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Short-run Projections of Patterns of Job Contraction in the EU

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Robert Stehrer and Terry Ward

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Summary

As the economic recession in the EU seems to be drawing to a close, there is inevitable interest in what the effects on employment in different sectors of activity and occupations have been, or are still likely to be once all the repercussions have materialized. Indeed, given the lags in both the collection of data and, more importantly, in the effect of a downturn in output on employment, it is likely to be only some time after the recession comes to an end and economic growth gets back close to its trend rate that the consequences for jobs will be apparent in the official statistics. Although any estimates, or predictions, of this kind are fraught with difficulty and highly uncertain, it is instructive to look back at previous episodes of economic downturn to see what can be learned from them, in particular about their differential effect on different parts of the economy and on different groups of worker. This is the concern of the present study. Specifically, the aim is to examine previous downturns in the EU economies and the different consequences they had, first, for sectors of activity because of the varying nature of the goods and services produced and, second, for the different types of job within sectors. The further aim is then to use the results of this examination as the basis for constructing projections of developments in employment over the period 2008-2010 given the present forecast of the overall change in GDP. From this, the subsequent step is to consider the implications for employment in different types of job. As part of this, the concern is also to identify the kinds of job which stand to be most affected by the current downturn and the characteristics of the people at present employed in them in different parts of the EU.

The projected decline in the number employed over the two years 2008-2010, as indicated above, amounts to around 4% across the EU as a whole according to the Commission's Spring forecast. This, however, understates the scale of job losses resulting from the recession, insofar as, in the absence of the economic downturn, the number in work would have been expected to continue increasing at around the trend rate observed over the preceding 10 years or so. If this rate had continued up to 2010, employment in the EU would have been almost 2% higher in that year than in 2008. In relation to this, therefore, the effect of the recession is to reduce the number employed by almost 6% over the two-year period. This effect varies under the specific assumptions from around 15% in Ireland and just over 10% in Spain to just under 4% in Greece and 3% in Portugal, with the effect in most countries being around 5-6%. A detailed breakdown of the employment shifts by sectors and occupations is provided as well. Generally, the relative employment shift is projected to be predominantly from jobs with lower wages and skills to those with higher levels in most countries, though not all, Austria, the Netherlands, Estonia and Slovakia being the exceptions. Such a shift is likely effectively to reinforce the shift in this direction implied by past trends continuing. Assuming that men and women are treated equally by employers – in the sense that any losses of particular jobs affect them proportionately, then men stand to be hit much harder than women by the recession simply because of the jobs that they do. This is already apparent in the statistics up to mid-2009, which show a much

larger reduction in the employment of men than of women. At the same time, partly linked to this, there are more full-time jobs likely to be lost than part-time ones, simply because they predominate in the sectors in which employment is likely to decline by most. On a full-time equivalent basis, therefore, the effect of the recession on employment is likely to be larger than the effect on job numbers.

Keywords: *employment projections, crisis effects, employment structures, job quality*

JEL classification: *E17, J23, J24, J29*

Robert Stehrer and Terry Ward

Short-run projections of patterns of job contraction in the EU

1 Introduction[1]

As the economic recession in the EU seems to be drawing to a close, there is inevitable interest in what the effects on both companies and individuals in different sectors of activity have been, or are still likely to be once all the repercussions have materialized. Indeed, given the lags in both the collection of data and, more importantly, in the effect of a downturn in output on employment, it is likely to be some time after the recession comes to an end and economic growth gets back close to its trend rate before the recession that the consequences for jobs will be apparent in the official statistics. Although any estimates, or predictions, of this kind are fraught with difficulty and highly uncertain, it is instructive to look back at previous episodes of economic downturn to see what can be learned from them, in particular about their differential effect on different parts of the economy and on different groups of worker. This is the concern of the present study. Specifically, the aim is to examine previous downturns in the EU economies and the different consequences they had, first, for sectors of activity because of the varying nature of the goods and services produced – for investment goods sectors, for example, which produce output whose purchase is essentially postponable as opposed to basic consumer goods or services – and, secondly, for the different types of job within sectors.

The further aim is then to use the results of this examination as the basis for constructing projections of developments in employment over the period 2008-2010 given the present forecast of the overall change in GDP. From this, the subsequent step is to consider the implications for job quality as defined in terms of both relative wages and skill, or education attainment, levels – or, more precisely, the differential effect of the recession on employment in different types of job defined in these terms. As part of this, the concern is also to identify the kinds of job which stand to be most affected by the current downturn and the characteristics of the people at present employed in them in different parts of the EU.

While the past downturns which are the subject of the analysis – those in the early 1980s and the early 1990s, which affected all EU economies, and the downturn in the early part of the present decade which was much less general in its incidence – differ from the present one in many respects, most especially in terms of the initial causes, many of the differential effects on sectors and jobs can be expected to be similar, precisely because of the influence of the nature of the output produced. The nature of products, therefore,

[1] Assisted by Erhan Ozdemir and Fadila Sanousi, Applica.

remains, in most cases, essentially the same as it was 20 or 25 years ago, even though technology might have changed substantially in the intervening period.

1.1 The data used in the analysis

An essential requirement for undertaking such an exercise is a sufficiently detailed set of data which enables the different kinds of activity to be sufficiently distinguished and which goes back ideally to the early 1980s – any earlier and the nature of the sectors and their interrelationship with each other may be too different to provide a guide to current potential developments. Fortunately, such a dataset is available as a result of work undertaken comparatively recently to construct a database for analysing productivity developments in different sectors of activity across Europe. This disaggregated sectoral database, compiled under the EU-KLEMS project[2], contains annual data for 31 NACE sectors (the NACE 1-digit service sectors plus 14 sectors within manufacturing together with agriculture and mining) on gross value-added at constant prices, employment and annual hours worked, as well as other variables, for each year from 1980 to 2005 or 2006 for all EU15 countries. The data in question are from the national accounts in each of the countries concerned and are compatible with the Eurostat national accounts data, which are also disaggregated by the 31 sectors, though far more complete (the Eurostat data go back to 1980 only for a very few countries).

These data are combined with more detailed data on employment from the EU Labour Force Survey (LFS), which enable a fuller analysis to be made of the number employed by sector of activity (the 60 NACE Rev.1 2-digit sectors) and an examination to be carried out of the structure of occupations within sectors (at the ISCO 2-digit level). The LFS data also provide information about the characteristics of the people employed in the different occupations within each of the sectors. This information is used in the analysis to examine the implications of the projections for men as opposed to women and for those employed part-time as opposed to full-time. In addition, data derived in past research from the LFS on educational attainment levels of those employed in the different jobs, defined in terms of occupations within sectors, are used to classify jobs by skill level, while data on the median hourly earnings associated with each job, again complied during past research, are used to classify jobs by relative wage level[3].

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[2] For details, visit: http://www.euklems.net

[3] For details of the research concerned, see R. Stehrer, T. Ward and E. Fernández Macías (2009), 'Changes in the Structure of Employment in the EU and their Implications for Job Quality', *wiiw Research Reports*, No. 354 (first published by the European Foundation, Dublin 2008).

1.2 Outline of analysis

The analysis begins by examining the changes in value-added, productivity and employment by sector during past periods of economic downturn in EU Member States, or more precisely in EU15 countries since for the countries which entered the EU in 2004 and 2007, the experience of economic downturn is more limited and different in character. For these countries, therefore, the main experience is that which occurred over the years immediately following the fall of the former communist regime around the end of the 1980s-beginning of the 1990s. This experience, however, was during the very initial stages of the transition to market economies and was a result largely of a collapse in trade with the Soviet Union. Accordingly, it is of limited relevance for the present situation.

In the EU15 countries, the focus is mainly on the economic downturns which occurred in the early 1980 and early 1990s and to a more limited extent on that in the early part of the present decade since this was less widespread and, in most cases, less pronounced than in the earlier periods.

The variables examined are:

- changes in value-added at constant prices in the individual sectors
- changes in employment, or more accurately, in the volume of labour input, as measured by total hours worked
- changes in labour productivity, defined as changes in value-added per hour worked, or volume of labour input
- changes in average annual hours worked by those employed, in order to move from the change in labour input to the number of people in work
- changes in the number of people employed as an outcome of changes in the preceding four variables.

In each case, the concern is to examine the changes in each sector of activity relative to the overall change in order to identify the differential effect of the downturn.

This analysis is supplemented by an examination of the changes in the structure of employment by (ISCO 2-digit) occupation within sectors, though in this case the focus is on the period since the mid-1990s, since the data available from the LFS make it difficult to go back before this (largely because of changes in the ISCO system of classification in the mid-1990s).

The results of these two pieces of analysis form the basis of the assumptions made about the differential effects of the present recession on jobs.

The developments over the initial stages of the present recession are then examined to see to what extent they are in line with, or different from, the results of the earlier analysis. This examination, however, is inevitably limited by the data available and while the short-tem data are relatively detailed for industry and construction, they are less so for services. In particular, they do not cover public sector activities – education and health services as well as public administration – which account for a large part of employment, nor, perhaps more importantly, do they cover financial services which is where the recession started.

This is followed by the central part of the analysis which is to apply the assumptions about the differential rates of change in value-added, employment and so on derived from the earlier analysis to the forecasts of the overall change in GDP in the different Member States in order to examine the implications for jobs. The concern is twofold: to identify the jobs most at risk during the downturn and to consider the implications of the recession – of the projected structure of the decline in employment – for job quality, as reflected in relative wages and skill levels.

The further aim is to consider the possible longer-term consequences for employment and job quality of the recession and, in particular, of the possible difference it might make to the structure of employment and job quality in the years beyond 2010 when recovery, in the sense of returning to GDP growth of at least 2% a year, is assumed to get underway.

2 Sectoral developments during previous downturns in economic activity

The concern here is to examine the changes in the variables listed above – in GDP, productivity, average hours worked and employment – in EU15 Member States over the three periods of downturn which had occurred before the present recession since 1980. For each country, the period of downturn examined relates to the years, or in year, in which the growth of total value-added in the economy in question slowed down by most or became negative. These years are in most cases the same or broadly same, though they can differ slightly because of differences in the timing of the downturn across the EU. For example, the downturn at the beginning of the 1990s began at least a year earlier in Sweden and Finland, as well as the UK, than in most other EU countries.

The changes over these three periods of recession are compared in Table 1-7 presented below with changes over a more ‘normal’ period in order to identify the differential effect of the recession on sectors and to take account of any long-term trends in their growth – or decline. These latter changes (labelled ‘trend’ in the tables), which are based on changes over the second half of the 1990s and up to the downturn in 2001 (or in some countries longer because of they were not affected by a downturn) are intended to indicate the longer-term trend situation and to provide a benchmark against which the effect of the recession on the different sectors can be measured. For example, in the case of Textiles

and clothing (NACE DB), value-added in most countries has declined since 1980 even in normal years, so the fact that value-added declined in each of the recession periods in itself is to be expected and the interesting question is whether the fall in these periods was larger than normal or not and, if so, how much larger. On the other hand, in the case of Business services (NACE K), there was continuous growth in value-added throughout the period and in this case the relevant question concerns the extent to which the rate of growth during recessions was reduced, if at all.

The main question of interest, of course, is the effect of the developments in value-added on employment and, in particular, on the number employed in the different sectors. As outlined above, this depends not only on the extent of any fall in value-added, or slowdown in growth, but also on the extent of the change in productivity – which during periods of recession, might also differ from the normal, or trend, rate of growth (as measured by the volume of labour input – i.e. the total hours of work) – and changes in the average hours worked by those employed. In other words, any reduction in labour inputs during periods of recession might be compensated in some degree by a reduction in hours worked by the people employed, so diminishing the extent to which the number in work is cut back.

In each case, the first two columns of the table show the share of total employment accounted for by each of the sectors in order to indicate the relative importance for overall employment of any reduction. Four of the 31 sectors have been amalgamated because of their typically small size to form larger sectors – specifically, agriculture (A) and fisheries (B) and the two mining and quarrying sectors (CA and CB). In addition, two sectors, employment in private households (e. g. cleaning and gardening) and extra-territorial organizations have been omitted because of the small numbers employed in most countries and a lack of data. The sectors which are shaded in the tables are those in which relatively few people are employed.

The starting-point is to look at the overall changes for the EU15 as a whole, which, of course, reflect the average developments across countries, before going on to examine the extent of similarities and differences between them.

EU15

Table 1 for the EU15 indicates, first, that the composition of employment over the period 1980-2005 changed significantly in a number of respects – in particular, that the importance of agriculture for jobs declined markedly (from accounting for 9% of employment to accounting for 4%), that there was a decline in the share of employment in all manufacturing sectors, most notably in textiles and clothing and that the by far the biggest increase in employment occurred in business services (from 5% of the total to 13%). (The shaded rows denote sectors in which the share of employment in 2005 was especially small – under 1%.)

Secondly, it shows that the effect of the downturn in the early 1980s was particularly severe, total value-added falling by just over 2% in 1981. The main sectors affected by this were mostly in manufacturing, with value-added in glass and non-metallic mineral products falling by over 7% and metal manufacture by just under 7%. At the sane time, value-added in construction declined by just over 4% and in the distributive trades by just over 1% (as against trend growth of around 3%). On the other hand, both value-added in both business services and public administration expanded by over 3% a year, in the latter, by well over the trend increase (this is the case even if account is taken of the fact that the upward trend in the 1980s was more than in the 1990s – at around 1-1.5% a year).

The decline in value-added was accompanied by a slightly smaller fall in the volume of labour input, so that labour productivity also fell a little in 1981, so cushioning the effect on employment. The reduction in productivity seems to have been concentrated in the sectors showing the biggest falls in value-added – in glass and non-metallic mineral products, metal manufacture and construction, especially, as well as in the distributive trades – though the reduction was not enough to compensate for the fall in value-added and the volume of labour inputs still declined significantly.

In other manufacturing sectors, productivity tended to increase, especially in the electrical engineering industry and motor vehicles, so that the volume of labour input declined sharply in all manufacturing industries (by 4-6% in most cases). Productivity also increased in most service sectors, though by not enough, except in transport, to offset the positive effect of the growth in value-added on labour input.

The depressing effect of the reduction in value-added on the number employed was further cushioned by a decline in average hours worked during the year by those employed, of almost 1% overall, and by more than 1% in most parts of manufacturing showing the biggest falls in labour input (the exception being textiles and clothing). Average hours worked also declined markedly in the public sector, in public administration, education and healthcare.

The number employed, therefore, fell by only half the decline in the volume of labour input during the year because of the reduction in average working time, though, nevertheless, still by almost 1% and by between 3% and 5% in most manufacturing industries and by over 6% in textiles and clothing. This fall was partly offset by a rise in the number employed in service sectors, with the number falling only in transport, though in the distributive trades the number employed remained unchanged, in contrast to a trend increase of over 1% a year.

