non-production workers) has increased over the last thirty years especially in the US. The only explanation that comes from economists is that demand for skilled workers has expanded leading to an increase in their relative employment and wages. Increased competition from low-wage countries is considered a minor explanatory factor for this in comparison to the influence of technological change[84]. There are three reasons for this: the magnitude of trade, changes in import prices, and employment changes within and between industries. The decline in the relative wages of 'less-skilled' workers has occurred to a much lesser extent in the EU[85]. Economists consider that in the US, wages are the 'adjustment variable' as shocks occur and require labour market adjustment, while on the contrary in the EU, employment plays this role. In theory, 'global production sharing' and international trade in inputs are a potential explanation for the increase in the wage gap between skilled and unskilled workers, as well as skill-biased technical change, having much the same impact on changes in labour demand [86]: both of these will shift demand away from low-skilled activities, while raising relative demand and wages of the higher skilled. There is disagreement among economists as to the extent of the impact of international trade on employment and wages, but a majority would agree that international trade and increased competition in product markets has a relatively small impact on the labour market.

For NMS relocation, concerns of labour-intensive production from the EU15 to the low-wage NMS are not borne out by the analysis: FDI is concentrated in the non-tradable sectors (public utilities, communication, financial intermediation, and other services). Only one fifth of FDI is allocated to industries where low labour-costs are key and the share of unskilled labour is high (clothing, footwear, electrical machinery, rubber and plastic products)[87], suggesting that the market access argument is much more potent than the low-cost factor. Empirical application of the fragmentation theory to the Czech Republic, Poland, Hungary at NACE-2 (DA-DN) level suggests that outsourcing bridges the skilled-to-unskilled wage gap in manufacturing (analysis is usually limited to manufacturing because of data limitations). So the fragmentation of production processes may in some cases reduce the skilled-to-unskilled wage gap[88]. Hungary is an example of the responsiveness of an economy to global specialisation trends. This country needed to shift to human-capital-intensive production swiftly since it faced high competition from lower-labour-cost neighbouring countries (Slovakia: other cost-related advantages) and Asia. As a result the structure of Hungarian exports has rapidly turned towards more skilled-intensive exports.

Fragmentation of the production process and international outsourcing[89] may affect factor rewards and factor productivity even in countries with large home markets (such as the US). If a country or region is specialised in the production of skill-intensive goods then there should be no effect of outsourcing on wages of the skilled, which should only benefit from higher real income. The wages of the unskilled though could decrease nationally; this is the standard result

81 *Feenstra and Hanson (1996).*
82 *Ciliberto, Panzar (2003).*
83 *This is an implication of the simple argument of the products' life cycle developed by Vernon.*
84 *Feenstra op. cit., Freeman, R. B. and Katz L.F (1995), ed.* Differences and Changes in Wage Structures*. 462 p., and Wood, http://www.albany.edu/~ms339/CapitalIntensity.pdf for the literature on technological change.*
85 *In fact evidence shows that the increase in wage differentiation was comparable to the US in the UK, more modest in France, the Netherlands and Nordic countries, while inequality tends to decrease in Germany (Borjas, 2000, Labor Economics).*
86 *Feenstra R.C., Hanson G.H. (2001),* Global production sharing and rising inequality: a survey of trade and wages*, NBER work ing paper 8372.*
87 *Above quoted report on* The impact of EU enlargement on the labour markets*.*
88 *WIIW (working papers by Egger and Stehrer)*
89 *Feenstra, Hanson (2001) and (2002).*

which one would expect. Determining empirically the actual impact of outsourcing and offshoring on wages calls for the use of more precise databases: using plant-level data rather than industry-level data is helpful in analysing such a phenomenon but unfortunately, this data is not available EU-wide. More efforts should definitely be given to gather and analyse plant-level data that would contain the most appropriate information to analyse the phenomenon. Analysts would then be able to link trade and employment dimensions[90].

The outsourcing and relocation phenomena are diverse in nature. From the above, it seems that such strategic choices could be viewed as a threat to local labour markets if they are only driven by low-wage motivations (leading to strong disruption in the short-term), or as an opportunity if a broader set of considerations are taken into account. In the latter case, thanks to feedback effects (increased exports, increased efficiency and cost savings in the home country, and reinvestment of savings in a productive way) increased outside opportunities should improve the economic situation of home economies (increased trade, increased growth, employment creation and upgrading of production processes).

Lately the press has reported cases of firms having repatriated activities which they had previously chosen to outsource (Dell, in the computer industry, Lehmann Brothers, in the financial sector[91]) because of the difficulty in managing and controlling the sub-contracters and ultimately due to consumer complaints about the quality of service which was provided. Indeed, a broader set of factors pertaining both to the economic and social environment ought to be part of the debate on this phenomenon, suggesting that the decision to offshore requires careful assessment of all related costs (e.g. search costs, co-ordination costs, extra managerial costs) and all risks associated with offshore locations (e.g. intellectual property rights, reputation, exchange rate risks)[92].

5.3. Empirical evidence

The difficulty for analysts is that nowadays there is much more to international trade than just trade in final goods[93] (this explains the use of a diverse set of data, indicators or different methodologies, box 9). Along the same lines, there is much more to globalisation than just international trade. Globalisation has induced the development of global production patterns and hence the relative importance of trade in intermediate goods has increased; this goes hand in hand with the diffusion of new technologies, which *–inter alia-* allows firms to produce around the clock (making use of the time difference). Ghose (2003) characterises the current global production pattern as the 'combined effect of shifting comparative advantage, growth of outsourcing and diffusion of skill-biased technological trade'.

The ***European Monitoring Centre on Change*** (EMCC)[94] uses the following definitions of outsourcing and relocation (within a broader set of types of restructuring[95]):

• outsourcing: a type of restructuring where the activity is subcontracted to another company which may or may not be located within the EU. Such a definition matches the contractual approach used by Grossman / Helpman (2002).

• relocation: where the activity is relocated to another country of the EU or beyond its borders.

The difference lies mainly in the type of legal arrangement that then links the headquarters to its other production units. Both cases imply job losses in the 'home' country, but also potential job creation in the home as well as in the host country (through savings and feedback effects – box 9).

Out of 1472 case studies posted by the European Restructuring Monitor (as of 30/04/2004 – table 75), outsourcing and relocation cases together represent 7.38% of all restructuring cases, which corresponds to 7.30% of the total planned job reductions. Among the 'outsourcing' cases (13 cases from 2002 to 2004 collected by the European Restructuring Monitor), some three companies outsourced within the EU15, one within the EU25 and the remainder (five companies) outside the EU (mainly in India).

Although the EMCC's approach only captures one side of the phenomenon (due to its data collection method it only considers job destruction, i.e. plants' outsourcing and layoffs announced in the press[96]), it is somewhat informative.

90 See Jansen, Turrini (2002), Job creation, job destruction and the international division of labour, *CEPR DP 3202 for the Italian case, and Redding (2004) for the UK.*

91 Drezner, Foreign Affairs, May/June 2004.

92 CESifo Forum, Volume 5, number 2, Summer 2004, special focus on outsourcing and offshoring.

93 Although it is true that trade in final goods was not the only type of trade, obviously trade in raw materials has historically played a major role.

94 In particular the European Restructuring Monitor, Dublin Foundation, www.eurofound.ie.

95 e.g. EMCC: 'restructuring' also encompasses 'outsourcing' and 'relocation' (vertical disintegration) which could also be viewed as consequences of 'globalisation' (free movement of capital, establishment, and investment). Increased competition can indeed stem from competitors in the home country (or region – within EU) as well as competitors abroad; at the same time, restructuring occurs because of increased competition but also due to innovation, changes in consumer demand, increases in productivity, etc.

96 The EMCC – the European Restructuring Monitor - gathers data through the press, which means that ERM correspondents have to rely on the accuracy of newspaper articles. Then newspapers report on restructuring announcements and then do not follow up on actual measures that are taken. Finally, ERPM document a proportionately high number of 'smaller' cases in the small economies, since these are picked up in the national papers but would not get coverage in the newspapers monitored in the large economies. Furthermore, newspapers rarely report on job creation aspects.

Box 9 - Individual country cases

Comparing the effect of FDI on employment in **the US and Sweden**[97] - some economists have tried to include the effect of globalisation on different types of labour (white/blue - skilled/unskilled). The small part of the Swedish-owned production that takes place abroad – in developing countries – involves more employment in the parent company in Sweden (notably more white-collar employment), even though the effect on Swedish employment becomes weaker over time. In the case of Sweden – the authors find no evidence of substitution – on the contrary, more sales by foreign affiliates increase employment in the parent company. According to these researchers, 'there is no evidence that production abroad by Swedish firms involves the allocation of labour-intensive operations to affiliates'.

With regard to **the US case**, Feenstra and Hanson (1996) use trade in intermediate goods (imports of) as a proxy for delocalisations (imports of intermediate goods presumably being substituted to national production). This constitutes the upper bound for such an approximation. Under this assumption, their main finding is that outsourcing can account for 31-51% of the increase in the relative demand for skilled labour that occurred in US manufacturing industries during the 1980s.

For **the UK**, it seems that localised effects, notably in Scotland (work of Philip Taylor on call centres), have been highly disruptive on the local/regional labour force, while at a broader level, across the UK (Redding 2004) evidence shows that the industrial structure has an important impact on the final outcome for wages. Using establishment data (Girma, Görg 2004) suggests that higher wages at home are positively related to outsourcing, which could mean that the savings motive is important. It also shows that foreign establishments outsource more and that there is a positive relation to labour productivity.

The case of **Ireland** in the recent years is fairly self-explanatory as to the consequences of high FDI inflows.

For **Italy**, an empirical study by Faini, Falzoni, Galeotti, Helg and Turrini[98], finds that international trade did not contribute to Italy's labour market problems. A possible explanation put forward by the authors is that given Italy's pattern of specialisation, international integration as reflected in falling import prices may have boosted the labour demand.

In the case of **France**, Cardebat[99] shows that delocalisations played an important role in the years from 1985 to 1992, leading to especially destructive consequences on unskilled labour and wage inequalities. Cardebat's empirical results – estimating labour demand for unskilled labour – show that a 10% fall in the price of intermediate goods would lead to a reduction in unskilled labour employment of -5.5% to -12.5%, notwithstanding methodological limitations. However, these results encompass both the effects of broader restructuring (inter-sectoral specialisation) and the effects of delocalisation, without managing to disentangle them. And in this case, only the negative effects are measured, again, potential job creation is not evaluated.

Using factor content analysis, Guimbert and Lévy-Bruhl (op.cit.) show that overall, trade has had a neutral effect on labour. They decompose results into two periods: 1978-1990 the balance of labour content has been negative (minus 40,000 jobs per year) while 1990-1997 is has been found to turn positive, even for the textile industry, for both skilled and unskilled labour.

Aussilloux and Cheval[100] show that FDI have a positive effect on employment in parent companies (located in France) and boost exports. On the whole, through this feedback effect, FDI has a positive impact on employment.

The Boston Consulting Group (BCG) has recently published results concerning France: globalisation is rather job-creating. Large French companies going global contribute to create jobs in France. Only 6% of manufactured goods consumed in France are processed in low-cost countries. BCG actually surveyed large companies and compared net job creation to their activity. (www.bcg.com). In a recent publication, the BCG conducts sectoral analysis for which evidence is mixed and shows overall that some companies choose to move their R&D activities to low-cost countries, that large multinationals are driving this trend, that evidence is mixed according to the segments that the companies choose to delocalise, that industries with short time-to-market are stipulating local production[101].

From the above, we derive that analysis would obviously benefit greatly from a comprehensive gathering of European-wide micro-data (establishment / plant-level data), which contain most valuable information about firms and employees.

97 *Blomstrom, Fors and Lipsey (1997),* FDI and Employment: home country experience in the US and Sweden*, The Economic Journal, Vol 107, n°445, pp. 1787-1797.*

98 *Faini R., Falzoni A.M., Galeotti M., Helg R., Turrini A. (2001),* Importing Jobs And Exporting Firms? On The Wage And Employment Implications Of Italy's Trade And Foreign Direct Investment Flows*,* *http://econwpa.wustl.edu/eps/it/papers/0103/0103002.pdf.*

99 *Bazen S., Cardebat J.M. (2001),* The impact of trade on the relative wages and employment of low-skilled workers in France*, Applied Economics (2001), 33, pp. 801-810.*

100 *Aussilloux V., Cheval M.-L. (2002),* Les investissements directs français à l'étranger et l'emploi en France*, Economie et Prévision, n°152-153, pp. 171-188.*

101 *BCG (2004),* Capturing Global Advantage.

Table 75 - Planned job reductions by type of restructuring				
Type of restructuring	**# Planned job reductions**	**% Planned job reductions**	**# Cases**	**% Cases**
Internal restructuring	550099	76.25%	833	65.44%
Bankruptcy / Closure	95933	13.3%	278	21.84%
Relocation	34937	4.84%	82	6.44%
Merger / Acquisition	21884	3.03%	47	3.69%
Outsourcing	17735	2.46%	13	0.94%
Other	820	0.11%	21	1.65%

Source: EMCC, 30/04/2004.

In particular, it helps to identify sectors that are under restructuring pressure. However, since the EMCC's restructuring monitor only launched its activities in 2002, there is still some way to go before 'trends' can be identified. Two years' data gathering is too short a period to find conclusive evidence about restructuring trends.

Overall – even though the evidence gathered by the EMCC tells only part of the outsourcing story – this descriptive work indicates that the actual number of job losses due to 'pure' outsourcing is very small.

Reports from leading consultancies and the media based on case studies have created controversy and an emotional debate about 'offshore outsourcing', especially in the context of the US presidential election campaign 2004. For instance, management consultancy McKinsey[102] forecasts for the US, Europe and Japan - 600,000 job losses a year, 70% in the US; IT researchers Forrester, predict 3.3 million US service job losses over the next 15 years; and IT industry analysts Gartner estimate 1 out of 10 jobs in the US IT industry will be lost. On the other hand, Global Insight[103] – finds IT outsourcing from the US results in ***net*** US job growth: over 90,000 net new jobs were created in 2003 and the number is projected to grow. The impact on job creation varies by sector, but the construction, transportation, education and health, wholesale trade, and financial services sectors are expected to benefit. However McKinsey (Global Institute) insists that overall, for every dollar invested by the US abroad, 1.13 dollars value-added is created in the US and value added is created abroad as well as jobs. This feeds back into increased demand in the US economy.

As mentioned in all reports, labour arbitrage (the cost-saving argument) is far from the only factor in the offshoring decision (cf for instance Canada, Ireland, Singapore are host to many offshoring companies and are not 'low-wage' countries). Among other factors driving relocation, companies cite greater productivity, improved service, superior technical skills, market access and 'other reasons', such as compensation costs, quality of human resources, geopolitical risks, and diversification of investment risks[104]. The US and UK are potentially most affected, because of the English-speaking skills in destination countries. Human resource factors such as optimising a pool of global labour supply, working around the clock (by making use of the time difference) and making use of a broader range of skills and educational base are key.

The IT sector is the main focus of the above-mentioned reports. For a specific sub-sector which is often nailed as a large 'outsourcer', namely the NACE 2D-72 'computer and related services', which includes hardware consultancy, software consultancy and supply,

101 The EMCC – the European Restructuring Monitor - gathers data through the press, which means that ERM correspondents have to rely on the accuracy of newspaper articles. Then newspapers report on restructuring announcements and do not follow up on actual measures that are taken. Finally, ERPM documents a proportionately high number of 'smaller' cases in the small economies, since these are picked up in the national papers but would not get coverage in the newspapers monitored in the large economies. Furthermore, newspapers rarely report on job creation aspects.

102 in Offshoring a win-win game, *www.mckinsey.com.*

103 Methodological note (on Global Insight): study of employment concentration by industry and forecasted industrial growth.

104 Gradev G. (ed.) (2001), CEE countries in the EU companies' strategies of industrial restructuring and relocation, *ETUI, Brussels, pp. 12-13.*

105 Source: Eurostat, the European Union Labour Force Survey, *data and own calculations.*

106 see Blomstrom, Fors, Lipsey (op.cit.)

data processing, database activities, maintenance and repair of office, accounting and computer machinery, other computer-related services, the net job creation figures have been over 31,000 jobs created between 2002 and 2003 both in the EU-15 (76%) and in the NMS (24% of the jobs created); between 1995 and 2002 this sub-sector created on average 175,000 jobs a year EU-wide[105].

The IT sector, and more specifically the lower-end of the IT sector (so far), seems to be more amenable to offshoring because such jobs can offer relatively small productivity differential but a high wage differential, making them interesting to offshore.

5.3.1. Comparison between the EU and the US

In US firms, larger foreign production is associated with smaller parent-company employment, reducing labour intensity in the parent company, especially if the production is located in developing countries[106]. This reflects a strategy on the part of investing firms of allocating labour-intensive production tasks to affiliates located in low-wage countries. At a later stage, elements are re-imported and used in the production of the final good. On the other hand, in Sweden, firms employ more labour at home when they produce abroad, in particular when associated with production in developing countries. Thus there is little allocation of labour-intensive production to low-wage countries by the Swedish firms and the labour effect which is observed reflects the need for hiring managers and supervisors (parent company supervision is required). This suggests a difference in investment strategies. It seems that in the US, the strategy is to take advantage of factor price differences, whilst in Sweden the strategy is rather to gain access to markets by substituting trade.

Outsourcing to English-speaking countries has naturally tended to affect the US and the British Isles more than the EU as a whole. For the IT sector, which is at the source of the controversy on outsourcing and job losses among white-collar workers, it is difficult to obtain a clear picture in the US. Indeed two-thirds of IT jobs pertain to non-IT sectors[107]. Moreover, it seems that in IT sectors in the strictest sense, lower skilled jobs have been destroyed, while high-skilled jobs have been created (e.g. computer software engineers). In addition, the average wage for those higher-skilled IT workers was much higher. Last but not least, the US runs a trade surplus in the following sectors: financial services, business, professional and technical services, and computer, data, database and information services.

Ninety percent of current US jobs cannot be offshored because they require geographical proximity. The tasks that are offshored are also easy to standardise, manage and monitor. For the US, Forrester predicts a job loss of 3.3 million across 15 years, i.e. 220,000 jobs a year, while it should actually create 22 million new jobs between now and 2010. Thus outsourcing should affect less than 0.2 percent of employed Americans (Drezner, Foreign Affairs, May-June 2004).

Restructuring in a broad sense is taking place in the US but overall, at least 16 million jobs are created or destroyed annually, representing 14% of total US employment[108]. Manufacturing in the US is also a source of concern because job destructions have not been made up by job creations in good times, so adjustment policies need to be designed accordingly and tailored to the specific needs of these workers.

In BLS News[109] of June 10, 2004, extended mass layoffs associated with domestic and overseas relocations, for the first quarter 2004 appear in table 76 for the US.

Layoffs associated with overseas relocation represent 2.5% of the non-farm workers separated from their jobs for at least 31 days. National relocation represents 4.2% of this total number of layoffs.

5.4. Upper and lower bounds

Currently we have very little evidence or data on the complex phenomenon of outsourcing. Here we need to acknowledge the huge difficulties in measuring the extent of outsourcing.

From a statistical perspective, it is almost impossible to disentangle the effects of outsourcing per se on net job losses at the aggregate level, since there are feedback effects that one cannot measure in the short-term. The raw number of dismissals tells only part of the story. Statistical shortcomings unfortunately hinder a finer measurement of the effects of outsourcing on labour and the demand for skills; white-collar as well as blue collars face the same insecurity linked to increased competitive pressures and more precise classifications by skills would probably help us show that within the high-skilled, the low-end of the high-skilled category also faces risk of layoffs, as much as the broader 'low-skilled' category.

The scale of outsourcing could be measured according to two

105 Source: Eurostat, the European Union Labour Force Survey, *data and own calculations.*
106 see Blomstrom, Fors, Lipsey (op.cit.)
107 Catherine Mann, 2004, IIE, Global sourcing and High-tech jobs.
108 Can manufacturing survive in advanced countries?, *R. H. McGuckin, the Conference Board – Executive Action, March 2004.*
109 Bureau of Labor Statistics, USA, publication based on a brand new survey, the Mass Layoffs Survey; so far results are available for the first quarter of 2004 only.

approaches, two types of evidence at the aggregate level: the lowest estimate (or lower bound) can be measured by counting the number of outsourcing cases reported in the press (as collected by the EMCC, i.e. 2.5% of planned job destructions); the upper estimate (or upper bound) can be measured by evaluating trade in intermediate inputs – which encompasses inter alia offshoring (see box 9, Feenstra and Hanson, 1996).

Concerns have been raised over the fact that trade in intermediate goods represents over a half of Chinese exports[110], namely US$97.2 billion in 1998. This kind of trade has grown substantially, typically in the case of China. From 1988 to 1998, 62.1% of total exports by China to the EU15 were actually *re-exports*. In the US case, processing imports from the EU accounts for approximately 20% of their total processing trade. In US manufacturing, imported inputs have increased from 6.5% (1972) to 11.6% (1990) of total intermediate purchases.

Yet the most accurate measure of the specific process of offshoring (international outsourcing) would be to link individual data on wages and employment to enterprise-level data on sub-contracting of activities (and the national vs. international nature of this sub-contracting relationship). An attempt using data on Germany (the German Socio-Economic Panel) and industry level data (broader aggregation than enterprise-level data) on international outsourcing from input-output tables from the German Federal Statistical Office[111] explores the relationship between offshoring and wages. The researchers find that offshoring has had a marked impact on wages, notably reducing the real wage for workers in the lowest skill categories by up to 1.8% while it increased the real wage of high-skilled workers by up to 3.3%.

Table 76 - Layoff cases in the US

Action	Layoff events	Separations
Total private non-farm sector	1204	239361
Total excluding seasonal and vacation events	869	182456
Total with movement of work	119	16021
Overseas relocations	34	4633
Within company	21	2976
Different company	13	1657
Domestic relocations	79	9985
Within company	65	8191
Different company	14	1794

Source: Bureau of Labour Statistics,USA.

However the use of enterprise-level data, linking it to employee data directly would greatly improve the accuracy of the analysis, focusing precisely on wages and employment variables. If such data were gathered across the EU25, such analysis would be possible.

5.4.1. The policy issue

Although the evidence gathered so far does not point to a dramatic increase in **net** job destruction, it is nevertheless probably true that outsourcing increases job turnover, which in turn increases the feeling of job insecurity. This in itself is a major policy issue. The challenge is not to assess the extent of workers concerned in Europe; rather it is to assess the differentiated impact on the components of the labour market and the ability of our labour markets to adapt to this changing situation. It boils down to whether or not we have created the appropriate framework to deal with such cases, and whether or not this framework is complete enough (should question the interactions between employment, social protection, tax policies, and competition policies). The substitution or complementarities between overseas and home jobs has been questioned. In the US in particular, it shows that they are complements, although there are distributional effects (creating more high-paying jobs in the US, but fewer low-skilled jobs at home)[112].

Policy concerns should be raised in cases of job destruction. Strong evidence of ***net*** job destruction is difficult to assess, because factors behind outsourcing, its causes and the strategy behind it vary (see the above section on the types of outsourcing strategies). It seems clear that vertical integration strategies lead to more substitution between domestic and foreign labour, calling for strong adjustment policies (assisting dislocated workers, etc.), while horizontal strategies lead to complementarities, calling for policies geared towards mobility and adaptability of the workforce.

110 Feenstra, Hanson (2001), http://www.nber.org/papers/w8088.pdf
111 Geishecker I., Görg H. (2004), International outsourcing and wages: winners and losers*, DIW Berlin, http://www.diw.de/deutsch/dasinstitut/abteilungen/ldm/archiv/ar2004/soep2004/doksoep2004/paper2004_geisheckergoerg.pdf*
112 Hanson and Slaughter (1999), NBER Working Paper 7074.

A realistic self-appraisal and action are needed to address the factors that policy can influence in the home economy, such as for instance education and training, R&D (promotion of ICT, innovation), entrepreneurship, modern work organisation. Outsourcing implies displacement of workers in some cases, but the net effect on jobs at home is not certain; the challenge is to help displaced workers in their transition to other productive activities. However, blocking all outsourcing moves would not constitute a realistic solution. Hindering relocation would be counterproductive and would inhibit change (which is a strong driver of the EU economic model). Opportunities for growth offered by globalisation should also drive economic dynamism.

6. Reconciling economic insecurity with the globalisation of production

In this section we explore the skill-content of employment creation throughout the EU and by sector in order to tentatively track the potential tensions or 'pressures' that globalisation generates on certain sectors and groups of workers. Finally, data on the extent of job creation and job destruction are presented by sector and by skills in order to assess the nature and magnitude of changes that workers are faced with in the EU, as well as the opportunities offered by the European labour market if considered in its entirety.

In open markets, greater competition spurs the reallocation of labour and capital to more efficient uses in the economy. Increasing job reallocations and job turnover may or may not result in an increased feeling of insecurity[113]. The fact that trade actually increases the pace of simultaneous job creation and destruction is a fundamental source of concern to workers especially for the low-skilled often bear the brunt of 'short-run adjustment'. Cushioning the negative consequences of this tendency for workers makes sense. However halting the competitive and opening up process could overall be counterproductive.

6.1. Importance of job reallocation

…to generate productivity gains and increase job opportunities at times of changing production patterns.

For any size of total employment change induced by changes in international factors - the changes in individual jobs at individual establishments are much greater[114]. Many more jobs are destroyed and also created than is apparent from the net employment changes. Turnover of jobs entails costs for firms as well as for workers and society as a whole (e.g. unemployment benefits, even if temporary), and benefits of better allocation of resources. The economics profession cannot as of yet give a comprehensive quantification and evaluation of costs and benefits.

International trade leads to job creation, through innovation and efficiency gains but it also requires labour market adjustment, and temporary dislocation. Job reallocation (job destruction and job creation) is an essential part of a dynamic economy. In the manufacturing sector in the US, the turnover is 1 in 5 jobs a year (this may explain the feeling of 'economic insecurity', however it cannot be caused by higher international exposure compared to other economies, since the US is a relatively 'closed' economy). If the feeling of insecurity is an inevitable consequence of increased economic dynamism, then there is room for policy intervention, in order to mitigate risks.

The OECD has computed the rate of job destruction, job creation and job reallocation for a set of countries, and found that for all the countries, net employment growth was always much smaller than job creation or destruction, and job reallocation is ten to thirty times higher than net employment growth.

However, at this point strong methodological issues have to be raised:

- calculating ***net*** job loss and the ***net*** effect on employment is a delicate operation, given the backward and forward linkages and short-term / long-term dimension of the issue of trade and employment.

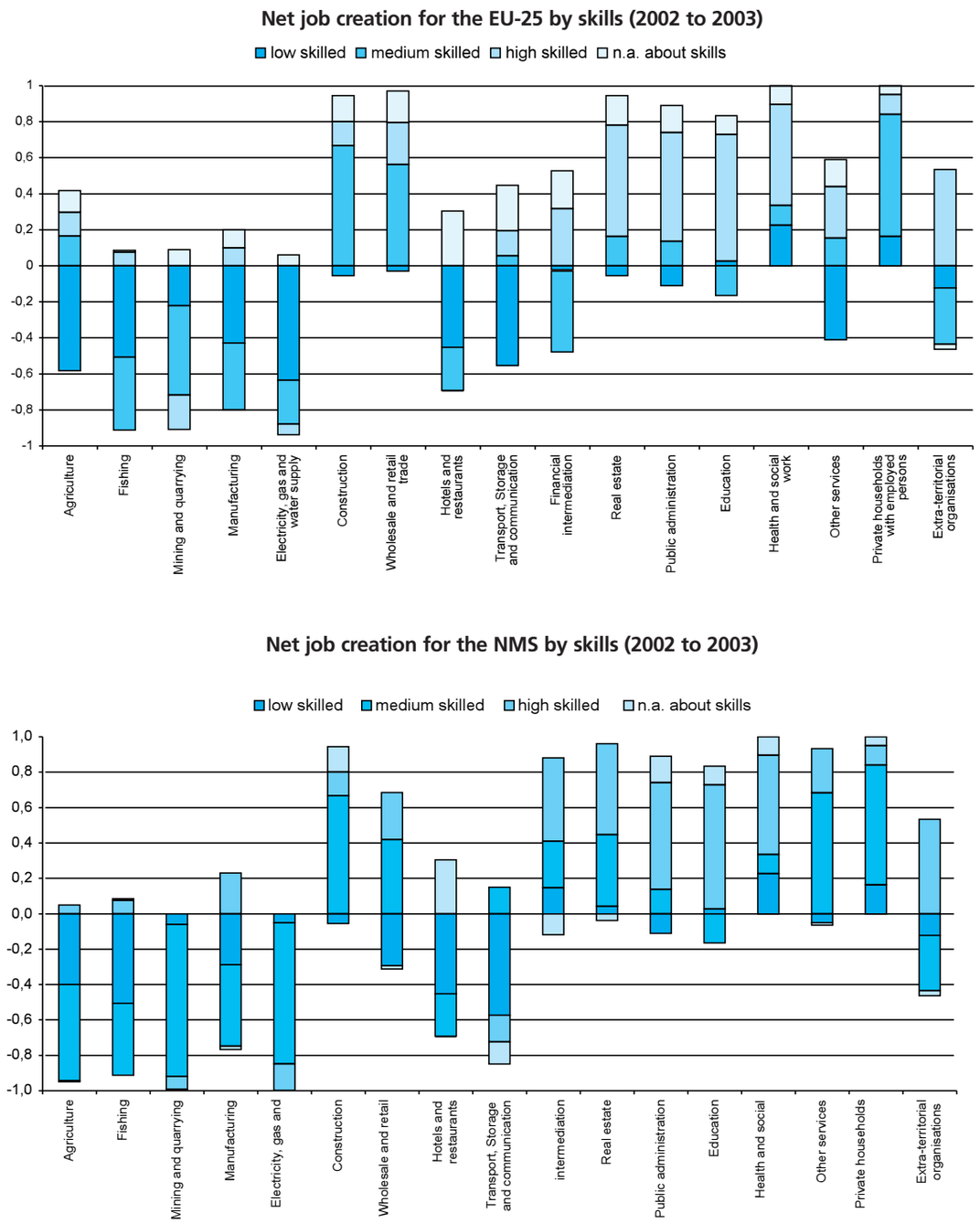
- disentangling the reasons for 'job dislocation' is not a straightforward task.

- changes in industry or manufacturing total ***net*** employment are much smaller than the underlying increases and decreases in employment occurring simultaneously at the level of individual establishment, i.e. a sector creates and destroys far more jobs per day in the national economy than job cuts announced through the press. Gross job flows (creation and destruction) at establishment level have to be taken into account which has not yet been done in any meaningful way. Job flows are far larger in magnitude than net employment changes.

113 *Scheve K., Slaughter M.J. (2002),* Economic insecurity and the globalisation of production*, Working Paper 03-09, Tuck School of Business at Dartmouth, http://ssrn.com/abstract=386625, define economic insecurity as 'worker insecurity' which may be related to riskier employment/wage outcomes. The authors argue that FDI may be a key factor contributing to this increased risk by making labour demand more elastic. They present evidence from panel data collected in Great Britain (1991-99) that FDI activity in industries in which the individuals work is positively correlated with individual perceptions of economic insecurity in terms of employment and wages. This study focuses on the individual level, based on the assumption that workers are risk-averse and they are concerned about the volatility of their earnings and the volatility of the risk of unemployment. This feeling of economic insecurity may contribute to the backlash against globalisation (described in the introduction to this chapter).*

114 *Davis, Haltiwanger and Schuh (1998),* Job creation and job destruction*, MIT press, 288 p.*

Chart 101 - Net job creation for the EU-25 and the NMS by skills (2002 to 2003)



Source: Eurostat, the European Union Labour Force Survey, and own calculations. 2002-2003 data was chosen for the quality of information available. Indeed, the number of 'no answer' increases as a longer time span is chosen.

- the need to go beyond the economy-wide and even sector-wide analysis : a focus on detailed industries and establishment data is needed. Greater emphasis should be placed on the potential insights of gathering plant-level data throughout the EU25, thereby providing information on employer and employee behaviour simultaneously. More accurate measures of turnover should be defined by industry, such as measures of job creation and destruction due to plant closure, contracting or expanding establishments, and plant openings.

In the next sub-section, attempts at illustrating the importance of net job creation are carried out for the EU25 with the very partial data that we have.

6.2. Overall job creation in the EU25

While analysing job creation dynamics[115], it appears that both the EU15 and the NMS have created a number of jobs in the past year, even though the economy was not performing its best. However, it also appears that the EU has lost comparatively more low-skilled jobs, which seems to confirm previous intuition about the groups of workers that are most affected.

Figures for net job creation (net employment growth) from 1993 to 2003 reveal that, on average, 500 jobs were created daily in each of the 15 Member States. **Job reallocation** altogether represents 10 to 30 times this amount, including the intra-sectoral shifts[116]. This represents 5,000 to 15,000 job reallocations a day for each country in the EU15. Hereafter net job creation from 2002 to 2003 is taken as an example as it is the most recent data, this exercise can be repeated for previous years (Chart 101).

Taking the EU25 as a whole and all sectors (chart 14), there was a net job creation between 2002 and 2003 (positive or negative change in the difference between the number of employed in 2003 and those employed in 2002)[117]. However, job creation is clearly more significant in the case of highly skilled workers. In both the EU25 and the EU15, workers in agriculture, fishing, mining and manufacturing, and energy, loose out. Compared to the EU15, more jobs were lost in the NMS in the areas of transport, storage and communication and other services. Job creation in the EU15 is also more high-skill-intensive than in the NMS, notably in the primary sectors, which contrasts sharply with the NMS.

At a more detailed level (2-digit NACE and 1-digit ISCED), the non-tradable service sector stands out as the sector that creates most of the jobs in the NMS. Job creation is also highest in the recreational, cultural and sporting activities, hotels and restaurants and real estate business.

Analysis of the structure of net job creation between 2002 and 2003 reveals the following two types of sectors:

(i) the traditional sector in which the NMS have a comparative advantage : mining, textiles manufacturing, leather products, mineral products and basic metals.

(ii) the sectors that are in need of strong job creation – 'recently created activities' which are driven by strong internal demand : recreational activities, radio, TV equipment, motor vehicles, hotels and restaurants, real estate, supporting transport activities and travel agencies.

Comparing the 'job creating' sectors in the NMS with the actual structure of exports of these countries clearly shows that NMS are specialising further in these specific sectors (Chart 102).

The EU clearly creates jobs and job creation by skills is unevenly distributed across countries as shown on chart 102 (for a longer time period). However it seems that for the EU15 at least, high-skill jobs are the backbone of job creation.

Job turnover has increased in the recent years; this observation is also valid at international level, for both industrialised and developing countries (Ghose 2003, ILO). If no net employment growth emerges, these constant shifts are surely highly disruptive and lower-skilled workers are bound to suffer from this outcome. Thus to be able to accommodate changes, job creation and net employment growth are crucial elements.

Notwithstanding the potential insecurity that increased job turnover could generate, to summarise the above points, the rate of job reallocation (which is far higher on average than the rate of net job creation) seems to be a crucial asset for the dynamism of EU economies.

Such a job creating potential (also highlighted in chapter 3 of this report) could be turned into an opportunity and could be considered as a driver of economic renewal, provided that appropriate and timely support is given to displaced workers. This needs to be done in order to reduce the time workers spend unemployed and to increase their skills. Consequently the matching efficiency needs to be improved, in order to properly match vacancies and unemployment spells. Therefore not surprisingly it has become a policy priority.

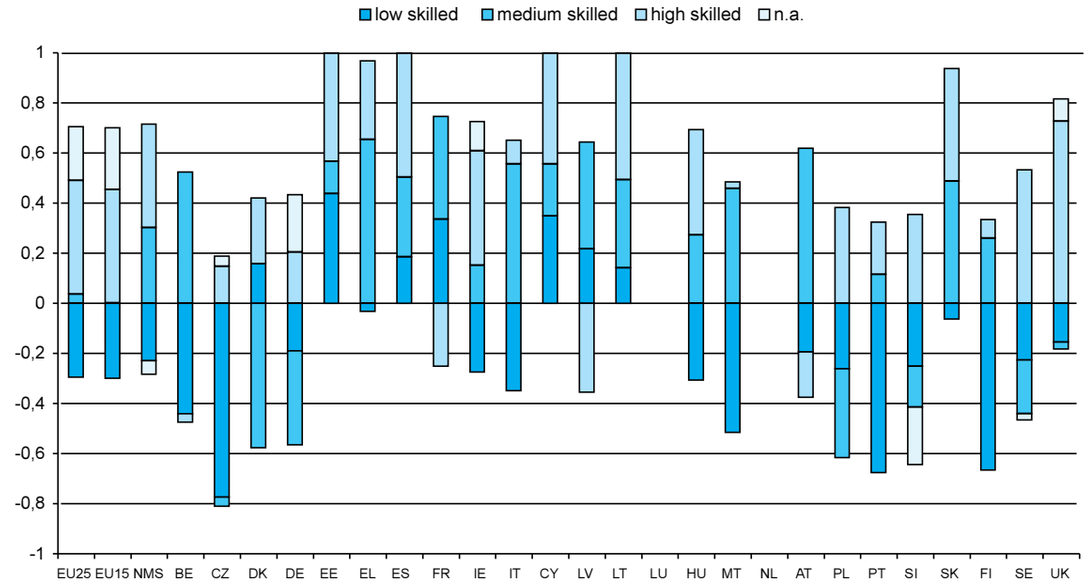
115 at 2-digit NACE level (classification by activity) and measured against the number of employed persons as reported in the LFS data from Eurostat.

116 Authors calculations, based on the argument developed by Pierre Cahuc, http://eurequa.univ-paris1.fr/membres/cahuc/DEAEns/Ch09ffHCE.pdf

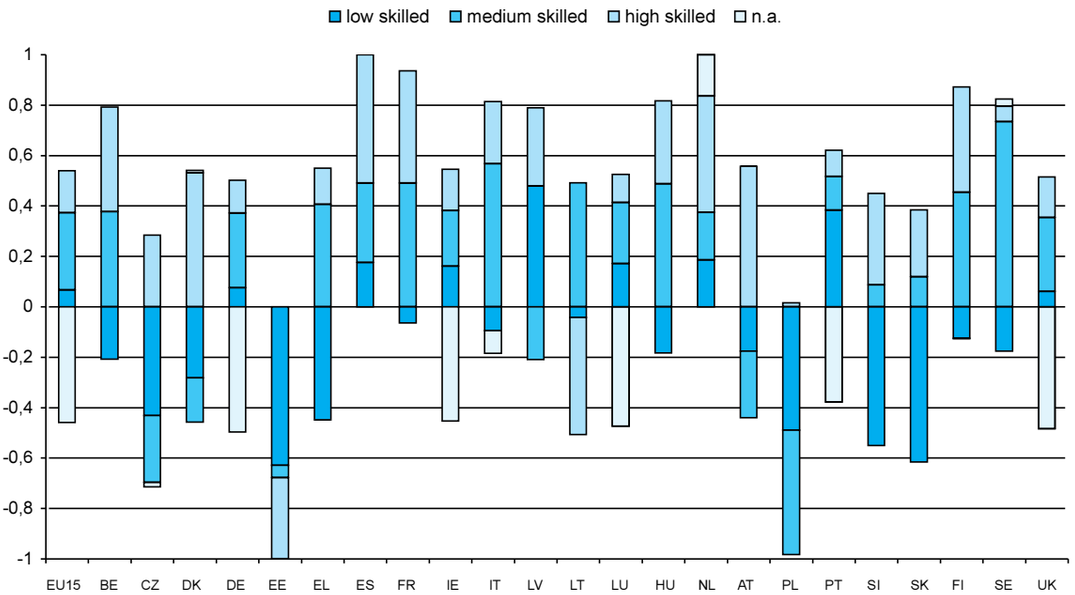
117 by ISCED skill category, referring to the skills of the individuals employed.

Chart 102 - Net job creation by country and by skills[118]

2002 to 2003



1998 to 2003



Source: Eurostat, the European Union Labour Force Survey and own calculations. The information on skills is less adequate in this case – from 1998 to 2003 – with a higher share of 'no answer'.

118 In charts 101 and 102, the scale of the Y-axis was artificially standardised between -1 and 1 reflecting relative percentage changes. In order to reflect the actual magnitude of changes (in terms of the number of people affected), the countries are sorted according to the total absolute number of changes, therefore the largest countries are to the right of the charts.

7. Concluding remarks

7.1. Main findings

In the 1990s, economies have become more and more integrated. Trade and FDI have increased substantially, and Europe seems to have become more and more integrated, with smaller countries displaying more 'openness' than the larger European economies. Moreover, integration is a complex set of links that goes far beyond mere trade in goods. Therefore in this chapter we have looked at enlargement and the dynamics of further integration as a 'mini-globalisation'. Indeed regional integration can be thought of as one example of 'globalisation', as in a laboratory experiment.

We noted that patterns of specialisation and trade have been changing with further integration, that FDI plays an increasing role and that overall the upgrading of products towards high quality segments is a trend across industry and the service sector. The dynamic or long-term gains from regional integration at the EU level stem from all the factors examined in section 3 leading to specialisation, enhanced trade links, increased diversity and increased efficiency within the EU, together with the upgrading of products and skills. Such gains translate into long-term growth prospects. Seizing the opportunities brought about by globalisation requires that all actors bear in mind the long-term gains, even though long-term gains are dispersed compared to much concentrated and localised short-term costs.

While deepening economic integration may have an impact in specific regions or sectors that are more exposed to import penetration, evidence also shows that this goes both ways, in the sense it creates new opportunities for all; this is particularly obvious in bordering regions. Yet there may be a bias towards higher skills and the distributional effects can be magnified due to the lack of labour mobility across sectors, regions and countries. Overall, experience gained through previous periods of deepening economic integration preceding and accompanying enlargement of the Community shows that the expected negative impact on employment and wages did not occur. The impact on employment and wages is limited to certain sectors; neither did it create substantial inflows of migrants[119].

Although the assumption is that wage differentiation should increase the more a country becomes integrated in the global game, due to increasing rewards to productivity gains in technology-driven sectors, the evidence is mixed (see chapter 3 of this report). It seems that increasing productivity, the continuous upgrading of European products and the increased quality of European labour are the way forward, this explains the growing need for strong investment in human capital, lifelong learning and adaptability of the workers and enterprises. This holds true, independently of the sector under consideration, be it industry or services (this relates to the findings of chapter 3).

In the European case, integration takes place in a broader context of solidarity and cohesion, which does not apply globally. The EU institutional framework represents a further step to such 'integration', which is lacking at global level – namely global governance. In addition, European integration has occurred gradually, whereas in recent years, further integration of economies globally has witnessed fairly abrupt changes and sudden shocks, such as the relatively localised and concentrated impact of offshoring on some workers and sub-sectors.

The bulk of the work on globalisation and its impact on the labour market has so far focussed on manufacturing, partly also because of data limitations. This will probably change in the coming years, because of the importance of ICT and related services – telecoms and technological improvements that accelerate the pace of 'change' in general and restructuring in particular; and related topics that have emerged recently, such as outsourcing, the growing importance of trade relations with countries such as China, India, and Brazil.

Attention should be paid to analyse carefully the specific strategies of firms when they opt for outsourcing. Consequences of vertical or horizontal strategies differ and should be accounted for in the design of policies targeted at managing change, in particular with a view to mitigate the strongly localised or regional effects of mass layoffs due to certain types of outsourcing or offshoring (irrespective of the type of skills and of the nature of the sector). Indeed the geographical concentration of layoffs is most disruptive in such cases, calling for strong and timely policy action targeted towards the displaced workers.

One of the main challenges to come to grips with such a topic is methodological. Pure trade data are not adequate to understand changes in the division of labour among countries, the international fragmentation of production and the activities of affiliates of MNCs. There is a need to gather the following data European-wide: at the macroeconomic level, data on job vacancies (through the job vacancy survey of Eurostat) should prove most useful once all countries pro-

119 *See* The impact of Eastern enlargement on Employment and labour markets in the EU Member States, *http://europa.eu.int/comm/employment_social/employment_analysis/impact_en.htm*

vide it, especially in relation to unemployment data, to understand the dynamics of matching; at the microeconomic level, linked employer-employee data are needed to analyse job creation and destruction thoroughly as well as more specific trends such as offshoring for instance, possibly combining such data with data from customs registers. Further attempts at linking datasets containing information on both employment and trade variables at individual level should be encouraged.

Finally analysing the dynamics of job creation throughout the EU in recent years (1998-2003) shows that overall, ***net*** job creation occurs across a variety of sectors and notably for the high skilled. Such diversity should be seen as a potential and as an opportunity, driving economic renewal, provided that mobility is improved and efficient matching is guaranteed.