In the subsequent recession in the early 1990s, the growth of value-added in the EU15 as a whole slowed down in 1990-1992 and fell slightly in 1993. In these three years, therefore,

growth averaged only 0.5% a year. The differential effect of this on different sectors was similar to that in the previous recession, though in this case motor vehicles did not escape a decline in value-added. The decline in value-added in construction was smaller in line with the more modest scale of the downturn, as was the reduction below the trend rate of growth in the distributive trade (in this case, by not enough to cause a fall). During this period, however, hotels and restaurants were hit much harder than in the earlier period, value-added falling by around 1%. The other service sectors continued to expand if in most cases by less than the trend rate of growth.

Despite the generally shallower downturn than 10 years before, the reduction input was only slightly less, at just over 1% a year, as a result of productivity continuing to increase (which might reflect the longer duration of the downturn). The decline in labour input was especially marked in manufacturing (not much less than in the preceding period), though it was also significant in both transport (as previously) and the distributive trades (which unlike in the previous period showed an increase in productivity), while there was a decline as well in financial services. In hotels and restaurants, however, productivity fell and labour input rose slightly.

Although average hours worked declined, the extent was similar to that in trend periods of growth, and only around half as much as in the earlier period. This was equally true in most sectors, especially in manufacturing and, in consequence, he reduction in the number employed was much the same overall in the economy as a whole (just under 1% a year) and larger tin manufacturing, where the number employed in the engineering industries fell in each case by over 5% a year, It was still the case, however, that in services the only sector to show a significant decline in the number in work was transport.

In the much shallower downturn in the early part of the present decade, when a number of EU15 Member States experienced hardly any slowdown at all, the effect on the different sectors was much the same as before only generally smaller, with motor vehicles escaping any significant effect. The exceptions were textiles and clothing, furniture and other manufactures and hotels and restaurants, in all of which the fall in value-added was as large as or larger than in the early 1990s.

Overall, there was a slight slowdown in productivity growth which was enough to prevent labour input from being reduced. Labour input, however, declined in all manufacturing industries, most especially in electrical and electronic equipment were the high growth of value-added was accompanied by an even large increaser in productivity. Labour input also declined in construction, marginally, the distributive trades, transport and, more significantly, in financial services, as well as in public administration.

This decline in labour input was offset in part by a reduction in average hours worked, which was on much the same scale as in the preceding years but which was accordingly responsible for all the increase in the number employed which occurred over the period (0.6% a year). The reduction in average hours was especially marked in manufacturing, in electrical and electronics equipment, in particular, and served to moderate the fall in the number employed, which was till close to 5% a year in this industry as well as in textiles and clothing. The only service sector to show a decline in the number employed was financial services, though there was only a marginal increase in transport and no increase at all in public administration.

Germany

In Germany, the scale of the downturn in the early 1980s was smaller than in the EU15 as a whole, the downturn in the early 1990s much the same and in the early part of the decade larger (Table 2). The sectors affected by the downturns were in general those affected at the EU level, with particularly large falls in value-added the engineering industries, including motor vehicles in the early 1990s and in hotels and restaurants in all three downturns (by around 2% a year in each case).

In each of the three periods, the decline in labour input was similar at just over 1% a year, reflecting the larger increases in productivity in the latte two periods than the first. The increases in productivity in these two periods were particularly marked in a number of manufacturing industries, adding to the adverse effect on labour input, though in others – in mechanical engineering and motor vehicles (where there was a sharp decline in productivity) – movements in productivity cushioned the fall in labour input. Either because of a decline in value-added or growth of productivity or both, labour input was reduced sharply in many parts of manufacturing, especially in the engineering industries.

While in the downturns in the early 1980s and the early 2000s, there was a significant reduction in average worked, which offset much of the effect of the decline in labour input on the number employed, which in both periods fell by less than 0.5% a year, this was the case in the early 1990s when average worked in the economy as a whole were broadly unchanged. In consequence, the number employed fell by almost 1.5% a year between 1991 and 1993. In manufacturing the fall was much greater, in part because of an increase rather than a reduction in average hours worked (perhaps reflecting a policy of companies to economize by cutting back their work forces as much as possible). In both mechanical and electrical engineering, therefore, the number employed was reduced by over 10% a year and in textiles and clothing by almost 16% a year. In addition, there was also a fall in the number employed in transport of 2% a year and a decline in employment in public administration of only slightly less, the government adding to job losses rather than trying to offset them. In all other service sectors, however, the number employed increased, in many cases by more than in normal years.

UK

The recession in the UK in the early 1980s was similar in scale to that at the EU level, while that in the early 1990s was on slightly larger scale and that in the early part of the present decade – in 2002 – much shallower (Table 3). The sectors affected were again much the same – most of the manufacturing industries and construction, at least in the earlier two periods, though there was a large fall in value-added in hotels and restaurants in both these periods as well, coupled with a more modest decline in the distributive trades. In addition, in the early 1980s, value-added in business services also fell as it did in education and personal and community services.

In both the first two downturns, labour input declined markedly as productivity growth increased above the normal trend rate over the 1980s and 1990s. This was particularly so in the early 1990s, when productivity as measured increased by over 4% a year overall and by more in a number of manufacturing and even services sectors. The only sector in which the volume of labour input increased over this period was public administration and in all other sectors it fell, except in health case where it remained unchanged. The reduction in labour input in the early 1990s was especially marked in manufacturing, in electrical engineering and motor vehicles, amounting to 12-13% a year, though in construction, it was only slightly less (11% a year). Although the reduction was smaller in service sectors, it still amounted to 4% a year in financial services and around 3% a year in both the distributive trades and transport.

The reduction in labour input was offset in all three periods by a decline in average hours worked, but especially in the early 1990s, when it was around 2% a year in the economy as a whole. The decline was particularly large in manufacturing, where in the engineering industries and iron and steel, it amounted to almost 4% a year. Despite this, however, the overall number employed fell by over 2% a year, though this was much less than in the early 1980s (when it was almost 4% a year, and in a number of manufacturing industries by close to 10% a year. Similarly in services, there was a significant decline in employment in the distributive trades, transport and financial services, in the first two, following a decline in the early 1980s as well.

Although the downturn in the early 2000s was much less than in the earlier periods, it still hit manufacturing relatively hard, with value-added declining in most industries along with the volume of labour input, with the result that the number employed fell sharply in the sector as a whole and most especially in mechanical and electrical engineering (by 8% and 11%, respectively). There was also a significant reduction in the number employed, however, in financial services, of 3%, though employment rose in most other services sectors (except in transport where it remained unchanged).

Table 1

EU15

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	9.2	3.8	-0.4	0.5	-1.7	*1.1*	-3.3	-4.7	-3.2	*-1.5*	3.0	5.4	1.5	*2.7*	-0.3	0.3	-0.6	*-0.2*	-3.0	-5.0	-2.6	*-1.3*
C	0.8	0.2	-2.9	2.3	0.1	*0.2*	-4.6	-10.6	-2.6	*-3.4*	1.8	14.5	2.7	*3.7*	-2.3	0.2	-1.6	*0.2*	-2.4	-10.8	-0.9	*-3.6*
DA	2.9	2.1	0.2	-0.5	0.5	*0.6*	-2.9	-1.5	-0.4	*0.0*	3.1	1.0	1.0	*0.6*	-0.7	-0.1	-0.8	*-0.6*	-2.2	-1.4	0.4	*0.6*
DB	3.0	1.0	-3.9	-3.1	-4.4	*-0.7*	-6.8	-6.7	-5.7	*-2.5*	3.0	3.9	1.3	*1.9*	-0.5	-0.2	-0.8	*-0.1*	-6.3	-6.5	-4.9	*-2.4*
DC	0.6	0.2	1.8	-5.5	-6.6	*-2.2*	-5.1	-5.2	-4.9	*-2.6*	7.2	-0.3	-1.7	*0.4*	0.0	-0.2	-1.6	*-0.2*	-5.1	-5.0	-3.4	*-2.4*
DD	0.8	0.5	-6.0	-2.7	1.3	*2.9*	-4.6	-2.5	-3.3	*-0.4*	-1.4	-0.3	4.8	*3.3*	-1.0	-0.2	-1.7	*0.0*	-3.6	-2.2	-1.6	*-0.3*
DE	1.9	1.3	-3.1	0.1	0.2	*2.1*	-2.4	-1.9	-2.1	*-0.3*	-0.8	2.1	2.3	*2.4*	-0.3	-0.2	-0.5	*0.3*	-2.0	-1.7	-1.6	*-0.6*
DF	0.2	0.1	-8.4	-20.5	-6.7	*-3.1*	-1.9	-4.1	0.2	*-2.5*	-6.6	-17.1	-6.9	*-0.6*	-0.5	-0.8	1.0	*-0.7*	-1.4	-3.3	-0.8	*-1.8*
DG	1.5	0.9	0.0	1.5	3.6	*4.3*	-3.8	-4.6	-1.4	*-0.7*	3.9	6.4	5.0	*5.0*	-0.4	-0.5	-0.5	*-0.2*	-3.4	-4.1	-0.8	*-0.5*
DH	0.9	0.8	-1.8	0.7	2.2	*4.4*	-4.9	-2.8	-2.3	*1.1*	3.3	3.7	4.6	*3.3*	-1.0	-0.5	-0.6	*-0.2*	-3.9	-2.3	-1.7	*1.3*
DI	1.3	0.7	-7.3	-3.1	-1.2	*2.1*	-5.3	-4.2	-2.9	*-0.2*	-2.2	1.2	1.8	*2.3*	-1.2	-0.2	-0.8	*-0.3*	-4.1	-4.0	-2.1	*0.0*
DJ	3.8	2.4	-6.7	-2.4	-0.7	*2.6*	-5.5	-4.5	-1.5	*0.3*	-1.2	2.2	0.8	*2.3*	-1.1	-0.6	-0.5	*0.0*	-4.4	-3.9	-1.1	*0.4*
DK	2.7	1.8	-4.0	-5.0	-1.0	*1.5*	-4.2	-5.4	-2.0	*0.0*	0.2	0.5	1.0	*1.5*	-1.5	-0.3	-0.4	*-0.3*	-2.8	-5.1	-1.6	*0.3*
DL	2.7	1.7	1.1	-1.1	12.1	*10.2*	-4.3	-5.4	-5.7	*0.4*	5.7	4.6	18.9	*9.8*	-1.1	-0.1	-1.1	*-0.2*	-3.3	-5.4	-4.6	*0.6*
DM	2.4	1.5	1.6	-5.2	3.1	*5.2*	-5.9	-6.2	-2.1	*0.8*	8.0	1.1	5.3	*4.4*	-1.3	-1.1	-0.7	*-0.7*	-4.7	-5.1	-1.4	*1.4*
DN	1.3	0.9	-3.1	-2.5	-3.7	*2.3*	-4.1	-2.3	-2.9	*0.3*	1.0	-0.2	-0.8	*2.0*	-0.5	-0.1	-0.4	*-0.3*	-3.7	-2.2	-2.5	*0.6*
E	0.9	0.6	0.5	1.5	0.6	*0.9*	-0.5	-1.7	-2.1	*-2.5*	1.0	3.3	2.8	*3.5*	-1.4	0.2	-0.6	*-0.6*	1.0	-1.9	-1.5	*-1.9*
F	8.3	7.3	-4.3	-1.9	0.0	*0.9*	-3.9	-2.3	-0.1	*1.5*	-0.5	0.4	0.1	*-0.6*	-1.2	-0.5	-0.4	*0.1*	-2.7	-1.8	0.3	*1.4*
G	14.3	15.1	-1.2	1.4	1.5	*3.0*	-0.1	-0.7	-0.2	*0.8*	-1.0	2.1	1.7	*2.1*	-0.2	-0.6	-0.7	*-0.5*	0.0	-0.1	0.6	*1.3*
H	3.1	4.9	1.3	-0.9	-0.9	*3.0*	1.2	0.3	2.1	*2.1*	0.1	-1.2	-3.0	*0.9*	-0.3	-0.8	0.0	*-0.5*	1.5	1.1	2.1	*2.6*
I	6.0	5.7	1.9	1.0	2.1	*4.6*	-0.8	-0.8	-0.3	*0.9*	2.7	1.8	2.4	*3.7*	-0.3	-0.2	-0.4	*-0.6*	-0.6	-0.6	0.1	*1.5*
J	2.7	2.9	1.3	1.4	3.3	*2.9*	1.1	-0.4	-0.6	*0.5*	0.2	1.8	4.0	*2.4*	-0.9	-0.5	-0.5	*-0.2*	1.9	0.1	-0.2	*0.7*
K	5.1	13.0	3.3	2.3	1.0	*3.0*	0.7	2.0	1.6	*4.6*	2.5	0.3	-0.6	*-1.5*	-0.9	-0.4	-0.1	*-0.5*	1.7	2.5	1.8	*5.1*
L	7.1	6.7	3.8	1.1	0.8	*0.5*	0.4	0.4	-0.5	*-0.5*	3.4	0.8	1.3	*0.9*	-1.4	0.1	-0.5	*-0.4*	1.8	0.3	0.0	*0.0*
M	5.6	6.7	2.3	1.2	1.4	*0.8*	0.1	0.9	2.6	*1.1*	2.2	0.3	-1.2	*-0.3*	-1.6	0.2	0.2	*-0.1*	1.7	0.7	2.4	*1.2*
N	6.4	9.8	2.4	1.6	2.2	*1.8*	0.8	1.6	2.1	*1.2*	1.5	-0.1	0.0	*0.6*	-1.8	-0.5	-0.3	*-0.5*	2.6	2.2	2.5	*1.7*
O	3.1	4.9	1.0	1.8	0.4	*1.7*	0.9	1.1	1.3	*1.9*	0.2	0.7	-0.8	*-0.3*	-0.7	-0.4	-0.4	*-0.4*	1.5	1.5	1.6	*2.4*
Total			-2.2	0.5	1.4	*2.6*	-1.8	-1.2	0.0	*1.0*	-0.4	1.7	1.4	*1.6*	-0.9	-0.4	-0.5	*-0.4*	-0.9	-0.8	0.6	*1.4*

For sector keys see appendix table A.12.