7.2. Policy perspective

Globalisation has positive and negative effects, but altogether this process brings about overall gains for European workers and consumers. Yet the distribution of gains is uneven; the labour market is central to whether these benefits of globalisation are effectively accessible to all. Dynamic economies necessarily create jobs and such dynamism creates enhanced opportunities for workers; however this requires adaptability of all actors, with appropriate policies helping them in 'anticipating, triggering and absorbing change'[120], thereby embracing globalisation from a pro-active perspective.

Growing inter-linkages and interdependence will characterise the global economy. Variables linking economies such as trade agreements, as well as exchange rate policies, have spillover effects and may feed into the labour markets through the export channel. 'Integration' of emerging countries into the world economy, 'the global game', their growth and catch-up is intrinsically linked to opening up.

While in analytical terms, one discusses how to 'compensate' losers, in policy terms, one generally thinks about this issue as 'finding ways of helping those negatively affected' by structural change. The EU has built-in mechanisms that could help mitigate the negative effects of change; these are generalised access to education and training, social protection, social dialogue and activation through appropriate labour market policies, within a broader solidarity and cohesion perspective. This framework could well serve as a solid basis to help both workers and enterprises increase their adaptability, in the context of accelerated change. Early-warning and prevention mechanisms for workers, as well as policies that mitigate the costs for displaced workers in the short- and long-term, and strong and continuous investment in human capital, and efficient skill-matching mechanisms should be enhanced to convert the overall feeling of insecurity into opportunities for the development of more diverse career paths at the individual level. Social protection systems also need to be reinforced to cope with such 'mobility-friendly' economic environments.

The question of how to compensate the losers facing negative consequences of global trends and structural change (in a broader perspective) deserves to be tackled at European level, all the more as the EU is a global player and probably one of the best placed to reap the benefits from globalisation. For this reason it should give timely and appropriate responses to those who need to rely on compensation mechanisms. As a result, the gap between perceptions of what globalisation may be and reality would tend to close up, making the difference between expectations that emerged from globalisation and reality smaller.

120 *Report of the Employment Taskforce chaired by Wim Kok:* Jobs, Jobs, Jobs*,* Creating more employment in Europe*, November 2003.*

Macroeconomic indicators, annual percentage growth

European Union 25	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	:	:	:	:	1.7	2.6	2.9	2.9	3.6	1.7	1.1	0.8	2.0	2.4
Occupied population	:	:	:	:	0.6	1.0	1.7	1.2	1.5	1.0	0.3	0.2	0.4	0.8
Labour productivity	:	:	:	:	1.2	1.6	1.3	1.8	2.1	0.8	0.9	0.9	1.7	1.7
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Harmonised CPI	4.0	3.4	2.8	3.0	3.1	2.6	2.1	1.6	2.4	2.5	2.1	2.0	1.9	1.8
Price deflator GDP	:	:	:	:	2.7	2.2	2.2	1.5	1.6	2.5	2.6	2.2	2.1	1.9
Nominal compensation per employee	:	:	:	:	3.4	3.1	2.6	3.1	3.4	4.0	3.2	3.1	3.0	3.0
Real compensation per employee (GDP deflator)	:	:	:	:	0.7	0.9	0.4	1.6	1.8	1.5	0.5	0.9	0.9	1.1
Real compensation per employee (private consumption deflator)	:	:	:	:	0.3	0.6	0.6	1.6	1.2	1.5	1.1	1.2	1.1	1.2
NULC	:	:	:	:	2.3	1.5	1.3	1.3	1.3	3.2	2.3	2.2	1.3	1.3
RULC	:	:	:	:	-0.4	-0.7	-0.8	-0.2	-0.3	0.7	-0.3	0.0	-0.8	-0.5

European Union 15	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	1.2	-0.5	2.7	2.4	1.6	2.5	2.9	2.9	3.5	1.6	1.0	0.7	1.9	2.3
Occupied population	-1.3	-1.6	-0.1	0.8	0.6	0.9	1.8	1.7	2.0	1.2	0.5	0.3	0.3	0.8
Labour productivity	2.6	1.3	2.8	1.6	1.1	1.6	1.1	1.2	1.6	0.5	0.6	0.7	1.6	1.6
Annual average hours worked	-0.5	-0.6	0.3	-0.4	-0.3	-0.1	-0.4	-0.5	-1.0	-0.6	-0.1	-0.3	:	:
Productivity per hour worked	3.1	1.7	2.5	2.0	1.2	1.7	1.5	1.6	2.5	1.0	0.6	0.8	:	:
Harmonised CPI	4.0	3.4	2.8	2.8	2.4	1.7	1.3	1.2	1.9	2.2	2.1	2.0	1.8	1.7
Price deflator GDP	4.2	3.4	2.6	2.8	2.3	1.8	1.9	1.3	1.4	2.4	2.6	2.2	2.0	1.8
Nominal compensation per employee	7.1	4.1	3.0	3.5	2.8	2.5	2.1	2.6	3.5	3.4	2.9	3.0	2.9	2.9
Real compensation per employee (GDP deflator)	2.9	0.6	0.4	0.6	0.5	0.7	0.2	1.2	2.0	1.0	0.2	0.7	0.9	1.1
Real compensation per employee (private consumption deflator)	2.5	0.0	-0.1	0.4	0.2	0.4	0.4	1.3	1.5	1.1	0.8	1.1	1.2	1.2
NULC	4.4	2.7	0.2	1.8	1.7	0.9	0.9	1.3	1.9	2.9	2.2	2.2	1.3	1.3
RULC	0.2	-0.7	-2.4	-1.0	-0.6	-0.9	-0.9	0.0	0.4	0.5	-0.4	0.0	-0.7	-0.5

United States	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	3.3	2.7	4.1	2.5	3.7	4.5	4.2	4.5	3.7	0.5	2.2	3.1	4.2	3.2
Occupied population	0.1	1.9	2.2	2.1	1.7	2.1	2.2	2.0	2.0	-0.2	-0.9	0.9	0.9	0.6
Labour productivity	3.6	0.7	1.5	0.0	1.9	2.2	1.9	2.4	1.6	0.3	3.3	2.2	3.3	2.5
Annual average hours worked	0.2	0.5	0.8	0.2	-0.3	0.8	0.1	0.0	-0.7	-0.9	-0.5	-1.4	:	:
Productivity per hour worked	3.1	0.3	1.0	0.2	2.3	1.6	1.9	2.4	2.4	1.6	3.6	3.7	:	:
National CPI	3.0	3.0	2.6	2.8	2.9	2.3	1.6	2.2	3.4	2.8	1.6	2.3	1.4	1.2
Price deflator GDP	2.3	2.3	2.1	2.0	1.9	1.7	1.1	1.4	2.2	2.4	1.5	1.7	1.1	0.9
Nominal compensation per employee	5.4	2.8	2.4	2.1	2.7	3.6	4.9	4.2	5.7	2.4	2.3	2.3	3.3	4.2
Real compensation per employee (GDP deflator)	3.1	0.5	0.3	0.0	0.8	1.9	3.7	2.7	3.4	0.1	0.8	0.6	2.2	3.2
Real compensation per employee (private consumption deflator)	2.5	0.4	0.3	-0.1	0.5	1.9	3.9	2.5	3.1	0.4	1.0	0.4	2.1	3.2
NULC	1.8	2.1	0.9	2.0	0.8	1.4	2.9	1.8	4.0	2.1	-0.9	0.1	0.0	1.6
RULC	-0.5	-0.2	-1.2	0.0	-1.1	-0.3	1.8	0.3	1.8	-0.3	-2.4	-1.6	-1.0	0.7

Japan	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	1.0	0.2	1.1	1.9	3.4	1.9	-1.1	0.1	2.8	0.4	-0.3	2.5	3.4	2.3
Occupied population	1.1	0.4	0.1	0.1	0.4	1.0	-0.7	-0.8	-0.1	-0.6	-1.4	-0.2	0.4	0.3
Labour productivity	-0.2	-0.1	1.0	1.8	3.0	0.8	-0.5	0.9	3.0	1.0	1.1	2.7	3.0	2.0
Annual average hours worked	-1.7	-3.1	-0.4	-0.7	0.4	-1.5	-1.2	-1.7	0.6	-0.7	:	:	:	:
Productivity per hour worked	1.5	3.0	1.4	2.6	2.6	2.3	0.7	2.6	2.4	1.7	:	:	:	:
National CPI	1.7	1.3	0.7	-0.1	0.2	1.7	0.6	-0.3	-0.7	-0.6	-0.9	-0.3	0.0	0.2
Price deflator GDP	1.6	0.5	0.1	-0.5	-0.8	0.3	-0.1	-1.5	-2.0	-1.5	-1.2	-2.5	-1.0	-0.4
Nominal compensation per employee	1.3	0.8	1.5	1.6	0.7	1.5	-0.2	-1.1	0.2	-0.5	-2.1	-0.7	1.1	0.8
Real compensation per employee (GDP deflator)	-0.3	0.2	1.4	2.1	1.4	1.2	-0.1	0.4	2.2	1.1	-1.0	1.9	2.1	1.2
Real compensation per employee (private consumption deflator)	-0.2	-0.2	0.9	1.9	0.7	0.5	-0.1	-0.4	1.5	1.1	-0.8	0.7	1.5	1.0
NULC	1.5	0.9	0.5	-0.2	-2.3	0.6	0.3	-2.0	-2.7	-1.5	-3.1	-3.3	-1.8	-1.1
RULC	-0.1	0.4	0.4	0.3	-1.5	0.4	0.4	-0.6	-0.7	0.0	-2.0	-0.8	-0.8	-0.7

Belgium	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	1.5	-1.0	3.2	2.4	1.2	3.5	2.0	3.2	3.8	0.6	0.7	1.1	2.0	2.5
Occupied population	-0.5	-0.8	-0.4	4.1	0.3	0.9	1.8	1.4	1.9	1.5	-0.3	-0.5	0.3	1.0
Labour productivity	2.0	-0.2	3.6	-1.6	0.8	2.5	0.2	1.8	1.9	-0.8	1.0	1.6	1.6	1.5
Annual average hours worked	-1.0	-2.3	0.1	1.8	-1.7	0.8	0.3	-3.5	-1.5	1.1	0.8	:	:	:
Productivity per hour worked	3.1	2.2	3.5	-3.3	2.6	1.7	-0.1	5.5	3.4	-1.9	0.2	:	:	:
Harmonised CPI	2.3	2.5	2.4	1.3	1.8	1.5	0.9	1.1	2.7	2.4	1.6	1.5	1.5	1.6
Price deflator GDP	3.4	4.0	2.1	1.3	1.2	1.4	1.7	1.4	1.2	1.8	1.7	1.7	1.7	1.6
Nominal compensation per employee	5.7	4.7	4.4	-1.9	1.5	2.9	1.0	3.4	2.1	3.6	4.3	2.3	2.8	3.0
Real compensation per employee (GDP deflator)	2.2	0.7	2.3	-3.1	0.3	1.5	-0.6	2.0	0.9	1.8	2.5	0.5	1.1	1.4
Real compensation per employee (private consumption deflator)	3.8	2.1	2.1	-3.4	-0.6	1.1	0.1	2.1	-0.2	1.1	2.5	0.4	1.3	1.3
NULC	3.6	4.9	0.8	-0.3	0.6	0.4	0.8	1.6	0.2	4.5	3.2	0.7	1.1	1.5
RULC	0.2	0.9	-1.3	-1.5	-0.5	-1.0	-0.9	0.2	-1.0	2.6	1.5	-1.1	-0.5	-0.1

Macroeconomic indicators, annual percentage growth

Czech Republic	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	-0.5	0.1	2.2	5.9	4.3	-0.8	-1.0	0.5	3.3	3.1	2.0	2.9	2.9	3.4
Occupied population	:	:	:	:	0.2	-0.7	-1.4	-2.1	-0.7	0.4	0.3	-0.7	-0.4	-0.2
Labour productivity	:	:	:	:	4.1	-0.1	0.4	2.6	4.0	2.7	1.6	3.6	3.3	3.6
Annual average hours worked	:	:	:	:	0.1	0.0	0.4	0.6	0.2	-4.4	-1.0	:	:	:
Productivity per hour worked	:	:	:	:	4.0	-0.1	0.0	2.0	3.8	7.4	2.7	:	:	:
Harmonised CPI	:	:	:	:	9.1	8.0	9.7	1.8	3.9	4.5	1.4	-0.1	2.8	2.8
Price deflator GDP	12.4	21.0	13.4	10.2	8.6	8.3	11.1	3.5	2.0	4.5	1.7	-2.4	3.1	3.0
Nominal compensation per employee	:	:	:	:	16.9	11.0	8.4	6.6	2.1	8.7	10.0	6.4	4.0	4.0
Real compensation per employee (GDP deflator)	:	:	:	:	7.7	2.5	-2.4	2.9	0.1	4.1	8.2	9.0	0.9	0.9
Real compensation per employee (private consumption deflator)	:	:	:	:	7.9	3.3	-0.3	3.5	-1.3	6.1	11.8	7.9	1.4	1.8
NULC				12.3	11.1	8.0	3.9	-1.8	5.9	8.2	2.7	0.6	0.4	
RULC	:	:	:	:	3.5	2.6	-2.7	0.3	-3.7	1.4	6.4	5.2	-2.4	-2.5

Denmark	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	0.6	0.0	5.5	2.8	2.5	3.0	2.5	2.6	2.8	1.6	1.0	0.4	2.1	2.2
Occupied population	-0.8	-1.7	2.0	0.9	0.4	0.8	1.6	2.1	0.3	0.3	-0.4	-1.0	0.1	0.6
Labour productivity	1.5	1.7	3.4	1.9	2.1	2.1	0.8	0.5	2.5	1.3	1.4	1.4	2.0	1.6
Annual average hours worked	1.5	-2.2	4.5	-2.4	0.3	0.8	-0.2	1.9	-2.3	0.8	-1.1	:	:	:
Productivity per hour worked	0.0	4.0	-1.0	4.4	1.9	1.3	1.0	-1.3	4.9	0.5	2.5	:	:	:
Harmonised CPI	1.9	0.9	1.8	2.0	2.1	1.9	1.3	2.1	2.7	2.3	2.4	2.0	1.5	1.8
Price deflator GDP	2.9	1.4	1.7	1.8	2.5	2.2	1.0	1.8	3.0	2.1	1.6	2.1	2.1	2.0
Nominal compensation per employee	4.1	2.3	0.8	3.7	4.6	3.8	3.6	2.2	4.2	4.6	3.2	3.4	3.5	3.5
Real compensation per employee (GDP deflator)	1.1	0.9	-0.9	1.9	2.1	1.5	2.6	0.4	1.2	2.5	1.5	1.2	1.4	1.5
Real compensation per employee (private consumption deflator)	2.1	0.3	-2.2	1.7	2.5	1.5	2.2	-0.2	1.6	2.1	1.0	1.5	1.7	1.7
NULC	2.6	0.6	-2.6	1.8	2.5	1.6	2.8	1.8	1.6	3.3	1.8	1.9	1.5	1.9
RULC	-0.3	-0.8	-4.2	0.0	0.0	-0.6	1.8	-0.1	-1.3	1.2	0.2	-0.2	-0.6	-0.1

Germany	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	2.2	-1.1	2.3	1.7	0.8	1.4	2.0	2.0	2.9	0.8	0.2	-0.1	1.5	1.8
Occupied population	-1.5	-1.4	-0.2	0.2	-0.3	-0.2	1.1	1.2	1.8	0.4	-0.6	-1.1	-0.1	0.7
Labour productivity	3.8	0.3	2.5	1.5	1.1	1.6	0.9	0.8	1.1	0.4	0.8	1.0	1.6	1.1
Annual average hours worked	1.0	-1.3	-0.1	-1.0	-1.2	-0.4	-0.5	-0.7	-1.1	-0.9	-0.5	0.2	:	:
Productivity per hour worked	2.7	1.6	2.6	2.5	2.3	2.0	1.3	1.5	2.2	1.4	1.3	0.8	:	:
Harmonised CPI	:	:	:	:	1.2	1.5	0.6	0.6	1.4	1.9	1.3	1.0	1.3	1.1
Price deflator GDP	5.0	3.7	2.5	2.0	1.0	0.7	1.1	0.5	-0.3	1.3	1.6	1.0	1.1	0.9
Nominal compensation per employee	10.5	4.1	3.0	3.6	1.3	0.8	1.0	1.2	2.1	1.7	1.5	1.6	1.6	1.9
Real compensation per employee (GDP deflator)	5.2	0.4	0.5	1.6	0.3	0.2	-0.1	0.7	2.3	0.4	0.0	0.6	0.5	1.0
Real compensation per employee (private consumption deflator)	5.8	0.2	0.4	1.7	-0.4	-1.2	-0.1	0.9	0.6	0.2	0.2	0.6	0.3	0.8
NULC	6.4	3.8	0.5	2.1	0.2	-0.7	0.2	0.3	1.0	1.3	0.7	0.6	0.0	0.8
RULC	1.3	0.2	-2.0	0.1	-0.8	-1.4	-0.9	-0.2	1.2	0.0	-0.8	-0.4	-1.1	-0.1

Estonia	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	:	:	-1.6	4.5	4.5	10.5	5.2	-0.1	7.8	6.4	7.2	5.1	5.4	5.9
Occupied population	-6.0	-7.9	-3.3	-6.2	-2.3	0.0	-1.9	-4.4	-1.5	0.8	1.3	1.5	0.6	0.4
Labour productivity	:	:	1.8	11.4	7.0	10.5	7.6	4.9	11.0	5.6	5.6	4.3	5.0	5.5
Annual average hours worked	:	:	:	:	:	:	:	:	:	-0.4	0.2	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	6.0	5.6	:	:	:
Harmonised CPI	:	:	:	:	19.8	9.3	8.8	3.1	3.9	5.6	3.6	1.4	2.8	2.9
Price deflator GDP	:	:	38.9	31.3	24.3	10.5	9.0	4.3	5.3	5.8	4.4	2.4	3.7	3.7
Nominal compensation per employee	:	:	56.6	42.6	24.0	20.1	15.7	14.4	10.0	7.7	10.2	8.9	9.4	7.6
Real compensation per employee (GDP deflator)	:	:	12.7	8.6	-0.2	8.7	6.2	9.7	4.4	1.8	5.5	6.4	5.5	3.8
Real compensation per employee (private consumption deflator)	:	:	9.3	14.0	-1.1	10.4	6.7	7.8	7.2	1.5	6.6	8.1	6.4	4.5
NULC	:	:	53.8	28.0	15.9	8.7	7.6	9.1	-0.9	2.0	4.3	4.4	4.1	1.9
RULC	:	:	10.7	-2.5	-6.8	-1.6	-1.3	4.7	-5.9	-3.5	-0.1	2.0	0.5	-1.7

Greece	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	0.7	-1.6	2.0	2.1	2.4	3.6	3.4	3.4	4.4	4.0	3.9	4.3	4.0	3.3
Occupied population	1.4	1.0	1.9	0.9	-0.5	-2.2	7.5	0.1	0.3	-0.3	0.1	2.2	1.7	1.0
Labour productivity	-0.7	-2.5	0.1	1.2	2.8	6.0	-3.8	3.3	4.2	4.4	3.8	2.0	2.3	2.2
Annual average hours worked	1.4	0.9	-1.5	-0.5	0.9	-0.8	-0.2	0.9	-1.0	0.5	0.1	:	:	:
Productivity per hour worked	-2.1	-3.4	1.7	1.7	1.9	6.9	-3.7	2.4	5.2	3.9	3.7	:	:	:
Harmonised CPI	:	:	:	8.9	7.9	5.4	4.5	2.1	2.9	3.7	3.9	3.4	3.4	3.5
Price deflator GDP	14.8	14.4	11.2	9.8	7.4	6.8	5.2	3.0	3.4	3.5	3.9	3.5	3.9	3.1
Nominal compensation per employee	11.5	9.8	10.9	13.0	8.6	16.4	1.8	6.5	5.8	5.3	8.7	5.5	7.0	6.2
Real compensation per employee (GDP deflator)	-2.9	-4.0	-0.2	2.9	1.1	9.0	-3.3	3.4	2.4	1.8	4.6	1.9	3.0	3.0
Real compensation per employee (private consumption deflator)	-3.6	-3.8	0.0	3.7	0.3	10.3	-2.6	4.1	2.4	1.9	5.0	1.9	3.5	2.8
NULC	12.3	12.7	10.8	11.7	5.6	9.8	5.8	3.1	1.6	0.9	4.7	3.4	4.6	3.9
RULC	-2.1	-1.5	-0.4	1.7	-1.7	2.9	0.5	0.1	-1.7	-2.5	0.8	-0.1	0.7	0.7

Macroeconomic indicators, annual percentage growth

Spain	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	0.9	-1.0	2.4	2.8	2.4	4.0	4.3	4.2	4.2	2.8	2.0	2.4	2.8	3.3
Occupied population	-1.4	-2.8	-0.5	1.9	1.3	2.9	3.9	3.5	3.5	2.3	1.5	1.9	2.1	2.3
Labour productivity	2.4	1.9	2.9	0.9	1.2	0.9	0.2	0.5	0.6	0.4	0.5	0.6	0.6	0.9
Annual average hours worked	-0.4	-0.5	0.0	-0.1	-0.3	0.2	1.2	-1.0	-0.1	0.1	-0.5	:	:	:
Productivity per hour worked	2.8	2.4	2.9	0.9	1.4	0.9	-0.7	1.7	0.8	0.4	1.1	:	:	:
Harmonised CPI	:	4.9	4.6	4.6	3.6	1.9	1.8	2.2	3.5	2.8	3.6	3.1	2.4	2.3
Price deflator GDP	6.7	4.5	3.9	4.9	3.5	2.3	2.4	2.8	3.5	4.2	4.4	4.2	3.7	3.2
Nominal compensation per employee	11.3	7.4	3.7	3.7	4.5	2.3	2.7	2.7	3.7	3.8	3.9	4.2	3.5	3.2
Real compensation per employee (GDP deflator)	4.3	2.8	-0.2	-1.2	1.0	0.0	0.3	-0.1	0.2	-0.3	-0.6	0.0	-0.1	-0.1
Real compensation per employee (private consumption deflator)	4.5	2.0	-1.1	-1.1	1.0	-0.3	0.5	0.3	0.5	0.5	0.4	1.1	1.0	0.7
NULC	8.7	5.4	0.8	2.8	3.3	1.4	2.5	2.1	3.1	3.4	3.3	3.6	2.9	2.2
RULC	1.8	0.8	-3.0	-2.0	-0.2	-0.9	0.1	-0.6	-0.4	-0.7	-1.0	-0.5	-0.8	-1.0

France	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	1.5	-0.9	2.1	1.7	1.1	1.9	3.4	3.2	3.8	2.1	1.2	0.5	1.7	2.4
Occupied population	-0.6	-1.3	0.1	0.9	0.4	0.4	1.5	2.0	2.7	1.7	0.7	0.2	0.1	0.7
Labour productivity	2.3	0.9	2.2	1.2	1.2	1.7	2.1	1.3	1.1	0.3	0.5	0.4	1.7	1.8
Annual average hours worked	0.0	-0.7	-0.3	-1.5	0.3	-0.4	-0.7	-0.4	-3.2	-1.4	0.2	-2.4	:	:
Productivity per hour worked	2.1	1.1	2.3	2.3	0.4	1.9	2.6	1.6	4.4	1.8	0.3	2.8	:	:
Harmonised CPI	2.4	2.2	1.7	1.8	2.1	1.3	0.7	0.6	1.8	1.8	1.9	2.2	1.9	1.5
Price deflator GDP	2.0	2.3	1.7	1.7	1.4	1.3	0.9	0.5	1.0	1.8	2.3	1.5	1.7	1.6
Nominal compensation per employee	4.1	2.9	1.7	2.8	2.5	2.2	1.9	2.5	2.3	2.6	2.8	2.2	2.3	2.4
Real compensation per employee (GDP deflator)	2.1	0.5	0.1	1.1	1.0	0.9	1.0	1.9	1.3	0.8	0.6	0.7	0.6	0.8
Real compensation per employee (private consumption deflator)	1.5	0.4	-0.4	0.8	0.6	0.8	1.2	2.0	0.8	1.0	0.9	0.2	0.5	0.8
NULC	1.7	2.0	-0.4	1.6	1.2	0.5	-0.2	1.1	1.2	2.3	2.4	1.8	0.6	0.6
RULC	-0.2	-0.3	-2.1	-0.1	-0.2	-0.8	-1.1	0.6	0.2	0.6	0.1	0.2	-1.0	-1.0

Ireland	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	3.3	2.7	5.8	9.9	8.1	11.1	8.6	11.3	10.1	6.2	6.9	1.4	3.7	4.6
Occupied population	0.3	1.5	3.1	4.1	3.6	5.6	8.6	6.0	4.7	3.0	1.3	1.8	0.8	1.3
Labour productivity	3.0	1.2	2.6	5.6	4.3	5.2	0.0	5.0	5.2	3.1	5.5	-0.4	2.9	3.2
Annual average hours worked	-2.4	-0.8	0.1	-0.1	0.2	-2.3	-4.0	-1.7	-0.1	-0.8	-0.5	:	:	:
Productivity per hour worked	5.5	2.0	2.5	5.7	4.2	7.7	4.2	6.8	5.3	3.9	6.1	:	:	:
Harmonised CPI	:	:	:	2.8	2.2	1.2	2.1	2.5	5.3	4.0	4.7	4.0	2.1	2.3
Price deflator GDP	2.8	5.2	1.7	3.0	2.1	4.0	6.3	3.9	4.3	5.1	5.4	0.6	1.9	2.5
Nominal compensation per employee	7.8	5.5	2.2	2.7	3.5	4.2	5.2	5.2	8.1	9.0	5.2	5.1	5.0	4.2
Real compensation per employee (GDP deflator)	4.8	0.3	0.5	-0.3	1.4	0.2	-1.1	1.3	3.7	3.8	-0.2	4.5	3.0	1.7
Real compensation per employee (private consumption deflator)	4.7	3.2	-0.5	-0.1	0.9	1.5	1.3	2.0	3.9	4.5	-0.8	1.6	3.1	1.9
NULC	4.7	4.3	-0.4	-2.7	-0.8	-0.9	5.1	0.2	2.8	5.7	-0.3	5.5	2.1	0.9
RULC	1.8	-0.9	-2.0	-5.6	-2.8	-4.8	-1.1	-3.5	-1.4	0.6	-5.5	4.9	0.1	-1.5

Italy	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	0.8	-0.9	2.2	2.9	1.1	2.0	1.8	1.7	3.0	1.8	0.4	0.3	1.2	2.1
Occupied population	-0.5	-2.5	-1.5	-0.1	0.6	0.4	1.0	1.1	1.9	2.0	1.8	1.2	0.4	0.8
Labour productivity	1.4	2.2	3.2	2.9	0.8	1.6	0.8	1.1	1.3	0.1	-0.9	-0.2	0.9	1.4
Annual average hours worked	-1.9	0.1	-0.1	0.0	0.2	0.1	-0.1	-0.3	-0.2	-0.7	-0.1	:	:	:
Productivity per hour worked	3.2	1.6	3.9	3.0	0.3	1.5	0.9	0.9	1.3	0.5	-1.4	:	:	:
Harmonised CPI	5.0	4.5	4.2	5.4	4.0	1.9	2.0	1.7	2.6	2.3	2.6	2.8	2.2	1.9
Price deflator GDP	4.5	3.9	3.5	5.0	5.3	2.4	2.7	1.6	2.2	2.6	3.1	2.9	2.4	2.0
Nominal compensation per employee	5.8	4.6	3.0	4.2	6.1	4.0	-1.5	2.6	3.1	3.2	2.5	3.8	3.2	2.9
Real compensation per employee (GDP deflator)	1.2	0.6	-0.4	-0.8	0.8	1.6	-4.1	1.0	0.9	0.5	-0.5	0.8	0.8	0.9
Real compensation per employee (private consumption deflator)	0.3	-0.9	-1.8	-1.7	1.7	1.7	-3.6	0.4	0.2	0.4	-0.5	1.3	0.9	0.8
NULC	4.3	2.3	-0.2	1.2	5.3	2.3	-2.3	1.5	1.8	3.1	3.5	4.0	2.3	1.5
RULC	-0.2	-1.6	-3.5	-3.6	0.0	0.0	-4.9	-0.1	-0.4	0.4	0.4	1.0	-0.1	-0.5

Cyprus	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	9.7	0.7	5.9	6.5	1.9	2.3	4.8	4.7	5.0	4.0	2.0	2.0	3.4	4.1
Occupied population	:	:	:	:	:	-0.3	1.0	1.3	2.8	1.9	1.4	0.5	0.7	0.9
Labour productivity	:	:	:	:	:	2.6	3.7	3.4	2.1	2.1	0.6	1.5	2.7	3.2
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Harmonised CPI	:	:	:	:	:	3.3	2.3	1.1	4.9	2.0	2.8	4.0	2.2	2.1
Price deflator GDP	5.8	5.1	5.3	3.0	1.8	2.7	2.5	2.2	4.5	2.3	2.8	5.3	2.5	2.3
Nominal compensation per employee	:	:	:	7.4	6.1	10.8	-0.7	5.8	7.2	4.7	5.3	4.9	4.3	4.2
Real compensation per employee (GDP deflator)	:	:	:	4.3	4.2	7.8	-3.1	3.4	2.6	2.3	2.5	-0.3	1.8	1.8
Real compensation per employee (private consumption deflator)	:	:	:	5.0	3.6	8.0	-1.8	3.6	2.1	2.8	2.9	1.1	2.1	2.1
NULC	:	:	:	:	:	8.0	-4.3	2.3	4.9	2.5	4.7	3.4	1.6	1.0
RULC	:	:	:	:	:	5.1	-6.6	0.1	0.4	0.3	1.9	-1.8	-0.9	-1.3

Macroeconomic indicators, annual percentage growth

Latvia	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	-34.9	-14.9	0.6	-1.6	3.7	8.4	4.8	2.8	6.8	7.9	6.1	7.4	6.2	6.2
Occupied population	-7.3	-6.9	-10.1	-10.4	-1.9	4.4	-0.3	-1.8	-2.9	2.2	1.6	0.7	0.5	0.5
Labour productivity	-29.7	-8.6	12.0	9.8	5.7	3.8	5.1	4.7	10.1	5.6	4.4	6.7	5.7	5.6
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Harmonised CPI	:	:	:	:	:	8.1	4.3	2.1	2.6	2.5	2.0	2.9	4.0	3.5
Price deflator GDP	975.9	71.5	38.3	28.4	15.0	6.9	4.6	5.2	3.8	2.2	3.8	3.4	2.0	1.8
Nominal compensation per employee	:	138.1	63.9	8.8	27.3	13.0	6.2	7.5	6.9	3.4	6.7	13.0	7.0	7.0
Real compensation per employee (GDP deflator)	:	38.8	18.5	-15.3	10.7	5.7	1.6	2.2	3.0	1.2	2.7	9.3	4.9	5.1
Real compensation per employee (private consumption deflator)	:	:	:	:	9.5	4.0	1.5	5.7	3.3	0.7	4.4	9.8	3.9	4.9
NULC	:	160.4	46.4	-0.9	20.5	8.8	1.1	2.7	-2.9	-2.1	2.2	5.9	1.2	1.3
RULC	:	51.8	5.8	-22.9	4.8	1.8	-3.3	-2.4	-6.5	-4.2	-1.6	2.5	-0.8	-0.5

Lithuania	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	-21.3	-16.2	-9.8	3.3	4.7	7.0	7.3	-1.7	3.9	6.4	6.8	9.0	6.9	6.6
Occupied population	-2.2	-4.2	-5.8	-1.9	0.9	0.6	-0.8	-0.5	-3.7	-4.0	-7.3	2.3	1.3	1.2
Labour productivity	-19.5	-12.6	-4.2	5.3	3.7	6.4	8.1	-1.2	7.9	10.9	15.1	6.5	5.5	5.3
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	-1.1	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	7.7	:	:
Harmonised CPI	:	:	:	:	24.7	8.8	5.0	0.7	0.9	1.3	0.4	-1.1	1.0	2.2
Price deflator GDP	943.0	306.2	61.6	46.4	20.6	14.0	5.0	-0.6	1.0	-0.1	0.0	-0.9	1.4	2.4
Nominal compensation per employee	:	:	67.7	67.5	32.7	23.3	18.5	5.2	0.0	3.4	0.7	6.7	5.8	6.0
Real compensation per employee (GDP deflator)	:	:	3.7	14.4	10.0	8.2	12.8	5.8	-1.0	3.5	0.7	7.7	4.4	3.5
Real compensation per employee (private consumption deflator)	:	:	:	:	12.3	12.6	12.4	5.6	1.6	1.0	1.0	9.3	4.8	3.7
NULC	:	:	75.1	59.1	28.0	15.9	9.6	6.4	-7.4	-6.7	-12.6	0.1	0.3	0.7
RULC	:	:	8.3	8.6	6.1	1.7	4.3	7.1	-8.3	-6.6	-12.5	1.1	-1.1	-1.7

Luxembourg	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	1.8	4.2	3.8	1.4	3.3	8.3	6.9	7.8	9.0	1.3	1.7	2.1	2.4	3.1
Occupied population	2.8	1.8	2.7	2.7	2.6	3.2	4.5	5.0	5.7	5.7	2.8	2.1	0.9	1.2
Labour productivity	-0.9	2.4	1.1	-1.2	0.7	5.0	2.3	2.7	3.2	-4.1	-1.0	0.1	1.4	2.0
Annual average hours worked	-1.1	-0.1	-1.2	0.9	-1.3	-0.1	-0.5	-0.2	:	:	:	:	:	:
Productivity per hour worked	0.2	2.4	2.3	-2.1	2.0	5.1	2.9	2.9	:	:	:	:	:	:
Harmonised CPI	:	:	:	:	1.2	1.4	1.0	1.0	3.8	2.4	2.1	2.5	2.0	1.7
Price deflator GDP	3.7	6.0	3.5	2.3	2.0	2.7	2.7	2.2	4.1	1.9	0.7	2.1	2.1	2.1
Nominal compensation per employee	6.5	5.7	3.9	1.3	1.9	2.5	1.6	3.6	4.7	3.6	3.6	2.6	2.0	2.8
Real compensation per employee (GDP deflator)	2.7	-0.2	0.4	-1.0	-0.1	-0.2	-1.0	1.4	0.6	1.7	2.9	0.5	-0.1	0.7
Real compensation per employee (private consumption deflator)	2.2	1.7	1.3	-0.7	0.5	1.1	0.6	2.1	2.1	0.4	1.4	0.6	0.3	1.1
NULC	7.5	3.3	2.8	2.5	1.3	-2.4	-0.7	0.9	1.5	8.0	4.7	2.5	0.6	0.8
RULC	3.6	-2.5	-0.7	0.2	-0.7	-4.9	-3.3	-1.2	-2.5	6.0	4.0	0.4	-1.5	-1.3

Hungary	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	-2.1	-0.6	2.9	1.5	1.3	4.6	4.9	4.2	5.2	3.8	3.5	2.9	3.2	3.4
Occupied population	:	-6.3	-2.0	-3.4	-0.5	0.1	1.8	3.2	1.0	0.4	0.7	2.5	0.6	0.7
Labour productivity	:	6.1	5.0	5.1	1.8	4.5	3.0	0.9	3.9	3.2	2.9	2.1	2.6	2.7
Annual average hours worked	:	:	:	:	-0.4	0.9	-0.3	0.8	-0.3	-2.2	0.4	:	:	:
Productivity per hour worked	:	:	:	:	2.3	3.4	3.3	0.2	4.4	5.7	2.3	:	:	:
Harmonised CPI	:	:	:	:	23.5	18.5	14.2	10.0	10.0	9.1	5.2	4.7	6.9	4.6
Price deflator GDP	20.3	21.3	19.5	26.7	21.2	18.5	12.6	8.4	9.9	8.6	8.9	7.8	6.4	5.3
Nominal compensation per employee	:	23.0	17.9	21.6	20.2	21.0	13.8	5.3	15.6	15.7	12.1	11.9	8.0	6.7
Real compensation per employee (GDP deflator)	:	1.4	-1.4	-4.1	-0.8	2.1	1.1	-2.9	5.2	6.6	2.9	3.9	1.5	1.3
Real compensation per employee (private consumption deflator)	:	1.9	-1.3	-4.8	-2.2	2.6	0.2	-4.4	5.9	6.9	8.2	7.0	1.1	1.9
NULC	:	15.9	12.3	15.7	18.0	15.9	10.5	4.4	11.2	12.1	8.9	9.7	5.3	3.8
RULC	:	-4.5	-6.1	-8.7	-2.6	-2.2	-1.9	-3.8	1.2	3.3	0.0	1.8	-1.1	-1.4

Malta	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	4.7	4.5	5.7	6.2	4.0	4.9	3.4	4.1	6.4	-1.2	1.7	0.4	1.4	2.0
Occupied population	1.3	0.9	0.5	3.2	1.5	-0.1	0.5	-0.4	2.3	1.8	-0.3	-1.4	-0.2	1.1
Labour productivity	3.4	3.6	5.2	3.0	2.5	5.0	2.9	4.5	4.0	-2.9	2.1	1.9	1.7	0.8
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Harmonised CPI	:	:	:	:	:	3.9	3.7	2.3	3.0	2.5	3.1	2.6	1.8	1.9
Price deflator GDP	3.6	2.8	3.5	4.8	0.8	2.3	2.3	2.7	0.9	5.8	1.1	4.6	1.1	1.5
Nominal compensation per employee	6.8	10.2	6.4	9.0	6.3	3.5	4.7	6.7	2.1	6.5	2.3	1.4	1.3	1.4
Real compensation per employee (GDP deflator)	3.1	7.2	2.8	4.0	5.4	1.2	2.4	3.9	1.2	0.6	1.2	-3.1	0.2	-0.1
Real compensation per employee (private consumption deflator)	:	:	:	:	4.3	0.1	1.9	4.7	0.6	3.3	1.3	0.1	-1.4	-0.7
NULC	3.3	6.4	1.1	5.9	3.7	-1.4	1.8	2.1	-1.8	9.6	0.2	-0.5	-0.4	0.6
RULC	-0.2	3.5	-2.3	1.0	2.9	-3.6	-0.5	-0.6	-2.7	3.6	-0.8	-4.8	-1.5	-0.9

Macroeconomic indicators, annual percentage growth

Netherlands	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	1.5	0.7	2.9	3.0	3.0	3.8	4.3	4.0	3.5	1.2	0.2	-0.7	1.0	1.6
Occupied population	1.3	0.3	0.6	2.3	2.3	3.2	2.6	2.6	2.2	1.8	0.9	-0.4	-0.8	0.6
Labour productivity	0.3	0.8	3.1	1.0	0.5	0.7	1.4	1.6	1.6	-0.1	0.0	0.3	2.3	1.1
Annual average hours worked	-1.0	-1.5	2.0	-1.5	0.6	-0.5	-1.2	-1.3	1.7	-3.2	1.0	:	:	:
Productivity per hour worked	1.1	1.9	0.2	2.3	0.1	1.1	2.9	2.7	-0.5	2.7	-1.6	:	:	:
Harmonised CPI	2.8	1.6	2.1	1.4	1.4	1.9	1.8	2.0	2.3	5.1	3.9	2.2	1.4	0.7
Price deflator GDP	2.3	1.9	2.3	2.0	1.2	2.0	1.7	1.6	3.9	5.4	3.4	2.8	1.2	0.3
Nominal compensation per employee	4.8	3.5	3.0	1.5	1.3	2.1	3.5	3.7	4.7	5.5	4.9	3.8	2.7	0.0
Real compensation per employee (GDP deflator)	2.4	1.6	0.7	-0.5	0.1	0.1	1.7	2.1	0.8	0.1	1.5	0.9	1.5	-0.3
Real compensation per employee (private consumption deflator)	1.6	1.4	0.1	0.1	-0.6	0.1	1.7	1.9	1.4	0.7	1.7	1.8	1.7	-0.9
NULC	4.5	2.7	-0.1	0.5	0.8	1.4	2.0	2.1	3.1	5.5	4.9	3.5	0.4	-1.1
RULC	2.1	0.8	-2.3	-1.5	-0.4	-0.6	0.3	0.5	-0.8	0.1	1.4	0.6	-0.8	-1.4

Austria	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	2.3	0.4	2.6	1.6	2.0	1.6	3.9	2.7	3.4	0.8	1.4	0.7	1.8	2.5
Occupied population	0.2	-0.6	-0.1	0.0	-0.6	0.5	1.0	1.4	0.8	0.6	-0.2	0.3	0.4	0.7
Labour productivity	2.2	1.3	2.8	2.0	2.2	1.1	2.4	1.5	2.4	0.1	1.4	0.5	1.4	1.8
Annual average hours worked	0.0	0.0	0.0	0.0	0.0	3.0	-5.7	0.7	:	:	:	:	:	:
Productivity per hour worked	2.1	1.1	2.7	1.6	2.6	-1.9	9.1	0.6	:	:	:	:	:	:
Harmonised CPI	3.5	3.2	2.7	1.6	1.8	1.2	0.8	0.5	2.0	2.3	1.7	1.3	1.4	1.3
Price deflator GDP	3.6	2.9	2.7	2.5	1.3	0.9	0.5	0.7	1.4	2.1	1.4	2.0	1.5	1.2
Nominal compensation per employee	5.9	4.8	4.0	4.5	1.2	1.5	2.5	2.1	2.2	1.4	2.2	2.7	2.6	2.7
Real compensation per employee (GDP deflator)	2.2	1.8	1.3	2.0	-0.1	0.6	2.0	1.4	0.8	-0.6	0.9	0.8	1.1	1.5
Real compensation per employee (private consumption deflator)	2.0	1.2	1.2	2.5	-0.7	0.0	2.0	1.3	0.8	-0.7	1.1	0.9	1.2	1.4
NULC	3.6	3.5	1.2	2.4	-1.0	0.4	0.1	0.6	-0.2	1.3	0.8	2.3	1.2	0.9
RULC	0.0	0.5	-1.5	-0.1	-2.3	-0.5	-0.4	-0.1	-1.6	-0.7	-0.5	0.3	-0.3	-0.3

Poland	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	2.5	3.7	5.3	7.0	6.0	6.8	4.8	4.1	4.0	1.0	1.4	3.7	4.6	4.8
Occupied population	:	-2.4	1.0	1.8	1.9	2.8	2.3	-2.7	-2.3	-0.6	-2.2	-1.1	0.4	1.1
Labour productivity	:	6.2	4.2	5.1	4.0	3.9	2.4	7.0	6.4	1.7	3.7	4.9	4.2	3.6
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Harmonised CPI	:	:	:	:	:	15.0	11.8	7.2	10.1	5.3	1.9	0.7	2.3	3.0
Price deflator GDP	38.6	30.6	37.2	28.0	18.6	13.9	11.6	6.4	6.7	4.0	1.3	0.5	2.1	2.6
Nominal compensation per employee	73.4	33.0	40.4	34.0	30.5	23.1	15.9	11.2	1.0	13.3	4.2	1.5	3.0	4.5
Real compensation per employee (GDP deflator)	25.1	1.8	2.3	4.7	10.0	8.0	3.9	4.6	-5.3	9.0	2.9	1.0	0.9	1.8
Real compensation per employee (private consumption deflator)	20.1	1.1	1.8	5.3	9.3	7.5	4.2	4.5	-7.3	6.4	2.6	0.9	0.4	1.2
NULC	:	25.1	34.7	27.5	25.5	18.4	13.2	3.9	-5.0	11.5	0.5	-3.2	-1.1	0.9
RULC	:	-4.2	-1.8	-0.4	5.8	4.0	1.5	-2.3	-11.0	7.2	-0.8	-3.8	-3.1	-1.7

Portugal	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	1.1	-2.0	1.0	4.3	3.5	4.0	4.6	3.8	3.4	1.7	0.4	-1.3	0.8	2.2
Occupied population	-1.6	-2.0	-1.0	-0.7	1.6	1.6	2.7	1.9	2.1	1.3	0.3	-0.8	0.2	0.7
Labour productivity	2.8	0.0	2.0	5.1	1.9	2.4	1.8	1.9	1.2	0.4	0.1	-0.5	0.6	1.4
Annual average hours worked	-0.6	-0.6	-0.2	2.0	-1.2	-2.1	-0.9	0.8	-2.4	:	:	:	:	:
Productivity per hour worked	3.4	0.6	2.2	3.0	3.1	4.6	2.8	1.1	3.7	:	:	:	:	:
Harmonised CPI	8.9	5.9	5.0	4.0	2.9	1.9	2.2	2.2	2.8	4.4	3.7	3.3	2.0	2.2
Price deflator GDP	11.4	7.4	7.3	3.4	3.0	3.8	3.8	3.1	3.5	4.5	5.1	2.3	2.4	2.1
Nominal compensation per employee	16.3	6.0	5.6	16.2	6.1	6.0	5.3	5.4	6.7	5.7	4.0	3.3	2.3	2.7
Real compensation per employee (GDP deflator)	4.4	-1.3	-1.6	12.4	3.0	2.2	1.4	2.2	3.2	1.2	-1.0	1.0	-0.1	0.5
Real compensation per employee (private consumption deflator)	6.5	-0.9	0.0	11.5	2.4	3.0	2.4	3.2	3.4	1.8	-0.2	-0.1	0.2	0.5
NULC	13.2	6.0	3.5	10.6	4.1	3.6	3.4	3.4	5.5	5.3	3.8	3.8	1.6	1.2
RULC	1.5	-1.3	-3.5	7.0	1.1	-0.2	-0.4	0.3	1.9	0.8	-1.2	1.4	-0.7	-0.9

Slovenia	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	-5.5	2.8	5.3	4.1	3.6	4.8	3.6	5.6	3.9	2.7	3.4	2.3	3.2	3.6
Occupied population	:	:	:	:	-1.5	-0.7	0.1	1.1	3.8	0.5	-0.5	-0.2	0.1	0.4
Labour productivity	:	:	:	:	5.2	5.5	3.5	4.5	0.1	2.2	4.0	2.5	3.1	3.1
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Harmonised CPI	:	:	:	:	9.9	8.3	7.9	6.1	8.9	8.6	7.5	5.7	3.6	3.2
Price deflator GDP	208.2	37.1	22.6	23.0	10.9	8.8	7.6	5.9	5.6	9.1	7.9	5.4	3.5	3.4
Nominal compensation per employee	:	:	:	:	12.9	10.6	9.0	7.5	11.0	11.6	10.7	7.5	6.5	6.3
Real compensation per employee (GDP deflator)	:	:	:	:	1.8	1.6	1.3	1.4	5.1	2.3	2.6	2.0	2.9	2.8
Real compensation per employee (private consumption deflator)	:	:	:	:	2.2	1.4	1.3	1.4	2.5	3.2	2.9	2.0	2.6	3.1
NULC	:	:	:	:	7.3	4.8	5.3	2.9	10.9	9.2	6.5	4.9	3.3	3.1
RULC	:	:	:	:	-3.3	-3.7	-2.1	-2.9	5.0	0.1	-1.3	-0.5	-0.2	-0.4

Macroeconomic indicators, annual percentage growth

Slovak Republic	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	:	7.2	6.2	5.8	6.1	4.6	4.2	1.5	2.0	3.8	4.4	4.2	4.0	4.1
Occupied population	:	:	:	0.2	2.3	-1.2	-0.4	-2.7	-1.8	0.6	-1.1	2.2	0.6	0.7
Labour productivity	:	:	:	5.6	3.7	5.9	4.7	4.3	3.9	3.2	5.5	1.9	3.4	3.3
Annual average hours worked	:	:	:	0.9	1.5	1.6	-1.0	-0.6	0.0	0.1	-2.3	:	:	:
Productivity per hour worked	:	:	:	4.7	2.2	4.3	5.7	4.9	3.9	3.0	8.0	:	:	:
Harmonised CPI	:	:	:	:	5.8	6.0	6.7	10.4	12.2	7.2	3.5	8.5	8.2	4.5
Price deflator GDP	:	15.5	13.4	9.9	4.3	6.7	5.2	6.5	8.5	4.2	4.2	4.4	5.5	2.5
Nominal compensation per employee	:	:	:	20.6	7.2	15.4	13.2	6.9	11.9	6.3	9.9	9.3	6.5	6.0
Real compensation per employee (GDP deflator)	:	:	:	9.7	2.7	8.2	7.6	0.4	3.2	2.0	5.4	4.6	1.0	3.4
Real compensation per employee (private consumption deflator)	:	:	:	10.4	2.1	8.9	7.0	-1.5	1.8	0.2	6.6	1.4	-0.7	2.1
NULC	:	:	:	14.1	3.3	9.0	8.2	2.5	7.7	3.0	4.1	7.2	3.0	2.6
RULC	:	:	:	3.9	-1.0	2.1	2.8	-3.7	-0.7	-1.1	-0.1	2.6	-2.3	0.1

Finland	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	-3.8	-1.2	3.9	3.4	3.9	6.3	5.0	3.4	5.1	1.1	2.3	1.9	2.6	2.7
Occupied population	-7.1	-6.0	-1.4	1.8	1.4	3.3	2.0	2.5	2.3	1.5	0.9	-0.4	0.1	0.5
Labour productivity	3.5	5.0	5.4	1.6	2.5	2.8	2.9	0.8	2.8	-0.4	1.3	2.3	2.5	2.3
Annual average hours worked	0.2	-0.2	1.1	0.1	0.4	-0.5	-0.2	0.1	-0.4	-0.8	-0.6	1.3	:	:
Productivity per hour worked	3.3	5.2	4.3	1.5	2.0	3.3	3.1	0.7	3.2	0.4	1.9	0.9	:	:
Harmonised CPI	3.3	3.3	1.6	0.4	1.1	1.2	1.4	1.3	3.0	2.7	2.0	1.3	0.4	1.5
Price deflator GDP	1.4	2.6	1.8	4.8	-0.3	2.1	3.5	-0.2	3.2	3.0	0.9	0.7	0.4	1.3
Nominal compensation per employee	2.0	0.5	3.4	4.0	2.6	1.5	4.4	2.2	3.7	4.7	1.9	3.4	3.3	3.4
Real compensation per employee (GDP deflator)	0.6	-2.0	1.6	-0.8	2.9	-0.6	0.9	2.4	0.5	1.6	1.0	2.7	2.9	2.1
Real compensation per employee (private consumption deflator)	-1.5	-3.9	2.4	3.2	0.9	-0.4	2.4	0.9	0.1	1.1	-1.2	1.7	2.7	1.7
NULC	-1.4	-4.3	-1.9	2.4	0.1	-1.3	1.5	1.3	0.9	5.1	0.6	1.1	0.8	1.1
RULC	-2.8	-6.7	-3.6	-2.3	0.5	-3.3	-2.0	1.5	-2.2	2.1	-0.3	0.4	0.4	-0.2

Sweden	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	-1.3	-2.0	4.2	4.1	1.3	2.4	3.6	4.6	4.3	0.9	2.1	1.6	2.3	2.6
Occupied population	-4.5	-5.2	-0.9	1.5	-0.8	-1.3	1.5	2.1	2.4	1.9	0.2	-0.2	-0.4	0.4
Labour productivity	3.3	3.4	5.1	2.5	2.2	3.8	2.1	2.4	1.9	-1.0	1.9	1.9	2.8	2.2
Annual average hours worked	1.1	1.1	2.4	0.3	0.5	0.3	-0.1	0.6	-1.4	-1.4	-1.4	-1.1	:	:
Productivity per hour worked	2.2	2.3	2.6	2.1	1.6	3.5	2.2	1.8	3.3	0.4	3.3	3.0	:	:
Harmonised CPI	1.3	4.8	2.9	2.7	0.8	1.8	1.0	0.6	1.3	2.7	2.0	2.3	1.2	1.6
Price deflator GDP	1.1	3.0	2.3	3.4	1.2	1.6	0.8	0.7	1.3	2.3	1.4	2.3	1.9	2.1
Nominal compensation per employee	3.9	4.4	5.9	2.8	7.3	4.8	2.6	1.3	7.5	4.5	2.7	2.4	3.4	3.5
Real compensation per employee (GDP deflator)	2.8	1.3	3.5	-0.6	6.0	3.2	1.8	0.6	6.1	2.2	1.2	0.1	1.5	1.4
Real compensation per employee (private consumption deflator)	1.8	-1.9	3.1	0.0	5.9	2.9	1.8	0.2	6.1	2.1	0.9	-0.1	2.3	1.9
NULC	0.6	0.9	0.7	0.3	5.0	1.0	0.5	-1.1	5.5	5.5	0.8	0.5	0.6	1.3
RULC	-0.5	-2.0	-1.6	-3.0	3.7	-0.5	-0.2	-1.7	4.1	3.2	-0.7	-1.8	-1.2	-0.8

United Kingdom	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	0.2	2.3	4.4	2.8	2.7	3.3	3.1	2.8	3.8	2.1	1.6	2.2	3.0	2.8
Occupied population	-2.9	-0.8	0.8	0.9	1.6	1.8	1.2	1.5	1.4	0.7	0.7	0.9	0.4	0.3
Labour productivity	3.1	3.2	3.5	1.9	1.1	1.5	1.9	1.3	2.4	1.4	0.9	1.3	2.6	2.4
Annual average hours worked	-2.2	-0.3	0.8	0.1	-0.1	-0.1	-0.3	-0.7	-0.6	0.2	-0.2	:	:	:
Productivity per hour worked	5.5	3.5	2.7	1.8	1.2	1.5	2.2	2.0	3.1	1.2	1.2	:	:	:
Harmonised CPI	4.2	2.5	2.0	2.7	2.5	1.8	1.6	1.3	0.8	1.2	1.3	1.4	1.6	1.9
Price deflator GDP	4.0	2.8	1.6	2.6	3.4	2.9	2.8	2.3	1.4	2.3	3.3	3.1	2.8	2.6
Nominal compensation per employee	5.9	3.7	2.8	3.7	3.1	4.5	5.6	4.4	5.6	5.1	3.5	4.3	5.0	5.0
Real compensation per employee (GDP deflator)	1.9	1.0	1.2	1.0	-0.2	1.6	2.8	2.0	4.1	2.7	0.2	1.2	2.1	2.3
Real compensation per employee (private consumption deflator)	1.0	0.3	0.8	0.3	-0.2	2.0	2.9	2.6	4.4	2.8	2.2	2.8	3.1	3.0
NULC	2.7	0.5	-0.7	1.7	2.0	3.0	3.7	3.1	3.2	3.6	2.6	3.0	2.3	2.5
RULC	-1.3	-2.2	-2.2	-0.9	-1.3	0.1	0.9	0.8	1.7	1.3	-0.7	-0.1	-0.5	-0.1

Bulgaria	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	-7.3	-1.5	1.8	2.9	-9.4	-5.4	3.9	2.3	5.4	4.1	4.9	4.3	5.0	5.5
Occupied population	-8.1	-1.6	0.6	1.3	0.1	-3.9	-0.2	-2.1	-3.5	-0.4	0.8	3.5	1.5	1.5
Labour productivity	1.0	0.1	1.2	1.6	-9.5	-1.5	4.1	4.5	9.2	4.5	4.1	0.8	3.4	3.9
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Harmonised CPI	:	:	:	:	:	:	18.7	2.6	10.3	7.4	5.8	2.3	6.0	4.5
Price deflator GDP	59.6	51.1	72.7	62.8	120.8	946.0	23.8	3.7	6.7	6.7	3.8	2.1	6.5	4.2
Nominal compensation per employee	:	:	:	:	72.7	848.0	52.5	6.0	10.2	12.3	7.1	2.9	8.4	8.0
Real compensation per employee (GDP deflator)	:	:	:	:	-21.8	-9.4	23.2	2.2	3.3	5.3	3.3	0.9	1.8	3.6
Real compensation per employee (private consumption deflator)	:	:	:	:	-21.3	-12.6	31.6	3.7	5.4	6.0	3.0	2.5	3.2	4.3
NULC	:	:	:	:	90.8	862.6	46.5	1.4	0.9	7.5	3.0	2.2	4.8	3.9
RULC	:	:	:	:	-13.6	-8.0	18.4	-2.2	-5.4	0.8	-0.8	0.1	-1.6	-0.3

Macroeconomic indicators, annual percentage growth

Romania	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	-8.7	1.5	3.9	7.1	3.9	-6.1	-4.8	-1.2	2.1	5.7	4.9	4.9	5.1	5.3
Occupied population	-3.0	-3.8	-0.5	-5.2	-1.2	-3.8	-2.3	-4.5	2.5	-0.8	-8.7	0.5	0.7	0.6
Labour productivity	-5.9	5.5	4.5	13.0	5.2	-2.3	-2.5	3.5	-0.3	6.6	14.8	4.3	4.4	4.7
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Harmonised CPI	:	:	:	:	38.8	154.9	59.1	45.8	45.7	34.5	22.5	15.3	12.0	8.5
Price deflator GDP	199.7	227.3	139.0	35.3	45.3	147.2	55.3	47.7	44.2	37.3	23.6	19.3	12.6	10.3
Nominal compensation per employee	187.8	207.6	132.6	54.3	53.5	103.1	128.1	41.2	74.9	-0.5	37.1	23.9	17.7	14.9
Real compensation per employee (GDP deflator)	-4.0	-6.0	-2.7	14.1	5.7	-17.8	46.9	-4.4	21.3	-27.6	11.0	3.9	4.5	4.1
Real compensation per employee (private consumption deflator)	-5.8	-8.0	-3.8	12.8	7.0	-20.9	52.7	-3.5	25.2	-26.6	12.9	5.3	4.8	4.9
NULC	205.8	191.6	122.7	36.5	45.9	108.0	134.0	36.5	75.5	-6.6	19.4	18.8	12.7	9.7
RULC	2.0	-10.9	-6.8	0.9	0.4	-15.9	50.7	-7.6	21.7	-32.0	-3.4	-0.5	0.0	-0.5

Turkey	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Real GDP	6.0	8.0	-5.5	7.2	7.0	7.5	3.1	-4.7	7.4	-7.5	7.8	5.8	4.6	5.0
Occupied population	0.5	-0.2	2.4	3.7	2.1	-2.5	2.8	2.1	-0.4	-1.0	-0.8	-0.3	1.4	2.0
Labour productivity	5.5	8.2	-7.7	3.4	4.8	10.3	0.3	-6.7	7.8	-6.5	8.6	6.1	3.2	3.0
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Harmonised CPI	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Price deflator GDP	63.7	67.8	106.5	87.2	77.8	81.5	75.7	55.6	49.9	54.8	44.3	22.5	13.4	12.4
Nominal compensation per employee	63.1	75.2	61.8	71.2	90.3	103.0	76.2	84.4	53.1	40.5	46.4	31.4	17.8	15.6
Real compensation per employee (GDP deflator)	-0.4	4.5	-21.6	-8.5	7.0	11.8	0.3	18.6	2.2	-9.3	1.4	7.2	3.9	2.9
Real compensation per employee (private consumption deflator)	0.3	6.7	-23.4	-12.5	4.8	15.8	0.2	22.8	-4.0	-8.2	7.4	5.3	3.7	3.5
NULC	54.6	61.9	75.3	65.6	81.5	84.2	75.7	97.6	42.1	50.3	34.8	23.9	14.2	12.3
RULC	-5.6	-3.5	-15.1	-11.5	2.0	1.4	0.0	27.0	-5.2	-2.9	-6.6	1.1	0.7	-0.1

Source: DG ECFIN's AMECO database. Latest updates to Commission's 2004 Spring Forecasts. Eurostat and OECD for average hours worked.

The figures in the following "key employment indicators" tables refer to data available up to mid-June 2004. For most Member States this means the most recent data available is that for 2003, but the following exceptions apply:

- LFS and much QLFD data for 2003 was not yet available for Luxembourg;
- QLFD data for 2003 was not yet available for Malta;
- QLFD data for 2003 for Austria are based on national estimates;
- LFS and QLFD data for France are provisional data for 2003.

Key employment indicators European Union

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	441728	442824	443878	445370	447237	449639	451337
2. Population aged 15-64	:	:	:	:	:	295693	296784	297700	298913	300230	301437	302532
3. Total employment (000)	:	:	:	:	:	:	192241	194293	197239	198974	199214	199636
4. Population in employment aged 15-64	:	:	:	:	:	179201	181596	184212	186593	188554	189335	190219
5. Employment rate (% population aged 15-64)	:	:	:	:	:	60.6	61.2	61.9	62.4	62.8	62.8	62.9
6. Employment rate (% population aged 15-24)	:	:	:	:	:	36.4	37.1	37.6	38.0	38.0	37.4	36.7
7. Employment rate (% population aged 25-54)	:	:	:	:	:	74.3	74.8	75.5	76.1	76.4	76.3	76.5
8. Employment rate (% population aged 55-64)	:	:	:	:	:	35.7	35.8	36.2	36.6	37.4	38.7	40.2
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	:	58.2	58.0
10. Self-employed (% total employment)	:	:	:	:	:	:	16.6	16.1	15.9	15.7	15.5	15.6
11. Part-time employment (% total employment)	:	:	:	:	:	:	15.7	16.1	16.3	16.4	16.7	17.1
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	12.0	12.3	12.6	12.8	12.7	12.9
13. Employment in Services (% total employment)	:	:	:	:	:	:	66.0	66.9	67.5	67.9	68.7	69.2
14. Employment in Industry (% total employment)	:	:	:	:	:	:	27.8	27.2	26.8	26.5	26.0	25.5
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	6.2	5.8	5.7	5.5	5.4	5.2
16. Activity rate (% population aged 15-64)	:	:	:	:	:	67.5	67.9	68.3	68.6	68.7	69.0	69.3
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	45.5	45.8	46.1	46.1	46.0	45.6	45.0
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	81.5	81.8	82.2	82.5	82.6	82.9	83.2
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	39.0	38.9	39.3	39.4	40.1	41.4	43.1
20. Total unemployment (000)	:	:	:	:	:	:	18936	18908	18209	17864	18600	19039
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	9.4	9.2	8.8	8.5	8.8	9.1
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	18.6	18.3	17.6	17.5	17.9	18.3
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	4.4	4.1	4.0	3.8	3.9	4.0
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	8.4	8.4	8.2	8.1	8.2	8.1

Male

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	214913	215572	216186	217041	218065	219414	220288
2. Population aged 15-64	:	:	:	:	:	147263	147942	148456	149150	149884	150612	151264
3. Total employment (000)	:	:	:	:	:	:	110828	111334	112610	113082	112739	112614
4. Population in employment aged 15-64	:	:	:	:	:	103368	104435	105311	106288	106917	106890	107029
5. Employment rate (% population aged 15-64)	:	:	:	:	:	70.2	70.6	70.9	71.3	71.3	71.0	70.8
6. Employment rate (% population aged 15-24)	:	:	:	:	:	40.3	40.8	41.1	41.4	41.4	40.5	39.5
7. Employment rate (% population aged 25-54)	:	:	:	:	:	85.0	85.4	85.7	86.0	85.9	85.4	85.1
8. Employment rate (% population aged 55-64)	:	:	:	:	:	46.6	46.6	46.7	46.9	47.7	48.8	50.3
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	:	69.7	69.1
10. Self-employed (% total employment)	:	:	:	:	:	:	19.3	18.9	18.7	18.5	18.5	18.6
11. Part-time employment (% total employment)	:	:	:	:	:	:	5.9	6.0	6.1	6.2	6.5	6.6
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	11.5	11.7	11.9	12.0	11.9	12.2
13. Employment in Services (% total employment)	:	:	:	:	:	:	57.5	57.4	57.3	57.7	58.3	58.4
14. Employment in Industry (% total employment)	:	:	:	:	:	:	36.7	36.5	36.2	36.1	35.6	35.5
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	5.9	6.1	6.4	6.2	6.1	6.1
16. Activity rate (% population aged 15-64)	:	:	:	:	:	77.2	77.3	77.4	77.4	77.3	77.3	77.4
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	49.5	49.7	49.8	49.7	49.7	49.2	48.5
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	92.1	92.1	92.1	92.0	91.8	91.8	91.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	50.8	50.7	50.7	50.5	51.1	52.2	53.8
20. Total unemployment (000)	:	:	:	:	:	:	9395	9376	8962	8933	9494	9766
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	8.2	8.1	7.7	7.6	8.1	8.3
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	17.4	17.2	16.6	16.7	17.6	18.1
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	3.7	3.5	3.4	3.3	3.4	3.6
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	8.5	8.5	8.3	8.3	8.6	8.6

Female

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	226812	227250	227691	228328	229172	230225	231050
2. Population aged 15-64	:	:	:	:	:	148433	148843	149243	149763	150346	150825	151268
3. Total employment (000)	:	:	:	:	:	:	81408	82959	84629	85892	86476	87024
4. Population in employment aged 15-64	:	:	:	:	:	75838	77165	78905	80306	81637	82446	83193
5. Employment rate (% population aged 15-64)	:	:	:	:	:	51.1	51.8	52.9	53.6	54.3	54.7	55.0
6. Employment rate (% population aged 15-24)	:	:	:	:	:	32.5	33.4	34.1	34.5	34.7	34.3	33.7
7. Employment rate (% population aged 25-54)	:	:	:	:	:	63.5	64.3	65.4	66.1	66.9	67.3	67.7
8. Employment rate (% population aged 55-64)	:	:	:	:	:	25.5	25.6	26.3	26.9	27.8	29.1	30.8
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	:	47.1	47.2
10. Self-employed (% total employment)	:	:	:	:	:	:	12.9	12.5	12.2	12.0	11.7	11.8
11. Part-time employment (% total employment)	:	:	:	:	:	:	29.1	29.6	29.8	29.8	30.1	30.5
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	12.6	13.0	13.4	13.7	13.7	13.7
13. Employment in Services (% total employment)	:	:	:	:	:	:	80.9	80.9	80.6	81.0	81.7	82.0
14. Employment in Industry (% total employment)	:	:	:	:	:	:	15.1	14.8	14.7	14.4	13.9	13.7
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	4.0	4.4	4.7	4.6	4.4	4.3
16. Activity rate (% population aged 15-64)	:	:	:	:	:	57.9	58.5	59.3	59.8	60.2	60.7	61.2
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	41.4	41.9	42.4	42.6	42.3	41.9	41.3
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	70.8	71.5	72.3	72.8	73.3	73.9	74.5
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	27.9	27.9	28.5	29.0	29.8	31.1	32.9
20. Total unemployment (000)	:	:	:	:	:	:	9541	9531	9248	8931	9106	9273
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	11.0	10.7	10.2	9.7	9.9	10.0
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	20.0	19.5	18.9	18.3	18.3	18.6
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	5.4	5.0	4.7	4.5	4.5	4.5
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	8.2	8.3	8.1	7.8	7.7	7.7

Source: Eurostat

Key employment indicators European Union of 15 Member States (EU15)

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	361457	363426	364799	365967	366986	367766	368948	370079	371655	373483	375611	377761
2. Population aged 15-64	242786	244013	244726	245315	246042	246535	247377	248050	248930	249884	250895	252082
3. Total employment (000)	157911	155448	155328	156405	157372	158902	161645	164443	167735	169810	170550	170962
4. Population in employment aged 15-64	148589	146560	146337	147357	148294	149620	151961	154926	157904	160074	161117	162036
5. Employment rate (% population aged 15-64)	61.2	60.1	59.8	60.1	60.3	60.7	61.4	62.5	63.4	64.1	64.2	64.3
6. Employment rate (% population aged 15-24)	42.5	39.4	38.0	37.5	36.9	37.2	38.2	39.4	40.4	40.8	40.5	39.7
7. Employment rate (% population aged 25-54)	73.9	73.0	72.9	73.3	73.5	73.9	74.5	75.6	76.5	77.0	77.1	77.2
8. Employment rate (% population aged 55-64)	36.3	35.8	35.7	36.0	36.3	36.4	36.6	37.1	37.8	38.8	40.1	41.7
9. FTE employment rate (% population aged 15-64)	:	:	:	55.5	55.4	55.6	56.2	57.2	58.1	58.7	58.9	58.6
10. Self-employed (% total employment)	16.1	16.1	16.1	16.0	15.9	15.7	15.5	15.1	14.8	14.7	14.6	14.8
11. Part-time employment (% total employment)	14.2	14.8	15.4	15.8	16.2	16.7	17.1	17.5	17.7	17.8	18.2	18.6
12. Fixed term contracts (% total employment)	11.1	11.0	11.5	12.0	12.3	12.7	13.1	13.4	13.6	13.3	13.0	12.8
13. Employment in Services (% total employment)	65.3	66.3	67.0	67.5	68.1	68.4	68.7	69.4	69.9	70.3	70.9	71.4
14. Employment in Industry (% total employment)	29.0	28.2	27.7	27.6	27.1	26.9	26.7	26.2	25.8	25.5	25.0	24.6
15. Employment in Agriculture (% total employment)	5.6	5.4	5.2	5.0	4.8	4.8	4.6	4.5	4.3	4.2	4.1	4.0
16. Activity rate (% population aged 15-64)	67.2	67.1	67.2	67.2	67.4	67.7	68.1	68.6	69.0	69.2	69.7	70.0
17. Activity rate (% of population aged 15-24)	51.3	49.6	48.5	47.4	46.8	46.7	47.2	47.7	47.8	47.7	47.6	47.2
18. Activity rate (% of population aged 25-54)	79.9	80.1	80.4	80.6	80.9	81.1	81.4	81.9	82.2	82.4	82.8	83.2
19. Activity rate (% of population aged 55-64)	38.7	38.7	38.9	39.1	39.7	40.0	40.0	40.3	40.6	41.5	42.8	44.6
20. Total unemployment (000)	14438	16709	17400	16862	17149	16934	16031	14953	13570	12904	13585	14207
21. Unemployment rate (% labour force 15+)	:	10.1	10.5	10.1	10.2	10.0	9.4	8.7	7.8	7.4	7.7	8.1
22. Youth unemployment rate (% labour force 15-24)	:	20.2	20.9	20.4	20.8	20.0	18.5	16.9	15.4	14.6	15.1	15.8
23. Long term unemployment rate (% labour force)	:	4.4	5.0	4.9	4.9	4.9	4.4	4.0	3.5	3.1	3.1	3.3
24. Youth unemployment ratio (% population aged 15-24)	8.8	9.9	10.0	9.5	9.6	9.3	8.7	8.1	7.4	7.0	7.2	7.3

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	175599	176768	177565	178233	178788	179230	179942	180605	181508	182542	183751	184898
2. Population aged 15-64	120750	121581	122027	122361	122753	123095	123640	124025	124527	125097	125725	126397
3. Total employment (000)	93651	91736	91434	91849	91992	92657	93963	95001	96492	97199	97125	97006
4. Population in employment aged 15-64	87908	86292	85895	86285	86427	86971	88090	89287	90626	91421	91532	91700
5. Employment rate (% population aged 15-64)	72.8	71.0	70.4	70.5	70.4	70.7	71.2	72.0	72.8	73.1	72.8	72.5
6. Employment rate (% population aged 15-24)	46.3	42.7	41.3	41.0	40.4	40.8	41.8	42.9	43.9	44.3	43.6	42.5
7. Employment rate (% population aged 25-54)	87.3	85.8	85.2	85.4	85.2	85.3	85.8	86.4	87.2	87.2	86.8	86.5
8. Employment rate (% population aged 55-64)	49.4	48.0	47.5	47.2	47.3	47.2	47.3	47.5	48.0	48.9	50.0	51.6
9. FTE employment rate (% population aged 15-64)	:	:	:	69.1	68.7	68.8	69.6	70.4	71.1	71.5	71.2	70.6
10. Self-employed (% total employment)	18.5	18.5	18.6	18.6	18.7	18.6	18.3	17.9	17.7	17.6	17.6	17.8
11. Part-time employment (% total employment)	4.2	4.5	4.9	5.2	5.4	5.7	5.9	6.1	6.1	6.2	6.5	6.7
12. Fixed term contracts (% total employment)	10.2	10.0	10.7	11.3	11.6	12.0	12.4	12.7	12.7	12.3	12.0	11.9
13. Employment in Services (% total employment)	55.6	56.5	57.3	57.6	58.1	58.3	58.6	59.1	59.6	60.0	60.5	60.5
14. Employment in Industry (% total employment)	38.1	37.4	36.9	36.8	36.4	36.2	36.1	35.7	35.3	35.1	34.7	34.7
15. Employment in Agriculture (% total employment)	6.3	6.1	5.9	5.6	5.5	5.5	5.4	5.2	5.0	4.9	4.8	4.8
16. Activity rate (% population aged 15-64)	79.0	78.5	78.1	77.8	77.8	77.8	78.0	78.1	78.2	78.3	78.4	78.5
17. Activity rate (% of population aged 15-24)	55.2	53.4	52.1	50.9	50.5	50.4	50.8	51.2	51.3	51.4	51.1	50.6
18. Activity rate (% of population aged 25-54)	93.3	93.0	92.9	92.7	92.6	92.5	92.4	92.5	92.5	92.4	92.4	92.4
19. Activity rate (% of population aged 55-64)	52.9	52.2	51.8	51.4	51.7	51.7	51.6	51.5	51.5	52.2	53.4	55.1
20. Total unemployment (000)	7380	8810	9113	8625	8825	8588	7986	7399	6643	6406	6893	7277
21. Unemployment rate (% labour force 15+)	:	9.1	9.4	9.0	9.1	8.9	8.2	7.5	6.7	6.5	6.9	7.4
22. Youth unemployment rate (% labour force 15-24)	:	19.8	20.3	19.1	19.6	18.6	17.2	15.8	14.2	13.8	14.8	15.7
23. Long term unemployment rate (% labour force)	:	3.7	4.3	4.2	4.2	4.2	3.7	3.3	2.9	2.7	2.7	2.9
24. Youth unemployment ratio (% population aged 15-24)	9.0	10.4	10.4	9.6	9.8	9.3	8.8	8.1	7.3	7.1	7.5	7.7

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	185852	186652	187228	187730	188194	188533	189004	189473	190147	190941	191859	192864
2. Population aged 15-64	122043	122437	122704	122958	123292	123442	123737	124025	124402	124787	125171	125685
3. Total employment (000)	64233	63685	63872	64537	65364	66235	67678	69442	71242	72611	73426	73957
4. Population in employment aged 15-64	60681	60269	60445	61073	61868	62651	63873	65640	67278	68653	69586	70339
5. Employment rate (% population aged 15-64)	49.7	49.2	49.3	49.7	50.2	50.8	51.6	52.9	54.1	55.0	55.6	56.0
6. Employment rate (% population aged 15-24)	38.6	36.1	34.8	34.0	33.3	33.6	34.6	35.9	36.8	37.3	37.3	36.7
7. Employment rate (% population aged 25-54)	60.4	60.2	60.4	61.1	61.8	62.4	63.2	64.6	65.8	66.8	67.4	67.8
8. Employment rate (% population aged 55-64)	24.0	24.2	24.7	25.3	25.8	26.1	26.3	27.1	28.0	29.1	30.6	32.2
9. FTE employment rate (% population aged 15-64)	:	:	:	42.3	42.5	42.7	43.2	44.3	45.4	46.2	46.8	46.9
10. Self-employed (% total employment)	12.7	12.6	12.5	12.2	12.0	11.8	11.7	11.2	11.0	10.9	10.7	10.9
11. Part-time employment (% total employment)	28.8	29.6	30.4	31.0	31.4	32.1	32.7	33.1	33.3	33.4	33.5	34.1
12. Fixed term contracts (% total employment)	12.5	12.2	12.6	13.0	13.1	13.6	14.0	14.4	14.6	14.5	14.2	13.9
13. Employment in Services (% total employment)	78.9	79.9	80.5	81.0	81.6	81.9	82.2	82.8	83.2	83.6	84.2	84.4
14. Employment in Industry (% total employment)	16.3	15.6	15.2	14.9	14.5	14.2	14.1	13.7	13.4	13.1	12.7	12.5
15. Employment in Agriculture (% total employment)	4.7	4.6	4.3	4.1	3.9	3.8	3.7	3.5	3.4	3.3	3.1	3.1
16. Activity rate (% population aged 15-64)	55.6	55.8	56.2	56.6	57.1	57.6	58.3	59.1	59.7	60.2	60.9	61.5
17. Activity rate (% of population aged 15-24)	47.4	45.9	44.8	43.9	43.0	43.0	43.5	44.1	44.2	44.0	44.0	43.6
18. Activity rate (% of population aged 25-54)	66.4	67.1	67.8	68.3	69.1	69.6	70.4	71.3	71.8	72.4	73.2	73.9
19. Activity rate (% of population aged 55-64)	25.6	26.0	26.7	27.4	28.3	28.8	28.9	29.5	30.2	31.1	32.6	34.4
20. Total unemployment (000)	7058	7899	8287	8237	8324	8347	8046	7554	6927	6497	6691	6930
21. Unemployment rate (% labour force 15+)	:	11.4	11.9	11.7	11.7	11.6	11.1	10.2	9.2	8.6	8.7	9.0
22. Youth unemployment rate (% labour force 15-24)	:	20.8	21.6	21.9	22.1	21.6	20.0	18.3	16.8	15.6	15.5	15.9
23. Long term unemployment rate (% labour force)	:	5.4	6.0	5.9	5.9	5.8	5.4	4.7	4.2	3.7	3.6	3.7
24. Youth unemployment ratio (% population aged 15-24)	8.5	9.4	9.6	9.5	9.5	9.2	8.7	8.1	7.5	6.9	6.8	6.9

Source: Eurostat

Key employment indicators Belgium

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	9968	10022	10072	10103	10126	10153	10175	10214	10239	10263	10310	10356
2. Population aged 15-64	6636	6658	6686	6697	6696	6700	6702	6710	6719	6728	6758	6791
3. Total employment (000)	3853	3828	3812	3839	3851	3886	3957	4011	4088	4149	4136	4115
4. Population in employment aged 15-64	3733	3715	3724	3755	3765	3807	3850	3980	4068	4033	4047	4047
5. Employment rate (% population aged 15-64)	56.3	55.8	55.7	56.1	56.2	56.8	57.4	59.3	60.5	59.9	59.9	59.6
6. Employment rate (% population aged 15-24)	31.8	29.0	28.2	27.4	26.8	26.3	26.8	28.2	29.1	29.7	29.4	27.4
7. Employment rate (% population aged 25-54)	73.1	73.0	72.8	73.2	73.5	74.1	74.3	76.2	77.4	76.6	76.5	76.5
8. Employment rate (% population aged 55-64)	22.2	21.9	22.5	22.9	21.9	22.1	22.9	24.6	26.3	25.1	26.6	28.1
9. FTE employment rate (% population aged 15-64)	54.5	53.2	53.2	53.4	53.3	53.8	53.9	55.7	57.4	55.7	55.3	54.7
10. Self-employed (% total employment)	17.8	18.2	18.3	18.2	18.3	18.1	17.6	17.3	16.8	16.5	16.4	16.3
11. Part-time employment (% total employment)	12.7	13.1	13.3	14.0	14.5	15.2	16.5	18.4	18.9	18.5	19.1	20.5
12. Fixed term contracts (% total employment)	5.0	5.1	5.2	5.4	6.0	6.6	8.2	9.9	9.1	8.8	8.1	8.4
13. Employment in Services (% total employment)	71.0	71.7	72.3	72.7	73.2	73.8	74.2	74.7	75.1	75.4	76.0	75.6
14. Employment in Industry (% total employment)	26.0	25.3	24.8	24.4	24.0	23.5	23.1	22.7	22.4	22.3	21.7	22.2
15. Employment in Agriculture (% total employment)	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.6	2.5	2.4	2.4	2.2
16. Activity rate (% population aged 15-64)	60.6	61.0	61.8	62.1	62.3	62.7	63.5	64.9	65.1	64.2	64.8	64.9
17. Activity rate (% of population aged 15-24)	37.1	35.8	36.0	34.8	33.7	33.2	33.8	35.7	35.3	35.7	35.7	35.0
18. Activity rate (% of population aged 25-54)	78.2	79.0	79.6	80.2	80.6	80.8	81.2	82.3	82.4	81.2	81.9	82.3
19. Activity rate (% of population aged 55-64)	22.8	22.8	23.5	23.9	22.9	23.2	24.1	25.9	27.1	25.9	27.7	28.9
20. Total unemployment (000)	287	354	406	407	401	390	400	377	302	289	321	358
21. Unemployment rate (% labour force 15+)	7.1	8.6	9.8	9.7	9.5	9.2	9.3	8.6	6.9	6.7	7.3	8.1
22. Youth unemployment rate (% labour force 15-24)	15.4	20.7	23.2	22.9	22.1	22.0	22.1	22.7	17.0	17.5	18.5	21.5
23. Long term unemployment rate (% labour force)	4.0	4.5	5.6	5.8	5.6	5.4	5.5	4.9	3.7	3.2	3.5	3.7
24. Youth unemployment ratio (% population aged 15-24)	5.6	7.4	8.2	7.9	7.4	7.2	7.3	7.7	6.1	6.1	6.4	7.5

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	4862	4893	4927	4944	4954	4966	4977	4994	5006	5018	5042	5067
2. Population aged 15-64	3325	3341	3366	3373	3372	3374	3375	3380	3384	3388	3403	3420
3. Total employment (000)	2342	2308	2297	2309	2309	2311	2330	2324	2365	2401	2377	2343
4. Population in employment aged 15-64	2267	2239	2243	2258	2256	2263	2265	2302	2351	2331	2323	2300
5. Employment rate (% population aged 15-64)	68.2	67.0	66.6	66.9	66.9	67.1	67.1	68.1	69.5	68.8	68.3	67.3
6. Employment rate (% population aged 15-24)	33.7	31.4	31.0	30.5	30.7	30.2	30.4	31.2	32.8	33.2	32.2	29.9
7. Employment rate (% population aged 25-54)	87.7	86.6	86.1	86.2	86.1	86.0	85.6	86.3	87.3	86.5	86.1	85.0
8. Employment rate (% population aged 55-64)	33.6	32.4	32.7	33.5	31.8	31.7	32.1	33.8	36.4	35.1	36.0	37.8
9. FTE employment rate (% population aged 15-64)	69.7	67.2	67.0	67.2	67.0	67.1	66.9	68.6	70.7	68.6	67.6	66.7
10. Self-employed (% total employment)	18.9	19.6	19.8	19.5	19.8	19.7	19.2	18.6	18.6	18.4	18.4	18.2
11. Part-time employment (% total employment)	2.3	2.5	2.7	3.0	3.2	3.5	3.9	5.1	5.5	5.2	5.6	6.4
12. Fixed term contracts (% total employment)	3.1	3.2	3.4	3.8	4.3	4.7	6.0	7.3	6.7	6.3	5.8	6.2
13. Employment in Services (% total employment)	61.4	61.8	62.7	63.2	63.7	64.2	64.3	64.3	64.9	65.3	66.2	65.7
14. Employment in Industry (% total employment)	35.2	34.6	33.8	33.4	32.9	32.5	32.4	32.5	31.9	31.6	30.9	31.5
15. Employment in Agriculture (% total employment)	3.4	3.6	3.5	3.4	3.3	3.3	3.3	3.2	3.2	3.0	2.9	2.8
16. Activity rate (% population aged 15-64)	71.9	71.7	72.2	72.4	72.4	72.5	72.8	73.4	73.7	73.2	73.2	72.9
17. Activity rate (% of population aged 15-24)	38.1	37.6	38.3	37.3	36.7	36.2	37.0	38.4	38.7	39.6	38.9	38.4
18. Activity rate (% of population aged 25-54)	92.0	91.7	92.2	92.3	92.4	92.1	91.8	92.0	91.8	91.0	91.3	90.9
19. Activity rate (% of population aged 55-64)	34.5	33.7	34.2	34.9	33.4	33.3	33.9	35.3	37.5	36.3	37.5	38.9
20. Total unemployment (000)	123	161	189	186	182	179	189	183	142	150	168	196
21. Unemployment rate (% labour force 15+)	5.1	6.7	7.7	7.6	7.4	7.3	7.7	7.3	5.6	6.0	6.7	7.8
22. Youth unemployment rate (% labour force 15-24)	13.5	19.6	21.6	20.5	18.6	18.5	20.2	22.0	14.7	16.6	18.9	22.6
23. Long term unemployment rate (% labour force)	2.7	3.1	4.1	4.5	4.3	4.2	4.5	4.1	3.0	3.0	3.2	3.4
24. Youth unemployment ratio (% population aged 15-24)	5.0	7.3	8.1	7.5	6.7	6.5	7.3	8.1	5.7	6.3	7.3	8.9

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	5106	5129	5145	5159	5172	5187	5198	5220	5233	5245	5267	5289
2. Population aged 15-64	3311	3316	3321	3324	3324	3326	3327	3331	3336	3341	3355	3371
3. Total employment (000)	1512	1521	1515	1530	1543	1576	1627	1687	1723	1748	1759	1773
4. Population in employment aged 15-64	1465	1476	1482	1498	1510	1545	1585	1678	1717	1702	1724	1746
5. Employment rate (% population aged 15-64)	44.3	44.5	44.6	45.0	45.4	46.5	47.6	50.4	51.5	51.0	51.4	51.8
6. Employment rate (% population aged 15-24)	29.8	26.6	25.4	24.2	22.8	22.2	23.0	25.1	25.4	26.0	26.5	24.7
7. Employment rate (% population aged 25-54)	58.1	59.0	59.2	60.0	60.7	61.8	62.8	65.8	67.2	66.5	66.8	67.8
8. Employment rate (% population aged 55-64)	11.4	12.0	12.8	12.9	12.4	12.9	14.0	15.7	16.6	15.5	17.5	18.7
9. FTE employment rate (% population aged 15-64)	39.3	39.2	39.5	39.6	39.7	40.5	40.9	42.9	44.2	43.0	43.2	42.9
10. Self-employed (% total employment)	16.1	16.0	15.9	16.4	16.0	15.7	15.4	15.4	14.4	13.8	13.8	13.8
11. Part-time employment (% total employment)	28.9	29.2	29.3	30.5	31.4	32.4	34.5	36.9	37.4	36.9	37.4	39.1
12. Fixed term contracts (% total employment)	7.9	7.8	7.7	7.7	8.3	9.2	11.2	13.2	12.3	12.0	11.2	11.1
13. Employment in Services (% total employment)	85.1	86.0	86.1	86.4	86.6	87.0	87.7	88.4	88.5	88.5	88.7	88.3
14. Employment in Industry (% total employment)	12.6	11.9	11.8	11.4	11.2	11.0	10.5	9.8	10.0	10.0	9.7	10.1
15. Employment in Agriculture (% total employment)	2.3	2.1	2.1	2.1	2.1	2.0	1.9	1.8	1.5	1.5	1.6	1.5
16. Activity rate (% population aged 15-64)	49.3	50.3	51.2	51.7	52.1	52.9	54.0	56.3	56.4	55.1	56.3	56.9
17. Activity rate (% of population aged 15-24)	36.0	33.9	33.7	32.4	30.8	30.3	30.5	32.8	31.8	31.7	32.4	31.4
18. Activity rate (% of population aged 25-54)	64.1	65.9	66.8	67.7	68.5	69.2	70.3	72.4	72.7	71.2	72.4	73.6
19. Activity rate (% of population aged 55-64)	11.8	12.5	13.5	13.5	12.9	13.5	14.8	16.8	17.1	15.9	18.2	19.2
20. Total unemployment (000)	165	194	218	220	219	211	211	194	161	139	153	161
21. Unemployment rate (% labour force 15+)	10.0	11.5	12.7	12.7	12.5	11.9	11.6	10.3	8.5	7.6	8.2	8.5
22. Youth unemployment rate (% labour force 15-24)	17.4	22.0	25.0	25.6	26.5	26.4	24.5	23.4	19.8	18.8	18.0	20.1
23. Long term unemployment rate (% labour force)	5.9	6.6	7.7	7.7	7.6	7.1	7.0	5.9	4.6	3.6	4.1	4.0
24. Youth unemployment ratio (% population aged 15-24)	6.2	7.4	8.4	8.3	8.1	7.9	7.4	7.3	6.5	5.8	5.5	6.0

Source: Eurostat

Key employment indicators Czech Republic

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	10250	10235	10222	10176	10171	10179
2. Population aged 15-64	:	:	:	:	:	:	7070	7089	7116	7121	7149	7182
3. Total employment (000)	:	:	:	4959	4968	4933	4863	4761	4728	4724	4760	4731
4. Population in employment aged 15-64	:	:	:	:	:	:	4759	4653	4625	4631	4677	4647
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	67.3	65.6	65.0	65.0	65.4	64.7
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	41.5	38.3	36.4	34.2	32.2	30.0
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	83.7	81.9	81.6	82.1	82.5	81.7
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	37.1	37.5	36.3	37.1	40.8	42.3
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	67.8	65.6	63.9	63.2	63.4	64.7	64.1
10. Self-employed (% total employment)	:	:	:	11.9	12.1	12.3	13.6	14.4	15.0	15.1	16.0	17.1
11. Part-time employment (% total employment)	:	:	:	:	:	:	5.7	5.6	5.3	4.9	4.9	5.0
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	6.7	7.6	8.1	8.0	8.1	9.2
13. Employment in Services (% total employment)	:	:	:	51.6	52.3	53.1	53.5	54.7	55.4	55.2	55.5	56.1
14. Employment in Industry (% total employment)	:	:	:	41.9	41.6	41.2	41.0	40.2	39.5	40.1	39.7	39.4
15. Employment in Agriculture (% total employment)	:	:	:	6.6	6.1	5.8	5.5	5.2	5.1	4.8	4.8	4.5
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	72.0	72.0	71.3	70.8	70.6	70.2
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	47.7	46.7	44.4	41.5	38.7	36.8
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	88.5	88.6	88.4	88.4	88.2	87.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	38.6	39.4	38.2	39.0	42.4	44.2
20. Total unemployment (000)	:	:	:	170	172	233	331	447	448	414	377	401
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	6.4	8.6	8.7	8.0	7.3	7.8
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	12.8	17.7	17.8	17.3	16.9	18.6
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	1.9	3.1	4.2	4.1	3.7	3.8
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	6.1	8.3	7.9	7.2	6.6	6.8