Table 2

Germany

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	5.6	2.2	6.9	-2.4	-3.0	*2.6*	-3.0	-7.8	-3.8	*-3.2*	10.3	5.8	0.8	*5.9*	-0.8	4.0	-1.8	*-0.4*	-2.2	-11.3	-2.0	*-2.8*
C	1.2	0.2	-2.0	2.0	-3.3	*-9.5*	-0.9	-12.0	-8.6	*-7.5*	-1.0	15.9	5.8	*-2.1*	-1.1	4.4	-0.4	*0.6*	0.1	-15.7	-8.2	*-8.1*
DA	3.1	2.4	-2.6	-5.7	-2.3	*0.9*	-2.2	-2.6	-0.1	*-0.7*	-0.4	-3.1	-2.2	*1.6*	-0.5	0.7	-1.0	*-1.6*	-1.7	-3.3	0.8	*0.9*
DB	2.4	0.5	-5.8	-7.9	-4.2	*-2.3*	-8.0	-14.4	-8.1	*-5.8*	2.3	7.6	4.2	*3.7*	-1.0	1.6	-0.9	*0.1*	-7.0	-15.7	-7.3	*-5.9*
DC	0.5	0.1	-3.9	-5.8	-3.7	*-3.6*	-7.3	-18.8	-7.0	*-5.3*	3.7	16.1	3.6	*1.8*	-0.2	0.9	-0.8	*-0.8*	-7.1	-19.6	-6.3	*-4.6*
DD	0.8	0.4	-7.1	6.3	-4.2	*0.2*	-5.2	-1.1	-9.2	*-3.0*	-2.0	7.5	5.6	*3.4*	-2.1	0.1	-3.8	*0.3*	-3.1	-1.2	-5.7	*-3.3*
DE	2.3	1.6	-0.8	-1.5	-5.0	*1.4*	-2.0	-2.7	-2.7	*-1.4*	1.2	1.2	-2.3	*2.8*	-1.0	0.6	-0.4	*1.1*	-1.0	-3.3	-2.3	*-2.5*
DF	0.2	0.1	-3.5	-50.4	-11.5	*-3.3*	1.0	-12.4	-2.7	*-4.2*	-4.4	-43.4	-9.0	*0.9*	-0.1	-2.9	-1.3	*-2.6*	1.0	-9.8	-1.5	*-1.7*
DG	2.1	1.2	-0.9	-0.5	2.8	*2.1*	-0.4	-7.4	-1.3	*-2.8*	-0.5	7.5	4.1	*5.0*	-0.3	0.2	-0.4	*-0.5*	-0.1	-7.6	-0.9	*-2.2*
DH	1.0	1.0	-1.5	-1.7	0.3	*2.0*	-2.5	-3.1	-1.7	*0.5*	1.0	1.4	2.1	*1.4*	-0.6	0.9	-0.5	*0.1*	-1.9	-4.0	-1.3	*0.4*
DI	1.4	0.6	-5.5	2.3	-3.1	*-0.5*	-4.7	-2.4	-6.4	*-3.4*	-0.8	4.7	3.6	*2.9*	-1.2	2.7	-1.3	*-0.9*	-3.5	-4.9	-5.2	*-2.5*
DJ	4.3	2.8	-3.5	-4.2	-0.6	*2.1*	-4.6	-5.9	-1.5	*-0.6*	1.2	1.9	1.0	*2.7*	-2.6	0.1	-0.2	*0.4*	-2.1	-6.0	-1.4	*-1.0*
DK	4.3	2.7	-2.6	-9.0	-0.8	*0.4*	-3.5	-9.1	-0.7	*-1.4*	0.9	0.1	-0.2	*1.8*	-2.4	1.2	-0.1	*-0.8*	-1.1	-10.1	-0.6	*-0.7*
DL	4.2	2.6	0.7	-4.2	-0.7	*4.3*	-3.9	-8.9	-3.0	*-1.7*	4.9	5.3	2.3	*6.1*	-1.2	1.6	-1.4	*-0.6*	-2.8	-10.4	-1.7	*-1.1*
DM	2.8	2.6	2.8	-10.9	6.8	*1.7*	-0.5	-7.2	-0.9	*0.8*	3.3	-4.0	7.8	*1.0*	-0.3	-1.0	-0.9	*-2.6*	-0.2	-6.3	0.0	*3.4*
DN	1.3	0.7	-6.7	-4.0	-7.1	*-0.5*	-5.2	-3.9	-5.2	*-3.3*	-1.6	-0.1	-2.0	*2.9*	-1.4	0.7	0.0	*-1.0*	-3.8	-4.6	-5.2	*-2.4*
E	1.1	0.7	-5.8	-0.7	0.5	*3.3*	1.4	-2.6	-1.6	*-4.8*	-7.0	1.9	2.2	*8.6*	0.6	0.7	-1.0	*-0.7*	0.7	-3.3	-0.7	*-4.1*
F	8.7	5.6	-4.3	2.5	-4.7	*-2.9*	-2.7	4.2	-6.3	*-3.0*	-1.6	-1.7	1.7	*0.1*	-0.2	0.3	-0.7	*0.0*	-2.5	4.0	-5.7	*-3.1*
G	14.0	15.2	-2.7	0.5	0.5	*2.5*	-1.1	0.1	-1.7	*0.1*	-1.6	0.3	2.2	*2.4*	-0.8	-0.3	-0.8	*-0.9*	-0.2	0.4	-0.9	*1.1*
H	2.5	4.5	-1.9	-1.9	-2.2	*1.8*	0.8	0.6	-0.4	*2.3*	-2.7	-2.5	-1.8	*-0.5*	-2.1	-2.1	-1.7	*-1.3*	2.9	2.8	1.3	*3.6*
I	6.1	5.4	1.1	2.2	2.1	*3.6*	-1.2	-2.8	-1.6	*-1.0*	2.2	5.1	3.8	*4.7*	-1.3	-0.7	-1.4	*-0.6*	0.1	-2.1	-0.2	*-0.4*
J	2.8	3.2	0.3	5.0	-4.0	*1.9*	0.7	1.9	-0.9	*0.3*	-0.4	3.1	-3.1	*1.5*	-0.8	-0.7	-0.5	*0.0*	1.5	2.6	-0.4	*0.3*
K	4.4	13.3	3.5	4.3	2.6	*3.4*	1.2	5.0	2.1	*5.7*	2.3	-0.7	0.4	*-2.1*	-1.3	-0.4	-0.3	*-1.4*	2.6	5.5	2.4	*7.2*
L	8.6	6.9	4.4	0.8	-0.3	*0.1*	0.3	-1.8	-1.4	*-1.4*	4.2	2.6	1.2	*1.6*	-0.8	0.0	-0.2	*-0.3*	1.1	-1.8	-1.2	*-1.1*
M	4.7	5.9	2.7	3.1	-0.4	*1.2*	0.4	3.3	1.2	*0.8*	2.3	-0.2	-1.6	*0.4*	-1.1	0.3	0.1	*-0.7*	1.5	3.0	1.1	*1.5*
N	5.5	10.4	0.8	6.0	3.8	*4.3*	2.2	2.1	1.7	*1.7*	-1.4	3.8	2.1	*2.6*	-1.1	-1.0	-0.4	*-0.9*	3.3	3.1	2.1	*2.6*
O	3.3	5.4	2.5	2.9	-1.2	*1.1*	0.5	0.8	0.1	*1.5*	2.1	2.1	-1.3	*-0.3*	-1.3	-1.1	-0.7	*-1.1*	1.8	2.0	0.9	*2.6*
Total			-0.2	0.4	0.5	*2.0*	-1.4	-1.3	-1.1	*0.0*	1.2	1.7	1.6	*2.0*	-1.0	0.1	-0.8	*-0.8*	-0.3	-1.4	-0.4	*0.8*

For sector keys see appendix table A.12.

Table 3

United Kingdom

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	2.3	1.4	2.6	4.9	13.0	-1.1	-1.9	-3.3	-9.7	-3.9	4.6	8.5	25.2	2.8	-2.9	-3.5	-1.3	-1.0	1.0	0.2	-8.6	-2.9
C	1.6	0.2	3.1	3.6	0.7	0.3	-10.7	-14.8	-9.7	-1.2	15.4	21.6	11.6	1.6	-3.7	-2.6	-5.4	0.3	-7.2	-12.5	-4.6	-1.6
DA	2.6	1.6	-1.9	1.2	2.3	0.0	-6.6	-3.2	-5.1	0.9	5.1	4.6	7.7	-0.8	-0.7	-0.9	-1.5	0.0	-6.0	-2.4	-3.6	0.9
DB	2.6	0.5	-8.4	-4.3	-7.3	-5.4	-14.3	-9.8	-12.0	-6.7	6.9	6.0	5.3	1.3	-0.7	-1.0	-1.3	0.0	-13.7	-8.9	-10.9	-6.7
DC	0.3	0.0	-7.4	-7.9	-12.4	-3.6	-13.3	-13.4	-18.0	-10.7	6.7	6.3	6.8	7.9	-0.7	-0.8	-1.0	0.0	-12.7	-12.7	-17.2	-10.6
DD	0.4	0.3	-10.1	-6.1	2.6	-2.1	-7.8	-4.3	4.0	-2.5	-2.5	-1.8	-1.4	0.4	-0.9	-1.2	-1.6	-0.1	-6.9	-3.2	5.7	-2.4
DE	2.0	1.5	-5.1	-1.5	0.1	0.2	-5.5	-1.6	-1.9	-0.7	0.4	0.0	2.0	0.9	-0.8	-1.0	-1.3	-0.1	-4.8	-0.6	-0.6	-0.6
DF	0.1	0.1	-5.3	7.0	1.5	-1.7	-7.3	0.3	0.6	-0.2	2.1	6.6	0.8	-1.5	0.3	-2.8	-0.5	-0.2	-7.6	3.2	1.1	0.0
DG	1.6	0.7	-2.3	3.2	-0.8	2.5	-8.5	-8.4	-0.2	-0.6	6.7	12.6	-0.6	3.1	0.3	-2.8	-0.5	-0.2	-8.8	-5.8	0.3	-0.4
DH	1.1	0.7	-9.0	-1.4	-3.8	0.0	-9.7	-10.0	-4.5	-0.4	0.7	9.6	0.8	0.3	0.3	-2.8	-0.5	-0.2	-9.9	-7.5	-4.1	-0.2
DI	1.1	0.4	-10.8	-6.9	-1.4	-0.4	-11.4	-11.6	-4.4	-2.5	0.7	5.3	3.1	2.2	0.2	-2.8	-0.6	-0.2	-11.6	-9.1	-3.8	-2.3
DJ	4.0	1.5	-3.2	-6.9	1.0	0.1	-13.0	-9.9	-6.1	-1.6	11.3	3.3	7.5	1.8	0.5	-3.6	-0.8	-0.1	-13.4	-6.6	-5.3	-1.5
DK	2.6	1.0	-11.0	-7.2	-5.4	-1.1	-9.5	-9.1	-8.9	-1.7	-1.6	2.0	3.8	0.6	0.5	-3.6	-0.7	-0.1	-9.9	-5.7	-8.2	-1.6
DL	3.0	1.2	-6.5	-4.3	-12.5	5.5	-8.0	-12.5	-10.7	0.6	1.6	9.4	-2.1	4.8	0.2	-3.8	0.3	-0.4	-8.3	-9.1	-10.9	1.0
DM	3.1	1.2	-7.7	-4.2	-2.3	1.6	-10.6	-13.0	-4.6	2.0	3.3	10.2	2.4	-0.4	0.6	-3.7	-0.8	-0.1	-11.1	-9.7	-3.9	2.1
DN	1.0	0.7	-10.2	-6.3	0.3	0.7	-8.8	-10.1	-3.9	1.8	-1.5	4.1	4.4	-1.1	-0.8	-1.0	-1.6	0.0	-8.0	-9.1	-2.4	1.9
E	1.1	0.4	2.1	4.0	0.5	2.9	-6.6	-5.9	3.8	-4.7	9.3	10.5	-3.2	7.9	-4.2	-0.5	0.3	0.3	-2.5	-5.4	3.5	-5.0
F	7.4	6.9	-7.9	-6.0	3.5	1.5	-5.0	-10.8	-0.3	0.7	-3.0	5.4	3.8	0.9	0.1	-2.8	-1.1	-0.1	-5.1	-8.2	0.8	0.7
G	17.1	17.0	-1.8	-0.3	4.7	3.1	-3.0	-3.1	-0.6	0.7	1.2	2.9	5.4	2.4	-0.6	-1.2	-1.6	-0.4	-2.3	-1.8	1.1	1.1
H	4.0	6.1	-2.7	-5.1	3.1	3.0	-2.7	-0.5	2.4	2.5	0.0	-4.6	0.8	0.5	-0.7	-0.5	-0.8	-0.8	-2.0	0.0	3.1	3.3
I	6.3	6.0	0.0	0.0	0.9	8.2	-4.9	-2.5	0.8	1.0	5.1	2.6	0.1	7.1	-1.1	-1.2	0.8	-1.0	-3.8	-1.3	0.0	2.0
J	3.1	3.7	1.2	0.4	7.6	4.2	0.4	-4.1	-3.7	0.1	0.8	4.7	11.7	4.0	-0.3	-1.5	-0.9	-0.2	0.7	-2.6	-2.8	0.3
K	7.6	16.3	-0.3	1.9	-0.9	5.9	-1.5	-1.0	0.8	4.6	1.3	3.0	-1.7	1.2	-0.4	-1.0	-0.4	-0.3	-1.2	0.0	1.2	4.9
L	6.3	5.3	0.2	0.8	2.6	-0.9	-2.9	1.1	3.7	-1.4	3.1	-0.2	-1.1	0.6	-1.1	-0.2	0.0	-0.4	-1.8	1.3	3.6	-1.0
M	6.1	8.2	-0.8	3.3	1.8	1.0	-2.6	-0.2	4.1	2.3	1.8	3.4	-2.3	-1.2	-1.1	0.6	0.4	0.2	-1.5	-0.8	3.7	2.1
N	7.5	10.6	3.6	5.0	3.8	2.7	1.6	0.0	2.1	1.0	1.9	5.1	1.7	1.6	-1.1	-2.4	0.2	0.1	2.8	2.5	1.9	1.0
O	3.7	6.1	-1.3	1.3	1.6	3.7	-1.1	-0.6	3.8	2.9	-0.2	1.9	-2.2	0.8	-0.1	-1.7	0.0	-0.6	-1.1	1.1	3.9	3.5
Total			-1.8	0.0	1.4	3.1	-4.7	-4.0	-0.2	1.0	3.0	4.2	1.6	2.0	-0.9	-1.9	-0.8	-0.4	-3.8	-2.2	0.6	1.4

For sector keys see appendix table A.12.