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	4964	4954	4949	4932	4934	4941
2. Population aged 15-64	:	:	:	:	:	:	3517	3524	3538	3545	3563	3582
3. Total employment (000)	:	:	:	:	:	:	2737	2671	2652	2653	2683	2671
4. Population in employment aged 15-64	:	:	:	:	:	:	2671	2607	2589	2595	2632	2619
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	76.0	74.0	73.2	73.2	73.9	73.1
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	47.3	42.3	39.3	37.1	35.3	32.3
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	91.3	89.5	89.3	89.7	90.2	89.7
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	53.2	53.6	51.7	52.6	57.2	57.5
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	77.3	75.7	73.6	72.6	72.6	73.9	73.2
10. Self-employed (% total employment)	:	:	:	:	:	:	17.2	18.2	18.8	19.0	20.2	21.6
11. Part-time employment (% total employment)	:	:	:	:	:	:	2.6	2.4	2.2	2.2	2.2	2.3
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	5.7	6.2	7.1	7.2	7.0	7.9
13. Employment in Services (% total employment)	:	:	:	:	:	:	42.8	43.7	44.6	44.5	44.9	45.3
14. Employment in Industry (% total employment)	:	:	:	:	:	:	50.6	50.0	49.2	49.5	49.3	49.2
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	6.6	6.3	6.2	6.0	5.9	5.5
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	80.0	79.9	79.1	78.6	78.6	78.0
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	53.5	51.4	48.3	45.2	42.3	39.6
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	95.1	95.1	94.9	94.9	94.8	94.4
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	55.1	56.2	54.5	55.0	59.3	59.9
20. Total unemployment (000)	:	:	:	68	73	100	144	208	210	192	170	176
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	5.0	7.3	7.3	6.7	6.0	6.2
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	11.5	17.4	18.5	17.7	16.6	18.4
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	1.5	2.4	3.4	3.4	3.0	2.9
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	6.2	8.9	8.9	8.0	7.0	7.3

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	5286	5281	5273	5244	5238	5238
2. Population aged 15-64	:	:	:	:	:	:	3554	3565	3578	3576	3586	3601
3. Total employment (000)	:	:	:	:	:	:	2126	2090	2076	2071	2077	2060
4. Population in employment aged 15-64	:	:	:	:	:	:	2087	2045	2036	2036	2045	2028
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	58.7	57.4	56.9	56.9	57.0	56.3
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	35.8	34.3	33.5	31.4	29.2	27.6
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	76.0	74.2	73.7	74.4	74.7	73.5
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	22.9	23.2	22.4	23.1	25.9	28.4
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	58.5	55.7	54.5	53.9	54.2	55.6	55.1
10. Self-employed (% total employment)	:	:	:	:	:	:	9.1	9.5	10.1	10.1	10.6	11.4
11. Part-time employment (% total employment)	:	:	:	:	:	:	9.9	9.9	9.3	8.5	8.3	8.5
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	7.7	9.1	9.4	8.9	9.3	10.7
13. Employment in Services (% total employment)	:	:	:	:	:	:	67.3	68.6	69.2	68.8	69.3	70.1
14. Employment in Industry (% total employment)	:	:	:	:	:	:	28.6	27.7	27.2	28.0	27.3	26.8
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	4.1	3.8	3.7	3.3	3.4	3.2
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	64.0	64.1	63.6	63.2	62.7	62.5
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	42.0	42.0	40.6	37.9	35.2	34.0
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	81.9	82.0	81.8	81.8	81.5	81.0
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	23.9	24.4	23.7	24.6	27.2	30.0
20. Total unemployment (000)	:	:	:	102	98	133	186	238	239	222	207	226
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	8.1	10.3	10.4	9.7	9.0	9.9
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	14.4	18.1	17.1	17.0	17.3	18.8
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	2.5	4.2	5.1	5.1	4.5	5.0
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	6.0	7.6	6.9	6.4	6.1	6.4

Source: Eurostat

Key employment indicators Denmark

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	5111	5129	5152	5198	5210	5232	5255	5277	5298	5321	5339	5359
2. Population aged 15-64	3472	3480	3484	3496	3514	3516	3523	3525	3532	3545	3538	3548
3. Total employment (000)	2600	2562	2599	2642	2652	2675	2718	2776	2784	2792	2782	2755
4. Population in employment aged 15-64	2557	2509	2518	2567	2594	2633	2646	2680	2694	2700	2684	2666
5. Employment rate (% population aged 15-64)	73.7	72.1	72.3	73.4	73.8	74.9	75.1	76.0	76.3	76.2	75.9	75.1
6. Employment rate (% population aged 15-24)	61.6	59.7	61.6	64.6	65.2	66.6	65.3	65.5	66.0	62.3	63.5	59.6
7. Employment rate (% population aged 25-54)	82.2	80.4	80.3	81.3	81.9	82.4	83.1	83.9	84.2	84.4	84.1	83.5
8. Employment rate (% population aged 55-64)	53.0	52.0	50.9	49.8	49.1	51.7	52.0	54.5	55.7	58.0	57.9	60.2
9. FTE employment rate (% population aged 15-64)	67.0	64.7	65.6	66.8	67.0	68.1	67.8	69.7	69.3	69.8	69.7	68.4
10. Self-employed (% total employment)	9.3	9.2	8.6	8.2	8.0	7.7	7.5	7.3	7.2	7.1	7.0	7.1
11. Part-time employment (% total employment)	23.0	23.1	21.7	21.8	21.9	22.5	22.3	21.6	21.3	20.1	20.0	21.3
12. Fixed term contracts (% total employment)	10.7	10.6	11.6	11.6	10.9	10.6	9.9	9.6	9.7	9.2	9.1	9.3
13. Employment in Services (% total employment)	70.6	71.1	71.8	70.9	71.3	71.8	72.2	73.0	73.3	73.6	74.1	74.5
14. Employment in Industry (% total employment)	24.2	23.9	23.7	24.5	24.4	24.0	23.9	23.3	23.1	22.9	22.5	22.2
15. Employment in Agriculture (% total employment)	5.2	5.0	4.6	4.5	4.4	4.2	3.9	3.7	3.6	3.5	3.3	3.3
16. Activity rate (% population aged 15-64)	82.4	81.4	79.5	79.8	79.8	79.8	79.7	80.6	80.0	79.9	79.6	79.5
17. Activity rate (% of population aged 15-24)	70.9	69.4	69.0	72.2	73.0	72.9	71.3	72.3	70.7	68.0	68.6	65.6
18. Activity rate (% of population aged 25-54)	91.4	90.4	88.0	87.6	87.8	87.4	87.7	88.2	87.9	87.9	87.8	87.8
19. Activity rate (% of population aged 55-64)	58.8	57.5	55.4	54.6	52.8	55.0	55.1	57.5	58.2	60.5	60.4	63.3
20. Total unemployment (000)	246	271	213	188	178	148	137	138	126	124	130	161
21. Unemployment rate (% labour force 15+)	8.6	9.6	7.7	6.7	6.3	5.2	4.9	4.8	4.4	4.3	4.6	5.6
22. Youth unemployment rate (% labour force 15-24)	11.7	12.8	10.2	9.6	9.7	7.7	7.3	8.8	7.0	8.4	7.9	10.3
23. Long term unemployment rate (% labour force)	2.4	2.6	2.5	2.0	1.8	1.5	1.3	1.0	1.0	0.8	0.9	1.1
24. Youth unemployment ratio (% population aged 15-24)	8.2	8.8	7.0	7.0	7.0	5.6	5.2	6.3	5.0	5.7	5.3	6.8

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	2513	2523	2538	2560	2573	2579	2584	2609	2620	2632	2640	2650
2. Population aged 15-64	1756	1759	1760	1766	1774	1775	1780	1783	1783	1793	1786	1794
3. Total employment (000)	1390	1368	1411	1456	1455	1455	1467	1495	1492	1494	1487	1483
4. Population in employment aged 15-64	1359	1333	1363	1411	1420	1428	1423	1441	1441	1438	1429	1429
5. Employment rate (% population aged 15-64)	77.4	75.8	77.5	79.9	80.0	80.5	79.9	80.8	80.8	80.2	80.0	79.6
6. Employment rate (% population aged 15-24)	61.1	59.2	63.0	67.5	67.5	68.5	64.8	68.2	68.5	64.5	65.5	61.5
7. Employment rate (% population aged 25-54)	85.8	84.0	85.5	87.0	88.0	88.3	88.5	88.6	88.5	88.2	88.4	87.9
8. Employment rate (% population aged 55-64)	63.9	63.0	62.8	64.7	61.7	62.7	61.3	62.6	64.1	65.5	64.5	67.3
9. FTE employment rate (% population aged 15-64)	74.9	71.8	74.0	76.6	76.4	76.9	76.2	77.6	76.9	76.9	76.7	75.4
10. Self-employed (% total employment)	12.3	12.2	11.0	10.6	10.6	10.3	9.9	9.7	9.5	10.0	9.8	9.5
11. Part-time employment (% total employment)	10.7	11.1	10.5	10.8	11.4	12.2	11.1	10.4	10.2	10.2	11.1	11.6
12. Fixed term contracts (% total employment)	9.8	9.5	10.8	10.7	10.6	10.2	9.2	8.6	8.5	7.7	7.9	8.2
13. Employment in Services (% total employment)	58.7	59.2	60.5	59.9	60.5	60.5	60.9	61.7	62.1	62.3	63.2	63.3
14. Employment in Industry (% total employment)	33.8	33.6	33.0	33.9	33.4	33.4	33.4	32.8	32.8	32.6	32.0	31.8
15. Employment in Agriculture (% total employment)	7.5	7.2	6.5	6.2	6.1	6.1	5.7	5.5	5.1	5.2	4.8	4.9
16. Activity rate (% population aged 15-64)	85.7	85.0	84.2	85.4	85.2	84.8	83.8	84.9	84.2	83.8	83.6	83.8
17. Activity rate (% of population aged 15-24)	70.4	69.1	70.7	74.3	74.5	74.2	70.6	74.9	73.4	70.2	70.7	67.7
18. Activity rate (% of population aged 25-54)	94.3	93.5	92.2	92.1	92.7	92.4	92.0	92.3	91.7	91.4	91.9	91.8
19. Activity rate (% of population aged 55-64)	70.2	69.3	68.2	70.3	66.1	66.3	64.4	65.5	66.7	68.4	67.1	70.4
20. Total unemployment (000)	123	140	106	86	81	68	59	67	62	59	68	81
21. Unemployment rate (% labour force 15+)	8.0	9.3	7.1	5.6	5.3	4.4	3.9	4.4	4.1	3.9	4.4	5.3
22. Youth unemployment rate (% labour force 15-24)	11.8	13.1	10.3	8.2	8.5	6.8	7.1	8.8	7.0	7.8	9.3	11.0
23. Long term unemployment rate (% labour force)	2.0	2.3	2.2	1.8	1.5	1.1	0.9	0.9	0.9	0.7	0.8	1.3
24. Youth unemployment ratio (% population aged 15-24)	8.2	8.9	7.2	6.0	6.3	5.0	4.9	6.5	4.9	5.6	6.4	7.5

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	2598	2606	2615	2638	2637	2654	2671	2669	2678	2689	2699	2708
2. Population aged 15-64	1719	1724	1727	1733	1743	1744	1743	1743	1749	1752	1752	1753
3. Total employment (000)	1209	1194	1188	1185	1197	1219	1251	1280	1292	1299	1295	1272
4. Population in employment aged 15-64	1199	1176	1155	1157	1174	1205	1223	1239	1253	1261	1256	1237
5. Employment rate (% population aged 15-64)	69.7	68.2	66.9	66.7	67.4	69.1	70.2	71.1	71.6	72.0	71.7	70.5
6. Employment rate (% population aged 15-24)	62.0	60.1	59.8	61.4	62.5	64.2	65.8	62.7	63.3	60.1	61.4	57.6
7. Employment rate (% population aged 25-54)	78.6	76.9	75.1	75.4	75.7	76.7	77.6	79.2	79.8	80.6	79.8	79.0
8. Employment rate (% population aged 55-64)	42.5	41.4	38.9	35.9	37.1	40.3	42.0	45.8	46.6	49.7	50.4	52.9
9. FTE employment rate (% population aged 15-64)	59.5	58.0	57.5	57.3	58.0	59.7	59.8	62.1	62.2	63.0	63.1	61.8
10. Self-employed (% total employment)	6.0	5.9	5.8	5.2	5.0	4.7	4.6	4.4	4.4	3.8	4.0	4.3
11. Part-time employment (% total employment)	37.1	37.0	35.0	35.4	34.7	34.9	35.5	34.7	34.1	31.6	30.3	32.6
12. Fixed term contracts (% total employment)	11.6	11.8	12.4	12.6	11.4	11.0	10.6	10.7	11.1	10.7	10.3	10.4
13. Employment in Services (% total employment)	83.9	84.4	84.6	84.1	84.2	85.0	85.2	85.7	85.8	86.2	86.4	87.3
14. Employment in Industry (% total employment)	13.5	13.0	13.0	13.4	13.6	13.1	13.0	12.7	12.3	12.1	11.9	11.2
15. Employment in Agriculture (% total employment)	2.7	2.5	2.4	2.5	2.3	1.9	1.8	1.6	1.9	1.6	1.6	1.5
16. Activity rate (% population aged 15-64)	78.9	77.6	74.6	74.0	74.2	74.7	75.6	76.1	75.6	75.9	75.5	75.1
17. Activity rate (% of population aged 15-24)	71.2	69.6	67.0	69.8	71.1	71.0	71.8	69.7	67.8	65.8	66.4	63.5
18. Activity rate (% of population aged 25-54)	88.5	87.2	83.9	83.0	82.8	82.5	83.5	84.1	84.0	84.4	83.7	83.7
19. Activity rate (% of population aged 55-64)	48.5	46.5	42.8	40.2	40.2	43.5	45.3	48.9	49.0	51.9	52.9	55.9
20. Total unemployment (000)	124	131	107	102	97	80	78	71	64	65	63	80
21. Unemployment rate (% labour force 15+)	9.2	9.9	8.5	8.1	7.5	6.2	6.0	5.4	4.8	4.9	4.7	6.0
22. Youth unemployment rate (% labour force 15-24)	11.5	12.5	10.1	11.3	11.0	8.8	7.4	8.8	7.1	8.9	6.3	9.5
23. Long term unemployment rate (% labour force)	2.8	3.0	2.8	2.2	2.1	1.9	1.8	1.2	1.1	1.0	1.0	1.0
24. Youth unemployment ratio (% population aged 15-24)	8.3	8.7	6.8	8.0	7.9	6.3	5.4	6.2	5.0	5.9	4.1	6.1

Source: Eurostat

Key employment indicators Germany

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	79464	80116	80406	80594	80712	80645	80895	80962	81132	81345	81560	81611
2. Population aged 15-64	54486	54942	54910	54838	55007	55001	55188	55145	55063	54973	54834	54711
3. Total employment (000)	37878	37365	37304	37382	37270	37208	37616	38077	38752	38917	38668	38248
4. Population in employment aged 15-64	36161	35770	35530	35433	35238	35015	35281	35931	36106	36183	35839	35434
5. Employment rate (% population aged 15-64)	66.4	65.1	64.7	64.6	64.1	63.7	63.9	65.2	65.6	65.8	65.4	64.8
6. Employment rate (% population aged 15-24)	54.4	51.7	49.8	47.7	45.5	44.6	45.3	47.2	47.2	47.0	45.2	44.0
7. Employment rate (% population aged 25-54)	77.9	76.9	76.7	76.9	76.7	76.6	77.2	78.7	79.3	79.3	78.7	77.8
8. Employment rate (% population aged 55-64)	36.2	35.8	36.6	37.7	37.9	38.1	37.7	37.8	37.6	37.9	38.7	39.3
9. FTE employment rate (% population aged 15-64)	62.0	60.5	59.8	59.7	58.7	57.9	57.7	58.3	58.6	58.6	58.1	57.5
10. Self-employed (% total employment)	9.6	9.9	10.2	10.3	10.3	10.5	10.6	10.3	10.3	10.5	10.6	10.8
11. Part-time employment (% total employment)	14.5	15.2	15.8	16.3	16.7	17.6	18.4	19.3	20.0	20.8	21.4	22.4
12. Fixed term contracts (% total employment)	10.5	10.3	10.4	10.5	11.2	11.8	12.4	13.0	12.7	12.4	12.1	12.2
13. Employment in Services (% total employment)	61.2	62.6	63.6	64.3	65.4	66.2	66.8	67.7	68.4	69.0	69.7	70.3
14. Employment in Industry (% total employment)	35.3	34.1	33.2	32.7	31.9	31.1	30.6	29.8	29.1	28.6	27.8	27.2
15. Employment in Agriculture (% total employment)	3.5	3.3	3.1	3.0	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.4
16. Activity rate (% population aged 15-64)	71.0	70.6	70.8	70.5	70.4	70.6	70.8	71.2	71.1	71.5	71.5	71.5
17. Activity rate (% of population aged 15-24)	58.1	56.1	54.5	52.2	50.4	49.8	50.1	51.6	51.5	51.3	50.1	49.1
18. Activity rate (% of population aged 25-54)	83.2	83.1	83.5	83.4	83.6	84.1	84.6	85.2	85.3	85.5	85.6	85.5
19. Activity rate (% of population aged 55-64)	39.7	40.1	41.5	42.9	43.9	44.9	44.5	43.7	42.9	42.9	43.7	44.3
20. Total unemployment (000)	2507	3020	3222	3115	3396	3788	3595	3334	3066	3111	3397	3662
21. Unemployment rate (% labour force 15+)	6.4	7.7	8.2	8.0	8.7	9.7	9.1	8.4	7.8	7.8	8.7	9.6
22. Youth unemployment rate (% labour force 15-24)	6.2	7.7	8.4	8.4	9.6	10.4	9.4	8.8	8.5	8.4	10.0	11.1
23. Long term unemployment rate (% labour force)	2.2	3.1	3.7	3.9	4.2	4.9	4.7	4.3	3.9	3.8	4.1	4.6
24. Youth unemployment ratio (% population aged 15-24)	3.6	4.3	4.6	4.4	4.8	5.2	4.8	4.5	4.3	4.2	4.9	5.0

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	38482	38898	39073	39184	39275	39283	39426	39501	39593	39736	39882	39939
2. Population aged 15-64	27476	27794	27788	27709	27761	27789	27865	27813	27751	27716	27633	27562
3. Total employment (000)	22065	21756	21634	21562	21337	21237	21377	21483	21752	21732	21425	21040
4. Population in employment aged 15-64	21063	20823	20592	20427	20158	19970	20027	20245	20230	20177	19831	19462
5. Employment rate (% population aged 15-64)	76.7	74.9	74.1	73.7	72.6	71.9	71.9	72.8	72.9	72.8	71.8	70.6
6. Employment rate (% population aged 15-24)	56.5	53.7	51.4	49.6	47.9	47.0	47.8	49.8	49.7	49.3	46.8	45.3
7. Employment rate (% population aged 25-54)	89.4	87.9	87.2	87.0	86.1	85.7	85.8	86.9	87.2	86.9	85.5	84.0
8. Employment rate (% population aged 55-64)	49.4	47.8	48.1	48.5	47.8	47.5	47.2	46.8	46.4	46.5	47.3	47.5
9. FTE employment rate (% population aged 15-64)	76.4	74.3	73.3	73.2	71.7	70.6	70.3	70.8	71.1	70.9	69.9	68.9
10. Self-employed (% total employment)	11.0	11.3	11.7	11.9	12.2	12.6	12.7	12.6	12.5	12.5	12.8	13.3
11. Part-time employment (% total employment)	2.7	3.0	3.3	3.6	3.8	4.3	4.7	:	:	:	:	:
12. Fixed term contracts (% total employment)	10.0	9.9	9.8	10.1	11.0	11.6	12.2	12.8	12.5	12.1	11.9	12.2
13. Employment in Services (% total employment)	50.2	51.3	52.3	52.8	53.7	54.4	55.1	55.9	56.6	57.3	58.0	58.6
14. Employment in Industry (% total employment)	46.2	45.2	44.4	44.0	43.3	42.6	41.9	41.2	40.4	39.8	39.0	38.4
15. Employment in Agriculture (% total employment)	3.6	3.4	3.3	3.2	3.0	3.0	3.0	3.0	3.0	2.9	2.9	3.0
16. Activity rate (% population aged 15-64)	80.9	80.2	80.1	79.6	79.3	79.2	79.2	79.2	78.9	79.0	78.7	78.2
17. Activity rate (% of population aged 15-24)	60.0	58.2	56.6	54.5	53.6	53.3	53.6	54.9	54.7	54.3	52.8	51.5
18. Activity rate (% of population aged 25-54)	93.8	93.4	93.4	93.1	93.0	93.3	93.4	93.6	93.4	93.5	93.1	92.5
19. Activity rate (% of population aged 55-64)	53.5	53.0	53.8	54.4	54.6	55.1	54.8	53.7	52.4	52.2	53.1	53.5
20. Total unemployment (000)	1140	1461	1582	1547	1793	2017	1926	1795	1661	1717	1925	2100
21. Unemployment rate (% labour force 15+)	5.1	6.5	7.1	7.0	8.1	9.1	8.6	8.1	7.5	7.8	8.8	10.0
22. Youth unemployment rate (% labour force 15-24)	5.7	7.6	8.6	8.6	10.2	11.3	10.2	9.5	9.3	9.4	11.7	13.4
23. Long term unemployment rate (% labour force)	1.9	2.5	3.0	3.2	3.7	4.3	4.2	4.0	3.7	3.7	4.0	4.6
24. Youth unemployment ratio (% population aged 15-24)	3.4	4.4	4.8	4.6	5.5	6.0	5.5	5.1	5.0	5.0	6.0	6.2

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	40982	41218	41333	41410	41437	41362	41469	41461	41539	41610	41678	41672
2. Population aged 15-64	27011	27148	27122	27129	27246	27212	27324	27332	27312	27258	27201	27148
3. Total employment (000)	15813	15609	15671	15820	15933	15971	16239	16594	17001	17185	17243	17208
4. Population in employment aged 15-64	15098	14947	14938	15007	15080	15045	15254	15685	15876	16006	16008	15972
5. Employment rate (% population aged 15-64)	55.9	55.1	55.1	55.3	55.3	55.3	55.8	57.4	58.1	58.7	58.9	58.8
6. Employment rate (% population aged 15-24)	52.4	49.8	48.1	45.7	43.0	42.1	42.7	44.5	44.6	44.7	43.6	42.8
7. Employment rate (% population aged 25-54)	66.1	65.4	65.8	66.4	67.0	67.3	68.3	70.3	71.2	71.6	71.8	71.5
8. Employment rate (% population aged 55-64)	23.5	24.0	25.2	27.1	28.2	28.7	28.3	28.8	29.0	29.4	30.1	31.2
9. FTE employment rate (% population aged 15-64)	47.6	46.4	46.2	46.1	45.8	45.2	45.0	45.8	46.1	46.5	46.4	46.2
10. Self-employed (% total employment)	7.8	7.9	8.0	8.0	7.7	7.8	7.8	7.5	7.5	7.9	7.9	7.8
11. Part-time employment (% total employment)	30.9	32.1	33.2	33.7	33.9	35.3	36.4	:	:	:	:	:
12. Fixed term contracts (% total employment)	11.1	10.9	11.0	11.1	11.4	12.1	12.6	13.4	13.0	12.6	12.3	12.3
13. Employment in Services (% total employment)	75.9	77.6	78.6	79.3	80.5	81.2	81.5	82.2	82.6	83.0	83.5	83.9
14. Employment in Industry (% total employment)	20.8	19.4	18.5	17.9	17.1	16.6	16.3	15.8	15.4	15.1	14.7	14.3
15. Employment in Agriculture (% total employment)	3.3	3.1	2.9	2.8	2.3	2.2	2.2	2.0	1.9	1.9	1.8	1.8
16. Activity rate (% population aged 15-64)	61.0	60.8	61.3	61.3	61.4	61.8	62.2	63.0	63.3	63.8	64.3	64.6
17. Activity rate (% of population aged 15-24)	56.1	53.9	52.5	49.9	47.1	46.2	46.6	48.3	48.2	48.2	47.3	46.6
18. Activity rate (% of population aged 25-54)	72.2	72.3	73.2	73.3	73.9	74.6	75.5	76.6	76.9	77.4	78.0	78.3
19. Activity rate (% of population aged 55-64)	26.3	27.4	29.3	31.5	33.3	34.7	34.1	33.7	33.5	33.6	34.3	35.2
20. Total unemployment (000)	1367	1559	1640	1568	1604	1772	1670	1539	1406	1393	1472	1561
21. Unemployment rate (% labour force 15+)	8.2	9.4	9.8	9.4	9.5	10.4	9.7	8.9	8.1	7.9	8.4	9.2
22. Youth unemployment rate (% labour force 15-24)	6.7	7.8	8.2	8.3	8.8	9.3	8.6	8.0	7.6	7.2	8.0	8.5
23. Long term unemployment rate (% labour force)	2.7	4.1	4.7	4.8	4.9	5.6	5.3	4.7	4.2	4.1	4.2	4.6
24. Youth unemployment ratio (% population aged 15-24)	3.7	4.2	4.3	4.1	4.1	4.3	4.0	3.8	3.6	3.4	3.8	3.9

Source: Eurostat

Key employment indicators Estonia

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	1386	1374	1366	1361	1356	1350
2. Population aged 15-64	:	:	:	:	:	:	914	914	916	916	912	911
3. Total employment (000)	:	:	:	634	619	619	608	581	572	577	584	593
4. Population in employment aged 15-64	:	:	:	:	:	:	590	562	554	559	566	573
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	64.6	61.5	60.4	61.0	62.0	62.9
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	35.5	30.1	28.3	28.1	28.2	29.3
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	78.8	76.7	75.6	76.0	76.8	77.8
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	50.2	47.5	46.3	48.5	51.6	52.3
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	64.6	65.0	61.6	59.5	59.9	60.9	61.3
10. Self-employed (% total employment)	:	:	:	6.9	7.5	7.9	8.6	8.6	9.4	8.2	8.1	8.9
11. Part-time employment (% total employment)	:	:	:	:	:	:	8.6	8.1	8.1	8.2	7.7	8.5
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	2.1	2.5	3.0	2.5	2.7	2.5
13. Employment in Services (% total employment)	:	:	:	55.8	56.7	57.9	58.2	60.0	59.8	60.3	62.0	61.5
14. Employment in Industry (% total employment)	:	:	:	34.1	33.6	33.0	33.0	32.0	33.2	32.9	31.2	32.3
15. Employment in Agriculture (% total employment)	:	:	:	10.1	9.7	9.1	8.8	8.0	7.0	6.8	6.9	6.1
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	72.2	70.4	70.2	70.0	69.3	70.1
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	42.5	38.9	37.4	36.5	34.2	36.9
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	88.0	87.1	87.0	86.3	85.4	85.7
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	53.5	51.3	51.3	53.2	55.7	56.3
20. Total unemployment (000)	:	:	:	:	69	64	61	74	81	77	61	66
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	9.6	9.2	11.3	12.5	11.8	9.5	10.1
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	17.0	15.2	22.0	23.6	23.5	19.3	22.9
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	4.3	5.0	5.7	5.7	5.0	4.6
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	6.0	8.0	8.4	8.1	6.2	8.1

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	639	632	628	627	624	621
2. Population aged 15-64	:	:	:	:	:	:	434	434	438	439	435	435
3. Total employment (000)	:	:	:	:	:	:	310	294	291	293	297	302
4. Population in employment aged 15-64	:	:	:	:	:	:	302	286	282	285	289	292
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	69.6	65.8	64.3	65.0	66.5	67.2
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	40.0	34.9	31.7	33.9	34.6	35.9
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	82.0	78.6	78.4	78.7	80.3	81.0
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	62.0	58.9	55.9	56.7	58.4	58.9
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	70.2	71.0	66.3	63.8	65.0	66.5	66.0
10. Self-employed (% total employment)	:	:	:	:	:	:	11.0	10.7	11.9	10.9	10.7	11.8
11. Part-time employment (% total employment)	:	:	:	:	:	:	5.9	5.9	5.3	5.1	4.8	5.4
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	2.9	3.5	4.4	3.3	3.9	3.2
13. Employment in Services (% total employment)	:	:	:	:	:	:	47.3	49.1	48.2	48.0	49.8	49.9
14. Employment in Industry (% total employment)	:	:	:	:	:	:	41.0	40.6	42.3	42.3	40.6	41.7
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	11.6	10.3	9.5	9.7	9.5	8.4
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	79.0	76.8	75.6	74.9	74.6	75.0
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	49.9	46.3	42.0	42.4	40.4	43.1
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	92.0	90.5	90.9	90.2	90.1	89.6
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	68.1	66.0	63.6	62.5	63.7	64.4
20. Total unemployment (000)	:	:	:	:	39	35	34	42	45	38	33	34
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	10.3	9.9	12.5	13.4	11.5	10.1	10.2
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	18.9	16.7	21.9	23.0	17.3	15.6	18.9
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	4.4	5.5	6.5	6.0	5.9	4.8
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	7.7	9.4	9.5	6.7	6.0	8.2

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	748	742	738	734	732	729
2. Population aged 15-64	:	:	:	:	:	:	480	480	479	478	478	476
3. Total employment (000)	:	:	:	:	:	:	297	287	281	283	287	291
4. Population in employment aged 15-64	:	:	:	:	:	:	290	278	272	274	277	281
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	60.3	57.8	56.9	57.4	57.9	59.0
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	32.0	26.0	24.8	21.9	21.6	22.7
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	75.9	74.8	73.1	73.5	73.6	74.8
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	41.6	39.2	39.0	42.1	46.5	47.3
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	59.5	59.6	57.3	55.7	55.2	55.9	57.0
10. Self-employed (% total employment)	:	:	:	:	:	:	6.1	6.4	6.7	5.4	5.4	5.9
11. Part-time employment (% total employment)	:	:	:	:	:	:	11.4	10.4	10.9	11.3	10.7	11.8
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	1.3	1.6	1.7	1.8	1.5	1.8
13. Employment in Services (% total employment)	:	:	:	:	:	:	69.6	71.2	71.7	73.1	74.4	73.5
14. Employment in Industry (% total employment)	:	:	:	:	:	:	24.6	23.2	23.8	23.1	21.4	22.7
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	5.8	5.6	4.5	3.8	4.2	3.8
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	66.4	65.0	65.3	65.5	64.4	65.7
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	36.3	32.5	32.7	30.3	27.9	30.6
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	84.2	83.9	83.3	82.7	81.0	82.2
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	43.1	40.9	42.0	46.0	49.8	50.3
20. Total unemployment (000)	:	:	:	:	30	29	27	32	37	38	28	32
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	8.9	8.3	10.1	11.5	12.0	8.9	10.0
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	14.4	13.1	22.1	24.5	31.9	24.8	29.5
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	4.0	4.4	4.9	5.3	4.1	4.4
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	4.3	6.7	7.3	9.5	6.5	8.1

Source: Eurostat

Key employment indicators Greece

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	9974	10123	10206	10238	10255	10269	10292	10310	10321	10356	10373	10478
2. Population aged 15-64	6651	6727	6761	6771	6787	6812	6924	6922	6876	6858	6765	6789
3. Total employment (000)	3807	3838	3834	3820	3805	3784	3940	3941	3935	3921	3914	3966
4. Population in employment aged 15-64	3570	3614	3666	3702	3732	3754	3841	3830	3831	3803	3833	3932
5. Employment rate (% population aged 15-64)	53.7	53.7	54.2	54.7	55.0	55.1	55.5	55.3	55.7	55.4	56.7	57.9
6. Employment rate (% population aged 15-24)	28.3	27.4	26.8	26.3	25.4	25.3	28.0	26.8	27.1	26.0	26.5	25.5
7. Employment rate (% population aged 25-54)	67.6	67.9	68.5	68.9	69.5	69.7	69.7	69.6	70.0	70.1	71.1	72.6
8. Employment rate (% population aged 55-64)	39.8	39.5	40.1	41.0	41.2	41.0	39.0	39.1	38.6	38.0	39.7	42.3
9. FTE employment rate (% population aged 15-64)	53.7	53.3	53.8	54.2	54.6	54.4	55.0	54.5	55.3	55.1	56.3	57.4
10. Self-employed (% total employment)	48.2	47.5	46.7	45.8	45.6	45.4	45.1	43.8	43.3	42.1	41.8	42.3
11. Part-time employment (% total employment)	4.5	4.3	4.7	4.8	5.0	4.8	5.6	5.8	4.5	4.0	4.5	4.3
12. Fixed term contracts (% total employment)	9.6	9.5	9.4	9.4	10.0	10.3	12.1	12.0	12.9	12.6	11.2	11.0
13. Employment in Services (% total employment)	50.5	52.5	54.4	55.9	56.0	57.0	57.7	58.0	58.8	59.3	60.0	60.6
14. Employment in Industry (% total employment)	25.4	24.8	24.6	24.5	24.7	24.2	24.3	23.9	23.9	24.0	23.8	23.4
15. Employment in Agriculture (% total employment)	24.2	22.8	20.9	19.6	19.4	18.8	18.0	18.1	17.3	16.8	16.1	16.0
16. Activity rate (% population aged 15-64)	58.5	59.0	59.7	60.4	61.1	61.3	62.6	63.0	62.9	62.1	63.1	63.9
17. Activity rate (% of population aged 15-24)	38.2	37.7	37.2	37.1	37.0	36.8	40.5	39.4	38.5	36.2	36.1	34.5
18. Activity rate (% of population aged 25-54)	71.9	72.8	73.7	74.3	75.2	75.7	76.7	77.4	77.5	77.2	78.1	79.2
19. Activity rate (% of population aged 55-64)	40.7	40.6	41.4	42.4	42.5	42.3	40.3	40.7	40.2	39.7	41.4	43.6
20. Total unemployment (000)	318	351	370	386	411	421	483	526	487	452	435	413
21. Unemployment rate (% labour force 15+)	7.9	8.6	8.9	9.2	9.6	9.8	10.9	11.8	11.0	10.4	10.0	9.3
22. Youth unemployment rate (% labour force 15-24)	25.2	26.8	27.7	28.5	31.0	30.8	30.1	31.9	29.4	28.0	26.4	26.3
23. Long term unemployment rate (% labour force)	3.8	4.2	4.4	4.7	5.2	5.3	5.8	6.4	6.0	5.4	5.1	5.1
24. Youth unemployment ratio (% population aged 15-24)	9.5	10.1	10.3	10.5	11.4	11.2	12.0	12.5	11.3	10.1	9.6	9.1

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	4830	4901	4932	4928	4928	4943	5006	4998	4990	5004	5021	5071
2. Population aged 15-64	3204	3247	3257	3255	3258	3276	3374	3368	3337	3334	3308	3330
3. Total employment (000)	2481	2491	2474	2445	2421	2392	2485	2466	2449	2441	2425	2449
4. Population in employment aged 15-64	2322	2340	2358	2361	2368	2363	2415	2386	2374	2360	2364	2414
5. Employment rate (% population aged 15-64)	72.4	72.1	72.4	72.5	72.7	72.1	71.6	70.8	71.1	70.8	71.4	72.5
6. Employment rate (% population aged 15-24)	35.5	34.4	33.6	33.1	31.4	31.1	34.1	31.9	32.0	30.2	31.3	30.9
7. Employment rate (% population aged 25-54)	90.1	89.9	89.9	89.8	90.2	89.7	88.8	88.2	88.4	88.5	88.6	89.5
8. Employment rate (% population aged 55-64)	58.8	57.9	58.9	59.6	59.8	59.1	55.8	55.4	54.9	55.0	56.0	59.3
9. FTE employment rate (% population aged 15-64)	73.4	72.3	72.7	72.8	73.2	72.3	72.1	71.0	71.5	71.2	72.0	72.8
10. Self-employed (% total employment)	49.0	48.4	47.6	47.1	46.9	46.9	46.6	45.6	45.2	44.5	43.8	44.1
11. Part-time employment (% total employment)	2.6	2.5	2.8	2.7	3.0	2.6	3.1	3.3	2.5	2.2	2.3	2.3
12. Fixed term contracts (% total employment)	9.8	9.4	9.4	9.1	9.7	9.9	11.3	10.8	11.1	10.9	10.0	9.5
13. Employment in Services (% total employment)	48.6	49.8	51.4	52.5	52.6	53.3	52.9	53.4	53.8	53.6	54.2	54.7
14. Employment in Industry (% total employment)	29.9	29.8	29.9	29.9	30.1	29.8	30.7	30.2	30.3	30.8	31.0	30.6
15. Employment in Agriculture (% total employment)	21.5	20.4	18.6	17.6	17.3	16.9	16.5	16.4	15.9	15.6	14.8	14.7
16. Activity rate (% population aged 15-64)	76.4	76.6	77.2	77.5	77.6	77.2	77.3	77.1	76.9	76.2	76.6	77.2
17. Activity rate (% of population aged 15-24)	43.2	42.5	42.0	41.4	40.2	40.0	43.7	41.6	41.0	38.6	39.0	38.1
18. Activity rate (% of population aged 25-54)	93.7	94.0	94.5	94.6	94.7	94.5	94.3	94.4	94.2	94.0	93.9	94.3
19. Activity rate (% of population aged 55-64)	60.3	59.8	61.0	61.8	61.8	61.1	57.7	57.6	57.1	57.3	58.1	61.1
20. Total unemployment (000)	127	146	157	161	159	166	190	207	190	181	171	158
21. Unemployment rate (% labour force 15+)	5.0	5.7	6.0	6.2	6.1	6.4	7.1	7.8	7.2	6.9	6.6	5.9
22. Youth unemployment rate (% labour force 15-24)	17.5	18.9	19.7	19.8	21.5	22.0	21.7	23.1	21.7	21.6	19.6	18.8
23. Long term unemployment rate (% labour force)	1.8	2.2	2.4	2.5	2.7	2.8	3.1	3.7	3.5	3.1	3.0	2.8
24. Youth unemployment ratio (% population aged 15-24)	7.6	8.1	8.3	8.2	8.7	8.8	9.4	9.6	8.9	8.3	7.6	7.1

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	5144	5222	5274	5310	5327	5326	5286	5313	5332	5352	5352	5407
2. Population aged 15-64	3446	3480	3504	3517	3529	3536	3551	3553	3539	3524	3456	3460
3. Total employment (000)	1326	1346	1360	1375	1384	1392	1455	1475	1486	1480	1489	1517
4. Population in employment aged 15-64	1249	1274	1308	1341	1364	1391	1426	1443	1457	1443	1469	1518
5. Employment rate (% population aged 15-64)	36.2	36.6	37.3	38.1	38.7	39.3	40.2	40.6	41.2	40.9	42.5	43.9
6. Employment rate (% population aged 15-24)	21.8	21.1	20.6	20.3	20.0	20.0	22.1	21.9	22.4	22.0	21.9	20.0
7. Employment rate (% population aged 25-54)	46.4	47.1	48.2	49.1	49.9	50.8	51.4	51.8	52.5	52.7	54.4	56.5
8. Employment rate (% population aged 55-64)	22.0	22.3	23.0	24.1	24.3	24.6	23.4	24.0	23.9	22.5	24.4	26.2
9. FTE employment rate (% population aged 15-64)	35.3	35.5	36.1	36.9	37.4	37.8	38.6	38.9	40.0	40.0	41.3	42.6
10. Self-employed (% total employment)	46.7	45.8	45.0	43.7	43.5	42.8	42.5	41.0	40.1	38.3	38.6	39.4
11. Part-time employment (% total employment)	8.1	7.7	8.0	8.4	8.7	8.5	10.0	9.9	7.8	7.1	8.1	7.6
12. Fixed term contracts (% total employment)	9.4	9.7	9.5	10.0	10.5	11.1	13.4	13.9	15.5	15.0	13.1	13.2
13. Employment in Services (% total employment)	54.0	57.4	60.0	61.9	62.0	63.6	66.1	65.9	67.1	68.8	69.6	70.3
14. Employment in Industry (% total employment)	17.0	15.4	14.9	14.9	15.0	14.3	13.2	13.3	13.2	12.5	12.1	11.7
15. Employment in Agriculture (% total employment)	29.1	27.2	25.0	23.2	23.0	22.1	20.7	20.8	19.7	18.7	18.3	18.1
16. Activity rate (% population aged 15-64)	41.8	42.6	43.4	44.6	45.8	46.6	48.6	49.7	49.7	48.7	50.1	51.1
17. Activity rate (% of population aged 15-24)	33.6	33.3	33.0	33.2	34.2	33.8	37.4	37.4	36.0	33.9	33.3	30.9
18. Activity rate (% of population aged 25-54)	51.6	52.6	54.0	55.2	56.8	57.9	59.9	61.2	61.6	61.2	62.9	64.8
19. Activity rate (% of population aged 55-64)	22.6	22.8	23.6	24.7	25.0	25.3	24.3	25.1	25.0	23.5	25.5	27.1
20. Total unemployment (000)	191	205	213	225	252	254	293	319	297	271	264	256
21. Unemployment rate (% labour force 15+)	12.9	13.6	13.7	14.1	15.2	15.2	16.7	17.8	16.7	15.5	15.0	14.2
22. Youth unemployment rate (% labour force 15-24)	34.4	36.1	37.0	38.3	41.0	40.4	39.7	41.1	37.8	35.0	34.3	35.6
23. Long term unemployment rate (% labour force)	7.2	7.6	7.7	8.1	9.3	9.3	9.9	10.5	9.8	8.6	8.3	8.5
24. Youth unemployment ratio (% population aged 15-24)	11.3	11.9	12.0	12.5	13.8	13.4	14.4	15.3	13.6	11.9	11.4	11.1

Source: Eurostat

Key employment indicators Spain

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	38569	38633	38669	38726	38871	38948	39084	39255	39590	39972	40292	40555
2. Population aged 15-64	25894	26091	26245	26400	26552	26656	26788	26911	27170	27437	27645	27805
3. Total employment (000)	13772	13381	13318	13572	13745	14147	14698	15209	15744	16107	16343	16646
4. Population in employment aged 15-64	12697	12169	12091	12393	12727	13165	13713	14462	15264	15839	16155	16590
5. Employment rate (% population aged 15-64)	49.0	46.6	46.1	46.9	47.9	49.4	51.2	53.7	56.2	57.7	58.4	59.7
6. Employment rate (% population aged 15-24)	30.0	25.3	24.1	24.4	24.2	25.3	27.0	30.4	32.3	33.5	33.3	33.4
7. Employment rate (% population aged 25-54)	60.5	58.7	58.4	59.5	60.6	61.9	63.6	66.1	68.3	69.4	70.1	71.3
8. Employment rate (% population aged 55-64)	36.0	34.5	32.6	32.3	33.2	34.1	35.1	35.0	37.0	39.2	39.7	40.8
9. FTE employment rate (% population aged 15-64)	47.8	45.1	44.3	45.1	45.7	47.1	48.9	51.4	53.8	55.3	56.2	57.2
10. Self-employed (% total employment)	19.3	19.2	19.1	18.7	18.9	18.1	18.0	17.2	16.7	16.3	15.8	15.3
11. Part-time employment (% total employment)	6.0	6.4	6.7	7.5	7.7	8.0	7.8	8.0	7.9	7.9	7.9	8.0
12. Fixed term contracts (% total employment)	34.2	33.0	34.2	35.2	34.1	33.8	33.2	32.9	32.0	31.7	31.0	30.6
13. Employment in Services (% total employment)	61.6	62.9	63.7	64.0	63.9	63.8	63.9	63.9	64.2	64.1	64.6	65.3
14. Employment in Industry (% total employment)	29.5	28.4	27.9	28.2	28.3	28.6	28.7	29.2	29.4	29.6	29.4	29.1
15. Employment in Agriculture (% total employment)	8.9	8.7	8.4	7.9	7.9	7.7	7.4	6.9	6.4	6.3	5.9	5.7
16. Activity rate (% population aged 15-64)	58.1	58.4	58.9	59.0	59.7	60.4	61.0	61.7	63.2	64.5	66.0	67.3
17. Activity rate (% of population aged 15-24)	43.8	42.7	42.1	40.7	40.0	39.6	39.8	40.9	41.4	42.4	42.9	43.2
18. Activity rate (% of population aged 25-54)	69.5	70.5	71.6	72.1	73.0	73.6	74.0	74.5	75.7	76.5	78.1	79.4
19. Activity rate (% of population aged 55-64)	38.5	37.6	36.0	35.6	36.2	37.1	37.8	37.4	39.5	41.9	42.7	43.8
20. Total unemployment (000)	2341	2917	3133	3007	2961	2816	2562	2182	1995	1889	2081	2125
21. Unemployment rate (% labour force 15+)	14.9	18.6	19.8	18.8	18.1	17.0	15.2	12.8	11.3	10.6	11.3	11.3
22. Youth unemployment rate (% labour force 15-24)	30.2	38.4	40.2	37.8	37.1	34.5	31.1	25.6	22.6	21.4	22.2	22.7
23. Long term unemployment rate (% labour force)	7.2	9.2	11.0	10.5	9.7	8.9	7.6	5.9	4.7	3.9	3.9	3.9
24. Youth unemployment ratio (% population aged 15-24)	13.0	15.8	16.2	15.0	14.8	13.9	12.6	10.5	9.5	9.1	9.5	9.8

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	18810	18844	18894	18949	18989	19021	19098	19171	19377	19569	19759	19896
2. Population aged 15-64	12741	12876	12970	13065	13166	13241	13342	13425	13588	13747	13879	13964
3. Total employment (000)	9232	8892	8836	8944	9004	9230	9558	9769	9974	10130	10200	10255
4. Population in employment aged 15-64	8549	8116	8016	8165	8316	8545	8902	9288	9666	9957	10079	10217
5. Employment rate (% population aged 15-64)	67.1	63.0	61.8	62.5	63.2	64.5	66.7	69.2	71.1	72.4	72.6	73.2
6. Employment rate (% population aged 15-24)	37.1	30.5	29.0	29.5	29.4	30.4	32.7	36.1	37.9	39.7	39.0	38.8
7. Employment rate (% population aged 25-54)	82.2	78.8	77.8	78.6	78.9	80.0	82.0	84.3	85.6	85.9	85.8	86.0
8. Employment rate (% population aged 55-64)	55.0	51.9	49.1	48.4	50.0	51.3	52.6	52.3	55.2	57.9	58.6	59.3
9. FTE employment rate (% population aged 15-64)	66.4	62.2	60.7	61.5	61.8	63.3	65.7	68.5	70.4	71.8	72.2	72.5
10. Self-employed (% total employment)	19.6	19.7	19.9	19.5	19.9	19.5	19.3	18.9	18.4	18.1	17.8	17.4
11. Part-time employment (% total employment)	2.2	2.4	2.6	2.9	3.0	3.1	2.9	2.9	2.7	2.7	2.5	2.6
12. Fixed term contracts (% total employment)	31.5	30.5	32.1	33.5	32.6	32.7	32.4	31.6	30.7	30.0	29.0	28.6
13. Employment in Services (% total employment)	52.4	53.7	54.6	54.6	54.3	53.9	53.7	53.4	53.7	53.2	53.7	53.8
14. Employment in Industry (% total employment)	37.6	36.4	35.8	36.5	36.6	37.3	37.6	38.5	38.7	39.3	39.2	39.4
15. Employment in Agriculture (% total employment)	10.1	9.9	9.6	8.9	9.1	8.9	8.7	8.1	7.6	7.5	7.1	6.8
16. Activity rate (% population aged 15-64)	76.9	76.4	75.7	75.0	75.3	75.4	75.9	76.3	77.3	78.3	79.0	79.7
17. Activity rate (% of population aged 15-24)	50.6	48.7	47.2	44.9	44.2	43.6	44.1	45.1	45.6	47.6	47.8	48.2
18. Activity rate (% of population aged 25-54)	91.9	92.2	92.0	91.7	91.7	91.5	91.5	91.5	91.7	91.6	92.1	92.4
19. Activity rate (% of population aged 55-64)	59.5	57.9	55.3	54.0	55.1	56.0	56.8	56.2	59.0	61.4	62.2	62.9
20. Total unemployment (000)	1185	1567	1632	1504	1474	1355	1168	947	845	809	887	914
21. Unemployment rate (% labour force 15+)	11.7	15.5	16.2	14.9	14.4	13.1	11.2	9.0	7.9	7.5	8.0	8.2
22. Youth unemployment rate (% labour force 15-24)	25.6	35.1	36.1	32.4	31.6	28.7	24.9	19.7	17.4	16.6	18.4	19.3
23. Long term unemployment rate (% labour force)	3.7	5.4	6.9	6.6	6.2	5.7	4.8	3.7	2.8	2.3	2.3	2.4
24. Youth unemployment ratio (% population aged 15-24)	12.9	16.7	16.6	14.4	14.2	13.0	11.3	9.0	8.1	7.9	8.8	9.3

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	19756	19787	19773	19775	19880	19926	19986	20083	20214	20403	20534	20660
2. Population aged 15-64	13158	13218	13278	13336	13387	13416	13446	13486	13583	13689	13766	13841
3. Total employment (000)	4514	4468	4466	4615	4732	4912	5139	5440	5770	5976	6143	6392
4. Population in employment aged 15-64	4148	4053	4075	4228	4411	4619	4810	5175	5598	5883	6076	6373
5. Employment rate (% population aged 15-64)	31.5	30.7	30.7	31.7	32.9	34.4	35.8	38.4	41.2	43.0	44.1	46.0
6. Employment rate (% population aged 15-24)	23.3	20.3	19.4	19.5	19.3	20.3	21.4	24.5	26.5	27.0	27.4	27.7
7. Employment rate (% population aged 25-54)	38.8	38.5	38.9	40.3	42.2	43.7	45.1	47.8	51.0	52.8	54.2	56.5
8. Employment rate (% population aged 55-64)	18.6	18.3	17.5	17.5	17.6	18.2	18.8	18.8	20.1	21.8	22.0	23.4
9. FTE employment rate (% population aged 15-64)	29.5	28.3	28.2	28.9	29.8	31.1	32.2	34.5	37.4	38.8	40.1	41.8
10. Self-employed (% total employment)	18.8	18.3	17.6	17.3	16.9	15.6	15.5	14.3	13.7	13.3	12.5	12.1
11. Part-time employment (% total employment)	13.8	14.5	15.0	16.4	16.7	17.1	16.9	17.1	16.8	16.8	16.7	16.8
12. Fixed term contracts (% total employment)	39.5	37.6	38.0	38.3	36.7	35.7	34.7	35.1	34.2	34.3	34.1	33.5
13. Employment in Services (% total employment)	79.7	80.6	81.1	81.6	81.6	82.0	82.4	82.3	81.8	82.1	82.4	83.2
14. Employment in Industry (% total employment)	13.7	13.1	12.8	12.6	12.8	12.6	12.6	12.9	13.6	13.5	13.5	12.8
15. Employment in Agriculture (% total employment)	6.6	6.3	6.1	5.8	5.6	5.4	5.0	4.8	4.5	4.4	4.1	4.0
16. Activity rate (% population aged 15-64)	39.9	41.0	42.4	43.3	44.3	45.5	46.1	47.2	49.2	50.7	52.8	54.8
17. Activity rate (% of population aged 15-24)	37.6	36.9	37.3	36.7	35.9	35.7	35.5	36.6	37.1	37.1	37.7	38.1
18. Activity rate (% of population aged 25-54)	47.0	48.9	51.2	52.6	54.2	55.6	56.3	57.4	59.6	61.2	63.9	66.3
19. Activity rate (% of population aged 55-64)	19.0	18.9	18.2	18.5	18.8	19.6	20.2	19.9	21.4	23.6	24.4	25.8
20. Total unemployment (000)	1156	1351	1501	1502	1487	1461	1394	1235	1149	1079	1195	1211
21. Unemployment rate (% labour force 15+)	21.0	24.1	26.1	25.3	24.4	23.4	21.8	18.7	16.7	15.4	16.4	15.9
22. Youth unemployment rate (% labour force 15-24)	36.2	42.8	45.4	44.4	44.0	41.6	38.8	33.0	29.2	27.8	27.3	27.2
23. Long term unemployment rate (% labour force)	13.6	15.7	17.8	16.8	15.4	14.1	12.4	9.4	7.6	6.3	6.3	6.0
24. Youth unemployment ratio (% population aged 15-24)	13.0	15.0	15.8	15.6	15.5	14.8	13.8	12.0	10.9	10.4	10.3	10.3

Source: Eurostat

Key employment indicators France

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	55587	55850	56059	56245	56424	56549	56661	56943	57326	57726	58562	59761
2. Population aged 15-64	36431	36546	36664	36778	36866	36927	36976	37172	37430	37682	38155	38852
3. Total employment (000)	22742	22449	22483	22682	22767	22867	23215	23680	24308	24720	24888	24934
4. Population in employment aged 15-64	21824	21662	21657	21893	21937	21994	22242	22645	23237	23659	23969	24380
5. Employment rate (% population aged 15-64)	59.9	59.3	59.1	59.5	59.5	59.6	60.2	60.9	62.1	62.8	62.8	62.8
6. Employment rate (% population aged 15-24)	30.1	27.6	26.2	26.1	25.3	24.8	25.6	27.1	28.6	29.5	29.5	29.9
7. Employment rate (% population aged 25-54)	77.2	76.8	76.6	77.1	76.9	76.7	77.1	77.7	78.8	79.4	79.4	79.3
8. Employment rate (% population aged 55-64)	29.8	29.7	29.6	29.6	29.4	29.0	28.3	28.8	29.9	31.9	34.7	36.8
9. FTE employment rate (% population aged 15-64)	57.5	56.9	56.2	56.6	56.7	56.5	56.9	57.3	58.7	59.9	60.4	58.5
10. Self-employed (% total employment)	12.0	11.6	11.2	10.7	10.4	10.1	9.7	9.5	9.2	8.9	8.8	8.8
11. Part-time employment (% total employment)	13.1	14.3	15.2	15.8	16.3	17.0	17.3	17.1	16.7	16.3	16.4	16.5
12. Fixed term contracts (% total employment)	10.6	10.9	11.5	12.4	12.8	13.4	13.9	14.5	15.2	14.6	13.5	12.9
13. Employment in Services (% total employment)	68.4	69.6	70.5	70.9	71.5	72.0	72.5	73.1	73.4	73.5	73.9	74.3
14. Employment in Industry (% total employment)	26.1	25.1	24.5	24.2	23.8	23.3	22.9	22.5	22.4	22.3	22.0	21.6
15. Employment in Agriculture (% total employment)	5.4	5.3	5.1	4.9	4.8	4.7	4.6	4.4	4.3	4.2	4.1	4.1
16. Activity rate (% population aged 15-64)	67.1	67.3	67.5	67.8	68.1	68.1	68.4	68.7	68.7	68.7	68.9	69.0
17. Activity rate (% of population aged 15-24)	39.1	37.7	36.5	35.8	35.2	34.4	34.6	35.7	35.6	36.2	36.5	37.4
18. Activity rate (% of population aged 25-54)	85.0	85.5	85.9	86.3	86.4	86.2	86.4	86.4	86.3	86.1	86.2	86.2
19. Activity rate (% of population aged 55-64)	32.2	31.9	31.7	31.9	32.0	31.5	30.9	31.2	32.1	33.8	36.7	38.8
20. Total unemployment (000)	2434	2766	2916	2799	2968	2964	2867	2736	2381	2212	2308	2479
21. Unemployment rate (% labour force 15+)	10.0	11.3	11.8	11.3	11.9	11.8	11.4	10.7	9.3	8.5	8.8	9.4
22. Youth unemployment rate (% labour force 15-24)	23.1	27.1	28.7	26.9	28.4	28.3	25.6	23.3	19.7	19.0	19.6	20.2
23. Long term unemployment rate (% labour force)	3.4	4.0	4.5	4.5	4.6	4.8	4.6	4.2	3.6	3.0	3.0	3.4
24. Youth unemployment ratio (% population aged 15-24)	8.8	10.0	10.1	9.2	9.6	9.5	8.8	8.2	7.0	7.0	7.2	7.2

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	26876	27011	27110	27203	27288	27345	27405	27575	27789	28010	28436	29040
2. Population aged 15-64	17912	17983	18046	18102	18152	18178	18202	18331	18485	18631	18907	19338
3. Total employment (000)	12841	12558	12529	12617	12645	12669	12810	13045	13382	13580	13604	13630
4. Population in employment aged 15-64	12309	12106	12057	12164	12165	12169	12264	12466	12786	12992	13092	13318
5. Employment rate (% population aged 15-64)	68.7	67.3	66.8	67.2	67.0	66.9	67.4	68.0	69.2	69.7	69.2	68.9
6. Employment rate (% population aged 15-24)	33.0	29.9	28.6	28.8	28.1	27.4	28.4	30.3	31.9	33.3	33.3	33.3
7. Employment rate (% population aged 25-54)	88.2	86.9	86.4	86.7	86.3	86.0	86.1	86.5	87.7	88.1	87.3	86.9
8. Employment rate (% population aged 55-64)	35.7	35.1	34.3	33.8	33.6	33.2	32.5	32.3	33.6	36.2	38.8	41.0
9. FTE employment rate (% population aged 15-64)	69.4	68.1	67.0	67.5	67.4	67.3	67.7	67.8	69.1	70.3	70.4	67.2
10. Self-employed (% total employment)	13.9	13.6	13.2	12.7	12.5	12.2	11.9	11.6	11.3	11.0	11.0	11.0
11. Part-time employment (% total employment)	3.8	4.3	4.8	5.1	5.3	5.5	5.6	5.5	5.3	5.0	5.2	5.4
12. Fixed term contracts (% total employment)	9.1	9.4	10.4	11.4	11.7	12.4	13.0	13.7	14.2	13.2	12.0	11.6
13. Employment in Services (% total employment)	58.4	59.6	60.6	60.8	61.2	61.7	62.3	62.9	63.1	63.2	63.4	63.7
14. Employment in Industry (% total employment)	35.4	34.2	33.3	33.3	33.0	32.4	31.9	31.5	31.4	31.5	31.3	31.1
15. Employment in Agriculture (% total employment)	6.2	6.1	6.1	5.9	5.9	5.9	5.8	5.6	5.4	5.3	5.3	5.3
16. Activity rate (% population aged 15-64)	75.3	75.0	74.9	75.0	75.2	75.1	75.2	75.3	75.2	75.2	75.2	75.0
17. Activity rate (% of population aged 15-24)	41.5	39.8	38.6	38.0	37.9	36.9	37.5	39.2	38.8	39.9	40.5	41.3
18. Activity rate (% of population aged 25-54)	95.1	95.1	95.2	95.2	95.2	94.9	94.6	94.4	94.2	94.0	93.8	93.3
19. Activity rate (% of population aged 55-64)	38.5	37.8	36.9	36.5	36.6	36.2	35.4	35.1	36.0	38.3	41.3	43.3
20. Total unemployment (000)	1083	1304	1370	1280	1385	1393	1322	1257	1057	988	1093	1171
21. Unemployment rate (% labour force 15+)	8.1	9.7	10.2	9.5	10.2	10.2	9.7	9.1	7.6	7.0	7.7	8.3
22. Youth unemployment rate (% labour force 15-24)	19.8	24.8	25.9	23.3	25.5	25.7	23.2	21.3	17.6	17.0	17.9	18.5
23. Long term unemployment rate (% labour force)	2.6	3.2	3.8	3.6	3.8	4.0	3.9	3.5	2.9	2.4	2.6	3.1
24. Youth unemployment ratio (% population aged 15-24)	7.9	9.5	9.5	8.3	9.1	9.1	8.5	8.2	6.8	6.8	7.1	7.0

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	28711	28839	28948	29042	29136	29204	29257	29368	29537	29716	30126	30721
2. Population aged 15-64	18519	18564	18617	18676	18714	18749	18775	18842	18945	19051	19249	19514
3. Total employment (000)	9901	9891	9954	10064	10122	10198	10405	10634	10925	11140	11284	11303
4. Population in employment aged 15-64	9515	9556	9600	9729	9772	9825	9979	10178	10451	10667	10877	11063
5. Employment rate (% population aged 15-64)	51.4	51.5	51.6	52.1	52.2	52.4	53.1	54.0	55.2	56.0	56.5	56.7
6. Employment rate (% population aged 15-24)	27.3	25.5	24.0	23.4	22.7	22.3	22.8	23.9	25.3	25.7	25.7	26.3
7. Employment rate (% population aged 25-54)	66.4	66.8	67.0	67.6	67.7	67.7	68.3	69.0	70.1	71.1	71.7	71.8
8. Employment rate (% population aged 55-64)	24.4	24.6	25.2	25.6	25.5	25.0	24.4	25.4	26.3	27.8	30.8	32.8
9. FTE employment rate (% population aged 15-64)	46.1	46.3	45.8	46.2	46.5	46.2	46.7	47.2	48.7	50.0	50.9	50.2
10. Self-employed (% total employment)	9.6	9.1	8.7	8.3	7.8	7.5	7.1	6.9	6.6	6.4	6.2	6.2
11. Part-time employment (% total employment)	25.2	26.9	28.3	29.1	30.0	31.2	31.6	31.4	30.8	30.1	29.8	29.8
12. Fixed term contracts (% total employment)	12.4	12.7	12.8	13.6	14.1	14.5	14.8	15.4	16.4	16.2	15.3	14.3
13. Employment in Services (% total employment)	81.0	82.0	82.6	83.2	83.9	84.2	84.6	85.0	85.4	85.6	86.2	86.6
14. Employment in Industry (% total employment)	14.6	13.9	13.6	13.2	12.7	12.5	12.3	12.0	11.7	11.6	11.2	10.8
15. Employment in Agriculture (% total employment)	4.4	4.1	3.8	3.6	3.4	3.3	3.1	3.0	2.9	2.8	2.7	2.7
16. Activity rate (% population aged 15-64)	59.2	59.8	60.3	60.8	61.1	61.2	61.9	62.3	62.4	62.4	62.7	63.1
17. Activity rate (% of population aged 15-24)	36.9	35.7	34.5	33.7	32.7	31.9	31.9	32.3	32.3	32.4	32.5	33.4
18. Activity rate (% of population aged 25-54)	75.1	76.1	76.9	77.5	77.8	77.8	78.4	78.6	78.5	78.5	78.9	79.1
19. Activity rate (% of population aged 55-64)	26.5	26.5	26.9	27.5	27.7	27.2	26.7	27.5	28.3	29.5	32.3	34.5
20. Total unemployment (000)	1351	1462	1546	1520	1584	1571	1545	1479	1324	1224	1216	1308
21. Unemployment rate (% labour force 15+)	12.4	13.2	13.8	13.5	13.9	13.7	13.4	12.7	11.2	10.3	10.0	10.6
22. Youth unemployment rate (% labour force 15-24)	26.5	29.5	31.6	30.7	31.5	31.2	28.3	25.6	22.2	21.6	21.8	22.3
23. Long term unemployment rate (% labour force)	4.5	4.8	5.4	5.5	5.6	5.7	5.5	5.1	4.4	3.7	3.5	3.9
24. Youth unemployment ratio (% population aged 15-24)	9.6	10.4	10.7	10.1	10.1	9.8	9.0	8.2	7.2	7.1	7.2	7.4

Source: Eurostat

Key employment indicators Ireland

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	3492	3484	3523	3543	3572	3623	3710	3754	3799	3853	3909	3965
2. Population aged 15-64	2190	2200	2241	2282	2332	2388	2455	2503	2547	2597	2641	2693
3. Total employment (000)	1155	1170	1220	1274	1324	1408	1522	1617	1692	1741	1765	1797
4. Population in employment aged 15-64	1120	1137	1188	1240	1291	1374	1488	1584	1660	1708	1731	1762
5. Employment rate (% population aged 15-64)	51.1	51.7	53.0	54.4	55.4	57.5	60.6	63.3	65.2	65.8	65.6	65.4
6. Employment rate (% population aged 15-24)	36.9	36.4	37.1	37.5	37.5	41.3	45.6	49.1	51.0	50.2	49.7	48.0
7. Employment rate (% population aged 25-54)	60.4	61.3	63.0	64.9	66.5	68.1	70.9	73.4	75.3	76.3	76.0	76.0
8. Employment rate (% population aged 55-64)	37.9	38.4	38.8	39.2	39.7	40.4	41.7	43.7	45.2	46.5	47.1	49.0
9. FTE employment rate (% population aged 15-64)	48.3	48.4	49.6	50.8	51.5	53.2	55.5	58.6	60.6	60.7	60.7	:
10. Self-employed (% total employment)	23.5	23.0	22.3	21.6	20.7	20.5	19.8	19.0	18.4	17.8	17.6	17.4
11. Part-time employment (% total employment)	9.1	10.5	11.1	11.6	11.4	13.6	16.5	16.4	16.4	16.4	16.5	16.8
12. Fixed term contracts (% total employment)	8.8	9.3	9.6	10.0	9.3	9.0	7.2	5.2	5.7	5.2	5.3	5.1
13. Employment in Services (% total employment)	58.3	59.5	59.6	60.3	61.1	61.0	62.2	62.8	63.3	63.8	65.0	65.8
14. Employment in Industry (% total employment)	28.1	27.4	27.9	27.8	27.7	28.6	28.8	28.6	29.0	29.1	28.1	27.7
15. Employment in Agriculture (% total employment)	13.6	13.1	12.5	11.9	11.2	10.4	9.0	8.6	7.7	7.1	6.9	6.5
16. Activity rate (% population aged 15-64)	60.4	61.1	61.8	61.9	62.5	64.1	65.6	67.1	68.2	68.5	68.7	68.8
17. Activity rate (% of population aged 15-24)	48.2	48.5	47.9	46.5	45.7	49.0	51.4	53.7	54.8	54.1	54.2	52.8
18. Activity rate (% of population aged 25-54)	69.9	70.8	71.9	72.7	74.0	75.0	76.2	77.3	78.4	78.9	78.9	79.2
19. Activity rate (% of population aged 55-64)	41.4	41.9	42.2	42.3	42.5	43.0	43.9	45.5	46.4	47.7	48.3	50.3
20. Total unemployment (000)	209	216	203	178	174	152	123	96	75	69	80	85
21. Unemployment rate (% labour force 15+)	15.4	15.6	14.3	12.3	11.7	9.9	7.5	5.6	4.3	3.9	4.3	4.6
22. Youth unemployment rate (% labour force 15-24)	24.4	25.3	23.0	19.5	18.2	15.4	11.3	8.4	6.7	6.7	8.0	8.3
23. Long term unemployment rate (% labour force)	9.7	10.0	9.7	8.0	7.4	6.0	3.9	2.6	1.6	1.2	1.3	1.5
24. Youth unemployment ratio (% population aged 15-24)	11.5	11.9	10.7	8.8	8.0	7.1	5.5	4.3	3.4	3.3	3.9	4.1

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	1742	1737	1752	1762	1779	1804	1841	1864	1887	1913	1941	1969
2. Population aged 15-64	1103	1107	1124	1145	1172	1199	1232	1256	1279	1303	1325	1350
3. Total employment (000)	747	744	767	795	817	855	915	962	1000	1023	1026	1040
4. Population in employment aged 15-64	718	717	741	768	790	828	888	935	974	997	1000	1013
5. Employment rate (% population aged 15-64)	65.1	64.8	65.9	67.1	67.5	69.1	72.1	74.5	76.2	76.5	75.5	75.0
6. Employment rate (% population aged 15-24)	38.7	37.6	38.4	39.6	39.7	43.8	48.7	52.2	54.8	54.1	52.8	51.1
7. Employment rate (% population aged 25-54)	78.6	78.5	79.7	81.0	81.8	82.6	84.9	86.9	88.2	88.6	87.3	86.9
8. Employment rate (% population aged 55-64)	59.5	59.4	59.5	59.7	59.0	58.8	60.1	61.7	63.1	64.2	63.9	64.7
9. FTE employment rate (% population aged 15-64)	63.4	62.7	63.9	65.2	65.2	67.0	70.0	73.6	75.9	75.6	74.4	:
10. Self-employed (% total employment)	30.6	30.1	29.6	28.9	27.6	27.5	26.6	25.8	25.3	24.9	24.9	24.6
11. Part-time employment (% total employment)	3.8	4.6	4.9	5.1	4.9	6.0	7.5	7.2	6.9	6.6	6.5	6.6
12. Fixed term contracts (% total employment)	6.7	7.4	8.1	8.3	7.2	6.9	5.6	4.1	4.6	4.3	4.5	4.3
13. Employment in Services (% total employment)	47.3	48.1	48.0	48.7	49.3	49.0	49.7	49.8	50.2	50.2	50.8	51.6
14. Employment in Industry (% total employment)	33.6	33.6	34.2	34.3	34.7	36.0	37.1	37.3	38.2	39.0	38.6	38.4
15. Employment in Agriculture (% total employment)	19.1	18.4	17.7	16.9	16.0	15.0	13.2	12.9	11.6	10.8	10.6	10.0
16. Activity rate (% population aged 15-64)	76.8	76.6	76.8	76.4	76.2	77.1	78.2	79.0	79.8	79.8	79.3	79.1
17. Activity rate (% of population aged 15-24)	51.5	51.1	50.8	49.7	48.9	52.3	55.0	57.2	58.8	58.4	58.0	56.6
18. Activity rate (% of population aged 25-54)	91.1	90.8	91.1	90.9	91.3	91.1	91.6	91.8	92.0	91.8	91.1	91.0
19. Activity rate (% of population aged 55-64)	65.0	64.8	64.8	64.4	63.2	62.8	63.4	64.1	64.9	66.0	65.6	66.4
20. Total unemployment (000)	132	134	126	109	106	93	76	58	45	42	50	53
21. Unemployment rate (% labour force 15+)	15.1	15.4	14.2	12.2	11.5	9.9	7.7	5.7	4.3	4.0	4.6	4.9
22. Youth unemployment rate (% labour force 15-24)	25.7	27.1	24.8	20.8	19.0	16.0	11.6	8.3	6.4	6.9	8.7	9.1
23. Long term unemployment rate (% labour force)	10.0	10.3	10.1	8.5	7.8	6.5	4.6	3.2	2.0	1.6	1.7	1.9
24. Youth unemployment ratio (% population aged 15-24)	13.0	13.5	12.3	10.0	9.0	7.9	6.1	4.5	3.6	3.8	4.6	4.8

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	1749	1747	1772	1781	1792	1819	1868	1891	1913	1940	1968	1997
2. Population aged 15-64	1087	1094	1117	1137	1161	1189	1223	1247	1269	1294	1316	1343
3. Total employment (000)	409	427	453	479	507	553	607	655	692	718	738	757
4. Population in employment aged 15-64	403	421	448	473	501	546	600	649	686	711	731	749
5. Employment rate (% population aged 15-64)	37.1	38.5	40.1	41.6	43.2	45.9	49.0	52.0	54.1	55.0	55.6	55.8
6. Employment rate (% population aged 15-24)	35.0	35.3	35.7	35.4	35.1	38.8	42.4	45.8	47.1	46.3	46.5	44.8
7. Employment rate (% population aged 25-54)	42.3	44.2	46.5	49.0	51.3	53.8	57.1	60.0	62.5	64.0	64.6	65.0
8. Employment rate (% population aged 55-64)	16.5	17.7	18.2	18.6	20.2	21.6	23.1	25.5	27.1	28.5	30.0	33.1
9. FTE employment rate (% population aged 15-64)	33.1	33.8	35.3	36.4	37.8	39.3	41.0	43.6	45.2	45.7	47.0	:
10. Self-employed (% total employment)	10.5	10.6	9.9	9.6	9.5	9.6	9.4	8.9	8.5	7.8	7.5	7.5
11. Part-time employment (% total employment)	18.7	20.8	21.5	22.4	22.0	25.4	30.0	30.0	30.1	30.5	30.4	30.8
12. Fixed term contracts (% total employment)	11.8	11.9	11.6	12.1	11.9	11.7	9.3	6.6	7.0	6.2	6.2	6.0
13. Employment in Services (% total employment)	78.5	79.5	79.3	79.5	80.1	79.7	81.1	81.9	82.2	83.3	84.7	85.3
14. Employment in Industry (% total employment)	18.0	16.7	17.1	16.9	16.3	17.0	16.3	15.7	15.7	14.9	13.6	13.0
15. Employment in Agriculture (% total employment)	3.5	3.8	3.6	3.5	3.6	3.3	2.6	2.4	2.1	1.8	1.7	1.7
16. Activity rate (% population aged 15-64)	43.8	45.5	46.7	47.3	48.7	51.1	52.9	55.0	56.5	57.2	58.0	58.4
17. Activity rate (% of population aged 15-24)	44.7	45.6	44.9	43.1	42.3	45.5	47.7	50.1	50.7	49.7	50.4	48.9
18. Activity rate (% of population aged 25-54)	48.7	51.0	52.9	54.6	56.8	59.1	60.9	62.9	64.8	66.1	66.8	67.4
19. Activity rate (% of population aged 55-64)	17.9	19.1	19.8	20.2	21.6	22.9	24.2	26.6	27.8	29.2	30.7	33.9
20. Total unemployment (000)	78	81	77	68	68	60	47	38	31	28	30	33
21. Unemployment rate (% labour force 15+)	16.0	16.0	14.6	12.5	11.8	9.9	7.3	5.5	4.3	3.8	4.0	4.2
22. Youth unemployment rate (% labour force 15-24)	22.7	23.1	20.8	17.9	17.2	14.6	11.0	8.6	7.1	6.4	7.0	7.4
23. Long term unemployment rate (% labour force)	9.2	9.5	9.1	7.3	6.7	5.1	2.8	1.9	1.0	0.8	0.7	0.9
24. Youth unemployment ratio (% population aged 15-24)	9.9	10.2	9.0	7.5	7.0	6.2	4.9	4.0	3.3	2.9	3.2	3.4

Source: Eurostat

Key employment indicators Italy

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	56149	56343	56493	56605	56746	56867	56933	57044	57229	57382	57399
2. Population aged 15-64	:	38470	38587	38634	38623	38648	38667	38639	38642	38645	38676	38692
3. Total employment (000)	22920	22348	22017	21993	22130	22215	22448	22698	23128	23581	24008	24286
4. Population in employment aged 15-64	:	20130	19818	19691	19788	19837	20088	20357	20753	21169	21478	21710
5. Employment rate (% population aged 15-64)	:	52.3	51.4	51.0	51.2	51.3	52.0	52.7	53.7	54.8	55.5	56.1
6. Employment rate (% population aged 15-24)	:	28.3	26.5	25.6	25.3	25.2	25.6	25.7	26.4	26.3	25.8	25.2
7. Employment rate (% population aged 25-54)	:	66.8	65.9	65.6	65.7	65.7	66.3	67.0	68.0	69.2	70.1	70.7
8. Employment rate (% population aged 55-64)	:	30.2	29.3	28.4	28.6	27.9	27.7	27.6	27.7	28.0	28.9	30.3
9. FTE employment rate (% population aged 15-64)	51.5	51.0	49.9	49.5	49.5	49.3	50.5	51.0	51.7	52.7	53.6	54.3
10. Self-employed (% total employment)	27.3	26.7	26.7	26.9	26.9	26.7	26.6	26.2	26.1	25.7	25.2	25.0
11. Part-time employment (% total employment)	:	5.5	5.9	6.3	6.5	6.8	7.3	7.9	8.4	8.4	8.6	8.5
12. Fixed term contracts (% total employment)	:	6.2	6.8	7.4	7.4	7.9	8.6	9.5	10.1	9.8	9.9	9.9
13. Employment in Services (% total employment)	61.8	62.3	62.6	63.0	63.8	64.0	64.3	64.9	65.5	65.8	66.2	66.5
14. Employment in Industry (% total employment)	31.3	31.2	31.1	31.0	30.5	30.4	30.4	30.1	29.6	29.3	29.2	29.1
15. Employment in Agriculture (% total employment)	6.9	6.5	6.3	6.0	5.7	5.6	5.3	5.0	4.9	4.8	4.6	4.4
16. Activity rate (% population aged 15-64)	:	58.3	57.8	57.8	58.1	58.2	59.0	59.6	60.1	60.6	61.1	61.5
17. Activity rate (% of population aged 15-24)	:	40.8	39.4	38.8	38.4	38.3	38.8	38.3	38.4	36.6	35.5	34.6
18. Activity rate (% of population aged 25-54)	:	71.9	71.7	71.9	72.2	72.4	73.2	73.8	74.3	75.1	75.7	76.3
19. Activity rate (% of population aged 55-64)	:	31.1	30.3	29.5	29.8	29.2	29.0	29.0	29.0	29.2	30.2	31.5
20. Total unemployment (000)	2055	2296	2498	2605	2626	2653	2711	2629	2455	2249	2160	2087
21. Unemployment rate (% labour force 15+)	8.7	10.1	11.0	11.5	11.5	11.6	11.7	11.3	10.4	9.4	9.0	8.6
22. Youth unemployment rate (% labour force 15-24)	26.7	30.1	31.9	33.3	33.6	33.5	33.5	32.3	30.7	28.1	27.2	27.0
23. Long term unemployment rate (% labour force)	:	5.8	6.7	7.3	7.5	7.5	7.0	6.8	6.4	5.8	5.3	4.9
24. Youth unemployment ratio (% population aged 15-24)	:	12.4	12.7	13.0	12.9	12.8	12.9	12.3	11.7	10.2	9.7	9.3

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	27132	27236	27310	27372	27462	27540	27580	27651	27764	27858	27873
2. Population aged 15-64	:	18982	19066	19110	19128	19174	19210	19211	19232	19258	19293	19309
3. Total employment (000)	:	14636	14372	14298	14299	14308	14379	14434	14610	14747	14950	15075
4. Population in employment aged 15-64	:	13158	12910	12776	12761	12748	12838	12920	13076	13201	13332	13438
5. Employment rate (% population aged 15-64)	:	69.3	67.7	66.9	66.7	66.5	66.8	67.3	68.0	68.5	69.1	69.6
6. Employment rate (% population aged 15-24)	:	33.5	31.4	30.4	30.2	30.2	30.7	30.1	30.7	30.4	30.3	29.7
7. Employment rate (% population aged 25-54)	:	87.1	85.4	84.5	84.2	83.9	84.0	84.3	84.9	85.5	86.0	86.5
8. Employment rate (% population aged 55-64)	:	48.0	46.3	44.6	43.9	42.0	41.4	41.2	40.9	40.4	41.3	42.8
9. FTE employment rate (% population aged 15-64)	69.0	68.3	66.4	65.5	65.1	64.7	66.3	66.7	67.0	67.6	68.4	69.0
10. Self-employed (% total employment)	:	29.0	29.1	29.6	29.8	29.7	29.7	29.4	29.6	29.3	28.8	28.6
11. Part-time employment (% total employment)	:	2.5	2.7	2.9	3.0	3.1	3.4	3.5	3.7	3.5	3.5	3.2
12. Fixed term contracts (% total employment)	:	5.0	5.7	6.2	6.5	6.9	7.6	8.2	8.7	8.3	8.4	8.2
13. Employment in Services (% total employment)	:	56.6	56.9	57.2	57.7	58.0	58.0	58.2	58.8	58.8	58.9	58.9
14. Employment in Industry (% total employment)	:	37.0	36.8	36.7	36.3	36.1	36.3	36.3	35.9	36.0	36.0	36.1
15. Employment in Agriculture (% total employment)	:	6.4	6.3	6.1	6.0	5.9	5.6	5.4	5.3	5.3	5.1	5.0
16. Activity rate (% population aged 15-64)	:	75.0	74.2	73.5	73.4	73.2	73.6	73.8	74.1	74.1	74.3	74.7
17. Activity rate (% of population aged 15-24)	:	46.0	44.6	43.7	43.2	43.1	43.8	42.6	42.5	40.6	39.9	39.2
18. Activity rate (% of population aged 25-54)	:	91.7	91.0	90.4	90.3	90.0	90.3	90.5	90.6	90.7	91.0	91.5
19. Activity rate (% of population aged 55-64)	:	49.4	47.9	46.4	45.7	43.9	43.4	43.2	42.7	42.3	43.0	44.4
20. Total unemployment (000)	947	1095	1224	1263	1276	1274	1295	1246	1156	1057	1018	990
21. Unemployment rate (% labour force 15+)	6.3	7.5	8.5	8.8	8.9	8.9	9.0	8.6	8.0	7.3	7.0	6.7
22. Youth unemployment rate (% labour force 15-24)	23.2	26.3	28.6	29.1	29.3	29.1	29.4	28.7	27.1	24.9	24.0	24.1
23. Long term unemployment rate (% labour force)	:	4.1	5.0	5.4	5.7	5.7	5.4	5.2	4.9	4.5	4.1	3.9
24. Youth unemployment ratio (% population aged 15-24)	:	12.4	12.9	12.8	12.8	12.5	12.9	12.1	11.4	10.1	9.6	9.4

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	29016	29108	29183	29233	29284	29327	29353	29393	29465	29524	29525
2. Population aged 15-64	:	19489	19522	19525	19496	19475	19457	19428	19410	19388	19383	19384
3. Total employment (000)	:	7713	7645	7695	7831	7906	8069	8263	8518	8834	9058	9211
4. Population in employment aged 15-64	:	6973	6909	6916	7027	7089	7250	7437	7677	7968	8146	8272
5. Employment rate (% population aged 15-64)	:	35.8	35.4	35.4	36.0	36.4	37.3	38.3	39.6	41.1	42.0	42.7
6. Employment rate (% population aged 15-24)	:	23.2	21.8	20.9	20.4	20.3	20.7	21.3	22.1	22.1	21.3	20.6
7. Employment rate (% population aged 25-54)	:	46.6	46.3	46.6	47.3	47.6	48.5	49.6	50.9	52.8	54.0	54.9
8. Employment rate (% population aged 55-64)	:	14.1	13.7	13.5	14.5	14.8	15.0	15.0	15.3	16.2	17.3	18.5
9. FTE employment rate (% population aged 15-64)	34.7	34.3	34.0	33.8	34.3	34.3	35.0	35.7	36.7	38.1	39.2	39.9
10. Self-employed (% total employment)	:	22.5	22.4	21.9	21.8	21.4	21.2	20.8	20.3	19.8	19.4	19.2
11. Part-time employment (% total employment)	:	11.2	12.0	12.7	12.9	13.4	14.3	15.6	16.5	16.6	16.9	17.3
12. Fixed term contracts (% total employment)	:	8.2	8.7	9.3	8.8	9.4	10.3	11.5	12.2	11.9	12.0	12.2
13. Employment in Services (% total employment)	:	72.7	73.1	73.6	74.7	74.7	75.1	76.4	76.8	77.4	78.0	78.7
14. Employment in Industry (% total employment)	:	20.5	20.7	20.5	20.1	20.2	20.1	19.4	19.1	18.6	18.2	17.8
15. Employment in Agriculture (% total employment)	:	6.8	6.3	5.9	5.3	5.1	4.7	4.2	4.1	4.1	3.9	3.5
16. Activity rate (% population aged 15-64)	:	41.9	41.9	42.3	43.0	43.5	44.6	45.5	46.3	47.3	47.9	48.3
17. Activity rate (% of population aged 15-24)	:	35.8	34.4	34.1	33.7	33.6	33.9	34.0	34.3	32.6	31.0	29.9
18. Activity rate (% of population aged 25-54)	:	52.1	52.6	53.4	54.1	54.6	56.0	57.1	57.9	59.3	60.3	60.9
19. Activity rate (% of population aged 55-64)	:	14.5	14.2	14.1	15.2	15.5	15.7	15.8	16.1	16.9	18.1	19.3
20. Total unemployment (000)	1108	1201	1273	1342	1351	1379	1416	1383	1299	1191	1142	1097
21. Unemployment rate (% labour force 15+)	13.0	14.5	15.4	16.1	15.9	16.1	16.1	15.5	14.3	12.9	12.2	11.6
22. Youth unemployment rate (% labour force 15-24)	31.0	35.0	36.2	38.5	39.1	39.2	38.6	36.9	35.0	32.1	31.4	30.8
23. Long term unemployment rate (% labour force)	:	8.8	9.8	10.5	10.6	10.5	9.5	9.3	8.8	8.0	7.2	6.7
24. Youth unemployment ratio (% population aged 15-24)	:	12.5	12.4	13.1	13.1	13.0	13.0	12.4	11.9	10.4	9.7	9.2

Source: Eurostat

Key employment indicators Cyprus

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	668	674	681	690
2. Population aged 15-64	:	:	:	:	:	:	:	:	438	444	449	460
3. Total employment (000)	:	:	:	:	288	287	290	294	302	:	:	:
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	288	301	308	318
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	65.7	67.8	68.6	69.2
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	37.0	38.4	37.0	37.6
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	78.3	80.8	82.2	82.6
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	49.4	49.1	49.4	50.4
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	62.7	64.0	66.2	67.4	67.8
10. Self-employed (% total employment)	:	:	:	:	21.8	20.7	19.9	20.0	:	:	:	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
13. Employment in Services (% total employment)	:	:	:	:	65.4	67.0	67.8	68.5	70.2	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	24.2	23.6	22.7	22.1	20.7	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	10.4	9.4	9.5	9.4	9.1	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	69.1	70.6	71.2	72.4
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	41.0	41.8	40.2	41.3
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	81.9	83.5	84.7	85.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	51.3	51.7	51.3	52.7
20. Total unemployment (000)	:	:	:	:	:	16	16	17	16	14	13	15
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	5.2	4.4	3.9	4.4
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	11.5	10.3	9.7	10.6
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	1.3	0.9	0.8	1.1
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	4.9	4.4	3.9	4.4

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	324	327	330	333
2. Population aged 15-64	:	:	:	:	:	:	:	:	211	214	216	221
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	166	170	171	174
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	78.7	79.3	78.9	78.8
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	39.6	39.8	38.0	38.7
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	92.6	93.4	93.0	92.2
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	67.3	66.9	67.3	68.9
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	78.5	78.9	79.3	79.5	79.3
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	81.4	81.5	81.3	82.2
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	42.4	42.5	41.3	42.6
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	95.3	95.3	95.2	95.2
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	69.6	69.5	69.7	73.2
20. Total unemployment (000)	:	:	:	:	:	5	6	6	6	5	6	8
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	3.2	2.9	3.0	4.0
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	7.1	7.6	9.3	10.5
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	0.5	0.6	0.5	0.8
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	3.0	3.2	4.0	4.4

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	344	347	351	356
2. Population aged 15-64	:	:	:	:	:	:	:	:	227	230	233	239
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	122	132	138	144
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	53.5	57.2	59.1	60.4
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	34.7	37.1	36.0	36.6
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	64.6	69.0	72.0	73.6
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	32.1	32.2	32.2	32.7
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	48.0	50.2	54.1	56.3	57.2
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	57.7	60.6	61.8	63.3
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	39.9	41.2	39.2	40.2
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	69.0	72.3	74.9	76.9
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	33.7	34.7	33.8	33.2
20. Total unemployment (000)	:	:	:	:	:	11	10	11	11	9	7	8
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	7.8	6.4	4.9	5.1
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	15.3	12.8	10.0	10.6
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	2.4	1.3	1.1	1.4
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	6.2	5.4	3.9	4.4

Source: Eurostat

Key employment indicators Latvia

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	2424	2402	2384	2366	2344	2330
2. Population aged 15-64	:	:	:	:	:	:	1602	1601	1600	1594	1590	1588
3. Total employment (000)	1294	1205	1083	1046	1018	1037	1043	1038	1038	:	:	:
4. Population in employment aged 15-64	:	:	:	:	:	:	959	941	920	935	960	982
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	59.9	58.8	57.5	58.6	60.4	61.8
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	33.3	32.3	29.6	28.8	31.0	31.5
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	76.0	74.6	73.6	75.4	76.1	77.7
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	36.3	36.6	36.0	36.9	41.7	44.1
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	58.2	57.2	56.0	57.6	59.9	61.1
10. Self-employed (% total employment)	11.4	26.3	32.3	19.9	19.7	21.5	19.8	18.3	16.9	:	:	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	12.8	12.1	11.3	:	:	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	8.0	7.6	6.7	:	:	:
13. Employment in Services (% total employment)	48.1	51.9	54.2	55.7	56.2	55.5	57.9	59.1	60.3	:	:	:
14. Employment in Industry (% total employment)	31.9	28.6	26.5	25.8	25.5	26.0	24.5	23.9	24.4	:	:	:
15. Employment in Agriculture (% total employment)	20.0	19.5	19.3	18.5	18.3	18.5	17.6	17.0	15.3	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	69.8	68.5	67.2	67.7	68.8	69.2
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	45.0	42.5	38.1	36.9	39.1	38.4
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	87.1	86.0	85.5	86.2	85.7	86.3
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	40.6	39.9	39.7	41.4	46.3	47.9
20. Total unemployment (000)	:	:	:	163	176	178	165	158	150	143	142	118
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	14.3	14.0	13.7	12.9	12.6	10.5
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	26.8	23.6	21.4	23.1	23.9	17.6
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	7.9	7.6	7.9	7.2	5.7	4.3
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	12.0	9.9	8.2	8.7	9.3	6.9