Table 4

France

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	8.5	3.6	0.0	-1.9	-5.6	1.5	-3.5	-4.6	-4.2	-2.2	3.6	2.8	-1.5	3.8	0.1	-0.2	-2.4	-0.5	-3.6	-4.5	-1.8	-1.8
C	0.4	0.1	-8.8	1.6	-1.7	-10.9	-4.1	-6.8	-2.7	-8.5	-4.9	9.0	1.1	-2.7	-1.2	0.2	-1.1	-0.6	-2.9	-7.0	-1.6	-7.9
DA	2.5	2.2	3.4	0.0	4.4	-0.7	-3.1	-1.7	0.4	0.0	6.7	1.8	4.0	-0.6	-3.4	-0.3	-0.5	-1.0	0.3	-1.4	0.8	1.0
DB	2.6	0.5	-6.7	-2.3	-2.6	0.5	-7.4	-6.7	-8.9	-6.2	0.8	4.7	7.0	7.1	-0.4	-0.4	-0.9	-1.0	-7.1	-6.3	-8.1	-5.2
DC	0.5	0.1	4.2	-15.8	-11.1	-7.4	-7.0	-6.7	-6.7	-5.4	12.1	-9.7	-4.7	-2.2	0.7	-0.4	-0.8	-1.1	-7.7	-6.3	-5.9	-4.4
DD	0.6	0.3	5.4	0.3	13.7	4.9	-4.7	-4.0	-1.2	-2.7	10.7	4.4	15.1	7.8	-0.7	-0.4	-1.1	-1.0	-4.1	-3.6	-0.1	-1.8
DE	1.5	1.1	-2.5	-1.7	-2.1	1.3	-2.9	-2.6	-3.6	-1.3	0.4	0.9	1.6	2.6	-0.7	-0.1	-1.1	-0.9	-2.2	-2.5	-2.6	-0.4
DF	0.3	0.1	-7.0	76.9	-13.1	13.8	-2.7	-2.6	7.1	-5.8	-4.4	81.5	-18.8	20.8	-0.8	1.0	1.7	-1.6	-1.9	-3.5	5.3	-4.2
DG	0.9	0.6	6.6	-2.0	-0.2	0.2	-4.2	-2.4	-1.0	-1.7	11.3	0.5	0.8	2.0	-1.1	-0.1	-1.0	-0.9	-3.1	-2.3	0.0	-0.8
DH	0.9	0.8	-7.6	10.4	7.3	13.3	-2.9	-1.5	-2.1	1.0	-4.9	12.1	9.6	12.2	-0.5	-0.1	-1.3	-0.8	-2.4	-1.4	-0.8	1.8
DI	1.0	0.5	-9.8	-1.3	0.5	1.7	-5.2	-3.2	-4.0	-2.0	-4.8	2.0	4.8	3.8	-1.5	-0.2	-1.1	-0.9	-3.8	-3.1	-2.9	-1.1
DJ	3.8	2.2	-13.4	-5.2	-0.6	1.1	-5.4	-4.2	-3.4	0.0	-8.5	-1.0	2.9	1.1	-1.1	-0.3	-1.3	-0.8	-4.3	-4.0	-2.1	0.8
DK	2.3	1.2	3.5	-3.6	-1.4	5.1	-4.4	-3.2	-4.0	-1.3	8.3	-0.3	2.7	6.5	-0.6	-0.1	-1.3	-0.7	-3.8	-3.1	-2.8	-0.6
DL	2.3	1.5	2.0	2.0	1.1	6.0	-2.6	-2.9	-5.8	0.1	4.7	5.0	7.3	5.9	-0.6	0.1	-1.1	-0.8	-2.0	-2.9	-4.8	0.9
DM	2.4	1.3	1.0	-5.6	0.3	4.2	-7.3	-4.7	-1.4	-0.1	8.9	-0.9	1.7	4.3	-3.1	-0.9	-0.7	-0.9	-4.3	-3.9	-0.7	0.8
DN	1.2	0.7	1.6	-2.3	-2.8	4.6	-3.5	-3.3	-3.5	-0.8	5.3	1.1	0.8	5.4	-0.9	0.1	-0.8	-0.9	-2.6	-3.5	-2.8	0.1
E	0.7	0.7	4.2	2.5	5.6	3.7	1.1	-0.3	-2.8	-1.1	3.1	2.8	8.6	4.9	-1.7	0.3	-0.4	-1.6	2.8	-0.6	-2.4	0.5
F	8.9	6.4	-1.7	-1.7	-1.1	0.5	-3.8	-3.9	-0.2	-0.1	2.2	2.4	-0.8	0.6	-1.9	-0.1	-1.2	-0.6	-2.0	-3.8	1.0	0.4
G	13.3	13.6	2.3	0.5	0.5	2.6	0.6	-2.0	0.6	0.7	1.6	2.6	-0.1	1.9	0.3	-0.6	-1.1	-0.8	0.3	-1.4	1.8	1.5
H	2.7	3.7	0.9	-1.8	-1.7	2.5	-0.1	-0.6	0.8	0.5	1.0	-1.2	-2.5	2.0	-2.7	-1.2	-0.6	-1.4	2.6	0.7	1.4	1.9
I	5.9	6.3	2.4	1.8	4.1	6.1	-0.5	0.2	-1.0	1.9	2.8	1.6	5.2	4.2	0.5	0.0	-1.5	-0.1	-0.9	0.2	0.5	2.0
J	3.1	3.1	4.7	-0.3	4.4	1.9	-0.7	-1.1	0.3	-0.6	5.4	0.8	4.1	2.6	-2.1	0.0	-1.2	-0.9	1.5	-1.1	1.6	0.2
K	7.7	14.8	2.9	1.2	1.2	3.4	-0.1	0.8	-1.5	4.5	3.0	0.4	2.8	-1.0	-2.5	-0.1	-1.3	-0.5	2.5	0.8	-0.2	5.0
L	8.2	9.1	3.4	2.7	-0.6	1.6	-3.1	2.1	-4.4	-0.1	6.7	0.6	3.9	1.7	-5.0	0.7	-3.1	-0.4	1.9	1.4	-1.3	0.3
M	6.4	8.0	1.1	1.5	-0.7	-0.1	-1.7	2.0	1.6	1.0	2.8	-0.5	-2.3	-1.1	-4.2	0.3	-1.0	0.1	2.6	1.8	2.6	0.8
N	7.8	11.6	2.5	2.2	1.7	0.4	-1.4	2.5	0.8	0.6	3.9	-0.3	1.0	-0.1	-4.5	-0.1	-0.6	-1.0	3.2	2.6	1.4	1.6
O	2.8	4.3	0.8	2.8	3.4	4.6	-1.5	2.0	-0.3	3.2	2.3	0.7	3.7	1.4	-3.6	-0.5	-2.0	-1.1	2.2	2.5	1.7	4.3
Total			0.5	0.5	1.0	2.6	-2.3	-1.0	-1.1	0.7	2.9	1.5	2.2	1.9	-1.9	-0.4	-1.5	-0.7	-0.4	-0.6	0.4	1.5

For sector keys see appendix table A.12.

Table 5

Italy

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	12.5	4.2	2.7	3.7	0.8	-1.6	-3.7	-3.3	-1.7	-0.6	6.6	7.3	2.5	-1.1	1.2	1.6	0.2	-0.5	-4.8	-4.8	-1.9	-0.1
C	0.3	0.2	-2.6	0.1	-2.6	-1.2	-1.8	-6.4	-2.7	-1.3	-0.9	6.9	0.1	0.2	-0.6	-0.4	-0.5	0.3	-1.2	-6.0	-2.2	-1.6
DA	2.2	2.0	0.6	3.8	-2.3	-0.1	-2.8	0.8	0.0	-2.5	3.4	3.0	-2.3	2.4	-0.5	0.2	-1.0	-0.9	-2.3	0.6	1.0	-1.6
DB	4.9	2.4	-1.9	-0.3	-5.6	0.9	-3.3	-3.9	-3.4	-0.6	1.4	3.8	-2.3	1.5	-0.7	-0.2	-1.0	-0.2	-2.7	-3.8	-2.4	-0.4
DC	1.5	0.7	1.7	-1.6	-3.6	3.2	-3.6	-2.5	-3.6	-1.2	5.5	1.0	0.1	4.5	-0.7	-0.1	-0.2	0.1	-2.9	-2.4	-3.5	-1.3
DD	1.2	0.7	-0.8	-0.4	-2.3	3.8	-3.9	-2.5	-3.1	-0.3	3.2	2.2	0.8	4.1	0.0	0.1	-0.7	-0.5	-3.9	-2.6	-2.4	0.1
DE	1.4	1.1	-0.5	1.2	-0.9	1.1	-3.5	-1.7	-0.7	-1.6	3.1	2.9	-0.2	2.8	-0.7	0.0	-0.5	-0.9	-2.8	-1.6	-0.2	-0.7
DF	0.1	0.1	-15.2	10.7	-32.4	-4.2	-2.1	-3.1	0.2	-0.6	-13.5	14.3	-32.5	-3.7	-0.6	-0.9	0.0	-0.4	-1.5	-2.2	0.2	-0.1
DG	1.4	0.8	8.5	-0.6	-0.4	-2.7	-4.2	-4.2	-1.6	-1.0	13.3	3.7	1.2	-1.7	-0.6	-0.5	-0.3	-0.3	-3.6	-3.7	-1.3	-0.8
DH	0.7	0.8	0.5	0.9	-2.0	-1.6	-2.7	-1.0	-2.6	-0.6	3.3	1.9	0.6	-0.9	-0.6	-0.5	-0.8	-0.6	-2.2	-0.6	-1.7	0.0
DI	1.5	1.0	-3.7	-2.9	-0.9	2.7	-2.1	-4.8	-1.7	1.1	-1.6	1.9	0.8	1.6	-0.6	-0.5	-0.6	-0.2	-1.5	-4.3	-1.1	1.2
DJ	4.4	3.6	-0.4	-0.7	-0.1	1.3	-1.1	-3.6	-0.4	0.2	0.8	3.0	0.3	1.1	-0.6	-0.7	-0.8	0.1	-0.6	-2.9	0.4	0.1
DK	2.9	2.6	-7.4	-3.3	1.4	1.7	-1.8	-2.6	0.7	0.5	-5.6	-0.7	0.8	1.1	-0.7	-0.6	-0.5	-0.1	-1.1	-2.0	1.2	0.7
DL	2.5	2.0	2.0	-1.6	-0.3	2.1	-2.8	-4.0	-0.5	0.4	4.9	2.6	0.2	1.7	-0.8	-0.6	-0.6	0.3	-2.0	-3.4	0.1	0.2
DM	2.2	1.1	0.7	-12.0	-3.3	-1.3	-4.4	-4.4	-1.0	-1.9	5.4	-8.0	-2.3	0.6	-1.1	-0.5	-0.5	-0.6	-3.4	-4.0	-0.5	-1.3
DN	1.5	1.3	-4.3	-0.5	0.5	-0.9	-2.2	-0.1	-1.4	-0.9	-2.2	-0.4	1.9	0.0	-0.3	0.1	-1.2	-0.4	-1.9	-0.2	-0.2	-0.5
E	0.7	0.5	1.2	-1.3	2.1	-1.4	-0.2	-1.4	-2.9	-1.9	1.3	0.1	5.1	0.6	-0.6	-0.4	-0.9	-0.3	0.4	-1.0	-2.1	-1.6
F	8.1	7.6	1.6	-1.4	1.1	3.9	0.3	1.5	1.7	2.9	1.4	-2.9	-0.5	0.9	0.3	0.5	-0.6	-0.3	0.0	1.0	2.2	3.2
G	14.5	14.6	0.7	0.2	0.7	2.4	3.9	-1.3	-0.6	0.1	-3.1	1.5	1.3	2.2	0.6	-0.5	-0.8	-1.0	3.3	-0.8	0.2	1.1
H	3.0	4.8	1.4	0.1	0.2	2.5	3.1	-0.4	2.5	2.1	-1.7	0.5	-2.3	0.4	1.4	-1.7	0.8	-2.4	1.6	1.4	1.7	4.6
I	5.2	4.9	1.9	2.4	1.2	4.4	4.3	-0.5	0.7	0.4	-2.3	2.9	0.5	3.9	3.2	0.9	0.4	-0.4	1.1	-1.3	0.2	0.8
J	2.2	2.5	-3.0	4.9	0.8	2.8	4.9	-0.3	0.0	0.2	-7.6	5.2	0.9	2.6	0.4	-1.4	-0.2	-0.3	4.6	1.1	0.2	0.5
K	3.1	12.0	4.9	0.3	0.2	2.2	10.1	1.2	2.5	4.0	-4.7	-0.9	-2.2	-1.7	1.1	-0.9	0.3	-0.9	8.9	2.1	2.1	4.9
L	6.1	5.5	-0.5	2.5	1.3	1.4	0.8	0.4	-0.6	-0.3	-1.3	2.1	1.9	1.7	-0.4	0.3	0.6	-0.4	1.2	0.1	-1.1	0.1
M	6.6	6.6	2.9	0.1	0.4	0.5	1.6	-0.1	0.6	-1.8	1.2	0.3	-0.2	2.3	-0.4	0.6	0.5	-2.5	2.0	-0.7	0.0	0.7
N	4.6	6.4	2.6	1.4	1.1	3.3	0.2	2.1	1.1	1.8	2.4	-0.7	0.0	1.4	0.1	0.4	-0.1	0.1	0.1	1.7	1.2	1.8
O	2.6	4.3	0.6	-1.2	-0.9	-1.3	1.9	1.0	0.9	2.1	-1.2	-2.2	-1.8	-3.4	0.6	0.2	-0.2	0.0	1.2	0.8	1.1	2.1
Total			1.0	0.5	0.3	1.8	0.5	-0.6	0.3	0.7	0.6	1.1	-0.1	1.0	0.3	-0.1	-0.2	-0.6	0.1	-0.5	0.6	1.3

For sector keys see appendix table A.12.