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	1117	1105	1098	1089	1078	1071
2. Population aged 15-64	:	:	:	:	:	:	765	765	765	764	762	761
3. Total employment (000)	:	:	:	:	:	:	540	539	531	:	:	:
4. Population in employment aged 15-64	:	:	:	:	:	:	498	490	471	473	490	503
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	65.1	64.1	61.5	61.9	64.3	66.1
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	37.7	36.9	34.7	32.8	36.4	37.1
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	79.5	77.8	74.8	76.7	78.1	80.7
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	48.1	49.9	48.4	46.2	50.5	51.3
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	63.0	63.0	60.7	61.5	63.5	66.3
10. Self-employed (% total employment)	:	:	:	:	:	:	21.1	19.5	18.4	:	:	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	12.5	11.0	9.7	:	:	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	10.2	10.0	8.8	:	:	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	48.8	49.7	50.7	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	31.1	31.1	31.9	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	20.1	19.2	17.4	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	76.4	75.1	72.7	72.6	74.1	74.1
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	50.0	49.0	44.1	42.2	44.6	44.5
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	91.4	90.2	88.2	89.0	89.2	89.7
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	55.8	54.4	54.0	52.9	57.1	56.1
20. Total unemployment (000)	:	:	:	100	107	100	90	85	82	81	79	59
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	15.1	14.4	14.4	14.2	13.6	10.3
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	27.4	25.5	21.2	23.5	22.4	13.7
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	8.3	7.6	8.3	8.1	6.5	4.1
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	13.8	12.5	9.5	10.3	9.7	6.3

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	1307	1297	1286	1277	1266	1258
2. Population aged 15-64	:	:	:	:	:	:	836	836	835	831	828	826
3. Total employment (000)	:	:	:	:	:	:	503	499	507	:	:	:
4. Population in employment aged 15-64	:	:	:	:	:	:	461	451	449	462	471	478
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	55.1	53.9	53.8	55.7	56.8	57.9
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	28.8	27.6	24.4	24.6	25.4	25.7
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	72.7	71.6	72.5	74.3	74.3	74.9
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	27.5	26.6	26.7	30.0	35.2	38.8
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	53.8	52.0	51.6	54.1	56.7	56.5
10. Self-employed (% total employment)	:	:	:	:	:	:	18.5	17.1	15.4	:	:	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	13.1	13.2	12.8	:	:	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	5.7	5.1	4.6	:	:	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	67.3	69.0	70.2	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	17.7	16.4	16.7	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	15.1	14.7	13.1	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	63.9	62.4	62.1	63.2	63.9	64.7
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	39.8	35.8	31.9	31.5	33.4	32.1
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	83.2	82.2	83.1	83.5	82.3	83.0
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	29.2	29.1	29.0	32.8	38.2	41.8
20. Total unemployment (000)	:	:	:	63	69	79	75	73	69	62	63	59
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	13.6	13.6	12.9	11.5	11.4	10.7
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	26.0	20.8	21.6	22.4	25.8	23.0
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	7.5	7.6	7.5	6.3	4.8	4.6
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	10.3	7.3	6.9	7.2	8.8	7.6

Source: Eurostat

Key employment indicators Lithuania

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	2812	2806	2802	2796	3453	3445
2. Population aged 15-64	:	:	:	:	:	:	2344	2330	2319	2312	2303	2305
3. Total employment (000)	:	:	:	:	:	:	:	:	1585	1522	1411	1442
4. Population in employment aged 15-64	:	:	:	:	:	:	1460	1438	1370	1329	1379	1408
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	62.3	61.7	59.1	57.5	59.9	61.1
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	33.1	31.1	25.9	22.7	23.8	22.5
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	78.2	77.6	75.2	74.1	76.9	78.9
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	39.5	40.9	40.4	38.9	41.6	44.7
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	59.4	58.0	60.3	62.0
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	39.6	37.8	20.0	20.3
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	10.2	9.9	10.8	9.6
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	4.4	5.8	7.2	7.2
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	53.9	55.7	54.8	54.1
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	26.2	27.2	27.4	28.0
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	19.9	17.1	17.8	17.8
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	72.1	72.2	70.8	69.7	69.6	69.9
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	43.2	42.2	36.9	33.1	30.9	30.0
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	89.8	90.0	89.0	88.5	88.5	88.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	42.4	43.4	45.1	44.9	46.9	50.5
20. Total unemployment (000)	:	:	:	:	:	:	210	200	283	283	225	214
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	11.8	11.2	15.7	16.1	13.6	12.7
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	23.6	23.0	29.3	30.2	23.9	27.2
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	6.7	4.3	7.6	9.1	7.3	6.1
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	11.2	10.2	11.6	10.8	7.8	8.8

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	1289	1284	1281	1275	1611	1607
2. Population aged 15-64	:	:	:	:	:	:	1128	1121	1116	1109	1104	1108
3. Total employment (000)	:	:	:	:	:	:	:	:	780	748	710	728
4. Population in employment aged 15-64	:	:	:	:	:	:	747	721	675	653	692	709
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	66.2	64.3	60.5	58.9	62.7	64.0
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	37.4	33.8	28.9	24.6	27.1	26.3
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	79.2	77.3	74.0	73.3	78.0	79.8
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	54.4	54.4	50.6	49.2	51.5	55.3
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	61.6	59.9	64.4	65.8
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	44.0	43.5	23.1	23.5
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	9.2	8.4	9.4	7.4
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	5.9	7.6	9.8	9.6
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	43.5	44.6	44.6	44.5
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	32.7	33.9	34.0	34.4
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	23.8	21.5	21.4	21.2
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	78.2	76.6	74.5	73.7	73.6	73.5
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	50.9	47.4	42.2	38.3	35.2	34.1
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	92.4	91.0	89.9	89.7	90.5	90.5
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	58.2	59.0	58.1	59.0	59.8	62.0
20. Total unemployment (000)	:	:	:	:	:	:	123	114	165	165	115	102
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	13.1	12.3	17.9	18.4	13.7	12.1
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	27.0	24.2	30.2	33.6	22.0	21.5
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	7.1	4.9	9.1	10.7	7.4	5.7
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	15.7	12.4	13.5	13.6	8.1	7.5

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	1524	1522	1521	1521	1842	1839
2. Population aged 15-64	:	:	:	:	:	:	1216	1209	1204	1203	1200	1197
3. Total employment (000)	:	:	:	:	:	:	:	:	806	774	701	714
4. Population in employment aged 15-64	:	:	:	:	:	:	713	717	695	676	687	699
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	58.6	59.4	57.7	56.2	57.2	58.4
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	28.6	28.2	22.8	20.9	20.5	18.5
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	77.4	77.9	76.3	74.8	75.8	78.0
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	28.3	30.6	32.6	31.1	34.1	36.7
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	57.3	56.2	56.5	58.4
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	35.1	31.8	16.9	17.1
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	11.1	11.4	12.3	11.8
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	3.1	4.2	4.9	4.8
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	64.0	66.4	65.1	64.0
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	20.0	20.7	20.8	21.6
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	16.0	12.9	14.1	14.4
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	66.5	68.2	67.3	66.0	65.8	66.5
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	35.5	36.9	31.5	27.8	26.6	25.8
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	87.3	89.1	88.2	87.4	86.7	87.2
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	30.4	31.6	35.2	34.3	37.2	41.8
20. Total unemployment (000)	:	:	:	:	:	:	87	86	118	119	109	112
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	10.4	10.0	13.4	13.8	13.4	13.3
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	18.1	21.2	28.1	25.8	26.2	34.0
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	6.2	3.6	6.2	7.4	7.1	6.5
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	6.6	7.9	9.6	7.9	7.6	10.0

Source: Eurostat. Note: The EU harmonised methodology covering all the population was implemented on 2002 data (break in series). Before 2002, the total population figures covered only persons aged 15+.

Key employment indicators Luxembourg

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	384	391	397	404	411	416	420	425	430	433	438	450
2. Population aged 15-64	266	269	272	275	278	280	282	285	288	293	296	302
3. Total employment (000)	201	204	209	216	221	228	239	251	265	280	288	294
4. Population in employment aged 15-64	163	164	163	162	165	168	171	176	181	185	187	184
5. Employment rate (% population aged 15-64)	61.4	60.8	59.9	58.7	59.2	59.9	60.5	61.7	62.7	63.1	63.1	:
6. Employment rate (% population aged 15-24)	48.9	45.4	42.1	38.3	36.6	34.5	32.9	31.8	31.9	32.3	29.7	:
7. Employment rate (% population aged 25-54)	73.9	73.4	73.2	72.2	73.3	74.4	75.1	76.9	78.2	78.7	78.7	:
8. Employment rate (% population aged 55-64)	24.9	25.4	23.5	23.7	22.9	23.9	25.1	26.4	26.7	25.6	29.5	:
9. FTE employment rate (% population aged 15-64)	59.6	58.9	58.0	56.6	57.4	58.3	58.0	59.1	60.4	60.0	60.9	:
10. Self-employed (% total employment)	8.3	8.1	7.8	8.3	8.3	8.1	7.9	7.6	7.3	7.0	6.9	:
11. Part-time employment (% total employment)	6.5	6.9	8.0	8.5	8.0	8.2	9.1	9.8	10.4	10.4	10.3	:
12. Fixed term contracts (% total employment)	3.4	3.9	4.3	4.1	4.2	4.1	4.9	5.2	5.3	5.6	5.0	:
13. Employment in Services (% total employment)	67.6	68.6	70.0	70.5	71.5	72.3	73.0	74.2	75.4	76.2	76.7	77.2
14. Employment in Industry (% total employment)	29.7	29.0	27.8	27.4	26.5	25.7	25.1	24.0	22.9	22.4	22.0	21.5
15. Employment in Agriculture (% total employment)	2.7	2.4	2.2	2.1	2.0	2.0	1.9	1.8	1.7	1.4	1.3	1.3
16. Activity rate (% population aged 15-64)	62.7	62.4	62.0	60.6	61.2	61.6	62.1	63.2	64.1	64.4	65.0	:
17. Activity rate (% of population aged 15-24)	50.8	47.8	45.6	41.4	40.1	37.2	35.2	34.1	34.1	34.5	32.7	:
18. Activity rate (% of population aged 25-54)	75.2	75.1	75.3	74.1	75.3	76.1	76.9	78.5	79.7	80.0	80.6	:
19. Activity rate (% of population aged 55-64)	25.2	25.6	23.7	23.7	23.0	24.1	25.3	26.7	27.0	25.7	29.7	:
20. Total unemployment (000)	4	4	5	5	5	5	5	4	4	4	5	7
21. Unemployment rate (% labour force 15+)	2.1	2.6	3.2	2.9	2.9	2.7	2.7	2.4	2.3	2.1	2.8	3.7
22. Youth unemployment rate (% labour force 15-24)	3.8	5.2	7.1	7.2	8.2	7.9	6.9	6.9	7.2	7.3	8.3	10.4
23. Long term unemployment rate (% labour force)	0.4	0.8	0.9	0.7	0.8	0.9	0.9	0.7	0.6	0.6	0.7	0.8
24. Youth unemployment ratio (% population aged 15-24)	2.0	2.5	3.1	2.9	3.3	2.9	2.5	2.3	2.5	2.6	2.8	3.7

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	189	193	196	199	203	206	208	211	212	214	216	222
2. Population aged 15-64	135	137	138	140	141	142	142	144	146	148	149	153
3. Total employment (000)	128	131	135	141	143	146	150	159	167	177	180	192
4. Population in employment aged 15-64	104	104	104	104	104	105	106	107	109	111	112	114
5. Employment rate (% population aged 15-64)	76.5	76.4	74.9	74.4	74.3	74.3	74.5	74.5	75.0	75.0	75.3	:
6. Employment rate (% population aged 15-24)	49.9	47.2	43.3	39.6	38.3	36.9	34.9	34.1	35.0	34.6	32.7	:
7. Employment rate (% population aged 25-54)	93.7	93.2	92.5	92.2	92.1	92.1	92.8	92.8	92.9	93.2	93.5	:
8. Employment rate (% population aged 55-64)	35.1	37.0	34.1	35.1	35.5	35.4	35.2	35.8	37.2	35.9	39.2	:
9. FTE employment rate (% population aged 15-64)	76.3	76.6	74.8	74.7	74.6	75.0	74.9	74.7	75.9	74.9	76.0	:
10. Self-employed (% total employment)	8.1	8.1	7.6	8.8	9.0	8.8	8.7	8.2	8.1	7.7	7.7	:
11. Part-time employment (% total employment)	1.0	0.9	1.1	1.4	1.1	1.0	1.5	1.5	1.7	1.4	1.7	:
12. Fixed term contracts (% total employment)	2.6	3.1	3.5	3.8	4.0	3.5	4.7	5.2	4.6	5.2	4.6	:
13. Employment in Services (% total employment)	55.8	56.4	58.7	60.1	60.9	61.3	62.8	63.7	65.1	66.1	66.4	:
14. Employment in Industry (% total employment)	41.1	40.9	38.8	37.6	36.7	36.2	35.1	34.3	32.9	32.2	31.9	:
15. Employment in Agriculture (% total employment)	3.1	2.7	2.5	2.3	2.5	2.5	2.2	2.0	2.0	1.7	1.7	:
16. Activity rate (% population aged 15-64)	77.8	78.0	77.1	76.1	76.1	75.8	75.9	75.9	76.3	76.3	77.0	:
17. Activity rate (% of population aged 15-24)	52.1	49.7	47.0	42.8	42.1	39.2	37.1	36.3	37.2	37.1	35.5	:
18. Activity rate (% of population aged 25-54)	94.9	94.8	94.7	93.9	93.7	93.6	94.3	94.2	94.2	94.4	95.2	:
19. Activity rate (% of population aged 55-64)	35.6	37.4	34.2	35.1	35.6	35.6	35.2	36.2	37.9	36.1	39.4	:
20. Total unemployment (000)	2	2	3	2	2	2	2	2	2	2	2	3
21. Unemployment rate (% labour force 15+)	1.7	2.2	2.6	2.0	2.2	2.0	1.9	1.8	1.8	1.7	2.1	2.7
22. Youth unemployment rate (% labour force 15-24)	4.0	4.8	7.1	6.6	8.0	6.5	6.5	6.1	6.6	7.5	6.4	8.0
23. Long term unemployment rate (% labour force)	0.4	0.7	0.8	0.6	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.1
24. Youth unemployment ratio (% population aged 15-24)	2.0	2.5	3.3	2.8	3.3	2.5	2.5	2.0	2.4	2.8	2.4	3.1

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	194	199	201	204	208	210	212	215	218	219	221	228
2. Population aged 15-64	131	132	134	136	138	139	140	141	142	145	147	149
3. Total employment (000)	72	72	74	75	78	82	88	92	98	103	108	102
4. Population in employment aged 15-64	60	59	59	58	60	63	65	69	71	74	74	71
5. Employment rate (% population aged 15-64)	45.7	44.8	44.4	42.6	43.8	45.3	46.2	48.6	50.1	50.9	50.8	:
6. Employment rate (% population aged 15-24)	47.8	43.6	40.9	36.9	34.8	32.1	30.8	29.4	28.8	29.8	26.7	:
7. Employment rate (% population aged 25-54)	53.0	52.8	52.9	51.4	53.9	56.1	56.9	60.5	63.0	63.9	63.5	:
8. Employment rate (% population aged 55-64)	15.0	14.2	13.3	12.6	10.8	12.9	15.5	17.2	16.4	15.2	19.7	:
9. FTE employment rate (% population aged 15-64)	42.4	40.8	40.8	38.1	39.9	41.3	41.2	43.5	44.6	45.1	45.7	:
10. Self-employed (% total employment)	8.6	8.0	8.2	7.5	7.0	7.0	6.5	6.7	6.0	5.8	5.5	:
11. Part-time employment (% total employment)	16.2	17.7	20.5	21.8	20.5	21.0	22.0	24.0	25.1	25.8	24.7	:
12. Fixed term contracts (% total employment)	4.7	5.3	5.8	4.7	4.6	5.0	5.2	5.2	6.6	6.4	5.6	:
13. Employment in Services (% total employment)	88.1	90.3	89.6	89.8	90.5	91.1	90.2	91.6	92.5	92.6	92.9	:
14. Employment in Industry (% total employment)	9.8	7.8	8.6	8.5	8.3	7.8	8.3	6.9	6.4	6.5	6.3	:
15. Employment in Agriculture (% total employment)	2.1	1.8	1.8	1.7	1.2	1.1	1.5	1.5	1.2	0.9	0.8	:
16. Activity rate (% population aged 15-64)	47.1	46.4	46.4	44.6	45.9	47.1	48.1	50.3	51.6	52.2	52.7	:
17. Activity rate (% of population aged 15-24)	49.5	45.7	44.1	40.0	38.0	35.1	33.2	31.7	30.9	31.8	29.8	:
18. Activity rate (% of population aged 25-54)	54.6	54.5	55.0	53.5	56.1	58.0	59.1	62.3	64.7	65.3	65.6	:
19. Activity rate (% of population aged 55-64)	15.1	14.2	13.4	12.7	10.8	13.0	15.8	17.4	16.4	15.2	19.9	:
20. Total unemployment (000)	2	2	3	3	3	3	3	2	2	2	3	4
21. Unemployment rate (% labour force 15+)	2.8	3.3	4.1	4.3	4.2	3.9	4.0	3.3	3.1	2.7	3.9	5.1
22. Youth unemployment rate (% labour force 15-24)	3.6	5.6	7.1	7.8	8.4	9.5	7.3	7.9	7.9	6.9	10.5	13.3
23. Long term unemployment rate (% labour force)	0.6	0.9	1.0	1.0	1.1	1.3	1.1	0.8	0.6	0.7	1.2	2.3
24. Youth unemployment ratio (% population aged 15-24)	1.7	2.6	3.0	2.9	3.3	3.4	2.5	2.5	2.5	2.4	3.2	4.4

Source: Eurostat - Note: LFS and most QLFD data for 2003 not yet available

Key employment indicators Hungary

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	10098	10075	10016	9972	9924	10038	10012	9980
2. Population aged 15-64	:	:	:	:	6835	6833	6801	6783	6764	6851	6849	6836
3. Total employment (000)	:	:	:	3623	3605	3611	3675	3792	3829	3845	3856	3969
4. Population in employment aged 15-64	:	:	:	:	3564	3579	3653	3769	3806	3850	3850	3897
5. Employment rate (% population aged 15-64)	:	:	:	:	52.1	52.4	53.7	55.6	56.3	56.2	56.2	57.0
6. Employment rate (% population aged 15-24)	:	:	:	:	27.9	29.8	33.9	34.9	33.5	30.7	28.5	26.8
7. Employment rate (% population aged 25-54)	:	:	:	:	70.2	69.8	70.3	72.3	73.0	73.1	73.0	73.7
8. Employment rate (% population aged 55-64)	:	:	:	:	17.7	17.7	17.3	19.4	22.2	23.5	25.6	28.9
9. FTE employment rate (% population aged 15-64)	:	:	:	:	52.1	52.0	53.1	55.4	56.0	56.0	56.2	56.9
10. Self-employed (% total employment)	:	:	:	17.8	17.9	17.2	16.0	15.6	15.0	14.3	13.8	13.2
11. Part-time employment (% total employment)	:	:	:	:	:	3.7	3.8	3.8	3.5	3.6	3.6	4.4
12. Fixed term contracts (% total employment)	:	:	:	:	:	6.6	6.5	6.2	7.1	7.5	7.3	7.5
13. Employment in Services (% total employment)	:	:	:	58.8	58.6	58.6	58.0	58.7	59.5	59.4	59.7	62.3
14. Employment in Industry (% total employment)	:	:	:	33.1	33.0	33.5	34.4	34.2	33.9	34.4	34.1	31.9
15. Employment in Agriculture (% total employment)	:	:	:	8.1	8.4	8.0	7.6	7.1	6.6	6.2	6.2	5.8
16. Activity rate (% population aged 15-64)	:	:	:	:	57.9	57.6	58.7	59.8	60.1	59.6	59.7	60.6
17. Activity rate (% of population aged 15-24)	:	:	:	:	34.6	35.9	40.0	40.1	38.3	34.6	32.6	31.0
18. Activity rate (% of population aged 25-54)	:	:	:	:	76.8	75.8	75.9	77.1	77.3	77.1	77.0	77.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	18.8	18.8	18.3	19.9	22.9	24.2	26.4	29.8
20. Total unemployment (000)	:	:	:	391	380	355	337	279	256	227	229	240
21. Unemployment rate (% labour force 15+)	:	:	:	:	9.6	9.0	8.4	6.9	6.3	5.6	5.6	5.8
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	18.5	17.0	15.0	12.7	12.1	10.9	11.8	13.1
23. Long term unemployment rate (% labour force)	:	:	:	:	5.2	4.5	4.2	3.3	3.0	2.5	2.4	2.4
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	6.3	6.0	6.0	5.0	4.5	3.8	3.9	4.1

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	4801	4799	4773	4750	4726	4756	4742	4722
2. Population aged 15-64	:	:	:	:	3322	3334	3324	3315	3313	3340	3338	3329
3. Total employment (000)	:	:	:	:	:	2008	2024	2083	2103	2101	2104	2152
4. Population in employment aged 15-64	:	:	:	:	1975	1990	2011	2069	2089	2102	2100	2113
5. Employment rate (% population aged 15-64)	:	:	:	:	59.5	59.7	60.5	62.4	63.1	62.9	62.9	63.5
6. Employment rate (% population aged 15-24)	:	:	:	:	31.3	33.6	37.6	38.7	37.3	34.4	31.2	29.8
7. Employment rate (% population aged 25-54)	:	:	:	:	77.7	77.4	76.8	78.7	79.2	79.4	79.7	80.1
8. Employment rate (% population aged 55-64)	:	:	:	:	27.2	27.0	27.0	29.7	33.2	34.1	35.5	37.8
9. FTE employment rate (% population aged 15-64)	:	:	:	:	60.1	60.4	60.5	63.2	63.6	63.4	63.6	64.0
10. Self-employed (% total employment)	:	:	:	:	:	21.0	19.5	19.2	18.7	17.7	16.9	16.7
11. Part-time employment (% total employment)	:	:	:	:	:	2.0	2.3	2.4	2.0	2.2	2.3	2.8
12. Fixed term contracts (% total employment)	:	:	:	:	:	7.0	7.1	6.5	7.7	8.1	7.9	8.3
13. Employment in Services (% total employment)	:	:	:	:	:	48.7	47.7	48.3	49.6	49.8	49.7	51.7
14. Employment in Industry (% total employment)	:	:	:	:	:	40.4	41.8	41.8	41.3	41.7	42.0	40.0
15. Employment in Agriculture (% total employment)	:	:	:	:	:	10.8	10.4	9.9	9.1	8.5	8.3	8.3
16. Activity rate (% population aged 15-64)	:	:	:	:	66.6	66.2	66.6	67.6	67.9	67.2	67.1	67.6
17. Activity rate (% of population aged 15-24)	:	:	:	:	39.6	41.3	45.1	45.0	43.2	39.2	36.0	34.6
18. Activity rate (% of population aged 25-54)	:	:	:	:	85.7	84.5	83.5	84.3	84.4	84.2	84.3	84.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	28.9	28.8	28.5	30.8	34.5	35.4	36.9	38.9
20. Total unemployment (000)	:	:	:	236	226	214	199	165	153	138	135	137
21. Unemployment rate (% labour force 15+)	:	:	:	:	10.2	9.7	9.0	7.4	6.8	6.1	6.0	6.0
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	19.9	18.6	16.6	13.7	13.1	11.6	12.5	13.5
23. Long term unemployment rate (% labour force)	:	:	:	:	5.8	4.9	4.5	3.6	3.4	2.9	2.7	2.5
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	7.8	7.6	7.4	6.1	5.6	4.6	4.6	4.7

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	5297	5275	5243	5222	5199	5282	5270	5258
2. Population aged 15-64	:	:	:	:	3513	3500	3477	3468	3452	3511	3512	3506
3. Total employment (000)	:	:	:	:	:	1603	1651	1709	1727	1744	1751	1817
4. Population in employment aged 15-64	:	:	:	:	1588	1588	1642	1700	1717	1747	1750	1785
5. Employment rate (% population aged 15-64)	:	:	:	:	45.2	45.4	47.2	49.0	49.7	49.8	49.8	50.9
6. Employment rate (% population aged 15-24)	:	:	:	:	24.4	26.0	30.2	31.1	29.7	26.9	25.8	23.8
7. Employment rate (% population aged 25-54)	:	:	:	:	62.9	62.5	63.9	66.1	66.9	67.0	66.5	67.4
8. Employment rate (% population aged 55-64)	:	:	:	:	10.1	10.3	9.6	11.3	13.3	14.9	17.6	21.8
9. FTE employment rate (% population aged 15-64)	:	:	:	:	44.5	43.9	46.0	47.9	48.7	48.8	49.1	50.0
10. Self-employed (% total employment)	:	:	:	:	:	12.4	11.6	11.1	10.4	10.2	9.9	9.0
11. Part-time employment (% total employment)	:	:	:	:	:	5.6	5.5	5.5	5.2	5.2	5.1	6.2
12. Fixed term contracts (% total employment)	:	:	:	:	:	6.1	5.8	5.8	6.5	6.8	6.6	6.7
13. Employment in Services (% total employment)	:	:	:	:	:	70.9	70.6	71.4	71.6	71.0	71.7	74.8
14. Employment in Industry (% total employment)	:	:	:	:	:	24.7	25.3	24.9	24.9	25.5	24.6	22.4
15. Employment in Agriculture (% total employment)	:	:	:	:	:	4.4	4.1	3.8	3.5	3.5	3.6	2.8
16. Activity rate (% population aged 15-64)	:	:	:	:	49.7	49.3	51.2	52.3	52.7	52.4	52.7	53.9
17. Activity rate (% of population aged 15-24)	:	:	:	:	29.6	30.5	34.7	35.0	33.3	29.9	29.3	27.3
18. Activity rate (% of population aged 25-54)	:	:	:	:	68.2	67.2	68.6	70.0	70.4	70.1	69.9	71.0
19. Activity rate (% of population aged 55-64)	:	:	:	:	10.7	10.8	10.2	11.4	13.5	15.1	18.0	22.4
20. Total unemployment (000)	:	:	:	154	153	140	138	114	103	90	94	103
21. Unemployment rate (% labour force 15+)	:	:	:	:	8.8	8.1	7.8	6.3	5.6	4.9	5.1	5.5
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	16.6	14.8	13.0	11.3	10.6	10.0	11.0	12.7
23. Long term unemployment rate (% labour force)	:	:	:	:	4.5	4.0	3.9	2.9	2.5	2.1	2.1	2.3
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	4.8	4.4	4.5	3.9	3.5	3.0	3.2	3.5

Source: Eurostat

Key employment indicators Malta

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	389	393	395	:
2. Population aged 15-64	:	:	:	:	:	:	:	:	263	267	269	:
3. Total employment (000)	:	:	:	:	:	:	132	131	134	138	137	:
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	143	145	147	:
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	54.2	54.3	54.5	:
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	52.8	52.3	51.0	:
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	60.6	61.0	61.5	:
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	28.5	29.4	30.3	:
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	:	53.7	53.0
10. Self-employed (% total employment)	:	:	:	:	:	:	12.0	12.1	12.3	10.9	10.9	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	6.8	7.4	8.3	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	4.1	4.0	4.6	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	62.0	63.1	63.7	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	36.0	34.9	34.3	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	2.0	2.0	1.9	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	58.0	58.1	58.6	:
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	58.7	60.8	59.6	:
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	64.3	63.8	64.8	:
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	29.6	30.1	30.9	:
20. Total unemployment (000)	:	:	:	8	9	11	11	12	11	11	12	13
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	7.0	6.7	7.5	8.2
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	14.2	16.1	17.7	19.8
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	4.6	3.2	3.2	:
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	8.8	10.2	11.0	:

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	193	195	196	:
2. Population aged 15-64	:	:	:	:	:	:	:	:	132	134	135	:
3. Total employment (000)	:	:	:	:	:	:	:	:	94	98	95	:
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	99	103	102	:
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	75.0	76.2	75.3	:
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	53.4	54.3	52.5	:
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	88.1	90.0	89.2	:
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	50.8	50.4	50.4	:
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	:	75.7	75.3
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	15.0	13.2	13.7	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	3.0	3.2	3.9	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	3.4	2.8	3.7	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	59.4	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	38.1	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	2.5	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	80.5	81.3	80.6	:
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	60.9	64.8	62.1	:
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	93.5	94.0	93.9	:
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	52.7	51.6	51.4	:
20. Total unemployment (000)	:	:	:	5	6	7	7	8	7	7	7	8
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	6.6	6.2	6.5	6.8
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	15.7	18.0	17.8	17.4
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	4.6	3.5	3.4	:
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	9.6	11.8	11.5	:

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	197	199	200	:
2. Population aged 15-64	:	:	:	:	:	:	:	:	131	133	134	:
3. Total employment (000)	:	:	:	:	:	:	:	:	41	40	42	:
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	43	43	45	:
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	33.1	32.1	33.6	:
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	52.2	50.2	49.4	:
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	32.7	31.4	33.4	:
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	8.4	10.2	11.8	:
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	:	31.7	30.6
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	6.1	5.3	4.8	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	15.5	17.5	18.2	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	5.6	6.4	6.6	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	73.7	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	25.6	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	0.7	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	35.2	34.6	36.4	:
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	56.3	56.6	56.9	:
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	34.6	33.1	35.2	:
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	8.8	10.3	11.9	:
20. Total unemployment (000)	:	:	:	3	3	4	4	4	4	4	5	6
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	7.8	8.0	9.6	11.3
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	12.6	14.0	17.6	22.5
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	4.4	2.3	2.3	:
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	7.5	8.4	10.6	:

Source: Eurostat

Key employment indicators Netherlands

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	14889	15036	15132	15217	15290	15383	15485	15591	15680	15837	15964	16075
2. Population aged 15-64	10328	10395	10457	10494	10532	10575	10618	10670	10722	10801	10871	10948
3. Total employment (000)	6986	6986	7036	7143	7308	7544	7742	7946	8124	8274	8349	8316
4. Population in employment aged 15-64	6609	6607	6687	6789	6981	7248	7458	7650	7819	8005	8089	8043
5. Employment rate (% population aged 15-64)	64.0	63.6	64.0	64.7	66.3	68.5	70.2	71.7	72.9	74.1	74.4	73.5
6. Employment rate (% population aged 15-24)	56.0	53.7	53.9	54.6	54.9	58.6	61.9	64.5	68.7	70.4	70.0	67.9
7. Employment rate (% population aged 25-54)	73.9	73.8	74.1	74.9	76.8	78.7	80.0	81.1	81.7	82.8	82.8	82.4
8. Employment rate (% population aged 55-64)	28.7	28.8	29.1	28.9	30.5	32.0	33.9	36.4	38.2	39.6	42.3	44.8
9. FTE employment rate (% population aged 15-64)	51.9	51.6	51.3	51.4	52.1	54.1	55.6	56.8	57.5	58.1	58.1	57.1
10. Self-employed (% total employment)	15.5	15.6	15.9	15.7	15.8	15.8	15.3	14.4	14.2	13.9	13.9	14.0
11. Part-time employment (% total employment)	34.8	35.2	36.7	37.4	38.0	37.9	38.9	39.7	41.5	42.2	43.9	45.0
12. Fixed term contracts (% total employment)	10.4	10.5	11.3	11.4	12.3	11.8	13.0	12.3	13.7	14.3	14.4	14.6
13. Employment in Services (% total employment)	71.9	72.5	73.4	74.2	74.8	75.1	75.8	76.1	76.4	76.8	77.2	77.7
14. Employment in Industry (% total employment)	23.7	23.1	22.3	21.8	21.2	20.9	20.6	20.3	20.1	19.9	19.5	19.0
15. Employment in Agriculture (% total employment)	4.4	4.4	4.3	4.0	4.0	3.9	3.6	3.5	3.5	3.3	3.3	3.3
16. Activity rate (% population aged 15-64)	67.5	67.9	68.8	69.3	70.3	72.0	73.0	74.1	75.2	75.8	76.5	76.3
17. Activity rate (% of population aged 15-24)	61.0	60.5	61.0	62.1	61.6	64.5	67.4	69.3	72.9	73.8	73.7	72.6
18. Activity rate (% of population aged 25-54)	77.5	78.1	79.1	79.4	80.7	82.0	82.5	83.3	83.7	84.3	84.8	85.2
19. Activity rate (% of population aged 55-64)	29.5	29.7	30.0	30.0	31.7	33.0	34.5	37.3	39.0	40.2	43.3	46.0
20. Total unemployment (000)	373	442	489	478	443	374	296	253	237	208	227	321
21. Unemployment rate (% labour force 15+)	5.3	6.2	6.8	6.6	6.0	4.9	3.8	3.2	2.9	2.5	2.7	3.8
22. Youth unemployment rate (% labour force 15-24)	8.1	10.6	10.9	11.4	11.1	9.1	7.6	6.8	5.9	5.6	5.1	6.7
23. Long term unemployment rate (% labour force)	2.5	3.3	3.3	3.1	3.0	2.3	1.5	1.2	0.8	0.7	0.7	1.0
24. Youth unemployment ratio (% population aged 15-24)	4.9	6.4	6.6	7.1	6.9	5.8	5.0	4.7	4.3	4.2	3.8	5.0

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	7378	7462	7508	7560	7595	7642	7690	7741	7789	7865	7930	7988
2. Population aged 15-64	5221	5265	5296	5323	5342	5363	5382	5405	5431	5469	5502	5540
3. Total employment (000)	4201	4166	4159	4227	4291	4409	4492	4548	4640	4690	4694	4647
4. Population in employment aged 15-64	3964	3929	3944	4006	4087	4227	4314	4372	4460	4526	4536	4482
5. Employment rate (% population aged 15-64)	75.9	74.6	74.5	75.3	76.5	78.8	80.2	80.9	82.1	82.8	82.4	80.9
6. Employment rate (% population aged 15-24)	55.8	53.5	53.4	55.2	55.3	60.2	62.8	64.6	70.0	71.2	70.6	68.5
7. Employment rate (% population aged 25-54)	89.1	87.7	87.4	88.0	89.3	90.7	91.4	91.7	92.2	92.7	91.8	90.4
8. Employment rate (% population aged 55-64)	41.7	40.9	40.7	39.7	41.4	44.3	47.5	49.6	50.2	51.1	54.6	57.3
9. FTE employment rate (% population aged 15-64)	70.5	69.6	68.9	69.0	69.7	71.7	73.1	73.8	74.7	75.0	74.7	73.1
10. Self-employed (% total employment)	17.0	16.8	17.0	17.0	17.6	17.5	17.0	16.0	16.0	15.6	15.9	16.4
11. Part-time employment (% total employment)	15.2	15.3	16.3	16.7	16.9	17.2	18.1	18.0	19.3	20.0	21.2	22.0
12. Fixed term contracts (% total employment)	7.3	7.4	8.6	9.1	9.3	9.3	10.5	9.7	11.2	11.9	12.1	13.0
13. Employment in Services (% total employment)	62.2	62.6	63.1	64.4	65.1	65.4	66.6	66.7	67.0	67.2	67.5	0.0
14. Employment in Industry (% total employment)	32.3	32.0	31.5	30.4	29.8	29.7	29.0	29.0	28.8	28.8	28.3	0.0
15. Employment in Agriculture (% total employment)	5.5	5.4	5.4	5.2	5.1	4.9	4.4	4.3	4.2	3.9	4.2	0.0
16. Activity rate (% population aged 15-64)	79.1	79.2	79.7	79.7	80.3	81.9	82.6	82.9	84.1	84.3	84.5	83.9
17. Activity rate (% of population aged 15-24)	60.8	61.4	61.8	62.1	62.1	65.9	68.1	68.8	73.7	74.4	74.5	73.2
18. Activity rate (% of population aged 25-54)	92.1	92.1	92.4	92.4	92.8	93.5	93.4	93.4	93.9	94.0	93.6	93.3
19. Activity rate (% of population aged 55-64)	42.4	42.0	41.8	41.1	42.7	45.3	48.2	50.6	51.2	51.8	55.8	58.8
20. Total unemployment (000)	171	227	256	234	205	163	132	104	103	96	118	173
21. Unemployment rate (% labour force 15+)	4.1	5.4	6.0	5.5	4.8	3.7	3.0	2.3	2.2	2.0	2.5	3.6
22. Youth unemployment rate (% labour force 15-24)	8.0	11.4	11.6	10.7	10.5	7.9	7.4	5.2	4.8	4.9	5.3	7.0
23. Long term unemployment rate (% labour force)	2.0	2.9	3.0	2.9	2.6	1.8	1.3	0.9	0.6	0.5	0.6	1.0
24. Youth unemployment ratio (% population aged 15-24)	4.9	7.0	7.1	6.6	6.5	5.1	5.0	3.5	3.6	3.7	4.0	5.2

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	7511	7574	7624	7657	7695	7741	7795	7850	7890	7972	8035	8087
2. Population aged 15-64	5107	5130	5160	5171	5190	5213	5236	5266	5291	5332	5368	5408
3. Total employment (000)	2785	2820	2877	2916	3017	3135	3251	3398	3484	3584	3654	3670
4. Population in employment aged 15-64	2645	2678	2744	2783	2894	3022	3145	3278	3359	3479	3553	3561
5. Employment rate (% population aged 15-64)	51.8	52.2	53.2	53.8	55.8	58.0	60.1	62.3	63.5	65.2	66.2	65.8
6. Employment rate (% population aged 15-24)	56.2	53.8	54.4	54.0	54.5	57.0	61.0	64.4	67.3	69.6	69.5	67.4
7. Employment rate (% population aged 25-54)	58.0	59.2	60.3	61.3	63.7	66.3	68.3	70.2	70.8	72.5	73.6	74.2
8. Employment rate (% population aged 55-64)	16.2	17.0	17.7	18.3	19.7	19.9	20.3	23.1	26.1	28.0	29.9	32.1
9. FTE employment rate (% population aged 15-64)	33.3	33.6	33.8	33.8	34.5	36.6	38.3	40.0	40.5	41.6	42.0	41.6
10. Self-employed (% total employment)	13.2	13.7	14.4	13.9	13.3	13.3	12.8	12.4	11.8	11.7	11.3	10.8
11. Part-time employment (% total employment)	64.4	64.6	66.1	67.4	68.1	67.3	67.6	68.9	71.0	71.3	73.1	74.0
12. Fixed term contracts (% total employment)	15.1	14.9	15.1	14.6	16.3	15.3	16.4	15.6	16.8	17.4	17.1	16.5
13. Employment in Services (% total employment)	87.1	87.3	88.4	88.5	89.1	88.9	88.6	88.9	88.9	89.3	89.6	0.0
14. Employment in Industry (% total employment)	10.2	9.8	8.9	9.2	8.5	8.5	8.9	8.6	8.7	8.3	8.2	0.0
15. Employment in Agriculture (% total employment)	2.7	2.9	2.6	2.3	2.4	2.6	2.5	2.5	2.4	2.4	2.2	0.0
16. Activity rate (% population aged 15-64)	55.7	56.4	57.7	58.6	60.1	61.8	63.2	65.2	66.0	67.1	68.3	68.5
17. Activity rate (% of population aged 15-24)	61.2	59.5	60.4	62.3	61.1	63.0	66.8	69.8	72.0	73.1	73.0	71.9
18. Activity rate (% of population aged 25-54)	62.2	63.6	65.3	66.0	68.2	70.1	71.3	72.9	73.2	74.3	75.7	76.9
19. Activity rate (% of population aged 55-64)	17.1	17.9	18.5	19.0	20.9	20.9	20.9	24.0	26.7	28.4	30.6	32.9
20. Total unemployment (000)	201	215	233	244	238	211	164	150	133	112	109	148
21. Unemployment rate (% labour force 15+)	7.2	7.5	7.9	8.1	7.7	6.6	5.0	4.4	3.8	3.1	3.0	4.0
22. Youth unemployment rate (% labour force 15-24)	8.2	9.7	10.2	12.1	11.8	10.4	7.9	8.5	7.1	6.3	4.9	6.4
23. Long term unemployment rate (% labour force)	3.3	4.0	3.6	3.4	3.7	3.1	1.8	1.5	1.0	0.8	0.8	1.1
24. Youth unemployment ratio (% population aged 15-24)	5.0	5.8	6.2	7.5	7.3	6.6	5.1	5.8	5.1	4.7	3.6	4.7

Source: Eurostat

Key employment indicators Austria

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	7837	7887	7899	7908	7915	7922	7942	7967	7994	7921
2. Population aged 15-64	:	:	5283	5309	5316	5324	5333	5345	5373	5411	5451	5398
3. Total employment (000)	3959	3934	3929	3928	3904	3924	3965	4020	4050	4076	4066	4079
4. Population in employment aged 15-64	:	:	3620	3650	3607	3611	3621	3666	3678	3707	3771	3734
5. Employment rate (% population aged 15-64)	:	:	68.5	68.8	67.8	67.8	67.9	68.6	68.5	68.5	69.2	69.2
6. Employment rate (% population aged 15-24)	:	:	60.4	57.4	55.3	54.7	54.5	54.1	52.4	51.3	51.6	51.0
7. Employment rate (% population aged 25-54)	:	:	79.7	80.6	80.3	80.8	81.0	81.9	82.6	82.9	83.9	84.5
8. Employment rate (% population aged 55-64)	:	:	27.2	29.7	29.1	28.3	28.4	29.7	28.8	28.9	29.7	30.4
9. FTE employment rate (% population aged 15-64)	:	:	:	65.8	63.6	63.5	63.8	63.9	63.5	63.4	62.9	63.1
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
11. Part-time employment (% total employment)	:	:	12.6	13.6	14.0	14.7	15.7	16.4	16.3	18.2	19.6	20.2
12. Fixed term contracts (% total employment)	:	:	4.8	6.8	7.9	7.8	7.9	7.9	8.0	7.8	7.3	7.1
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
16. Activity rate (% population aged 15-64)	:	:	71.1	71.4	70.8	70.9	71.0	71.3	71.0	71.3	72.6	72.7
17. Activity rate (% of population aged 15-24)	:	:	63.6	60.6	59.1	58.5	58.0	57.0	55.3	54.7	55.6	55.5
18. Activity rate (% of population aged 25-54)	:	:	82.4	83.5	83.5	84.2	84.4	84.9	85.3	85.9	87.6	88.3
19. Activity rate (% of population aged 55-64)	:	:	28.1	30.8	30.4	29.6	29.8	31.2	30.5	30.5	31.5	32.2
20. Total unemployment (000)	135	151	147	149	165	167	171	151	140	140	166	172
21. Unemployment rate (% labour force 15+)	:	4.0	3.8	3.9	4.4	4.4	4.5	3.9	3.7	3.6	4.3	4.4
22. Youth unemployment rate (% labour force 15-24)	:	6.3	5.7	5.6	6.3	6.7	6.4	5.4	5.3	5.8	6.8	7.2
23. Long term unemployment rate (% labour force)	:	:	1.1	1.0	1.2	1.3	1.3	1.2	1.0	0.9	0.9	1.1
24. Youth unemployment ratio (% population aged 15-24)	:	:	3.5	3.4	3.7	3.9	3.7	3.1	2.9	3.2	3.7	4.0

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	3782	3809	3815	3819	3821	3825	3838	3855	3872	3822
2. Population aged 15-64	:	:	2639	2656	2658	2659	2661	2664	2676	2695	2715	2671
3. Total employment (000)	:	:	2237	2244	2223	2227	2245	2267	2281	2265	2224	2213
4. Population in employment aged 15-64	:	:	2062	2085	2054	2049	2050	2067	2069	2060	2062	2024
5. Employment rate (% population aged 15-64)	:	:	78.1	78.5	77.3	77.1	77.0	77.6	77.3	76.4	75.9	75.8
6. Employment rate (% population aged 15-24)	:	:	63.4	61.0	58.8	58.3	57.9	58.6	57.0	55.6	55.7	55.4
7. Employment rate (% population aged 25-54)	:	:	90.3	91.0	90.1	90.4	90.5	90.8	91.3	90.6	90.2	90.6
8. Employment rate (% population aged 55-64)	:	:	38.4	42.2	41.6	40.3	40.5	42.6	41.2	40.1	39.7	40.1
9. FTE employment rate (% population aged 15-64)	:	:	:	78.3	76.0	75.9	76.4	76.9	76.2	76.0	74.8	74.9
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
11. Part-time employment (% total employment)	:	:	3.6	3.8	3.7	4.1	4.4	4.2	4.1	4.8	5.3	5.5
12. Fixed term contracts (% total employment)	:	:	4.3	6.6	7.8	7.5	8.0	7.9	7.4	7.2	7.4	7.6
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
16. Activity rate (% population aged 15-64)	:	:	80.8	81.1	80.5	80.3	80.3	80.6	80.0	79.5	80.0	80.0
17. Activity rate (% of population aged 15-24)	:	:	66.4	64.1	62.7	62.0	61.2	61.5	60.0	59.4	60.4	60.8
18. Activity rate (% of population aged 25-54)	:	:	93.1	93.6	93.4	93.9	94.1	93.9	94.0	93.7	94.4	94.8
19. Activity rate (% of population aged 55-64)	:	:	39.7	44.0	43.8	42.5	42.8	45.1	43.6	42.4	42.7	43.2
20. Total unemployment (000)	57	67	64	66	78	78	81	72	67	67	87	91
21. Unemployment rate (% labour force 15+)	:	3.1	3.0	3.1	3.7	3.7	3.8	3.4	3.1	3.2	4.1	4.2
22. Youth unemployment rate (% labour force 15-24)	:	5.1	4.6	4.5	5.3	5.6	5.0	4.3	4.8	5.2	6.5	7.0
23. Long term unemployment rate (% labour force)	:	:	0.8	0.7	0.9	1.0	1.0	1.0	0.9	0.7	0.8	1.1
24. Youth unemployment ratio (% population aged 15-24)	:	:	2.9	2.8	3.2	3.4	3.0	2.6	2.8	3.1	3.9	4.1

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	4056	4078	4083	4089	4093	4097	4104	4112	4121	4100
2. Population aged 15-64	:	:	2644	2653	2658	2665	2672	2681	2697	2716	2737	2727
3. Total employment (000)	:	:	1691	1684	1680	1697	1719	1753	1769	1810	1843	1867
4. Population in employment aged 15-64	:	:	1559	1565	1553	1562	1571	1599	1608	1647	1711	1713
5. Employment rate (% population aged 15-64)	:	:	58.9	59.0	58.4	58.6	58.8	59.6	59.6	60.7	62.5	62.8
6. Employment rate (% population aged 15-24)	:	:	57.4	53.8	51.8	51.1	51.2	49.7	47.9	47.1	47.6	46.7
7. Employment rate (% population aged 25-54)	:	:	68.8	70.1	70.3	71.0	71.3	73.0	73.8	75.2	77.7	78.6
8. Employment rate (% population aged 55-64)	:	:	17.2	18.2	17.3	17.0	17.1	17.6	17.2	18.4	20.4	21.5
9. FTE employment rate (% population aged 15-64)	:	:	:	53.4	51.2	51.3	51.3	51.0	51.0	50.9	51.2	51.7
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
11. Part-time employment (% total employment)	:	:	24.5	26.8	27.6	28.5	30.5	32.2	32.2	34.9	36.7	37.7
12. Fixed term contracts (% total employment)	:	:	5.4	6.9	8.1	8.1	7.7	8.0	8.8	8.6	7.2	6.6
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
16. Activity rate (% population aged 15-64)	:	:	61.4	61.7	61.2	61.5	61.7	62.1	62.0	63.2	65.3	65.6
17. Activity rate (% of population aged 15-24)	:	:	60.7	57.0	55.4	55.1	54.9	52.6	50.6	50.1	50.8	50.2
18. Activity rate (% of population aged 25-54)	:	:	71.5	73.1	73.3	74.3	74.6	75.8	76.5	78.1	80.9	81.9
19. Activity rate (% of population aged 55-64)	:	:	17.6	18.7	17.9	17.4	17.7	18.2	18.1	19.2	21.1	22.2
20. Total unemployment (000)	77	84	83	83	87	89	91	80	74	72	79	81
21. Unemployment rate (% labour force 15+)	:	5.0	4.9	5.0	5.2	5.4	5.4	4.7	4.3	4.2	4.5	4.6
22. Youth unemployment rate (% labour force 15-24)	:	7.6	7.0	6.8	7.4	8.0	7.9	6.6	6.0	6.5	7.0	7.5
23. Long term unemployment rate (% labour force)	:	:	1.6	1.5	1.5	1.6	1.8	1.5	1.2	1.1	1.1	1.0
24. Youth unemployment ratio (% population aged 15-24)	:	:	4.1	4.0	4.2	4.4	4.4	3.5	3.1	3.3	3.6	3.8

Source: Eurostat - Note: In the case of Austria, employment in agriculture - as derived from national accounts - includes a significant number of persons with occasional or small jobs. When calculated on the basis of the LFS and limited to the main job, the share of agriculture in employment is found to be significantly lower, and the shares in services and industry somewhat higher. Due to the substantial differences in the estimates of sectoral employment shares, no data is provided.

Key employment indicators Poland

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	38309	38418	38505	38581	38609	38639	38660	38667	38654	38644	38632	38219
2. Population aged 15-64	:	:	:	:	:	25005	25247	25461	25739	25986	26159	26031
3. Total employment (000)	:	:	:	14791	14969	15177	15354	14757	14526	14207	13782	13617
4. Population in employment aged 15-64	:	:	:	:	:	14726	14894	14664	14155	13866	13470	13324
5. Employment rate (% population aged 15-64)	:	:	:	:	:	58.9	59.0	57.6	55.0	53.4	51.5	51.2
6. Employment rate (% population aged 15-24)	:	:	:	:	:	28.9	28.5	25.9	24.5	24.0	21.7	21.2
7. Employment rate (% population aged 25-54)	:	:	:	:	:	74.7	75.3	73.8	70.9	69.2	67.4	67.5
8. Employment rate (% population aged 55-64)	:	:	:	:	:	33.9	32.1	31.9	28.4	27.4	26.1	26.9
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	52.9	50.7	50.3
10. Self-employed (% total employment)	:	:	:	29.7	29.5	28.3	27.2	26.9	27.4	28.0	28.1	27.3
11. Part-time employment (% total employment)	:	:	:	:	:	10.6	10.4	10.5	10.5	10.3	10.8	10.5
12. Fixed term contracts (% total employment)	:	:	:	:	:	4.8	4.7	4.6	5.8	11.7	15.4	19.4
13. Employment in Services (% total employment)	:	:	:	45.4	46.2	47.5	48.8	50.6	50.4	50.4	52.0	53.0
14. Employment in Industry (% total employment)	:	:	:	32.0	31.7	31.9	32.1	31.3	30.9	30.5	28.6	28.6
15. Employment in Agriculture (% total employment)	:	:	:	22.6	22.1	20.5	19.2	18.1	18.8	19.1	19.3	18.4
16. Activity rate (% population aged 15-64)	:	:	:	:	:	65.9	65.7	65.9	65.8	65.5	64.6	63.9
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	36.7	36.2	36.1	37.8	39.7	37.8	36.4
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	82.6	82.6	82.5	82.4	81.9	81.5	81.4
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	35.8	34.1	34.5	31.3	30.2	29.1	30.1
20. Total unemployment (000)	:	:	:	2279	2241	1849	1730	2300	2849	3228	3408	3255
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	10.9	10.2	13.4	16.4	18.5	19.8	19.2
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	23.2	22.5	30.1	36.3	39.8	41.8	41.1
23. Long term unemployment rate (% labour force)	:	:	:	:	:	5.1	4.8	5.8	7.6	9.3	10.8	10.7
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	8.2	7.8	11.0	13.7	15.6	15.7	14.8

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	18661	18708	18746	18778	18786	18797	18801	18798	18783	18773	18761	18507
2. Population aged 15-64	:	:	:	:	:	12321	12447	12561	12713	12832	12919	12873
3. Total employment (000)	:	:	:	:	:	8467	8529	8121	8004	7797	7529	7432
4. Population in employment aged 15-64	:	:	:	:	:	8227	8279	8064	7783	7592	7352	7271
5. Employment rate (% population aged 15-64)	:	:	:	:	:	66.8	66.5	64.2	61.2	59.2	56.9	56.5
6. Employment rate (% population aged 15-24)	:	:	:	:	:	33.9	32.7	29.5	27.3	26.6	24.2	23.9
7. Employment rate (% population aged 25-54)	:	:	:	:	:	82.8	83.1	80.5	77.6	75.4	73.0	73.0
8. Employment rate (% population aged 55-64)	:	:	:	:	:	43.1	41.5	40.6	36.7	35.6	34.5	35.2
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	59.2	56.7	56.1
10. Self-employed (% total employment)	:	:	:	:	:	30.0	29.1	29.0	29.5	29.9	30.4	29.8
11. Part-time employment (% total employment)	:	:	:	:	:	8.3	8.1	8.0	8.2	8.3	8.5	8.2
12. Fixed term contracts (% total employment)	:	:	:	:	:	5.6	5.3	5.2	6.5	12.4	16.3	20.8
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	40.6	40.4	40.4	42.0	42.8
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	41.0	40.5	40.4	38.2	38.0
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	18.4	19.1	19.2	19.8	19.1
16. Activity rate (% population aged 15-64)	:	:	:	:	:	73.3	72.8	72.5	71.7	71.5	70.6	70.0
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	41.7	40.5	40.1	40.9	43.1	41.6	40.5
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	89.8	89.6	88.9	88.3	87.7	87.2	87.1
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	45.5	44.1	44.3	40.4	39.6	38.7	39.7
20. Total unemployment (000)	:	:	:	1136	1098	840	782	1097	1356	1592	1762	1696
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	9.1	8.5	11.8	14.6	17.1	19.0	18.6
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	20.4	20.2	28.5	34.6	38.4	40.9	39.8
23. Long term unemployment rate (% labour force)	:	:	:	:	:	3.7	3.5	4.5	6.1	7.9	9.7	10.1
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	8.0	7.7	11.3	13.9	16.2	16.9	16.0

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	19648	19710	19758	19803	19823	19843	19859	19869	19870	19871	19872	19712
2. Population aged 15-64	:	:	:	:	:	12685	12800	12899	13027	13153	13241	13158
3. Total employment (000)	:	:	:	:	:	6712	6826	6636	6522	6410	6253	6185
4. Population in employment aged 15-64	:	:	:	:	:	6501	6616	6603	6372	6274	6119	6054
5. Employment rate (% population aged 15-64)	:	:	:	:	:	51.3	51.7	51.2	48.9	47.7	46.2	46.0
6. Employment rate (% population aged 15-24)	:	:	:	:	:	24.0	24.3	22.4	21.8	21.5	19.3	18.3
7. Employment rate (% population aged 25-54)	:	:	:	:	:	66.6	67.5	67.0	64.3	63.0	61.9	62.1
8. Employment rate (% population aged 55-64)	:	:	:	:	:	26.1	24.1	24.5	21.4	20.4	18.9	19.8
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	46.7	44.9	44.7
10. Self-employed (% total employment)	:	:	:	:	:	26.1	25.0	24.4	24.8	25.7	25.4	24.3
11. Part-time employment (% total employment)	:	:	:	:	:	13.6	13.2	13.6	13.4	12.7	13.4	13.2
12. Fixed term contracts (% total employment)	:	:	:	:	:	4.0	4.0	3.9	4.9	10.9	14.4	17.8
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	63.1	62.7	62.5	64.1	65.2
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	19.3	19.0	18.4	17.2	17.2
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	17.6	18.3	19.1	18.8	17.6
16. Activity rate (% population aged 15-64)	:	:	:	:	:	58.8	58.8	59.4	59.9	59.7	58.7	58.0
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	31.9	32.0	32.2	34.8	36.4	34.1	32.2
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	75.4	75.6	76.1	76.5	76.2	75.8	75.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	27.6	25.6	26.2	23.6	22.2	20.9	22.0
20. Total unemployment (000)	:	:	:	1143	1143	1009	948	1204	1494	1635	1646	1558
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	13.0	12.2	15.3	18.6	20.2	20.7	20.0
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	26.6	25.1	32.0	38.2	41.4	42.9	42.7
23. Long term unemployment rate (% labour force)	:	:	:	:	:	6.7	6.3	7.4	9.3	10.9	12.2	11.5
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	8.4	7.9	10.7	13.4	15.0	14.5	13.7

Source: Eurostat - Note: * Total population from Demographic. Statistics. Eurostat.

Key employment indicators Portugal

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	9849	9893	9931	9976	10032	10082	10120	10159	10217	10295	10371	10439
2. Population aged 15-64	6694	6747	6861	6897	6893	6869	6859	6878	6906	6959	7012	7058
3. Total employment (000)	4602	4545	4570	4567	4629	4744	4868	4928	5029	5098	5107	5064
4. Population in employment aged 15-64	4416	4361	4382	4383	4416	4510	4590	4646	4725	4782	4784	4743
5. Employment rate (% population aged 15-64)	66.0	64.6	63.9	63.5	64.1	65.7	66.9	67.5	68.4	68.7	68.2	67.2
6. Employment rate (% population aged 15-24)	47.3	43.1	41.0	39.2	39.8	42.5	43.1	43.1	42.4	43.0	42.1	38.7
7. Employment rate (% population aged 25-54)	78.7	78.8	78.2	78.2	78.2	79.0	80.0	80.6	81.8	82.2	81.6	81.0
8. Employment rate (% population aged 55-64)	47.8	45.4	46.5	45.8	47.1	48.2	50.0	50.3	50.7	50.1	50.9	51.1
9. FTE employment rate (% population aged 15-64)	65.5	63.8	62.1	61.9	61.8	62.5	64.8	65.7	66.8	67.2	67.1	65.7
10. Self-employed (% total employment)	27.2	27.7	28.8	28.8	29.0	29.0	28.4	27.0	26.3	27.3	26.9	26.9
11. Part-time employment (% total employment)	7.2	7.5	8.1	8.1	9.4	10.8	11.0	11.0	11.0	11.0	11.2	11.7
12. Fixed term contracts (% total employment)	12.5	11.5	11.4	12.0	13.6	15.4	17.2	18.7	19.9	20.4	21.7	21.1
13. Employment in Services (% total employment)	55.7	55.2	54.5	54.6	54.1	52.1	51.4	52.9	52.8	53.2	53.8	55.0
14. Employment in Industry (% total employment)	33.0	33.5	34.1	34.3	34.2	35.1	35.2	34.5	34.5	34.0	33.8	32.3
15. Employment in Agriculture (% total employment)	11.3	11.3	11.4	11.0	11.6	12.8	13.4	12.7	12.7	12.7	12.4	12.6
16. Activity rate (% population aged 15-64)	68.9	68.5	68.6	68.4	69.0	70.2	70.7	70.9	71.5	71.8	72.1	72.1
17. Activity rate (% of population aged 15-24)	52.0	48.7	47.2	45.6	46.3	48.5	48.1	47.4	46.6	47.4	47.6	45.3
18. Activity rate (% of population aged 25-54)	81.5	82.6	83.1	83.4	83.3	83.7	83.9	84.1	84.8	85.2	85.4	85.9
19. Activity rate (% of population aged 55-64)	48.8	46.9	48.1	47.2	48.7	50.0	51.7	51.9	52.4	51.7	52.9	53.4
20. Total unemployment (000)	201	266	329	345	347	329	257	228	208	213	271	345
21. Unemployment rate (% labour force 15+)	4.3	5.6	6.9	7.3	7.3	6.8	5.1	4.5	4.1	4.1	5.1	6.3
22. Youth unemployment rate (% labour force 15-24)	10.4	12.8	15.0	16.5	16.7	15.1	10.5	8.9	8.8	9.2	11.5	14.4
23. Long term unemployment rate (% labour force)	1.4	2.0	2.7	3.3	3.4	3.3	2.2	1.8	1.7	1.5	1.8	2.2
24. Youth unemployment ratio (% population aged 15-24)	5.1	5.8	6.5	6.8	6.9	6.5	5.2	4.4	4.3	4.6	5.5	6.6

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	4711	4756	4786	4820	4857	4851	4875	4893	4924	4966	5007	5042
2. Population aged 15-64	3202	3235	3302	3343	3339	3336	3356	3368	3383	3413	3441	3465
3. Total employment (000)	2604	2557	2566	2558	2590	2644	2708	2717	2768	2800	2796	2754
4. Population in employment aged 15-64	2482	2440	2451	2450	2464	2513	2549	2555	2592	2618	2613	2567
5. Employment rate (% population aged 15-64)	77.5	75.4	74.2	73.3	73.8	75.3	75.9	75.9	76.6	76.7	75.9	74.1
6. Employment rate (% population aged 15-24)	53.9	48.8	46.3	44.1	45.1	48.1	47.6	48.0	48.5	49.0	47.7	43.0
7. Employment rate (% population aged 25-54)	91.5	90.8	89.6	89.3	89.0	89.2	89.7	89.6	90.0	90.2	89.4	88.0
8. Employment rate (% population aged 55-64)	63.9	61.9	63.0	61.0	62.5	63.0	63.4	61.3	62.1	61.3	61.2	61.6
9. FTE employment rate (% population aged 15-64)	78.3	75.6	73.2	72.2	72.1	72.8	75.8	75.8	76.7	77.3	76.7	74.7
10. Self-employed (% total employment)	27.0	27.5	29.1	30.0	30.3	30.1	29.2	28.0	27.4	28.6	28.3	28.4
11. Part-time employment (% total employment)	4.1	4.3	4.6	4.3	5.2	6.0	6.2	6.4	6.5	6.7	7.0	7.3
12. Fixed term contracts (% total employment)	11.1	10.3	10.3	11.0	13.0	14.5	16.0	17.2	18.2	18.6	20.1	19.4
13. Employment in Services (% total employment)	50.5	49.3	48.8	47.8	47.4	44.6	43.9	45.1	44.6	45.1	44.9	45.9
14. Employment in Industry (% total employment)	39.3	40.3	40.7	41.7	41.6	43.6	44.0	43.6	44.0	43.4	43.9	42.3
15. Employment in Agriculture (% total employment)	10.2	10.4	10.5	10.5	11.0	11.8	12.1	11.3	11.4	11.5	11.3	11.9
16. Activity rate (% population aged 15-64)	79.5	78.2	78.0	77.3	77.9	79.1	79.3	79.2	79.3	79.4	79.5	78.8
17. Activity rate (% of population aged 15-24)	55.0	50.8	49.5	48.2	49.6	52.1	51.5	51.8	51.8	52.8	52.9	49.2
18. Activity rate (% of population aged 25-54)	93.9	94.1	94.0	93.8	93.4	93.2	93.1	92.9	92.5	92.7	92.6	92.5
19. Activity rate (% of population aged 55-64)	65.6	64.2	65.5	63.0	64.6	65.3	65.8	63.9	64.5	63.3	63.5	64.7
20. Total unemployment (000)	94	124	160	170	170	161	113	109	91	91	122	162
21. Unemployment rate (% labour force 15+)	3.6	4.8	6.1	6.5	6.5	6.1	4.1	3.9	3.3	3.2	4.2	5.4
22. Youth unemployment rate (% labour force 15-24)	8.9	10.7	13.4	15.0	14.3	12.0	8.3	7.2	6.6	7.1	9.6	12.4
23. Long term unemployment rate (% labour force)	1.4	2.0	2.8	3.3	3.3	3.0	1.9	1.5	1.4	1.2	1.4	1.8
24. Youth unemployment ratio (% population aged 15-24)	4.7	5.2	6.2	6.7	6.5	5.7	4.3	3.8	3.6	3.9	5.1	6.2

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	5138	5137	5145	5156	5175	5230	5245	5265	5293	5329	5365	5397
2. Population aged 15-64	3492	3513	3559	3554	3555	3534	3504	3511	3523	3546	3571	3592
3. Total employment (000)	1999	1989	2006	2010	2040	2100	2160	2212	2261	2299	2310	2310
4. Population in employment aged 15-64	1929	1918	1929	1931	1950	1996	2041	2091	2133	2164	2171	2175
5. Employment rate (% population aged 15-64)	55.2	54.6	54.2	54.3	54.9	56.5	58.3	59.6	60.5	61.0	60.8	60.6
6. Employment rate (% population aged 15-24)	39.9	36.8	35.4	33.8	33.9	36.7	38.4	38.2	36.3	36.9	36.3	34.3
7. Employment rate (% population aged 25-54)	67.2	68.0	67.8	68.1	68.3	69.3	70.7	72.0	73.9	74.6	74.0	74.2
8. Employment rate (% population aged 55-64)	34.7	31.9	32.8	32.4	34.0	35.8	38.3	40.6	40.7	40.2	41.9	41.9
9. FTE employment rate (% population aged 15-64)	54.0	53.1	52.0	52.3	52.2	53.1	54.5	56.2	57.4	57.6	58.0	57.1
10. Self-employed (% total employment)	27.5	27.8	28.2	27.1	27.4	27.7	27.4	25.8	24.9	25.7	25.2	25.2
11. Part-time employment (% total employment)	11.1	11.7	12.6	13.0	14.7	16.8	17.1	16.7	16.4	16.4	16.3	17.0
12. Fixed term contracts (% total employment)	14.3	13.0	12.8	13.1	14.3	16.5	18.6	20.5	21.8	22.6	23.6	23.0
13. Employment in Services (% total employment)	62.5	62.9	61.9	63.3	62.7	61.6	60.8	62.4	62.9	63.2	64.6	66.0
14. Employment in Industry (% total employment)	24.7	24.6	25.7	25.0	24.8	24.3	24.2	23.3	22.8	22.5	21.7	20.5
15. Employment in Agriculture (% total employment)	12.8	12.5	12.4	11.7	12.5	14.1	15.0	14.3	14.3	14.3	13.7	13.5
16. Activity rate (% population aged 15-64)	58.6	59.0	59.5	59.7	60.4	61.7	62.5	63.0	63.9	64.5	65.0	65.6
17. Activity rate (% of population aged 15-24)	46.9	45.0	43.8	41.9	42.3	44.7	44.5	43.0	41.2	42.0	42.2	41.3
18. Activity rate (% of population aged 25-54)	70.1	72.0	73.1	73.6	73.9	74.6	75.1	75.7	77.3	78.1	78.3	79.6
19. Activity rate (% of population aged 55-64)	34.9	32.7	33.6	33.4	35.4	37.1	39.5	41.5	41.8	41.5	43.5	43.5
20. Total unemployment (000)	107	142	170	175	178	168	144	119	117	122	150	183
21. Unemployment rate (% labour force 15+)	5.1	6.7	7.9	8.2	8.2	7.6	6.4	5.2	5.1	5.1	6.1	7.2
22. Youth unemployment rate (% labour force 15-24)	12.1	15.2	16.9	18.4	19.8	18.9	13.0	11.1	11.5	12.0	13.8	17.0
23. Long term unemployment rate (% labour force)	1.4	2.0	2.8	3.4	3.6	3.6	2.7	2.1	2.1	1.9	2.2	2.6
24. Youth unemployment ratio (% population aged 15-24)	5.5	6.4	6.8	6.9	7.3	7.3	6.0	5.0	5.1	5.2	5.9	7.0

Source: Eurostat

Key employment indicators Slovenia

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	1993	1988	1985	1983	1989	1992	1995	1996
2. Population aged 15-64	:	:	:	:	1391	1387	1385	1384	1397	1399	1401	1405
3. Total employment (000)	:	:	:	:	:	:	:	:	900	905	899	898
4. Population in employment aged 15-64	:	:	:	:	857	868	872	861	877	893	889	879
5. Employment rate (% population aged 15-64)	:	:	:	:	61.6	62.6	62.9	62.2	62.8	63.8	63.4	62.6
6. Employment rate (% population aged 15-24)	:	:	:	:	37.8	40.0	37.5	34.0	32.8	30.5	30.6	29.1
7. Employment rate (% population aged 25-54)	:	:	:	:	81.4	81.0	81.6	81.7	82.6	83.6	83.4	82.5
8. Employment rate (% population aged 55-64)	:	:	:	:	19.1	21.8	23.9	22.0	22.7	25.5	24.5	23.5
9. FTE employment rate (% population aged 15-64)	:	:	:	:	60.5	60.9	61.8	60.8	61.5	62.4	62.7	60.9
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	17.9	17.5	17.2	16.9
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	6.4	6.1	6.1	6.2
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	13.7	13.0	14.2	13.7
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	50.8	51.3	52.0	52.9
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	37.6	37.5	36.9	36.4
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	11.7	11.3	11.0	10.7
16. Activity rate (% population aged 15-64)	:	:	:	:	66.2	67.3	68.2	67.3	67.5	68.1	67.8	67.1
17. Activity rate (% of population aged 15-24)	:	:	:	:	45.3	47.9	45.5	41.3	39.2	37.1	36.6	35.2
18. Activity rate (% of population aged 25-54)	:	:	:	:	86.0	85.7	87.0	87.1	87.4	88.0	88.1	87.5
19. Activity rate (% of population aged 55-64)	:	:	:	:	19.6	22.4	24.5	23.1	24.0	26.5	25.2	24.3
20. Total unemployment (000)	:	:	:	66	65	67	72	69	63	56	60	63
21. Unemployment rate (% labour force 15+)	:	:	:	:	6.9	6.9	7.4	7.2	6.6	5.8	6.1	6.5
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	17.5	17.2	17.8	17.9	16.2	16.0	15.3	15.9
23. Long term unemployment rate (% labour force)	:	:	:	:	3.4	3.4	3.3	3.2	4.1	3.5	3.4	3.4
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	7.6	7.8	7.6	7.1	6.0	5.8	5.5	5.4

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	967	970	968	967	972	974	976	976
2. Population aged 15-64	:	:	:	:	696	701	702	701	707	709	710	712
3. Total employment (000)	:	:	:	:	:	:	:	:	486	492	489	490
4. Population in employment aged 15-64	:	:	:	:	459	470	471	466	475	487	484	479
5. Employment rate (% population aged 15-64)	:	:	:	:	66.0	67.0	67.2	66.5	67.2	68.6	68.2	67.4
6. Employment rate (% population aged 15-24)	:	:	:	:	39.4	43.5	39.5	35.8	35.7	34.1	34.4	33.7
7. Employment rate (% population aged 25-54)	:	:	:	:	84.9	84.3	85.2	85.2	85.7	87.0	86.7	85.7
8. Employment rate (% population aged 55-64)	:	:	:	:	27.6	29.4	31.8	31.1	32.3	35.9	35.4	33.2
9. FTE employment rate (% population aged 15-64)	:	:	:	:	65.5	65.8	66.2	65.5	66.1	67.9	67.7	66.1
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	20.5	20.1	20.0	19.8
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	5.3	5.0	4.9	5.1
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	12.7	12.1	12.6	12.6
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	42.9	43.0	43.6	43.7
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	45.6	45.5	45.2	45.2
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	11.5	11.4	11.2	11.1
16. Activity rate (% population aged 15-64)	:	:	:	:	71.1	71.9	72.6	71.8	71.9	72.8	72.5	72.0
17. Activity rate (% of population aged 15-24)	:	:	:	:	47.2	51.1	47.7	43.2	41.7	40.5	40.4	39.9
18. Activity rate (% of population aged 25-54)	:	:	:	:	89.9	89.1	90.7	90.6	90.6	91.1	91.2	90.6
19. Activity rate (% of population aged 55-64)	:	:	:	:	28.5	30.5	32.9	33.0	34.6	37.5	36.7	34.5
20. Total unemployment (000)	:	:	:	38	35	35	38	36	33	29	31	32
21. Unemployment rate (% labour force 15+)	:	:	:	:	7.0	6.8	7.3	7.0	6.4	5.5	5.8	6.1
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	17.1	15.4	16.9	16.7	14.9	15.0	13.8	13.7
23. Long term unemployment rate (% labour force)	:	:	:	:	3.7	3.6	3.3	3.4	4.0	3.4	3.4	3.3
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	7.8	7.5	7.6	6.9	6.0	6.1	5.5	5.3

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	1025	1018	1017	1016	1017	1018	1019	1020
2. Population aged 15-64	:	:	:	:	696	686	683	683	689	690	691	693
3. Total employment (000)	:	:	:	:	:	:	:	:	414	412	411	407
4. Population in employment aged 15-64	:	:	:	:	398	398	400	394	403	406	405	400
5. Employment rate (% population aged 15-64)	:	:	:	:	57.1	58.0	58.6	57.7	58.4	58.8	58.6	57.6
6. Employment rate (% population aged 15-24)	:	:	:	:	36.1	36.4	35.4	32.2	29.7	26.8	26.5	24.3
7. Employment rate (% population aged 25-54)	:	:	:	:	77.8	77.5	77.8	78.0	79.3	80.1	80.0	79.3
8. Employment rate (% population aged 55-64)	:	:	:	:	11.5	14.6	16.1	13.4	13.8	15.8	14.2	14.6
9. FTE employment rate (% population aged 15-64)	:	:	:	:	55.6	55.9	57.2	56.1	56.8	56.9	57.6	55.5
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	14.8	14.3	13.8	13.3
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	7.8	7.4	7.5	7.5
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	14.8	14.0	16.1	14.9
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	60.1	61.1	62.0	63.9
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	28.1	27.9	27.2	25.9
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	11.8	11.0	10.8	10.3
16. Activity rate (% population aged 15-64)	:	:	:	:	61.4	62.7	63.6	62.6	62.9	63.2	63.0	62.1
17. Activity rate (% of population aged 15-24)	:	:	:	:	43.3	44.5	43.3	39.4	36.4	33.7	32.5	30.3
18. Activity rate (% of population aged 25-54)	:	:	:	:	82.0	82.1	83.1	83.4	84.2	84.7	84.9	84.3
19. Activity rate (% of population aged 55-64)	:	:	:	:	11.9	15.0	16.4	13.7	14.1	16.2	14.4	14.9
20. Total unemployment (000)	:	:	:	29	29	32	34	33	30	28	29	31
21. Unemployment rate (% labour force 15+)	:	:	:	:	6.7	7.1	7.5	7.4	6.8	6.2	6.5	7.1
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	18.0	19.3	18.8	19.2	18.0	17.4	17.4	19.0
23. Long term unemployment rate (% labour force)	:	:	:	:	3.1	3.3	3.3	3.0	4.1	3.6	3.4	3.6
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	7.4	8.1	7.7	7.3	5.9	5.5	5.6	5.6

Source: Eurostat

Key employment indicators Slovak Republic

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	5358	5369	5377	5379	5384	5389
2. Population aged 15-64	:	:	:	:	:	:	3619	3657	3693	3723	3728	3733
3. Total employment (000)	:	:	:	2107	2156	2129	2120	2063	2025	2037	2016	2061
4. Population in employment aged 15-64	:	:	:	:	:	:	2191	2125	2096	2115	2118	2155
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	60.6	58.1	56.8	56.8	56.8	57.7
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	35.0	31.0	29.0	27.7	27.0	27.4
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	78.5	76.1	74.7	74.8	75.0	76.0
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	22.8	22.3	21.3	22.4	22.8	24.6
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	60.6	58.0	56.4	55.7	55.8	57.4
10. Self-employed (% total employment)	:	:	:	6.6	6.5	6.5	7.1	8.0	8.3	8.8	9.1	10.2
11. Part-time employment (% total employment)	:	:	:	:	:	:	2.3	2.1	2.1	2.3	1.9	2.4
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	4.2	3.9	4.8	4.9	4.9	4.9
13. Employment in Services (% total employment)	:	:	:	53.9	54.4	54.3	56.2	57.9	59.4	60.2	60.5	61.3
14. Employment in Industry (% total employment)	:	:	:	37.2	37.6	38.1	36.8	36.0	35.1	34.5	34.5	34.3
15. Employment in Agriculture (% total employment)	:	:	:	8.9	8.0	7.6	7.0	6.2	5.6	5.3	5.0	4.4
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	69.3	69.5	69.9	70.4	69.9	70.0
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	46.8	46.8	46.0	45.5	43.4	41.1
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	87.4	87.6	88.4	88.9	88.6	89.5
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	24.6	24.6	24.3	25.5	26.9	28.5
20. Total unemployment (000)	:	:	:	304	282	293	330	427	481	508	489	446
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	16.7	18.7	19.4	18.7	17.1
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	34.2	37.1	39.0	37.6	32.9
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	7.8	10.1	11.4	12.2	11.1
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	12.3	15.9	16.6	17.6	16.2	13.3

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	2593	2600	2604	2602	2608	2613
2. Population aged 15-64	:	:	:	:	:	:	1780	1802	1822	1836	1842	1847
3. Total employment (000)	:	:	:	:	:	:	1167	1126	1096	1098	1095	1120
4. Population in employment aged 15-64	:	:	:	:	:	:	1207	1159	1133	1139	1149	1170
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	67.8	64.3	62.2	62.0	62.4	63.3
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	38.0	32.9	29.8	28.9	28.7	29.3
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	84.9	81.7	79.6	79.0	79.5	80.5
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	39.1	36.8	35.4	37.7	39.1	41.0
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	69.0	65.2	62.7	61.5	61.7	63.6
10. Self-employed (% total employment)	:	:	:	:	:	:	9.5	10.8	11.3	11.9	12.5	13.5
11. Part-time employment (% total employment)	:	:	:	:	:	:	1.1	1.2	1.1	1.2	1.1	1.3
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	4.0	4.1	5.1	5.1	5.2	5.3
13. Employment in Services (% total employment)	:	:	:	:	:	:	43.9	45.4	47.2	47.9	48.6	48.9
14. Employment in Industry (% total employment)	:	:	:	:	:	:	47.2	46.4	45.2	44.9	44.8	45.0
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	8.9	8.2	7.6	7.3	6.6	6.1
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	77.2	76.9	76.8	77.4	76.7	76.7
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	51.8	50.9	49.4	49.8	47.5	44.9
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	93.7	93.7	93.9	94.0	93.4	94.1
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	42.0	41.1	41.0	43.1	46.3	48.1
20. Total unemployment (000)	:	:	:	150	132	139	165	230	262	281	263	238
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	16.6	18.9	19.8	18.6	16.8
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	35.2	39.9	42.1	38.8	34.5
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	7.4	10.1	11.3	11.9	10.9
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	12.9	17.5	19.1	20.7	18.1	15.2

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	2766	2770	2774	2776	2776	2777
2. Population aged 15-64	:	:	:	:	:	:	1839	1855	1871	1886	1886	1886
3. Total employment (000)	:	:	:	:	:	:	953	937	929	939	921	942
4. Population in employment aged 15-64	:	:	:	:	:	:	985	966	963	976	969	985
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	53.5	52.1	51.5	51.8	51.4	52.2
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	32.1	29.0	28.2	26.5	25.3	25.4
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	72.1	70.6	69.8	70.7	70.6	71.5
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	9.4	10.3	9.8	9.8	9.5	11.2
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	52.4	51.0	50.2	50.1	50.0	51.3
10. Self-employed (% total employment)	:	:	:	:	:	:	4.2	4.6	4.8	5.1	5.0	6.2
11. Part-time employment (% total employment)	:	:	:	:	:	:	3.8	3.2	3.1	3.5	2.7	3.8
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	4.4	3.6	4.5	4.7	4.5	4.6
13. Employment in Services (% total employment)	:	:	:	:	:	:	70.7	72.3	73.2	74.0	73.9	75.2
14. Employment in Industry (% total employment)	:	:	:	:	:	:	24.7	23.9	23.5	22.9	22.9	22.2
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	4.7	3.8	3.3	3.1	3.2	2.6
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	61.7	62.3	63.2	63.7	63.2	63.5
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	41.9	42.7	42.6	41.3	39.2	37.2
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	81.1	81.5	82.9	83.9	83.9	84.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	10.3	11.1	10.7	11.0	11.1	12.4
20. Total unemployment (000)	:	:	:	155	150	154	165	197	219	227	226	208
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	16.9	18.5	18.9	18.9	17.4
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	33.1	33.9	35.4	36.2	30.9
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	8.4	10.1	11.4	12.6	11.4
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	11.6	14.3	14.2	14.5	14.2	11.4

Source: Eurostat

Key employment indicators Finland

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	5022	5045	5070	5088	5105	5119	5133	5144	5156	5166	5180	5193
2. Population aged 15-64	3374	3384	3394	3398	3404	3413	3426	3440	3453	3450	3458	3464
3. Total employment (000)	2177	2047	2018	2056	2084	2154	2197	2253	2304	2338	2360	2350
4. Population in employment aged 15-64	2197	2065	2047	2094	2125	2160	2212	2282	2319	2350	2354	2345
5. Employment rate (% population aged 15-64)	65.1	61.0	60.3	61.6	62.4	63.3	64.6	66.4	67.2	68.1	68.1	67.7
6. Employment rate (% population aged 15-24)	35.9	30.4	28.4	29.8	30.6	34.2	36.1	40.0	41.1	41.8	40.7	39.7
7. Employment rate (% population aged 25-54)	79.6	75.3	75.1	76.4	77.3	77.7	79.1	80.4	80.9	81.5	81.6	81.1
8. Employment rate (% population aged 55-64)	37.0	34.8	33.2	34.4	35.4	35.6	36.2	39.0	41.6	45.7	47.8	49.6
9. FTE employment rate (% population aged 15-64)	:	:	:	56.5	57.5	59.5	60.6	64.2	64.9	65.7	65.8	65.2
10. Self-employed (% total employment)	13.8	13.8	14.0	13.7	13.5	13.2	12.4	12.4	12.2	11.9	11.8	11.8
11. Part-time employment (% total employment)	10.4	11.3	11.5	11.6	11.4	10.9	11.4	12.1	12.3	12.2	12.8	13.0
12. Fixed term contracts (% total employment)	:	:	:	:	:	18.1	17.4	16.8	16.3	16.4	16.0	16.3
13. Employment in Services (% total employment)	63.6	64.4	64.8	64.9	65.5	65.5	65.9	66.0	66.4	67.1	68.0	68.9
14. Employment in Industry (% total employment)	27.7	27.0	26.8	27.1	27.1	27.5	27.7	27.7	27.7	27.3	26.7	26.0
15. Employment in Agriculture (% total employment)	8.7	8.6	8.5	7.9	7.4	7.0	6.4	6.2	6.0	5.6	5.3	5.1
16. Activity rate (% population aged 15-64)	73.4	72.6	72.0	72.6	72.9	72.4	72.8	73.9	74.5	75.0	74.9	74.5
17. Activity rate (% of population aged 15-24)	48.3	45.2	42.5	42.1	42.2	45.6	47.1	50.9	52.3	52.1	51.5	50.7
18. Activity rate (% of population aged 25-54)	87.6	87.2	87.1	87.7	87.7	86.9	87.3	87.8	87.9	88.0	88.0	87.5
19. Activity rate (% of population aged 55-64)	41.6	41.1	41.0	42.9	44.8	41.8	41.7	43.5	45.8	50.3	52.1	53.7
20. Total unemployment (000)	292	405	408	382	363	314	285	261	253	238	237	235
21. Unemployment rate (% labour force 15+)	11.7	16.3	16.6	15.4	14.6	12.7	11.4	10.2	9.8	9.1	9.1	9.0
22. Youth unemployment rate (% labour force 15-24)	26.4	33.6	34.0	29.7	28.0	25.2	23.5	21.4	21.4	19.8	21.0	21.8
23. Long term unemployment rate (% labour force)	:	:	:	:	:	4.9	4.1	3.0	2.8	2.5	2.3	2.3
24. Youth unemployment ratio (% population aged 15-24)	13.3	15.8	14.9	12.8	12.0	11.6	11.1	10.9	11.1	10.3	10.8	11.0

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	2429	2442	2456	2466	2476	2484	2492	2499	2507	2512	2521	2529
2. Population aged 15-64	1689	1697	1703	1705	1709	1715	1722	1728	1735	1733	1738	1741
3. Total employment (000)	1116	1054	1043	1077	1098	1136	1163	1183	1211	1225	1222	1220
4. Population in employment aged 15-64	1124	1061	1055	1095	1118	1136	1168	1196	1216	1227	1216	1213
5. Employment rate (% population aged 15-64)	66.6	62.5	62.0	64.2	65.4	66.2	67.8	69.2	70.1	70.8	70.0	69.7
6. Employment rate (% population aged 15-24)	35.6	30.9	28.8	31.7	32.3	36.1	38.3	41.7	42.2	42.9	41.1	40.1
7. Employment rate (% population aged 25-54)	80.7	76.4	76.5	79.0	80.2	80.6	82.4	83.5	84.3	84.7	83.8	83.3
8. Employment rate (% population aged 55-64)	39.5	37.0	35.2	35.6	37.8	38.1	38.4	40.1	42.9	46.6	48.5	51.0
9. FTE employment rate (% population aged 15-64)	:	:	:	59.1	60.5	63.5	64.8	68.4	69.3	69.8	69.3	68.4
10. Self-employed (% total employment)	18.0	18.2	18.2	17.8	17.3	17.0	15.7	15.9	15.9	15.4	15.3	15.3
11. Part-time employment (% total employment)	7.3	8.0	8.2	8.2	8.0	7.0	7.3	7.7	8.0	7.9	8.3	8.7
12. Fixed term contracts (% total employment)	:	:	:	:	:	15.3	14.3	13.8	12.9	12.9	12.5	12.6
13. Employment in Services (% total employment)	49.6	50.6	51.0	51.0	51.7	51.4	52.1	52.0	52.1	53.1	53.8	54.5
14. Employment in Industry (% total employment)	39.2	38.2	38.2	39.0	39.0	39.6	39.8	39.9	40.1	39.5	39.3	38.8
15. Employment in Agriculture (% total employment)	11.1	11.2	10.8	10.0	9.3	8.9	8.1	8.1	7.9	7.4	7.0	6.8
16. Activity rate (% population aged 15-64)	76.7	75.9	75.4	75.9	76.1	75.5	76.1	76.8	77.2	77.6	77.0	76.8
17. Activity rate (% of population aged 15-24)	50.1	47.7	45.2	45.3	45.3	48.1	49.5	52.7	53.5	53.3	52.1	51.4
18. Activity rate (% of population aged 25-54)	90.8	90.4	90.2	90.8	90.6	89.7	90.4	90.7	90.8	90.9	90.5	90.1
19. Activity rate (% of population aged 55-64)	44.6	43.5	43.5	44.6	47.1	44.4	44.3	45.1	47.3	51.3	53.0	55.3
20. Total unemployment (000)	178	235	235	204	186	160	143	130	122	117	123	124
21. Unemployment rate (% labour force 15+)	13.6	18.1	18.1	15.7	14.3	12.3	10.9	9.8	9.1	8.6	9.1	9.2
22. Youth unemployment rate (% labour force 15-24)	30.1	36.4	37.2	30.7	29.5	25.4	22.8	20.8	21.1	19.6	21.2	21.9
23. Long term unemployment rate (% labour force)	:	:	:	:	:	4.9	4.3	3.2	2.8	2.7	2.5	2.6
24. Youth unemployment ratio (% population aged 15-24)	15.6	17.8	17.2	14.1	13.4	12.3	11.3	10.9	11.3	10.4	11.0	11.3

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	2593	2604	2614	2622	2629	2635	2640	2645	2649	2654	2659	2664
2. Population aged 15-64	1685	1688	1691	1693	1695	1698	1705	1711	1718	1717	1720	1723
3. Total employment (000)	1061	993	976	979	986	1018	1034	1070	1093	1113	1138	1130
4. Population in employment aged 15-64	1073	1005	992	999	1007	1024	1044	1086	1103	1123	1138	1132
5. Employment rate (% population aged 15-64)	63.7	59.5	58.7	59.0	59.4	60.3	61.2	63.4	64.2	65.4	66.2	65.7
6. Employment rate (% population aged 15-24)	36.2	30.0	27.9	27.9	29.0	32.4	33.9	38.3	40.0	40.7	40.3	39.2
7. Employment rate (% population aged 25-54)	78.3	74.1	73.7	73.7	74.2	74.7	75.7	77.1	77.3	78.1	79.2	78.9
8. Employment rate (% population aged 55-64)	34.9	33.0	31.5	33.4	33.3	33.3	34.1	38.0	40.4	45.0	47.2	48.3
9. FTE employment rate (% population aged 15-64)	:	:	:	53.8	54.3	55.5	56.4	60.2	60.5	61.8	62.4	62.0
10. Self-employed (% total employment)	9.3	9.3	9.5	9.2	9.3	9.1	8.7	8.5	8.2	8.1	8.1	8.1
11. Part-time employment (% total employment)	13.7	14.8	14.9	15.4	15.2	15.3	15.9	16.9	17.0	16.8	17.5	17.7
12. Fixed term contracts (% total employment)	:	:	:	:	:	21.0	20.5	19.8	19.8	19.9	19.5	20.0
13. Employment in Services (% total employment)	78.4	79.2	79.6	80.2	80.9	81.2	81.4	81.6	82.2	82.4	83.1	84.3
14. Employment in Industry (% total employment)	15.5	14.9	14.5	14.2	13.9	13.9	14.2	14.3	14.0	13.9	13.3	12.4
15. Employment in Agriculture (% total employment)	6.1	5.8	6.0	5.6	5.2	4.8	4.4	4.2	3.8	3.7	3.6	3.3
16. Activity rate (% population aged 15-64)	70.2	69.3	68.7	69.3	69.7	69.3	69.5	71.1	71.8	72.4	72.8	72.2
17. Activity rate (% of population aged 15-24)	46.4	42.9	39.8	38.9	39.2	43.1	44.8	49.1	51.0	50.9	50.9	50.0
18. Activity rate (% of population aged 25-54)	84.4	83.9	83.9	84.4	84.7	83.9	84.0	84.7	84.9	85.0	85.5	84.8
19. Activity rate (% of population aged 55-64)	38.9	39.1	38.6	41.4	42.7	39.4	39.3	42.0	44.4	49.4	51.2	52.2
20. Total unemployment (000)	114	170	174	178	176	154	142	131	131	121	114	111
21. Unemployment rate (% labour force 15+)	9.6	14.4	14.8	15.1	14.9	13.0	12.0	10.7	10.6	9.7	9.1	8.9
22. Youth unemployment rate (% labour force 15-24)	22.5	30.6	30.5	28.6	26.3	25.0	24.3	22.1	21.6	20.0	20.9	21.6
23. Long term unemployment rate (% labour force)	:	:	:	:	:	4.9	4.0	2.8	2.7	2.3	2.0	2.0
24. Youth unemployment ratio (% population aged 15-24)	11.0	13.7	12.6	11.4	10.5	10.9	10.9	10.9	11.0	10.2	10.6	10.8