Table 6

Sweden

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	5.1	2.2	-0.1	-3.3	4.9	0.0	-3.6	-3.9	-3.9	-2.7	3.6	0.6	8.0	2.8	0.1	-1.3	4.2	0.2	-3.7	-2.6	-6.8	-2.8
C	0.4	0.2	-15.4	-2.6	-9.5	-1.0	-4.0	-6.1	-6.1	-4.7	-11.9	3.7	-8.8	3.9	-2.2	-0.2	-2.1	-0.8	-1.8	-5.8	1.3	-3.9
DA	2.0	1.4	-1.0	-0.3	1.4	0.5	-3.4	-3.9	-3.9	-1.0	2.4	3.7	0.6	1.5	0.3	0.8	-1.9	0.0	-3.7	-4.7	2.7	-1.0
DB	0.8	0.2	-11.1	-8.6	-0.8	-1.0	-9.3	-12.0	-12.0	-2.6	-2.0	3.9	1.3	1.5	0.3	0.8	1.1	0.7	-9.6	-12.7	-3.1	-3.2
DC	0.1	0.0	-11.1	-8.6	-11.0	-5.5	-9.3	-12.0	-12.0	-5.2	-2.0	3.9	-9.2	-0.4	0.3	0.8	-2.0	-1.3	-9.5	-12.7	0.0	-3.9
DD	1.3	0.9	-10.3	-9.3	3.8	5.9	-8.9	-8.8	-8.8	0.7	-1.6	-0.6	1.3	5.1	0.3	0.8	1.0	0.4	-9.2	-9.5	1.5	0.4
DE	3.2	1.9	-3.6	0.5	-5.9	1.5	-0.8	-5.3	-5.3	-1.1	-2.8	6.2	-2.9	2.7	0.3	0.8	-0.6	1.0	-1.1	-6.1	-2.4	-2.1
DF	0.1	0.1	-4.4	4.4	-3.0	5.7	-1.5	-5.1	-5.1	0.2	-3.0	10.1	4.2	5.5	0.3	0.9	-3.5	0.8	-1.8	-5.9	-3.6	-0.6
DG	1.1	0.9	-4.4	4.4	6.0	8.3	-1.5	-5.1	-5.1	2.1	-3.0	10.1	1.5	6.1	0.3	0.8	2.2	0.5	-1.8	-5.9	2.2	1.6
DH	0.7	0.5	-4.4	4.4	-1.7	5.0	-1.5	-5.1	-5.1	1.4	-3.0	10.1	-2.3	3.6	0.3	0.8	1.0	0.4	-1.8	-5.9	-0.4	1.0
DI	0.7	0.4	-13.4	-13.4	4.7	1.2	-6.9	-10.1	-10.1	-0.2	-7.0	-3.6	4.3	1.5	0.3	0.8	-1.1	0.6	-7.2	-10.9	1.6	-0.8
DJ	3.5	2.5	-3.9	-1.5	-2.8	3.2	-2.3	-7.8	-7.8	2.0	-1.6	6.8	-2.4	1.2	0.4	0.9	-2.1	0.4	-2.7	-8.5	1.8	1.6
DK	3.0	2.3	0.6	-4.7	4.7	1.4	-1.3	-7.7	-7.7	-0.6	1.9	3.2	4.2	2.0	0.3	0.8	-1.3	-0.3	-1.6	-8.5	1.8	-0.3
DL	2.6	1.8	0.6	-4.7	-12.9	25.6	-1.3	-7.7	-7.7	2.5	1.9	3.2	-17.0	22.6	0.3	0.8	-0.4	1.2	-1.6	-8.5	5.4	1.3
DM	2.6	2.2	0.6	-4.7	-3.7	10.7	-1.3	-7.7	-7.7	1.5	1.9	3.2	-2.3	9.0	0.3	0.8	-2.4	-0.1	-1.6	-8.5	1.0	1.6
DN	1.1	1.0	6.6	-1.1	-1.1	4.5	0.6	-0.8	-0.8	-1.5	6.0	-0.3	-2.5	6.1	0.3	0.8	-0.2	-1.1	0.3	-1.6	1.6	-0.5
E	0.8	0.7	6.9	-0.4	4.6	-0.3	1.0	-1.5	-1.5	-0.5	5.9	1.0	10.0	0.3	-0.2	1.6	-2.8	0.4	1.2	-3.0	-2.1	-0.9
F	6.6	5.8	-3.5	-5.0	5.1	-0.1	-0.2	-8.5	-8.5	1.1	-3.3	3.9	-0.3	-1.1	0.7	-0.1	-1.1	0.3	-0.9	-8.4	6.6	0.8
G	11.9	12.3	-2.2	-1.0	2.6	4.5	-0.7	-3.5	-3.5	0.4	-1.5	2.6	3.5	4.1	-0.2	0.3	-2.5	-0.2	-0.4	-3.8	1.7	0.5
H	2.4	2.8	0.2	-3.0	1.3	5.3	-1.8	-2.2	-2.2	1.9	2.1	-0.8	-0.7	3.4	-1.4	1.6	-1.0	-0.3	-0.4	-3.8	3.0	2.2
I	6.7	6.3	2.3	-2.4	0.4	4.2	1.4	-3.8	-3.8	1.1	0.9	1.5	4.6	3.1	0.9	-0.8	-3.0	-0.4	0.5	-3.0	-1.0	1.6
J	1.6	2.1	3.3	-0.4	-2.7	5.4	1.2	-2.2	-2.2	1.8	2.1	1.9	-2.4	3.5	0.7	1.9	-2.3	-0.4	0.5	-4.0	2.0	2.3
K	4.8	12.7	4.0	0.9	2.8	3.1	0.3	-1.6	-1.6	5.7	3.8	2.6	-1.6	-2.4	0.3	0.6	-2.1	-0.3	0.0	-2.2	6.7	6.1
L	7.5	6.0	2.2	-1.6	-8.1	-0.5	2.0	-2.1	-2.1	-2.0	0.2	0.5	0.7	1.6	-0.4	0.6	-4.3	0.0	2.4	-2.7	-4.7	-2.0
M	9.2	10.2	2.2	-1.6	2.2	1.0	2.0	-2.1	-2.1	0.0	0.2	0.5	0.3	1.0	-0.4	0.6	-2.1	0.3	2.4	-2.7	4.0	-0.2
N	15.0	16.2	2.2	-1.6	3.7	1.2	2.0	-2.1	-2.1	1.3	0.2	0.5	1.1	-0.1	-0.4	0.6	0.8	0.4	2.4	-2.7	1.8	0.9
O	5.1	6.3	3.8	0.7	3.6	1.2	0.7	1.1	1.1	0.1	3.1	-0.5	-0.4	1.1	-0.4	0.6	-1.4	0.1	1.1	0.5	5.5	-0.1
Total			0.7	-1.3	0.3	3.7	-0.3	-3.6	-3.6	0.8	1.0	2.4	-0.3	2.8	-0.2	0.3	-1.5	0.0	-0.1	-3.9	2.1	0.8

For sector keys see appendix table A.12.

Table 7

Finland

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	13.1	5.1		-2.8	-7.2	1.8		-4.9	-4.3	-3.6		2.2	-3.0	5.6		1.6	-2.6	-0.2		-6.4	-1.8	-3.4
C	0.4	0.2		-1.5	5.8	-0.2		-4.7	-3.0	0.7		3.4	9.1	-0.9		0.1	-1.3	-0.5		-4.8	-1.7	1.2
DA	2.8	1.6		2.9	5.7	4.0		-6.8	0.9	-1.9		10.4	4.8	6.0		-0.3	-0.1	-0.2		-6.6	1.0	-1.7
DB	2.8	0.5		-10.1	-9.6	-0.6		-18.6	-9.4	-1.1		10.4	-0.2	0.5		-0.9	-1.4	0.1		-17.9	-8.1	-1.3
DC	0.5	0.1		-9.2	-8.4	-1.5		-16.6	4.4	-4.9		9.0	-12.3	3.5		0.2	8.3	-0.6		-16.8	-3.6	-4.3
DD	2.4	1.2		0.0	-4.0	7.9		-11.3	-1.4	0.3		12.8	-2.7	7.6		-1.1	0.2	-0.6		-10.3	-1.6	0.9
DE	4.1	2.7		1.2	0.5	3.7		-6.2	-3.0	-0.4		7.9	3.6	4.1		-0.8	-0.7	-0.3		-5.5	-2.2	-0.1
DF	0.2	0.1		1.4	-8.1	7.8		0.6	-14.0	1.5		0.8	6.9	6.2		-0.4	0.8	0.0		1.0	-14.7	1.5
DG	0.8	0.8		0.5	-8.7	5.8		-3.3	0.3	0.2		3.9	-9.0	5.5		0.3	-0.2	0.0		-3.7	0.5	0.3
DH	0.7	0.7		-0.9	-6.1	3.7		-8.1	-8.1	4.8		7.8	2.2	-1.1		-0.6	-0.5	0.1		-7.6	-7.7	4.7
DI	0.9	0.7		-11.4	-0.4	4.1		-16.1	-2.5	3.7		5.6	2.2	0.4		-1.5	-1.9	0.6		-14.8	-0.6	3.1
DJ	2.2	2.6		-0.4	4.7	5.6		-8.9	-0.4	5.0		9.3	5.1	0.5		-1.0	-0.2	-0.2		-8.0	-0.2	5.3
DK	2.9	2.6		-12.0	1.5	1.2		-9.9	-1.9	2.2		-2.3	3.4	-0.9		-1.4	-0.8	-0.1		-8.6	-1.1	2.3
DL	1.7	2.7		9.5	11.9	24.2		-4.5	-5.4	5.5		14.6	18.2	17.7		-0.4	-0.3	0.1		-4.1	-5.1	5.5
DM	1.6	0.9		-4.8	-6.4	1.9		-11.9	-9.9	0.7		8.1	3.9	1.2		-4.5	-5.2	0.3		-7.7	-4.9	0.5
DN	1.1	0.7		-9.9	-0.2	4.0		-10.9	1.0	2.3		1.2	-1.1	1.6		-1.7	4.3	0.0		-9.4	-3.2	2.3
E	1.1	0.7		3.6	-0.5	3.6		-6.3	-3.8	-2.2		10.5	3.4	5.9		-1.0	1.7	0.0		-5.3	-5.4	-2.2
F	7.5	6.9		-8.0	2.6	4.6		-14.7	-0.1	4.3		7.8	2.7	0.3		-0.6	-0.6	0.0		-14.2	0.5	4.3
G	12.7	12.8		-12.4	3.1	4.8		-8.9	-0.2	2.2		-3.9	3.3	2.5		-0.4	-0.2	-0.6		-8.6	0.0	2.7
H	2.8	3.2		-7.7	-5.2	3.0		-8.2	-1.0	4.5		0.4	-4.2	-1.4		0.0	-0.4	0.6		-8.2	-0.7	3.9
I	7.2	7.1		-0.4	1.3	6.7		-5.3	-1.0	1.1		5.2	2.3	5.5		-0.4	0.1	-0.1		-5.0	-1.1	1.3
J	2.3	1.6		-8.4	-5.0	-0.6		-5.0	1.3	-3.5		-3.6	-6.2	3.0		2.4	3.1	-0.8		-7.2	-1.8	-2.8
K	4.0	10.6		-0.8	0.3	3.9		-4.7	2.3	5.8		4.0	-1.9	-1.8		0.3	0.0	-0.8		-4.9	2.3	6.7
L	6.1	7.2		-2.4	0.6	1.1		-0.9	0.6	1.2		-1.5	0.1	0.0		0.4	-0.4	-0.2		-1.3	1.0	1.4
M	4.8	6.7		-1.4	0.2	1.3		-1.4	0.7	0.3		0.1	-0.5	1.0		0.0	-0.9	-1.7		-1.5	1.6	2.1
N	9.9	14.8		-3.3	-0.4	1.0		-2.8	1.7	2.4		-0.5	-2.0	-1.4		0.2	-0.3	0.2		-3.0	2.0	2.3
O	2.9	4.9		-3.8	-0.4	3.3		-2.9	2.5	3.4		-1.0	-2.9	0.0		-0.6	0.3	0.1		-2.3	2.3	3.2
Total				-3.5	1.3	4.6		-6.5	-0.4	1.7		3.2	1.6	2.8		-0.3	-0.5	-0.4		-6.2	0.1	2.1

Note: There was no downturn in the early 1980s.

For sector keys see appendix table A.12.

France

The downturn in France in the early 1980s was less than in the EU15 overall, with value-added growing slightly instead of declining, while in the early 1990s, it was much the same and the early part of the present decade, slightly greater (Table 4). Correspondingly, the effect on different sectors of activity was generally less marked than in Germany and the UK in the first two downturns. Although, therefore, by and large the same manufacturing industries were hit hardest as in other countries – rubber and plastics, non-metallic mineral products, metal manufacture in the 1980s, metal manufacture, mechanical engineering and motor vehicles in the 1990s, and construction in both periods – the effect was in most cases on a smaller scale. Moreover, among services, no sector experienced a decline in value-added in the early 1980s and only hotels and restaurants and financial services showed a decline in the early 1990s.

In the most recent downturn before the present one, the effect on manufacturing was relatively small, only textiles and clothing, paper and printing, mechanical engineering, and furniture and other manufactures showing much of a fall in value-added, though construction and hotels and restaurants also experienced a decline as 10 years earlier. Moreover, value-added in public administration d and education declined as well, the public sector, therefore, reinforcing the reduction in output.

As in other countries, the downturn in value-added was accompanied by a decline in labour input in all manufacturing sectors in all three periods, the only exception being food drink in the most recent downturn, as productivity either increased (as in the most recent downturn) or fell less than the decline in value-added. Labour input also declined in construction in all three periods, though only marginally in the latest one, while there was equally a general decline throughout most of the service sector in the early 1980s, most notably in the public sectors. In the early 1990s, the decline in labour input in services was confined to the distributive trades, hotels and restaurants and financial services, while 10 years later, labour input increased in all three of these sectors and fell in transport, business services (unlike in most other countries) and most markedly in public administration.

The effect on the number employed of the decline in labour input, however, was offset by a reduction in average hours worked in all three downturns, though much more in the 1980s and 2001-2003 than in the 1990s, Indeed, in the early 1980s, average hours worked overall were reduced by almost 2% in the 1981 downturn and by 1.5% between 2001 and 2003, in the first period cutting the fall in the number employed to under 0.5% and in the second period, causing employment to increase by almost 0.5% a year despite the decline of over 1% a year in labour input.

In both periods, the reduction in average hours worked occurred in most sectors, and though it was not sufficient to prevent a fall in the number employed in manufacturing industries, it did prevent job losses in financial services, the three pubic sectors and personal and community services in the 1980s downturn and in transport and personal and community services in the 2001-2003 period, while moderating the fall in employment in business services and public administration.

Italy

In Italy, the downturn in the early 1980s was more moderate than in most other EU countries but more prolonged, lasting from 1981 to 1984, while the downturn in the early 1990s was similar in scale to that in the EU15 as a whole and that in the early part of the present decade, both deeper and longer (Table 5). The sectors hit hardest were in general those in manufacturing as in other countries, though the effect on value-added was more evenly spread than in Germany or the UK, with the exception of motor vehicles, in which value-added declined by 12% in the recession of the 1990s and by 3% between 2001 and 2005.

The service sectors largely escaped any reduction in output in all three downturns, as did construction except in the early 1990s, the main exception being personal and community services in both the early 1990s and the first half of the present decade. At the same time, value-added in agriculture increased in all the downturns, in contrast to the 'normal' period in the second half of the 199os, when it declined.

Productivity growth in Italy has consistently been less than in other EU countries since 1980. In the downturn in the early 1980s, it averaged only just over 0.5% a year, in the early 1990s, just over 1%, much the same as in the subsequent period of normal growth. These low rates of productivity moderated the reduction in labour input in the latter period and led to a rise in the former period. In the downturn between 2001 and 2005, productivity actually fell marginally and despite the depressed growth in value-added, labour input increased over this period.

The reduction in productivity was most marked in motor vehicles in the early 1990s, amounting to some 8% a year, though this was not enough to prevent a decline in labour input. Indeed, labour input declined in all manufacturing industries, except for food and drink, both over this period and in the other two downturns, while this was also a fall in labour input in most market service sectors in the early 1990s. In the most recent downturn, however, as in the first part of the 1980s, labour input increased in all service sectors, except in the distributive trades in the most recent period,

Unlike in most other countries average hours worked either increased or fell only slightly in all three periods of downturn – in contrast to the more normal period of growth in the

second half of the 1990s when they declined by just over 0.5% a year. Accordingly, changes in average hours they contributed very little to safeguarding jobs, but given the increase in labour input consequent on the slow growth or decline in value-added, they did not need to do so to prevent the number employed from falling in the early 1980s and in the most recent period, when remarkably given the very low growth in value-added, the number employed increased by just over 0.5% a year. In the early 1990s, however, the number employed fell by 0.5% a year, with the falls being concentrated in manufacturing, as in other countries, though there was also a fall in jobs in the distributive trades, transport and education, though not in construction.

In the most recent period of slowdown, most manufacturing industries experienced a reduction in employment, though not the mechanical and electrical engineering industries or metal manufacture, in all of three of which the number employed increased, if only marginally in the last, despite the lack of output growth. Elsewhere, the number employed increased in all sectors apart from agriculture and public administration.

In Italy, therefore, jobs seem to have been maintained during downturns by accepting low or no productivity growth, whereas in France, they have been maintained by reductions in average working time, by effectively sharing the available work among more people.

Sweden

In Sweden, the downturn in the early 1990s, in this case between 1990 and 1993, was more pronounced than in most other EU countries, value-added falling by almost 1.5% a year over the three-year period (Table 6). The downturn in 2001 was also deeper than in the EU as a whole, but it is the earlier period which provides the most interesting insight into the prospective effects of the current recession, since not only did output fall for three consecutive years unlike in most other part of the EU, but as now it coincided with a financial crisis.

During this period, significant falls in value-added occurred in most manufacturing industries, with a decline of around 5% a year in each of the engineering industries (including motor vehicles) and one of over 13% a year in the glass and non-metallic mineral industry. The decline in value-added in construction was similar to that in engineering, while there was a fall of 3% a year in hotels and restaurants and one of only slightly less in transport. At the same time, value-added also declined in most other service sectors, including the non-market ones, the only exceptions being business services and personal and community services.

This widespread reduction in value-added was accompanied by an equally widespread growth of productivity which averaged around 2.5% a year over the period, only slightly less than the rate of growth during the more normal period in the second half of the 1990s.

Only in a few sectors did productivity not increase (in glass and non-metallic mineral products, hotels and restaurants and personal and community services, in particular) and, accordingly, there was a more or less general reduction in labour input, even in most service sectors.

Moreover, average hours worked generally increased rather than fell over this period, so reinforcing the effect of the reduction in labour input on the number employed, which declined by 4% a year overall and by 8.5% a year in the engineering industries and construction, while in most other parts of manufacturing, the decline was around 6% a year or more. The number employed in most service sectors also declined, the only exception being personal and community services, where the number rose a little.

In Sweden, therefore, the recession hit all, or nearly all, sectors, though it was again especially severe in the engineering industries and construction.

Finland

The recession also hit all sectors in Finland, where the overall scale of the decline in GDP was much larger than in Sweden, this amounting to some 3.5% a year in the three years 1990-1993 (Table 7). Moreover, in this case, the reduction in value-added was more evenly spread across sectors than in other countries where the recession was much more modest. Although, therefore, there were substantial declines in value-added in many manufacturing industries, exceeding 10% a year in textiles and clothing, glass and non-metallic mineral products and, above all, in machinery and equipment, value-added fell by even more in the distributive trades (by over 12% a year). It also fell by much the same in financial services and hotels and restaurants as in construction (by around 8% a year) and there was no service sector which escaped a fall.

At the same time, labour productivity increased over the period by over 3% as year overall, by slightly more than in the subsequent years of recovery. The growth of productivity was particularly high in manufacturing industries, though in machinery and equipment, productivity declined, so offsetting in (small) part the large fall in value-added . This was also the case in the distributive trades and financial services, but in construction and glass and non-metallic mineral products, productivity in contrast increased by more than average.

While average hours worked declined in most manufacturing industries, most especially in motor vehicles, so helping to moderate the reduction in the number employed, this was less the case in services, where in most sectors, there was either no change or an increase, particularly in financial services.

Accordingly, the number employed fell significantly in all sectors, in services almost as much as in manufacturing, though the biggest reductions occurred in textiles and clothing

(by 18% a year, so almost halving the number of jobs), glass and other non-metallic mineral products (by around 15 a year) and construction (by 14% a year). Nevertheless, the fall in employment in the distributive trades and hotels and restaurants was well above average (by over 8% a year), as it was in financial services (at over 7% a year). As in Sweden, the non-market service sectors were not spared job losses, though the overall scale of these was smaller, if still significant.

The other EU15 countries

The other countries where the downturns were less pronounced, tend, on the whole, to display a similar pattern of change in value-added and employment across sectors as in the EU15 as a whole or in Germany and the UK (see Annex Tables A.1-A,7 – note that there are insufficient data available for Greece and Ireland to be included). In most cases, the reduction in both was concentrated either almost wholly or disproportionately in manufacturing and construction, while slower growth of productivity or even a decline often coupled with a reduction in average hours worked tended to moderate the effect of a fall in value-added on the number employed.

3 Changes in the structure of occupations during previous economic downturns

As indicated above, no comparable set of data on occupations exists at the EU level for the years before the mid-1990s, so it is not possible to examine developments in the structure of occupations within sectors during periods of downturn before then. The only data available come from EU Labour Force Survey from the mid-1990s on. What emerges from an examination of these data is that there is has been an fairly uniform shift in most sectors of activity from lower level of occupations to higher levels ones, or, in other words, from those not requiring high levels of education, though perhaps extended vocational training, to those for which educational attainment is, in most cases, essential. The question here, however, concerns the tendency, if any, for the structure of occupations to change over the economic cycle – whether, for example, the relative number of people employed in higher level occupations tends to increase or decline as economic activity falls.

This question is particularly relevant in respect of manufacturing, which, as indicated above, is more susceptible to being affected by economic downturns than services. To examine this question without investigating in detail changes in the occupational structure in each of the industries distinguished above, manufacturing can be divided into three groups of industries according both to their technical characteristics and, related to this, to the structure of occupations within them. The three groups in question are:

- basic industries, which are those such as Food and drink, Textiles and clothing, Metal manufacture, Wood and Furniture, in which skilled and semi-skilled manual workers

tend to account for 60-70% of employment and managers and professionals for around 20%;

- processing industries, which are Chemicals and pharmaceuticals and Pulp and paper, together with Electrical and electronic equipment in which the occupational structure is similar, with skilled and semi-skilled workers representing 30-40% of the work force and managers and professionals, 40-50%;
- engineering industries, which in this case, are Machinery and equipment and Motor vehicles and other transport equipment, in which managers and professional represent around 35% of employment and skilled and semi-skilled manual workers around 50%.

In the case of the basic industry group, there is some sign in the EU15 as a whole of the share of managers and professionals (engineers, accountants, marketing managers and so on) increasing as total employment declined from 2001 on, matched by a reduction in the share of both skilled (such as toolmakers or mechanics) and semi-skilled workers (plant and machine operators and assemblers) (Figure 1). Much the same is the case in the processing industries, where the share of skilled and semi-skilled manual workers in employment declined closely in line with each other as the share of managers and professionals rose (Figure 2).

In the engineering industries, the decline in employment after 2001 was less than in other parts of manufacturing, but a similar increase in the share of managers and professionals is evident, In this case, the counterpart decline is largely concentrated among skilled manual workers (Figure 3). In all three cases, however, it is difficult to disentangle the effect of the downturn from long-term trends.

It is worth noting, however, that there is much less sign of any effect of a decline in employment (or indeed of the long-term trend for higher level occupations to increase) on the share of unskilled manual workers (labourers, cleaners and so on), which in all three groups changed relatively little over the period.

It seems, therefore, that insofar as a reduction in employment – and, by inference, a downturn in economic activity – affects the occupational structure of the work force in manufacturing, it is the more skilled manual workers who tend to lose out rather than the least skilled.

In the projections which follow, the assumption is made that the occupational structure of employment does not change as a result of the recession, since it is difficult to attach any precise figure to the effect of a downturn in this regard. Nevertheless, it is assumed that past trends in the structure of occupations within sectors continue in future years. The projections, therefore, incorporate the tendency for employment to shift to higher level jobs

and away from skilled and semi-skilled manual workers, though it is assumed that these shifts are not accelerated by the recession.

Figure 1

Changes in the occupational structure of employment in basic industries, EU15

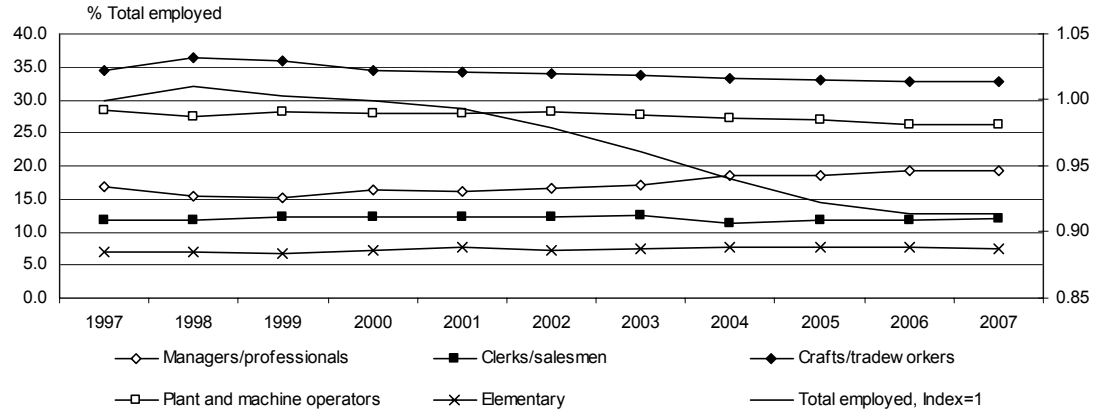


Figure 2

Changes in the occupational structure of employment in processing industries, EU15

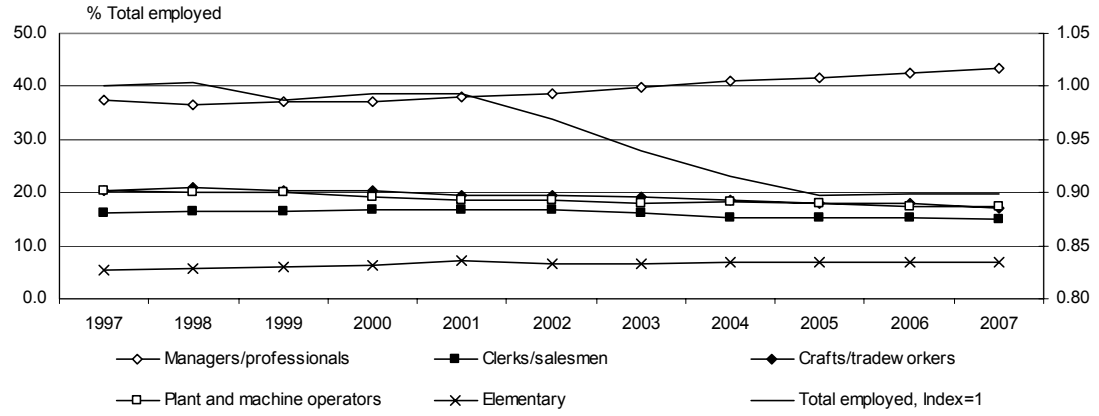
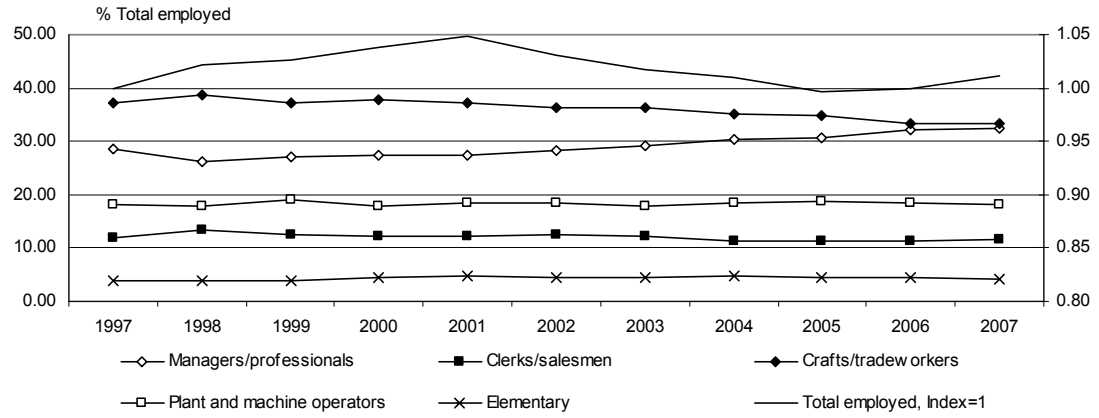


Figure 3

Changes in the occupational structure of employment in engineering industries, EU15



4 The implications of past experience for the present recession

Experience during the downturns which have occurred in the EU15 countries over the relatively recent past suggest that the present recession can be expected to hit some sectors much harder than others. In particular, on past experience, value-added in investment goods industries and construction can be expected to decline more than in the rest of the economy. How far, however, this decline is translated into a reduction in the number employed depends on what happens to labour productivity – whether the upward trend reflecting advances in technology and know-how is maintained or is moderated as output falls – and average working time. Both, in turn, depend on the reaction of employers to a fall in sales and the extent to which they attempt, and have the financial capacity, to keep their work force intact and to avoid shedding jobs – or, in the cases of those countries with short-time working schemes, such as Germany in particular, that governments can continue to subsidize companies who maintain people in employment on reduced hours of work rather than making them redundant.

Past experience also suggests that the behaviour of labour productivity and average hours worked and, accordingly, the effect of the downturn on employment, is likely to be influenced both the scale of the downturn and its duration, or perhaps more relevantly its expected duration. In both Finland and Sweden, therefore, where the scale of the fall in output in the early 1990s was greater than in other EU15 Member States and where the downturn was more persistent, labour productivity increased over the period at much the same rate as in more normal periods while the average working time of those in employment either increased or fell only slightly.

In a number of other countries, on the other hand, such as, in particular, in Italy in the early part of the present decade and in Belgium, the Netherlands, Austria and Portugal in the early 1990s, growth of labour productivity declined markedly during the recession years, while in France in the early part of the present decade, as well as in the early 1980s and in the UK, in the early 1990s, average hours worked were reduced. In each case, the effect was either to moderate the scale of job losses or to maintain the growth in employment, even if at a slower rate than before.

A key question in relation to the present recession is how far the effect of the decline in GDP which is underway on the overall number employed is likely to resemble the experience of past downturns in the various countries – to what extent, in other words, a slowdown or reversal of productivity growth and/or a reduction in average working time is likely to soften the effect on jobs. A further question is whether the effect of the recession on different sectors of activity will tend to follow a similar pattern as during past downturns or whether, on the other hand, it will differ because, in particular, of its different origins – i.e. in the financial sector rather than in other parts of the economy (such as in the energy

market as in the case of the downturn of the early 1980s or the IT sector as in the early 2000s).

Neither question can be answered with any certainty at the present time given the relatively brief time which has elapsed since the onset of the recession combined with the delays in relevant statistics available. There are data, however, on both value-added and employment for the early stages of the recession, in most cases, up to mid-2009, and, as indicated below, these suggest that, initially at least, the sectors most affected are much the same as those hit hardest during previous downturns, despite the difference in origin. They also indicate a significant lag in nearly all countries between the reduction in value-added which has already been substantial in many sectors and the effect of this on employment. Accordingly, they suggest that the effect on jobs has been moderated considerably by an implicit decline in labour productivity as employers for the most part have delayed adjusting their work force to the lower output levels.

How long such an adjustment can be postponed depends on the finances available to employers to maintain jobs, which depends in large part in turn on how long the downturn lasts or is expected to last. Although the most recent data available at the time of writing indicate that GDP rose marginally in Germany, France and a few other countries in the second quarter of 2009 rather than continuing to decline, these data are provisional and it would be heroic to assume that they mark the end of the downturn in economic activity, still less the beginnings of a sharp recovery which might eliminate the need for any significant reduction in employment.