Source: Eurostat

Key employment indicators Sweden

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	8577	8629	8706	8765	8789	8804	8818	8834	8857	8889	8930	8969
2. Population aged 15-64	5569	5578	5611	5638	5649	5658	5670	5686	5708	5739	5776	5821
3. Total employment (000)	:	4077	4041	4103	4069	4015	4078	4163	4264	4345	4352	4341
4. Population in employment aged 15-64	4225	3977	3939	3997	3973	3930	3988	4078	4168	4249	4252	4242
5. Employment rate (% population aged 15-64)	75.9	71.3	70.2	70.9	70.3	69.5	70.3	71.7	73.0	74.0	73.6	72.9
6. Employment rate (% population aged 15-24)	45.9	37.3	36.5	37.6	35.9	35.6	37.7	39.9	42.2	44.2	42.8	41.2
7. Employment rate (% population aged 25-54)	87.4	83.6	82.3	82.9	82.0	80.9	81.4	82.7	83.9	84.6	84.1	83.5
8. Employment rate (% population aged 55-64)	67.3	63.4	62.0	62.0	63.4	62.6	63.0	63.9	64.9	66.7	68.0	68.6
9. FTE employment rate (% population aged 15-64)	:	:	:	63.9	62.8	61.9	62.4	63.8	65.1	68.4	68.1	67.6
10. Self-employed (% total employment)	:	5.5	5.6	5.6	5.5	5.6	5.5	5.5	5.4	5.1	4.9	4.7
11. Part-time employment (% total employment)	:	20.5	20.8	20.5	20.2	20.2	19.8	19.7	19.5	21.1	21.5	22.9
12. Fixed term contracts (% total employment)	:	12.0	14.1	14.7	14.4	15.1	16.1	16.5	15.8	15.2	15.2	15.1
13. Employment in Services (% total employment)	:	72.8	73.1	72.4	72.5	72.7	72.8	73.3	73.7	73.8	74.4	74.8
14. Employment in Industry (% total employment)	:	23.8	23.6	24.4	24.4	24.3	24.4	24.0	23.6	23.7	23.3	22.8
15. Employment in Agriculture (% total employment)	:	3.4	3.3	3.2	3.1	2.9	2.8	2.7	2.7	2.5	2.4	2.3
16. Activity rate (% population aged 15-64)	79.9	77.7	76.7	77.0	77.1	76.5	76.2	76.8	77.3	77.9	77.6	77.3
17. Activity rate (% of population aged 15-24)	54.2	49.6	48.2	47.4	46.1	45.5	45.7	46.8	48.1	50.0	49.1	47.7
18. Activity rate (% of population aged 25-54)	90.8	89.2	88.2	88.7	88.5	87.8	87.3	87.6	87.9	88.0	87.7	87.7
19. Activity rate (% of population aged 55-64)	68.1	65.1	64.3	65.1	67.0	66.4	66.4	67.6	68.6	70.0	71.2	71.9
20. Total unemployment (000)	252	401	412	391	426	437	362	300	253	224	229	260
21. Unemployment rate (% labour force 15+)	5.6	9.1	9.4	8.8	9.6	9.9	8.2	6.7	5.6	4.9	4.9	5.6
22. Youth unemployment rate (% labour force 15-24)	13.2	22.0	22.0	19.1	20.5	20.6	16.1	12.3	10.5	10.9	11.9	13.4
23. Long term unemployment rate (% labour force)	0.5	1.4	2.3	2.3	2.8	3.1	2.6	1.9	1.4	1.0	1.0	1.0
24. Youth unemployment ratio (% population aged 15-24)	7.2	10.9	10.6	9.0	9.4	9.3	7.5	6.2	5.4	5.9	6.5	6.9

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	4192	4222	4265	4298	4315	4327	4340	4353	4371	4393	4421	4443
2. Population aged 15-64	2826	2832	2849	2862	2868	2873	2879	2887	2899	2916	2935	2957
3. Total employment (000)	:	2102	2093	2139	2129	2106	2145	2186	2237	2269	2264	2258
4. Population in employment aged 15-64	2228	2067	2051	2092	2082	2061	2096	2137	2179	2208	2200	2195
5. Employment rate (% population aged 15-64)	78.8	73.0	72.0	73.1	72.6	71.7	72.8	74.0	75.1	75.7	74.9	74.2
6. Employment rate (% population aged 15-24)	54.6	42.4	40.9	42.1	40.3	39.3	41.2	43.0	44.2	43.7	41.8	40.4
7. Employment rate (% population aged 25-54)	87.9	83.6	82.7	84.0	83.3	82.5	83.4	84.4	85.8	86.6	85.9	85.3
8. Employment rate (% population aged 55-64)	72.0	67.0	65.4	65.2	66.7	65.1	66.1	67.3	67.8	69.4	70.4	70.8
9. FTE employment rate (% population aged 15-64)	:	:	:	69.5	67.9	67.3	68.5	69.3	70.0	73.6	72.9	72.3
10. Self-employed (% total employment)	:	8.4	8.4	8.3	8.3	8.3	8.1	7.9	7.9	7.4	7.3	7.0
11. Part-time employment (% total employment)	:	6.8	7.3	7.3	7.4	7.5	7.4	8.0	8.2	10.8	11.1	11.2
12. Fixed term contracts (% total employment)	:	11.1	13.7	13.6	13.0	13.3	13.9	14.2	13.8	12.9	12.8	12.8
13. Employment in Services (% total employment)	:	58.1	58.6	57.9	58.3	59.0	59.4	60.0	60.6	61.0	61.4	61.7
14. Employment in Industry (% total employment)	:	35.9	35.6	36.7	36.5	36.3	36.2	35.8	35.2	35.3	35.0	34.7
15. Employment in Agriculture (% total employment)	:	6.0	5.8	5.4	5.2	4.7	4.3	4.2	4.2	3.7	3.6	3.6
16. Activity rate (% population aged 15-64)	83.2	80.0	79.1	79.6	79.6	79.0	79.0	79.4	79.8	79.9	79.4	79.2
17. Activity rate (% of population aged 15-24)	62.7	54.5	52.2	51.3	49.8	48.9	49.1	49.9	50.2	50.0	48.5	47.3
18. Activity rate (% of population aged 25-54)	91.8	90.1	89.5	90.4	90.2	89.7	89.6	89.7	90.2	90.4	89.8	89.9
19. Activity rate (% of population aged 55-64)	72.9	69.0	68.2	68.6	70.8	69.7	70.3	71.5	72.1	73.1	74.2	74.9
20. Total unemployment (000)	157	247	248	225	236	238	194	155	139	124	127	145
21. Unemployment rate (% labour force 15+)	6.6	10.7	10.8	9.7	10.1	10.2	8.4	6.6	5.9	5.2	5.3	6.0
22. Youth unemployment rate (% labour force 15-24)	15.7	25.6	24.9	20.4	21.3	21.1	16.4	12.2	11.0	11.9	12.0	13.0
23. Long term unemployment rate (% labour force)	1.0	2.6	3.9	3.6	3.8	4.0	3.2	2.2	1.7	1.2	1.2	1.2
24. Youth unemployment ratio (% population aged 15-24)	8.6	12.8	12.1	9.7	10.0	9.8	7.8	6.4	5.9	6.3	6.5	6.9

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	4381	4403	4438	4464	4472	4474	4477	4480	4486	4496	4510	4527
2. Population aged 15-64	2739	2743	2759	2773	2779	2783	2789	2797	2809	2823	2841	2864
3. Total employment (000)	:	1973	1947	1964	1939	1909	1932	1977	2028	2076	2087	2083
4. Population in employment aged 15-64	2001	1911	1889	1907	1892	1871	1894	1942	1990	2041	2053	2047
5. Employment rate (% population aged 15-64)	73.1	69.7	68.5	68.8	68.1	67.2	67.9	69.4	70.9	72.3	72.2	71.5
6. Employment rate (% population aged 15-24)	37.4	32.3	32.2	33.2	31.8	31.9	34.3	36.9	40.1	44.7	43.8	42.1
7. Employment rate (% population aged 25-54)	87.0	83.6	81.9	81.8	80.7	79.1	79.5	80.9	81.9	82.5	82.4	81.7
8. Employment rate (% population aged 55-64)	63.2	60.5	59.1	59.2	60.5	60.4	60.0	60.7	62.1	64.0	65.6	66.3
9. FTE employment rate (% population aged 15-64)	:	:	:	58.5	57.8	56.7	56.4	58.5	60.2	63.3	63.4	63.0
10. Self-employed (% total employment)	:	2.5	2.7	2.8	2.6	2.7	2.8	2.9	2.8	2.7	2.5	2.4
11. Part-time employment (% total employment)	:	36.0	36.2	35.8	34.9	34.7	34.3	33.3	32.3	33.0	33.1	35.5
12. Fixed term contracts (% total employment)	:	12.8	14.5	15.8	15.8	16.9	18.3	18.7	17.8	17.6	17.6	17.4
13. Employment in Services (% total employment)	:	87.9	88.1	87.6	87.5	87.4	87.3	87.6	87.8	87.9	88.4	89.0
14. Employment in Industry (% total employment)	:	11.5	11.2	11.5	11.6	11.6	11.6	11.3	11.1	11.0	10.5	10.0
15. Employment in Agriculture (% total employment)	:	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.1	1.1	1.0
16. Activity rate (% population aged 15-64)	76.8	75.4	74.4	74.6	74.7	74.0	73.5	74.2	74.8	75.7	75.8	75.4
17. Activity rate (% of population aged 15-24)	46.5	45.6	45.2	44.6	43.4	42.9	42.8	44.0	46.1	50.1	49.7	48.3
18. Activity rate (% of population aged 25-54)	89.7	88.1	86.7	86.8	86.7	85.6	85.0	85.4	85.5	85.5	85.5	85.4
19. Activity rate (% of population aged 55-64)	64.0	61.7	60.8	61.9	63.5	63.4	62.6	63.8	65.2	66.9	68.2	68.9
20. Total unemployment (000)	95	154	164	166	190	199	168	145	114	100	101	115
21. Unemployment rate (% labour force 15+)	4.4	7.3	7.8	7.8	9.0	9.5	8.0	6.8	5.3	4.5	4.6	5.2
22. Youth unemployment rate (% labour force 15-24)	10.7	18.2	19.0	17.7	19.8	20.1	15.8	12.4	9.9	9.9	11.8	13.7
23. Long term unemployment rate (% labour force)	0.1	0.4	0.8	1.0	1.5	2.0	1.8	1.4	1.0	0.8	0.8	0.8
24. Youth unemployment ratio (% population aged 15-24)	5.8	8.9	9.1	8.3	8.9	8.8	7.1	6.1	5.0	5.5	6.5	7.0

Source: Eurostat

Key employment indicators United Kingdom

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	56919	57112	57294	57491	57686	57891	58117	58373	58629	58857	59037	59238
2. Population aged 15-64	37216	37250	37273	37407	37592	37768	37965	38226	38496	38761	39009	39250
3. Total employment (000)	26933	26714	26940	27191	27614	28104	28446	28876	29267	29472	29526	29771
4. Population in employment aged 15-64	25275	25099	25307	25609	25955	26415	26773	27139	27515	27803	27961	28179
5. Employment rate (% population aged 15-64)	67.9	67.4	67.9	68.5	69.0	69.9	70.5	71.0	71.5	71.7	71.7	71.8
6. Employment rate (% population aged 15-24)	56.8	54.9	54.8	55.2	55.7	56.5	56.7	56.6	56.7	56.7	56.3	55.5
7. Employment rate (% population aged 25-54)	76.5	76.2	76.7	77.2	77.7	78.6	79.3	79.9	80.4	80.6	80.6	80.8
8. Employment rate (% population aged 55-64)	47.6	46.7	47.4	47.5	47.7	48.3	49.0	49.6	50.8	52.3	53.5	55.5
9. FTE employment rate (% population aged 15-64)	59.3	58.6	58.7	59.2	59.4	60.2	60.7	61.2	61.7	62.2	62.1	62.0
10. Self-employed (% total employment)	12.7	12.7	13.0	13.0	12.8	12.5	12.0	11.6	11.3	11.2	11.4	12.2
11. Part-time employment (% total employment)	22.9	23.6	24.0	24.1	24.6	24.6	24.5	24.6	24.8	24.6	24.9	25.2
12. Fixed term contracts (% total employment)	5.9	6.3	6.9	7.2	7.3	7.6	7.3	7.0	6.9	6.7	6.3	6.1
13. Employment in Services (% total employment)	75.0	75.9	76.2	76.4	76.7	76.6	76.6	77.6	78.3	79.2	80.0	80.4
14. Employment in Industry (% total employment)	23.6	22.7	22.5	22.5	22.1	22.1	22.2	21.2	20.6	19.8	19.0	18.7
15. Employment in Agriculture (% total employment)	1.4	1.4	1.3	1.2	1.2	1.3	1.3	1.2	1.2	1.0	0.9	0.9
16. Activity rate (% population aged 15-64)	75.7	75.5	75.3	75.2	75.3	75.4	75.4	75.7	75.7	75.6	75.6	75.6
17. Activity rate (% of population aged 15-24)	68.3	67.2	66.3	65.8	66.1	66.1	65.8	65.3	65.0	64.3	64.0	63.3
18. Activity rate (% of population aged 25-54)	83.8	83.7	83.5	83.5	83.5	83.5	83.5	84.0	84.1	83.8	84.0	84.0
19. Activity rate (% of population aged 55-64)	52.0	51.7	52.1	51.3	51.4	51.5	51.5	52.1	53.0	54.1	55.4	57.3
20. Total unemployment (000)	2787	2848	2639	2429	2281	1974	1785	1734	1587	1489	1534	1501
21. Unemployment rate (% labour force 15+)	9.8	10.0	9.3	8.5	8.0	6.9	6.2	5.9	5.4	5.0	5.1	5.0
22. Youth unemployment rate (% labour force 15-24)	16.5	17.6	16.4	15.3	15.0	13.7	13.1	12.8	12.3	11.9	12.1	12.3
23. Long term unemployment rate (% labour force)	3.6	4.2	4.1	3.6	3.1	2.5	1.9	1.7	1.5	1.3	1.1	1.1
24. Youth unemployment ratio (% population aged 15-24)	11.2	11.8	10.9	10.2	9.9	9.1	8.7	8.3	8.0	7.7	7.8	7.8

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	27870	27988	28112	28240	28368	28499	28638	28800	28956	29107	29226	29350
2. Population aged 15-64	18667	18694	18724	18807	18915	19004	19118	19264	19415	19553	19702	19828
3. Total employment (000)	14985	14728	14883	15038	15231	15533	15740	15959	16155	16263	16257	16408
4. Population in employment aged 15-64	13997	13813	13947	14126	14283	14565	14785	14965	15157	15309	15363	15487
5. Employment rate (% population aged 15-64)	75.0	73.9	74.5	75.1	75.5	76.6	77.3	77.7	78.1	78.3	78.0	78.1
6. Employment rate (% population aged 15-24)	58.3	56.2	56.6	57.3	57.5	58.4	58.7	58.7	58.9	59.2	58.1	57.3
7. Employment rate (% population aged 25-54)	84.5	83.6	84.1	84.7	84.8	85.8	86.6	87.0	87.5	87.5	87.4	87.6
8. Employment rate (% population aged 55-64)	58.3	56.4	56.5	56.2	57.1	58.4	59.1	59.7	60.1	61.7	62.6	64.8
9. FTE employment rate (% population aged 15-64)	73.1	71.5	71.7	72.2	72.2	73.2	73.8	73.9	74.5	74.8	74.0	74.0
10. Self-employed (% total employment)	17.0	17.0	17.4	17.5	17.2	16.5	15.7	15.3	14.7	14.9	15.2	16.1
11. Part-time employment (% total employment)	6.3	7.0	7.5	7.8	8.4	8.5	8.5	8.8	8.8	8.9	9.4	9.9
12. Fixed term contracts (% total employment)	4.8	5.3	5.9	6.3	6.4	6.6	6.4	6.3	6.1	6.0	5.6	5.4
13. Employment in Services (% total employment)	64.2	65.3	65.7	65.9	66.2	66.0	65.9	67.2	68.0	69.0	70.0	70.5
14. Employment in Industry (% total employment)	33.8	32.7	32.5	32.4	32.2	32.2	32.3	31.0	30.3	29.5	28.7	28.1
15. Employment in Agriculture (% total employment)	2.0	2.1	1.8	1.7	1.7	1.8	1.8	1.7	1.7	1.5	1.4	1.3
16. Activity rate (% population aged 15-64)	85.2	84.6	84.3	83.8	83.7	83.4	83.2	83.4	83.2	82.9	82.7	82.7
17. Activity rate (% of population aged 15-24)	72.7	71.5	70.8	70.1	70.4	69.8	69.3	69.0	68.3	68.2	67.2	66.4
18. Activity rate (% of population aged 25-54)	94.1	93.4	93.1	92.7	92.2	91.7	91.6	91.9	91.8	91.3	91.4	91.3
19. Activity rate (% of population aged 55-64)	65.6	64.6	64.0	62.4	62.8	63.3	63.1	63.2	63.4	64.6	65.4	67.5
20. Total unemployment (000)	1863	1900	1753	1586	1492	1237	1105	1064	959	910	933	919
21. Unemployment rate (% labour force 15+)	11.5	11.9	11.0	9.9	9.3	7.7	6.9	6.5	5.9	5.5	5.6	5.5
22. Youth unemployment rate (% labour force 15-24)	19.6	20.7	19.0	17.4	17.5	15.4	14.7	14.2	13.3	13.3	13.6	13.7
23. Long term unemployment rate (% labour force)	4.7	5.6	5.5	4.8	4.2	3.3	2.5	2.2	1.9	1.7	1.4	1.4
24. Youth unemployment ratio (% population aged 15-24)	14.2	14.7	13.5	12.3	12.3	10.8	10.3	9.8	9.0	9.1	9.2	9.1

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	29049	29125	29182	29251	29318	29391	29479	29573	29673	29750	29811	29888
2. Population aged 15-64	18549	18556	18549	18600	18678	18764	18847	18963	19081	19209	19307	19422
3. Total employment (000)	11945	11981	12051	12147	12376	12567	12703	12916	13112	13209	13269	13362
4. Population in employment aged 15-64	11278	11286	11359	11483	11672	11850	11988	12174	12358	12494	12598	12692
5. Employment rate (% population aged 15-64)	60.8	60.8	61.2	61.7	62.5	63.1	63.6	64.2	64.8	65.0	65.3	65.3
6. Employment rate (% population aged 15-24)	55.3	53.6	52.9	53.1	53.9	54.5	54.6	54.4	54.5	54.1	54.4	53.7
7. Employment rate (% population aged 25-54)	68.4	68.8	69.2	69.7	70.5	71.3	71.8	72.7	73.2	73.5	73.7	73.8
8. Employment rate (% population aged 55-64)	37.3	37.3	38.6	39.0	38.7	38.5	39.2	39.9	41.7	43.1	44.7	46.4
9. FTE employment rate (% population aged 15-64)	46.4	46.4	46.5	47.0	47.4	48.1	48.3	49.2	49.7	50.2	50.7	50.7
10. Self-employed (% total employment)	7.3	7.5	7.6	7.5	7.5	7.6	7.4	7.1	7.1	6.8	6.9	7.4
11. Part-time employment (% total employment)	43.8	44.1	44.4	44.4	44.6	44.6	44.4	44.0	44.4	44.0	43.9	44.0
12. Fixed term contracts (% total employment)	7.3	7.3	7.9	8.2	8.4	8.6	8.4	7.8	7.9	7.5	7.2	6.8
13. Employment in Services (% total employment)	87.3	87.8	88.1	88.3	88.6	88.8	88.9	89.6	90.1	90.7	91.4	91.8
14. Employment in Industry (% total employment)	12.1	11.5	11.2	11.0	10.7	10.5	10.4	9.8	9.4	8.8	8.1	7.8
15. Employment in Agriculture (% total employment)	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.4	0.4
16. Activity rate (% population aged 15-64)	66.0	66.2	66.3	66.5	66.9	67.3	67.4	67.9	68.2	68.1	68.3	68.3
17. Activity rate (% of population aged 15-24)	63.8	62.7	61.5	61.3	61.6	62.2	62.0	61.5	61.6	60.3	60.6	60.0
18. Activity rate (% of population aged 25-54)	73.4	73.9	73.9	74.1	74.6	75.0	75.2	76.0	76.2	76.1	76.4	76.4
19. Activity rate (% of population aged 55-64)	39.0	39.4	40.8	40.7	40.3	40.0	40.4	41.2	42.9	44.0	45.7	47.4
20. Total unemployment (000)	924	949	885	843	789	738	681	669	628	579	601	582
21. Unemployment rate (% labour force 15+)	7.5	7.6	7.1	6.7	6.3	5.8	5.3	5.1	4.8	4.4	4.5	4.3
22. Youth unemployment rate (% labour force 15-24)	12.7	13.8	13.2	12.8	12.0	11.7	11.3	11.1	11.1	10.3	10.2	10.6
23. Long term unemployment rate (% labour force)	2.1	2.4	2.3	2.0	1.7	1.5	1.2	1.0	0.9	0.8	0.7	0.7
24. Youth unemployment ratio (% population aged 15-24)	8.1	8.6	8.1	7.9	7.4	7.2	7.0	6.8	6.8	6.2	6.2	6.4

Source: Eurostat

Key employment indicators Bulgaria

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	8033	7884	8173	7821
2. Population aged 15-64	:	:	:	:	:	:	:	:	5491	5375	5357	5308
3. Total employment (000)	:	:	:	:	3286	3157	3153	3088	2980	2940	2982	3084
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	2768	2672	2709	2785
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	50.4	49.7	50.6	52.5
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	19.7	19.8	19.4	20.7
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	68.5	67.2	67.6	69.2
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	20.8	24.0	27.0	30.0
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	50.3	50.6	52.5
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	:	3.2	2.5	2.3
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	:	6.3	5.3	6.5
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	60.7	62.5	61.9	60.9
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	30.5	33.2	30.9	28.8
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	80.6	81.9	80.7	79.1
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	24.0	29.2	31.8	33.9
20. Total unemployment (000)	:	:	:	343	329	417	362	402	561	659	608	453
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	16.4	19.2	17.8	13.6
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	33.7	38.0	35.0	26.8
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	9.3	11.9	11.7	8.9
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	10.3	12.7	11.2	7.8

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	3894	3818	3972	3792
2. Population aged 15-64	:	:	:	:	:	:	:	:	2684	2647	2643	2616
3. Total employment (000)	:	:	:	:	:	:	:	:	1586	1539	1567	1633
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	1469	1394	1418	1466
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	54.7	52.7	53.7	56.0
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	21.8	20.1	20.5	21.7
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	70.8	68.4	69.0	71.4
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	33.2	34.2	37.0	40.5
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	53.5	53.9	56.3
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	:	2.9	2.1	1.9
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	:	6.6	5.8	7.0
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	66.2	67.0	66.4	65.4
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	34.9	35.6	34.2	31.5
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	83.3	84.2	83.0	81.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	38.4	41.7	43.7	45.6
20. Total unemployment (000)	:	:	:	180	171	220	190	213	303	361	334	247
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	16.7	20.0	18.5	13.9
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	36.1	41.3	38.3	28.9
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	9.5	12.5	12.2	9.1
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	12.6	14.8	13.6	9.4

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	4138	4066	4201	4030
2. Population aged 15-64	:	:	:	:	:	:	:	:	2807	2729	2714	2692
3. Total employment (000)	:	:	:	:	:	:	:	:	1394	1401	1415	1452
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	1299	1278	1290	1319
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	46.3	46.8	47.5	49.0
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	17.7	19.4	18.4	19.6
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	66.3	65.9	66.1	67.1
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	10.3	14.7	18.2	21.0
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	47.2	47.5	48.8
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	:	3.6	3.0	2.6
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	:	5.9	4.7	5.9
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	55.6	58.1	57.5	56.5
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	26.3	30.9	27.6	26.1
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	78.0	79.6	78.4	76.4
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	11.8	18.0	21.5	23.8
20. Total unemployment (000)	:	:	:	163	158	196	173	189	258	298	274	206
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	16.2	18.4	17.0	13.2
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	30.7	34.2	30.9	24.2
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	9.1	11.3	11.2	8.6
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	8.1	10.6	8.8	6.2

Source: Eurostat - Note: In the case of Bulgaria, employment in agriculture - as derived from national accounts - includes a significant number of persons with occasional or small jobs. When calculated on the basis of the LFS and limited to the main job, the share of agriculture in employment is found to be significantly lower and the shares in services and industry somewhat higher. Due to the substantial differences in the estimates of sectoral employment shares, no data is provided.

Key employment indicators Romania

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	22328	22377	22346	22334	22326	22309	21686
2. Population aged 15-64	:	:	:	:	:	15158	15190	15189	15231	15277	15327	14933
3. Total employment (000)	10458	10062	10012	9493	9379	9023	8813	8420	8629	8563	7745	7393
4. Population in employment aged 15-64	:	:	:	:	:	9912	9754	9598	9590	9529	8833	8602
5. Employment rate (% population aged 15-64)	:	:	:	:	:	65.4	64.2	63.2	63.0	62.4	57.6	57.6
6. Employment rate (% population aged 15-24)	:	:	:	:	:	36.5	35.5	33.5	33.1	32.6	28.7	26.4
7. Employment rate (% population aged 25-54)	:	:	:	:	:	80.6	79.0	78.1	77.5	76.6	72.7	73.1
8. Employment rate (% population aged 55-64)	:	:	:	:	:	52.1	51.5	49.6	49.5	48.2	37.3	38.1
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	67.5	65.6	64.5	63.8	62.9	58.4	58.5
10. Self-employed (% total employment)	36.6	36.5	38.1	36.3	37.2	40.2	41.2	44.7	46.2	46.1	40.2	39.2
11. Part-time employment (% total employment)	:	:	:	:	:	14.9	15.8	15.8	16.4	16.5	11.8	11.5
12. Fixed term contracts (% total employment)	:	:	:	:	:	3.0	3.0	3.0	2.8	3.0	1.0	2.0
13. Employment in Services (% total employment)	29.9	28.2	29.1	31.9	30.3	30.4	31.2	30.4	31.3	31.6	34.3	34.9
14. Employment in Industry (% total employment)	37.1	35.8	34.4	33.6	34.3	32.0	30.7	28.4	27.3	27.5	30.7	31.0
15. Employment in Agriculture (% total employment)	33.0	36.0	36.5	34.4	35.5	37.6	38.1	41.2	41.4	40.9	35.1	34.1
16. Activity rate (% population aged 15-64)	:	:	:	:	:	69.9	68.9	68.4	68.4	67.3	63.4	62.2
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	45.6	44.1	42.1	41.4	40.0	37.4	32.9
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	84.5	83.2	83.2	83.0	81.6	78.6	78.0
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	52.5	51.8	50.1	50.0	48.7	37.9	38.8
20. Total unemployment (000)	:	:	:	1163	764	630	638	732	792	747	786	658
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	5.3	5.4	6.2	6.8	6.6	7.5	6.6
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	16.3	15.8	17.2	17.2	17.6	21.0	18.7
23. Long term unemployment rate (% labour force)	:	:	:	:	:	2.4	2.3	2.7	3.5	3.3	4.0	4.1
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	7.4	7.0	7.3	7.0	6.9	7.6	6.3

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	10866	10888	10866	10864	10863	10855	10549
2. Population aged 15-64	:	:	:	:	:	7463	7484	7481	7512	7543	7577	7397
3. Total employment (000)	:	:	:	:	:	4846	4721	4487	4588	4545	4176	4030
4. Population in employment aged 15-64	:	:	:	:	:	5366	5271	5164	5155	5115	4817	4718
5. Employment rate (% population aged 15-64)	:	:	:	:	:	71.9	70.4	69.0	68.6	67.8	63.6	63.8
6. Employment rate (% population aged 15-24)	:	:	:	:	:	40.4	39.4	36.9	35.8	35.2	31.4	29.9
7. Employment rate (% population aged 25-54)	:	:	:	:	:	87.4	85.3	84.3	83.7	82.8	79.6	80.1
8. Employment rate (% population aged 55-64)	:	:	:	:	:	60.7	59.5	56.9	56.0	54.3	42.7	43.5
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	75.6	73.3	71.3	70.5	69.4	65.1	65.2
10. Self-employed (% total employment)	:	:	:	:	:	36.4	38.1	42.3	44.4	44.6	39.1	38.7
11. Part-time employment (% total employment)	:	:	:	:	:	12.6	13.5	13.8	14.6	14.9	10.9	10.9
12. Fixed term contracts (% total employment)	:	:	:	:	:	3.0	3.0	3.0	2.8	3.2	1.1	2.2
13. Employment in Services (% total employment)	:	:	:	:	:	27.3	28.1	27.4	28.4	29.3	31.3	31.6
14. Employment in Industry (% total employment)	:	:	:	:	:	38.1	36.5	33.7	32.1	31.9	35.3	35.3
15. Employment in Agriculture (% total employment)	:	:	:	:	:	34.6	35.4	38.8	39.4	38.9	33.4	33.0
16. Activity rate (% population aged 15-64)	:	:	:	:	:	76.6	75.7	75.2	75.0	73.6	70.4	69.3
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	49.5	49.0	47.2	46.0	43.8	41.5	37.5
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	91.4	90.0	90.2	90.0	88.5	86.4	85.8
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	61.4	60.1	57.7	56.9	55.3	43.9	44.6
20. Total unemployment (000)	:	:	:	508	355	315	345	422	447	418	441	375
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	5.0	5.5	6.8	7.2	6.9	7.8	6.9
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	14.8	15.6	18.6	18.3	17.9	20.7	17.7
23. Long term unemployment rate (% labour force)	:	:	:	:	:	2.1	2.2	2.8	3.6	3.3	4.1	4.2
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	7.3	7.6	8.8	8.3	7.6	8.4	6.8

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	11462	11489	11480	11471	11463	11454	11136
2. Population aged 15-64	:	:	:	:	:	7694	7706	7708	7719	7733	7750	7536
3. Total employment (000)	:	:	:	:	:	4178	4092	3932	4042	4018	3569	3363
4. Population in employment aged 15-64	:	:	:	:	:	4548	4484	4435	4435	4414	4016	3884
5. Employment rate (% population aged 15-64)	:	:	:	:	:	59.1	58.2	57.5	57.5	57.1	51.8	51.5
6. Employment rate (% population aged 15-24)	:	:	:	:	:	32.7	31.6	30.2	30.5	30.0	26.1	22.9
7. Employment rate (% population aged 25-54)	:	:	:	:	:	74.0	72.7	72.0	71.2	70.6	65.9	66.0
8. Employment rate (% population aged 55-64)	:	:	:	:	:	44.6	44.5	43.3	43.8	42.9	32.6	33.3
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	59.6	58.2	57.9	57.3	56.5	51.9	51.8
10. Self-employed (% total employment)	:	:	:	:	:	44.5	44.8	47.4	48.1	47.8	41.6	39.9
11. Part-time employment (% total employment)	:	:	:	:	:	17.5	18.3	18.1	18.5	18.4	13.0	12.2
12. Fixed term contracts (% total employment)	:	:	:	:	:	3.0	3.0	3.1	2.8	2.8	0.8	1.7
13. Employment in Services (% total employment)	:	:	:	:	:	34.0	34.8	33.7	34.5	34.2	37.8	38.9
14. Employment in Industry (% total employment)	:	:	:	:	:	25.0	24.0	22.3	21.8	22.6	25.2	25.7
15. Employment in Agriculture (% total employment)	:	:	:	:	:	41.0	41.2	44.0	43.7	43.2	37.0	35.4
16. Activity rate (% population aged 15-64)	:	:	:	:	:	63.5	62.3	61.8	61.9	61.1	56.6	55.3
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	41.8	39.3	37.1	36.8	36.3	33.4	28.2
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	77.7	76.4	76.3	76.0	74.8	70.8	70.1
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	44.8	44.5	43.5	43.9	43.1	32.8	33.6
20. Total unemployment (000)	:	:	:	655	409	315	294	311	344	328	346	284
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	5.7	5.3	5.6	6.3	6.2	7.1	6.2
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	18.2	16.1	15.4	15.8	17.4	21.3	20.0
23. Long term unemployment rate (% labour force)	:	:	:	:	:	2.9	2.5	2.7	3.4	3.2	4.0	3.9
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	7.6	6.4	5.8	5.8	6.2	6.9	5.8

Source: Eurostat

Key employment indicators Turkey

All	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	64062	65042	66038	:
2. Population aged 15-64	:	:	:	:	:	:	:	:	41124	41959	42791	:
3. Total employment (000)	:	:	:	:	:	:	:	:	20557	20492	20146	:
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	19822	19756	19494	:
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	48.2	47.1	45.6	:
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	36.3	34.5	31.8	:
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	56.2	55.2	53.9	:
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	35.3	34.7	33.8	:
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	0.0	0.0	0.0	:
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	29.5	31.0	27.6	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	23.0	20.0	20.3	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	20.4	17.3	14.6	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	40.5	40.6	43.3	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	24.6	23.3	23.9	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	34.9	36.1	32.8	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	51.7	51.6	51.3	:
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	41.8	41.2	39.7	:
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	59.1	59.2	59.3	:
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	36.1	35.5	35.3	:
20. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:	:
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	6.5	8.3	10.3	9.0
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:	:
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	1.4	1.8	3.2	:
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	:	:	:	:

Male	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	32173	32661	33152	:
2. Population aged 15-64	:	:	:	:	:	:	:	:	20619	21049	21471	:
3. Total employment (000)	:	:	:	:	:	:	:	:	15215	14938	14515	:
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	14682	14437	14067	:
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	71.2	68.6	65.5	:
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	49.1	45.7	41.0	:
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	84.9	82.2	79.6	:
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	51.4	49.9	47.3	:
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	:	:	:
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	15.6	16.3	13.6	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	16.4	15.0	15.1	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	22.2	18.3	14.5	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	45.2	46.1	49.2	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	28.4	27.3	27.3	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	26.4	26.6	23.5	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	76.4	75.4	74.0	:
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	56.8	55.1	51.7	:
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	89.4	88.5	87.8	:
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	53.0	51.6	50.0	:
20. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:	:
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	6.6	8.7	10.7	9.5
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:	:
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	1.2	1.6	3.0	:
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	:	:	:	:

Female	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1. Total population (000)	:	:	:	:	:	:	:	:	31889	32381	32886	:
2. Population aged 15-64	:	:	:	:	:	:	:	:	20506	20911	21320	:
3. Total employment (000)	:	:	:	:	:	:	:	:	5342	5554	5631	:
4. Population in employment aged 15-64	:	:	:	:	:	:	:	:	5141	5321	5427	:
5. Employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	25.1	25.4	25.5	:
6. Employment rate (% population aged 15-24)	:	:	:	:	:	:	:	:	23.8	23.6	22.9	:
7. Employment rate (% population aged 25-54)	:	:	:	:	:	:	:	:	26.6	27.2	27.4	:
8. Employment rate (% population aged 55-64)	:	:	:	:	:	:	:	:	19.9	20.2	21.0	:
9. FTE employment rate (% population aged 15-64)	:	:	:	:	:	:	:	:	:	:	:	:
10. Self-employed (% total employment)	:	:	:	:	:	:	:	:	58.4	60.0	54.4	:
11. Part-time employment (% total employment)	:	:	:	:	:	:	:	:	41.7	33.3	33.6	:
12. Fixed term contracts (% total employment)	:	:	:	:	:	:	:	:	12.7	13.3	15.2	:
13. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	27.1	25.5	28.2	:
14. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	13.8	12.8	15.0	:
15. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	59.0	61.7	56.8	:
16. Activity rate (% population aged 15-64)	:	:	:	:	:	:	:	:	26.9	27.7	28.4	:
17. Activity rate (% of population aged 15-24)	:	:	:	:	:	:	:	:	27.2	27.7	28.1	:
18. Activity rate (% of population aged 25-54)	:	:	:	:	:	:	:	:	27.9	28.9	29.8	:
19. Activity rate (% of population aged 55-64)	:	:	:	:	:	:	:	:	20.0	20.3	21.3	:
20. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:	:
21. Unemployment rate (% labour force 15+)	:	:	:	:	:	:	:	:	6.3	7.4	9.4	7.3
22. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:	:
23. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	1.9	2.2	3.6	:
24. Youth unemployment ratio (% population aged 15-24)	:	:	:	:	:	:	:	:	:	:	:	:

Source: Eurostat

Data Sources

Most of the data used in this report originates from Eurostat, the Statistical Office of the European Communities. The main data sources used are:

- the European Community Labour Force Survey (LFS)
- the Eurostat Quarterly Labour Force Data (QLFD) series
- the European Community Household Panel (ECHP)
- the Eurostat Labour Cost Survey (LCS)
- the Eurostat Harmonised Series on Unemployment
- the Annual Macroeconomic Database (AMECO)

The **European Community Labour Force Survey (LFS)** is the EU's harmonised survey on labour market developments. The survey has been carried out since 1983 in the EU Members States, with some providing quarterly results from a continuous labour force survey, others conducting a single annual survey in the spring. If not mentioned otherwise, results based on the LFS refer to surveys conducted in the spring ("second quarter") of each year. It also provides data for all Candidate Countries.

The **Quarterly Labour Force Data (QLFD)** series is a harmonised, consistent series of quarterly employment statistics based on LFS, completed through estimates when quarterly data are not available. It covers all EU15 (for the period of 1991 to present) and all New Member States and Candidate Countries (since 1996 or later, depending on data availability). The QLFD consist of two series: 1) population, employment and unemployment, and 2) employment by economic activity and employment status. The first series is based mainly on the community LFS. Data cover the population living in private households only (collective households are excluded) and refer to the place of residence (national concept). They are broken down by gender and aggregate age group (15-24, 25-54, 55-64, 15-64). Unemployment data are also broken down by job search duration (less than 6 months, 6-11, 12-23, 24 or more). The second series is mainly based on the ESA-1995 national accounts employment data. Data cover all people employed in resident producer units (domestic concept), including persons living in collective households. They are broken down by sex, working time status (full-time/part-time) and contract status (permanent/temporary). All key employment indicators - with the exception of the full-time equivalent employment rate, the unemployment rates and the youth unemployment ratio - are based on the QLFD series. They represent yearly averages if not stated otherwise. Where the QLFD series does not provide the relevant breakdowns, the original LFS data were used in this report.

The **European Community Household Panel (ECHP)** is an annual longitudal survey of a representative panel of households which was conducted for the period 1994-2001. The longitudinal structure of the survey makes it possible to follow up and interview the same households and individuals over several consecutive years. At the time of publication of this report, data were available for all eight waves of the panel (1994-2001) for all EU Member States except Austria (1995-2001) and Finland (1996-2001). Sweden did not take part in the ECHP, but provided some basic comparable micro data from the Swedish survey on living conditions in the ECHP user's database from 1997 onwards. There are important breaks in the data series for Germany, (1994/95), Luxembourg and the UK (1996/97), following variations in the sample definition. The survey covers a wide range of topics: income and living conditions, employment status, health, education, demographics and housing. It is based on a standardised questionnaire from Eurostat and subsequently adapted by national agencies. Data are accessible to the public by means of the ECHP user database. Results on quality in work and on transitions between labour market states or job characteristics are based on this database.

The **Eurostat Labour Cost Survey (LCS)** is a business survey which is conducted every four years, covering all economic activities in sections C-K of the NACE Rev.1 classification and all enterprises with 10 or more employees. Some countries, notably the New Member States and Candidate Countries, additionally provide data for NACE sections L-O and for smaller enterprises. The survey contains detailed information on the level and structure of labour costs (hourly, monthly and annual), wages and salaries, working hours and employment at the national, regional and sectoral (NACE-2) level and by establishment size. Labour Cost surveys have been carried out by the EU Member States for the years 1975, 1978, 1981, 1984, 1988, 1992, 1996 and 2000. Latest structural data from the Labour Cost Survey (LCS) are available for the year 2000. For most New Member States, the 2000 survey is the first survey they have undertaken that complies with the Regulations. In that survey, no data are provided for Belgium, Malta and Turkey.

For the unemployment related indicators, the main source is the Eurostat **Harmonised series on unemployment**. This is a data set on unemployment collected by Eurostat comprising of yearly averages, quarterly and monthly data. It is based on LFS and register data on unemployment from national sources. Monthly data from national surveys or from registers of the public employment services are used to extrapolate the LFS data and to compile monthly unemployment estimates. This data set does not cover skills and long term unemployment for the analysis of which the LFS was used instead.

Macroeconomic indicators are obtained from the Economic and Financial Affairs DG **Annual Macroeconomic Database (AMECO)** and are based on ESA 95 national accounts. The database comprises inter alia information on GDP, productivity, real unit labour costs and employment growth. The data is collected by Eurostat from the Member States' National Statistical Offices. Besides regular weekly updates this database is revised twice a year in the framework of the Commission's Spring and Autumn Economic Forecasts.

- Other data sources:

Furthermore, data from other International Organisations were used where appropriate, in particular the OECD (Organisation for Economic Co-operation and Development) Labour market statistics database, the OECD Main Industrial Indicators, the OECD Social expenditures database; the United Nations Conference for Trade and Development, notably its DITE database on Foreign Direct Investment; the World Bank, World Development Indicators; the Vienna Institute of International Studies; and the European Restructuring Monitor, from the European Monitoring Centre on Change.

Definitions and Data Sources of Macroeconomic Indicators

Sources: AMECO and national accounts (ESA 95)

1. Real GDP: gross domestic product (GDP) at 1995 market prices, annual change
2. Occupied population: occupied population, total economy, annual change
3. Labour productivity: GDP at 1995 market prices per person employed, annual change
4. Annual average hours worked, annual change
5. Productivity per hours worked: gross domestic product per hours worked, annual change
6. Harmonised CPI: harmonised consumer price index, annual change
7. Price deflator GDP: price deflator gross domestic product at market prices, annual change
8. Nominal compensation per employee, total economy, annual change
9. Real compensation per employee: deflator gross domestic product, total economy, annual change
10. Real compensation per employee total economy (private consumption deflator), annual change
11. NULC: nominal unit labour costs, total economy, annual change.
12. RULC: real unit labour costs, total economy, annual change

Definitions and Data Sources of Key Employment Indicators

Sources: QLFD, LFS, Eurostat harmonised series on unemployment

1. Total population in 000s (source: Eurostat QLFD)
2. Total Population aged 15-64 (the "working age population") in 000s (source: Eurostat QLFD)
3. Total Employment in 000s (source: Eurostat QLFD)
4. Population in employment aged 15-64 in 000s (source: Eurostat QLFD)

5-8. Employment rate, Employed divided by population in the corresponding age bracket (source: Eurostat QLFD)

9. Full-time equivalent employment rates.
   The full-time equivalent employment rate is calculated by dividing the full-time equivalent employment by the total population in the 15-64 age-group. Full-time equivalent employment is defined as total hours worked on both, main and second job (LFS) divided by the average annual number of hours worked in full-time jobs within the economic territory (ESA 1995).
10. Self-employed in total employment, Number of self-employed as the share of total employment (source: Eurostat QLFD)
11. Part-time employment in total employment, Number of part-time employed as a share of total employment (source: Eurostat QLFD)
12. Fixed term contracts in total employment (total employees), Number of employees with contracts of limited duration as a share of total employees (source: Eurostat QLFD)
13. Employment in services, Employed in services as a share of total employment (source: Eurostat QLFD)
14. Employment in industry, Employed in industry as a share of total employment (source: Eurostat QLFD
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16-19. Activity rate, Labour force (employed and unemployed) as a share of total population in the corresponding age bracket (source: Eurostat QLFD)

20. Total Unemployment in 000s (source: Eurostat Harmonised series on unemployment)

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