The assumptions made here in order to assess the effect of the recession on the structure of employment, as well as on those in the work force who stand to lose their jobs, are:

- first, that the decline in GDP in each of the EU Member States (including those who have entered the Union since 2004) over the two-year period 2008-2010, which is the focus of attention, is in line with the European Commission sort-term economic forecast published in Spring 2009 (see below for summary details);
- secondly, that the overall effect on employment in the two years 2008-2010 in each of the countries is also in line with this forecast, which in practice implies that much of the fall in output – though in many countries not all – is reflected by the end of the period in a reduction in employment;
- thirdly, that average hours of work in each of the EU15 countries are reduced in percentage terms in line with the largest decline experienced during the earlier downturns examined above, which, in combination with the forecast of employment, gives rise to an implicit projection of the change in labour input and, therefore, of the change in labour productivity;

- fourthly, that the effects of the recession on value-added, labour productivity and average hours worked in the different sectors of activity are similar in relative terms to those observed in earlier downturns; this, in practice, means disproportionate reductions in each case in the investment goods industries, including construction, so that while output falls by more than in other sectors, the effect on the number employed is moderated by larger falls than elsewhere in productivity and average hours worked.

These four sets of assumptions enable projections to be made of the change in value-added, labour productivity and the number employed over the period of recession in each of the sectors of activity distinguished in the earlier part of the analysis.

These assumptions are, of course, open to question. In particular, the latest data available, which relate, however, only to the initial stages of the recession, indicate, as noted above, that up to the second quarter of 2009, employment had fallen by much less than it is projected to do by the end of 2010. Nevertheless, given the scale of the reduction in output, it seems inevitable that large scale job losses will occur over the coming months unless there is a dramatic upturn in economic activity. Indeed, the experience of both Finland and Sweden in the early 1990s, when the decline in GDP was much greater than elsewhere and more comparable to the present period and when productivity increased significantly, suggest that the official forecast may be overly optimistic about the extent to which lower productivity is likely to moderate the scale of job losses.

The experience in Finland, where the fall in output was especially large, also suggests that the fall in value-added and employment may be more widespread, and equal, across sectors than the evidence of earlier downturns in other countries indicates. On the other hand, the present recession has been accompanied by a more substantial attempt by governments to maintain aggregate demand than was the case in the early 1990s when demand management policies were applied in a less widespread way. Both consumer and public expenditure, therefore, may suffer less of a decline than in Finland during the period in question, which would imply that more of the reduction would be concentrated on investment and, accordingly, on investment goods industries as in other countries. In other words, the difference in the sectoral pattern of the decline in value-added between Finland and other countries in the early 1990s was due to the pattern of decline in demand as well as the scale of decline in GDP.

Treatment of the new Member States

The analysis of developments during earlier economic downturns was confined to the EU15 countries because for the Member States which have entered the Union since 2004, there were no comparable periods that could be taken as guides to potential developments during the present recession. For these countries, in order not to exclude them from the study completely, the approach adopted is to take, in each case, the EU15 country whose

sectoral structure of economic activity most resembles that of the Member State in question and to apply the differential changes in value-added, productivity and average hours worked across sectors for the country concerned to the official forecasts of GDP, etc. for the Member State. Relevant data to generate estimates of job quality, however, are not available for Poland, Bulgaria and Romania, while there are also data problems for Cyprus, Malta and Latvia. These, in consequence, are excluded from the analysis here.

For the Czech Republic, Hungary and Slovakia, therefore, all of which have an economic base built very much on manufacturing and in which the engineering industries are especially important, the differential changes in sectors shown by Germany are applied to the forecasts of GDP and implied productivity. For Slovenia, which also has a relatively large manufacturing sector, but which is more similar to France in terms of its structure of activity, the changes in the latter are applied, while for Estonia and Lithuania, in which the structure of the economy is more similar to Portugal than to any other EU15 country, the changes in this are applied.

5 The projected developments in GDP and employment 2008-2010

Across the EU as a whole, GDP is projected to decline by 4% in 2009 and to remain broadly unchanged in 2010 having grown by only just under 1% in 2008, less than half the long-term trend rate of growth, according to the latest European Commission short-term forecast (published in Spring 2009) (Table 8). At the same time, employment is forecast to fall by just over 2.5% in 2009 and by just under 1,5% in 2010, implying an overall decline in employment over the two years of much the same as the fall in GDP and, accordingly, no growth of GDP per person employed. If average hours worked were to be reduced at a similar rate as in earlier downturns, this, in turn, implies an increase in labour productivity in terms of value-added per hour of labour input of around 0.5-1% a year over these two years, around half the apparent underlying trend rate of growth.

There is, however, some variation in the forecasts for individual Member States. The forecast rate of GDP decline over the two years, therefore, is particularly large in Ireland (just over 11%) and in the Baltic States (11% in Estonia and as much as 16% in Lithuania – as well as Latvia). On the other hand, in Greece (and Poland), the forecast decline is less than 1% over the period. Between these extremes, however, the forecast reduction in GDP is between 3% and 5% in nearly all Member States, though slightly more in Germany (around 5.5%).

At the same time, the forecast change in employment over the two years implies some marked variations in the change in labour productivity, ranging in the EU15 from an increase of 5-6% in Spain and around 3% in Ireland to a decline of almost 1% in Portugal,

with the forecast in most countries being between broadly no change (as in Germany and Italy) and a rise of 2% (as in Denmark and Sweden).

In the new Member States, growth of labour productivity is implicitly forecast to continue to increase in Slovenia and the Czech Republic, even if at a lower rate than in the recent past, most especially in the latter, while there is projected to be a marked reduction in productivity in Lithuania and to a lesser extent in Hungary, Slovakia and Estonia. In the former three countries, in particular, therefore, the number employed is forecast to decline over the two-year period at a significantly lower rate than the fall in GDP.

Table 8

Forecasts of GDP and employment and implied productivity, 2008-2010

% change

	GDP	Employment	Hours worked*	Implied productivity
Austria	-4.1	-3.8	-0.3	0.0
Belgium	-3.7	-2.7	-1.1	0.1
Czech Republic	-2.4	-3.0	0.0	0.6
Germany	-5.1	-3.7	-1.5	0.0
Denmark	-3.0	-4.2	-0.8	2.0
Estonia	-11.0	-10.4	0.0	-0.7
Spain	-4.2	-7.9	-1.4	5.5
Finland	-4.5	-3.7	-0.9	0.1
France	-3.2	-3.4	-0.8	1.0
Greece	-0.8	-1.2	-1.0	1.5
Hungary	-6.6	-4.9	0.0	-1.7
Ireland	-11.4	-12.6	-1.6	3.1
Italy	-4.3	-3.9	-0.4	0.0
Lithuania	-15.2	-9.9	0.0	-5.8
Latvia	-15.9	-11.9	0.0	-4.5
Netherlands	-3.9	-3.8	-1.6	1.5
Portugal	-4.5	-2.0	-1.7	-0.8
Sweden	-3.2	-4.6	-0.5	2.0
Slovenia	-2.7	-5.3	0.0	2.7
Slovak Republic	-1.9	-1.3	0.0	-0.6
United Kingdom	-3.7	-3.3	-1.6	1.2
EU*	-4.1	-4.0	-1.1	1.0

* Change in average hours worked based on experience during previous downturns.

The figures for implied productivity are derived from the figures in the first three columns.

Source: European Commission, Spring Economic Forecast, March 2009.

Given the high degree of uncertainty surrounding the present recession and both its scale and duration, these forecasts of the change in GDP and employment could well turn out to be substantially different in reality. The concern here, however, is not so much with the magnitude of the decline in output and the numbers employed over the recession but with the structure of this in terms of both sectors of activity and jobs. While the scale of the overall decline in output and employment will obviously affect the size of the reduction in

value-added and the number of jobs in individual sectors, whether it is bigger or smaller than forecast ought not to change too much the relative pattern of the effect on sectors.

Table 9

Assumptions for value-added, productivity and hours worked for projections

Percentage point difference per year from total change

	Germany			France			Italy			UK			Spain		
	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked
AB	0.5	1.5	0.0	-2.0	1.0	0.0	3.0	4.0	0.0	4.0	4.0	-1.5	0.0	-1.0	0.0
C	-1.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	-4.0	-2.0	0.0
DA	-2.4	0.0	0.0	-1.0	1.0	0.0	3.0	2.0	0.0	1.0	1.0	0.0	1.0	1.5	0.0
DB	-4.7	2.5	-1.0	-3.0	1.0	0.0	-2.0	2.0	-1.0	-8.0	2.0	-1.0	-5.0	-1.0	0.0
DC	-4.2	2.0	-1.0	-10.0	-2.0	0.0	-2.0	0.0	-1.0	-7.0	2.0	-1.0	-4.0	-0.5	0.0
DD	-4.7	2.0	-1.0	0.0	3.0	0.0	-1.0	1.0	-1.0	-6.0	-3.0	-1.0	-4.0	-0.5	0.0
DE	-1.8	0.0	0.0	-2.0	-0.5	0.0	0.5	2.0	0.0	-1.5	-2.0	0.0	0.0	0.0	0.0
DF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DG	-0.8	2.5	-0.5	-2.5	0.0	0.0	-1.0	2.0	-0.5	-2.0	4.0	-1.0	0.0	1.0	0.0
DH	-2.1	0.0	-0.5	0.0	2.0	0.0	0.5	1.0	-0.5	-4.0	3.0	-1.0	0.0	1.0	-2.0
DI	-3.5	1.0	-1.0	-2.0	2.0	0.0	-2.0	1.0	-1.0	-6.0	1.0	-1.0	0.0	1.0	-1.0
DJ	-4.5	0.0	-1.0	-6.0	1.0	0.0	-1.0	1.5	-1.0	-6.0	6.0	-1.5	-5.0	-0.5	0.0
DK	-9.3	-1.0	-1.0	-4.0	1.0	0.0	-4.0	-1.0	-1.0	-8.0	2.0	-1.5	-3.0	0.0	0.0
DL	-4.5	3.5	-1.0	0.0	3.0	0.0	-2.0	1.5	-1.0	-4.0	5.0	-1.5	-4.0	1.0	0.0
DM	-11.3	-4.0	-1.5	-6.0	-2.0	-1.0	-10.0	-5.0	-1.5	-6.0	4.0	-1.5	-10.0	-2.0	-2.0
DN	-4.4	-2.0	-1.0	-3.0	0.0	0.0	-1.0	-2.0	-1.0	-6.0	-1.0	-1.0	-2.0	2.0	0.0
E	0.0	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	4.0	6.0	0.0	1.0	2.0	0.0
F	-4.0	0.1	-1.0	-2.5	-0.5	0.0	-2.0	-1.0	0.0	-6.0	2.0	-1.0	-5.0	0.0	0.0
G	-1.0	-1.0	0.0	-0.5	1.0	0.0	0.0	1.0	0.0	-0.5	-1.0	0.0	1.0	0.0	0.5
H	-2.0	-3.0	0.0	-2.5	-2.0	-1.0	-0.5	-1.0	0.5	-3.0	-3.0	0.5	1.0	0.0	0.5
I	1.7	2.7	0.5	1.5	2.0	0.0	2.0	2.0	0.5	0.0	0.0	0.5	2.0	1.5	0.0
J	-4.4	1.5	0.5	-2.5	2.0	0.0	-2.0	4.0	0.0	-2.0	4.0	0.5	-5.0	3.0	0.0
K	3.8	0.0	0.5	1.0	-0.5	0.0	0.0	-2.0	0.5	2.0	-1.0	0.5	3.0	-1.0	-1.0
L	2.5	-0.4	0.5	2.0	0.0	0.5	2.0	0.0	0.5	2.0	-2.0	0.5	2.0	0.0	0.0
M	2.9	-0.4	0.5	1.0	-2.0	0.5	1.0	-1.0	0.5	2.5	-1.0	0.5	2.5	0.0	0.5
N	3.3	0.0	0.5	2.0	-1.5	0.0	1.5	-1.0	0.0	5.0	1.0	0.0	2.5	0.0	0.5
O	2.6	0.6	0.0	2.0	-0.5	0.0	0.0	-2.5	0.0	1.5	-2.0	0.0	2.0	-0.5	0.0

For sector keys see appendix table A.12.

6 Projected changes in the sectoral structure of activity

The analysis of the differential sectoral changes in value-added, labour productivity and average hours worked during earlier economic downturns is used to generate projections of changes in value-added and employment in the different sectors in the present recession. Specifically, the typical changes in these three variables in each of the sectors observed in the three periods examined are expressed in relation to the overall changes in the various countries order to obtain estimates of the differential changes by sector over the period 2008-2010. In addition, in many cases, larger reductions in value-added in

financial services than have typically occurred in the past are assumed in view of the origins of the present recession. These differential changes in respect of value-added, labour productivity and average hours worked are set out in Table for the larger Member States (the changes for the other Member States are set out in Annex Table A.8).

They show in each case a larger decline in value-added than the overall reduction in the investment goods industries together with construction ass well as in the more basic industries which produce inputs for other sectors, though the scale of this varies across countries, in part reflecting their relative importance in the economy, which in turn reflects their involvement in exporting. They also show that the effect on jobs is moderated in some cases, though not in the more basic industries, by a relative decline in labour productivity and more generally by a relative reduction in average hours worked, with again the scale varying across countries.

7 The evidence from the early stages of the present recession

The data available at the time of writing on developments during the initial stages of the present recession, which for most countries relate to the period up to the second quarter of 2009, are broadly in line with the relative changes in the different sectors indicated above. This is particularly the case as regards production, or value-added, which show especially large reductions in the engineering industries and other producer goods industries, such as basic metals.

In the EU15 as a whole, therefore, production in the Basic metals industry (iron and steel) fell by 35% between the second quarter 2008 and the second quarter 2009, in Motor vehicles by 33% and in Machinery and equipment by almost 30%, while in Electrical equipment, it declined by 26% (Table 10).

In most of the service sectors, on the other hand, the reduction – in this case in turnover – was less than 10%, the main exception being Retailing and wholesaling, where the decline was just over 11%.

These falls in production, however, were not reflected in a decline in employment on anywhere the same scale in most cases. Only in Wood and wood products and Textiles was the decline in employment over 10% and while it was relatively large in motor vehicles (just over 7%), Electrical engineering (7%) and basic metals (just over 6%), it was still considerably smaller than the fall in production. By implication, employers in these industries have so far absorbed much of the decline in output by effectively accepting a large reduction in productivity, which in practice has been accompanied by the extensive use of short-time working in a n umber of countries. How long both are likely to be sustainable is an open question. By contrast, in construction, the decline in employment

(just over 8%) was on much the same scale as the reduction in production, to a large extent reflecting the concentration of this reduction in Spain, where the fall in output has been quickly followed by job losses.

Table 10

Change in production and employment in EU15, 2007 to 2008 and 2008 to 2009

% change between 2nd quarters in the years

	Production		Employment	
	2007-08	2008-09	2007-08	2008-09
Manufacturing	0.0	-17.6	0.5	-4.7
Food products	-0.6	-0.6	0.9	-0.6
Drink products	-4.1	-3.7	0.4	-7.7
Tobacco products	-13.4	2.2	-11.9	-3.0
Textiles	-6.5	-21.7	-4.3	-11.0
Cothing	-2.5	-9.1	-2.8	-9.6
Leather, footwear	-7.3	-16.2	-1.9	-9.6
Wood, wood products	-6.7	-19.0	1.6	-10.4
Paper, paper products	-1.5	-12.9	-2.3	-4.5
Printing	-1.7	-8.6	-2.0	-6.1
Chemicals	-0.7	-15.3	-0.7	-4.7
Pharmaceuticals	2.9	4.3	-0.1	-4.5
Rubber, plastic products	-2.9	-18.9	0.1	-6.0
Non-metallic mineral prods	-5.5	-20.8	-1.4	-9.2
Basic metals	3.3	-34.8	-0.1	-6.4
Metal products	0.9	-25.5	2.7	-8.2
Computer, electronic prods	3.8	-20.0	-0.8	-6.2
Electrical equipment	3.9	-26.0	2.4	-6.9
Machinery+equipment	5.1	-29.4	3.3	-3.3
Motor vehicles	-0.4	-32.6	0.4	-7.4
Other transport equip	4.5	-10.5	2.1	-3.0
Furniture	-2.1	-20.8	-0.6	-9.0
Other manufacturing	-0.9	-6.3	-0.1	-3.4
Electricity, gas	1.3	-8.7	-0.3	0.7
Construction	-2.9	-8.9	-0.6	-8.4
Retailing and wholesaling	7.9	-11.3	1.4	-2.3
Land transport	11.8	-9.9	1.5	-3.0
Water transport	7.2	-15.5	3.7	0.1
Air transport	8.2	-7.1	-0.3	-6.4
Postal services	2.4	-5.6	-0.9	-3.0
Hotels and restaurants	2.2	-5.4	1.4	-2.4
Publishing activities	1.9	-6.6	0.9	-3.5
Telecommunications	0.2	0.5	-1.7	-3.4
Computing	7.4	-7.3	5.3	0.5

Note: Changes in production for service sectors relate to turnover

Source: Eurostat, Short-term business statistics

A similar pattern of change in output and employment up to the first part of 2009 is evident in most countries, even if the overall scale of decline differs markedly. In Germany, therefore, there was a similarly large disproportionate fall in production in the engineering

industries, of 27-29% over the year up to the second quarter of 2009 and a fall in Basic metals of 36% (Table 11).

Table 11

Change in production and employment in Germany, 2007-2008 and 2008-2009

% change between 2nd quarters in the years

	Production		Employment	
	2007-08	2008-09	2007-08	2008-09
Manufacturing	3.3	-21.5	2.7	-2.4
Food products	-0.8	-0.2	0.9	1.9
Drink products	-5.8	-4.4	-1.2	-3.8
Tobacco products	-30.5	1.2	-5.5	3.0
Textiles	-2.5	-23.0	-2.5	-8.1
Cothing	-16.8	-8.1	-5.2	-9.5
Leather, footwear	-8.5	2.8	4.9	-4.1
Wood, wood products	-1.6	-14.9	0.3	-7.1
Paper, paper products	0.2	-9.7	0.7	-1.9
Printing	0.6	-10.8	0.6	-2.7
Chemicals	-1.0	-19.9	-0.2	-2.2
Pharmaceuticals	1.3	-0.9	0.0	-2.4
Rubber, plastic products	0.8	-16.9	2.8	-3.6
Non-metallic mineral prods	-3.2	-15.3	-0.2	-4.2
Basic metals	4.0	-36.1	3.4	-2.7
Metal products	6.0	-25.7	5.4	-2.1
Computer, electronic prods	11.5	-26.4	1.3	-9.3
Electrical equipment	5.9	-27.5	3.4	-7.2
Machinery+equipment	7.9	-28.7	5.6	-0.3
Motor vehicles	0.4	-27.0	1.8	-4.8
Other transport equip	9.8	-23.3	4.9	-0.3
Furniture	0.4	-14.3	1.1	3.1
Other manufacturing	1.1	-9.8	3.7	6.0
Electricity, gas	1.6	-12.0	-0.1	-1.7
Construction	-1.2	3.3	-0.9	-2.5
Retailing and wholesaling	5.7	-9.8	0.0	-1.1
Land transport	5.9	-10.5	0.7	-0.4
Water transport	5.4	-19.7	2.5	0.5
Air transport	-9.8	7.2	5.6	-3.7
Postal services	-1.1	-3.6	-0.7	-1.4
Hotels and restaurants	0.5	-4.1	-0.8	0.7
Publishing activities	6.5	-7.2	1.9	-1.3
Telecommunications	-0.1	3.6	-2.2	-1.2
Computing	4.9	-20.6	6.1	2.3

Note: Changes in production for service sectors relate to turnover

Source: Eurostat, Short-term business statistics

As in the EU15 as a whole, however, the reduction in employment was very modest in comparison. Although it amounted to over 9% in Computer and electronics products and over 7% in Electrical engineering, the decline was only 5% in Motor vehicles and there was hardly any fall at all in Machinery equipment, while the very large reduction of output in

Basic metals was accompanied by a fall of under 3% in employment. Again as at EU15 level, the decline in turnover in most service sectors was less than 10%, in this case with the exception of Transport and Computing, and any reduction in employment was relatively modest.

Table 12

Change in production and employment in Spain, 2007-2008 and 2008-2009

% change between 2nd quarters in the years

	Production		Employment	
	2007-08	2008-09	2007-08	2008-09
Manufacturing	-6.3	-18.8	1.5	-15.3
Food products	-6.3	-18.8	1.5	-15.3
Drink products	-0.9	1.1	8.2	-2.6
Tobacco products	-2.5	-2.5	12.1	-29.1
Textiles	-7.0	-9.3	-32.3	-15.0
Cothing	-15.0	-25.5	-1.4	-24.0
Leather, footwear	-17.4	-14.8	-4.1	-28.5
Wood, wood products	-6.4	-21.4	-13.7	-26.3
Paper, paper products	-18.8	-24.7	18.3	-27.4
Printing	-1.4	-10.5	1.3	5.6
Chemicals	-14.1	-14.2	1.7	-14.8
Pharmaceuticals	-6.2	-4.3	4.2	-17.7
Rubber, plastic products	9.7	-0.2	10.5	-23.3
Non-metallic mineral prods	-7.0	-23.6	1.5	-4.7
Basic metals	-20.1	-28.4	-2.8	-21.2
Metal products	2.3	-32.1	-5.0	-18.4
Computer, electronic prods	-6.0	-24.9	4.0	-29.4
Electrical equipment	10.0	-29.5	-15.0	3.8
Machinery+equipment	-0.8	-31.6	4.5	-22.6
Motor vehicles	-9.4	-28.4	-5.7	-9.1
Other transport equip	-8.1	-37.3	1.1	-12.8
Furniture	5.7	-7.5	2.6	-1.7
Other manufacturing	-19.2	-33.5	2.6	-25.5
Electricity, gas	-4.7	-22.4	-9.2	5.1
Construction	0.5	-7.6	-7.2	15.1
Retailing and wholesaling	-16.3	-12.6	-6.3	-24.5
Land transport	-1.6	-19.0	0.5	-5.7
Water transport	-1.4	-16.0	0.8	-7.2
Air transport	6.9	-9.7	-0.6	-6.2
Postal services	3.3	-22.0	0.3	-7.6
Hotels and restaurants	8.0	-9.8	-0.9	-3.8
Publishing activities	-0.5	-10.5	-0.2	-7.2
Telecommunications	2.9	-7.5	2.8	-2.6
Computing	1.0	-4.3	-2.8	-2.7

Note: Changes in production for service sectors relate to turnover

Source: Eurostat, Short-term business statistics

In the other countries, the decline in output in the first half of 2009 was reflected more in a decline in employment than in Germany. This is particularly the case in Spain, where the

reduction in employment in the year up to mid-2009 was substantially greater than in other EU Member States, except for Ireland and the three Baltic States (Table 12). Here, moreover, the decline in many service sectors amounted to around 5-7% over the period.

The decline in employment in the other Member States, apart from those mentioned (though there are no data for 2009 for Ireland to verify), tends to be somewhere between Germany than Spain (see Annex Table A.19 for the UK, Table A.10 for France and Table A.11 for Lithuania).

8 The effect of the recession on employment

The projected decline in the number employed over the two years 2008-2010, as indicated above, amounts to around 4% across the EU as a whole according to the Commission's Spring forecast. This, however, understates the scale of job losses resulting from the recession, insofar as, in the absence of the economic downturn, the number in work would have been expected to continue increasing at around the trend rate observed over the preceding 10 years or so. If this rate had continued up to 2010, employment in the EU would have been almost 2% higher in that year than in 2008. In relation to this, therefore, the effect of the recession is to reduce the number employed by almost 6% over the two-year period.

This effect varies from around 15% in Ireland and just over 10% in Spain to just under 4% in Greece and 3% in Portugal, with the effect in most countries being around 5-6%.

8.1 The differential effect on employment by sector

Across the EU as a whole (or at least across the countries for which data are available), the implication of the above assumptions is that the number employed is projected to decline by around 18% in financial services over the two years 2008-2010, by almost 15% in the motor vehicle industry and by around 13-14% in the machinery and equipment and electrical and electronic equipment industries (Table 13).

At the same time, the decline is projected to amount to around 13% in textiles and clothing and 12% in construction. In the former, however, this is less than the trend rate of decline apparent over the years 2000-2007 – largely because some moderation of productivity growth and reduction in working time is assumed to maintain jobs during the recession (though, of course, this may not happen in this particular sector).. (There is also a significantly smaller decline in employment in the leather and footwear industry projected than implied by the continuation of recent trends, though the number working in the

industry in the EU is very small.) In both construction and motor vehicles, the decline is even larger if related to the growth which would have occurred on recent trends.

Table 13

Projected employment by sector in the EU in 2010, relative to 2008 and trend

% difference

	Relative to 2008	Relative to trend
Agriculture	-5.8	-0.8
Mining	-5.1	4.5
Food, drink, tobacco	-6.0	-5.9
Clothing and textiles	-12.7	5.2
Leather and footwear	-10.4	19.8
Wood and wood products	-10.2	-6.3
Paper, pulp, printing	-6.3	-4.3
Chemicals and pharmaceuticals	-8.2	-4.6
Rubber and plastics	-7.3	-8.9
Glass and non-metallic mineral products	-9.3	-8.1
Metal manufacture	-12.2	-11.9
Machinery and equipment	-14.5	-13.3
Electrical and electronic equipment	-13.1	-11.4
Motor vehicles and transport equipment	-14.9	-18.0
Furniture and other manufactures	-7.3	-5.8
Electricity, gas, water	-4.0	-2.1
Construction	-11.6	-13.9
Retail and wholesale distribution	-4.5	-5.8
Hotels and restaurants	-4.1	-8.9
Transport	-4.3	-6.6
Financial services	-16.2	-17.4
Business services	1.8	-4.4
Public administration	1.0	-0.8
Education	1.3	-1.5
Health and social services	2.6	-1.5
Personal, social, community services	1.0	-3.0

Note: EU excludes BG, CY, LV, LU, MT, PL and RO

Employment is also projected to decline in the distributive trades, transport and hotels and restaurants by around 4-5% over the period and by around 6-7% in the first two and 9% in the last in relation to trend. On the other hand, the number in work is projected to continue to increase in business services, public administration, education and healthcare, though by less than trend in all of these, if only marginally so in respect of public administration where governments are assumed to try to maintain jobs.

This pattern is repeated in individual Member States, though the scale of the reduction in employment projected in the different industries varies and in some countries – in particular, in Ireland and Spain, where the overall extent of job losses is greater than elsewhere – employment is projected to decline in all, or nearly all, services sectors, including in the non-market ones (Tables 14-18).

Table 14

Projected employment in 2010 relative to 2008 and relative to trend

% difference

	Germany		France		Italy		UK	
	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend
AB	-4.8	0.1	-9.1	-4.1	-5.0	1.2	-1.1	1.5
C	-19.6	30.3	-3.5	27.1	-3.4	23.5	4.9	-1.2
DA	-7.6	-9.4	-7.0	-8.5	-2.5	-2.8	-4.4	1.3
DB	-15.0	-1.6	-12.8	26.6	-10.6	3.2	-20.5	27.0
DC	-13.8	22.1	-21.1	22.1	-6.1	27.4	-20.5	18.5
DD	-13.0	11.7	-8.9	-2.6	-4.9	-1.8	-7.7	-8.2
DE	-6.2	-8.9	-4.9	-3.8	-8.2	-5.9	-3.0	5.7
DG	-8.3	-3.5	-9.1	-5.5	-7.2	-4.5	-13.5	-4.0
DH	-6.7	-11.4	-7.7	-11.5	-4.2	-2.2	-15.2	-4.9
DI	-9.7	-3.1	-10.1	-4.8	-7.5	-13.6	-16.0	-5.0
DJ	-10.0	-9.4	-17.1	-15.5	-7.1	-7.1	-22.0	-17.8
DK	-17.4	-17.2	-12.2	-7.6	-7.9	-8.5	-19.3	-12.6
DL	-16.2	-14.8	-8.2	-7.5	-9.7	-13.0	-18.0	-2.1
DM	-15.4	-20.4	-9.8	-13.4	-13.3	-18.4	-19.3	-15.1
DN	-6.0	-2.0	-9.5	1.8	-0.1	-1.8	-11.8	-5.7
E	-5.2	-4.1	1.7	5.4	-6.0	3.6	-6.9	-10.1
F	-9.1	-4.9	-7.5	-11.7	-5.6	-10.7	-16.3	-18.9
G	-2.9	-3.2	-6.2	-9.2	-5.5	-7.7	-2.3	-2.0
H	-0.9	-5.7	-2.2	-5.8	-3.3	-12.6	-4.3	-7.3
I	-5.5	-7.5	-4.4	-7.2	-4.4	-7.6	-4.3	-6.8
J	-15.1	-15.7	-11.7	-14.1	-14.1	-14.9	-15.3	-17.0
K	3.8	-2.4	0.0	-5.8	-0.4	-8.7	1.8	-2.5
L	1.8	3.5	-0.2	-5.5	-1.1	6.5	3.5	-0.9
M	2.6	-1.1	1.3	0.9	0.0	-3.1	3.2	-1.2
N	2.8	-1.1	4.0	-1.2	2.3	-3.7	4.2	1.1
O	1.0	-1.4	1.6	-3.9	1.3	-5.5	3.5	-0.4

Table 15

Projected employment in 2010 relative to 2008 and relative to trend

% difference

	Spain		Ireland		Belgium		Austria	
	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend
AB	-5.6	3.1	-20.5	-11.9	5.0	10.8	-10.0	-10.2
C	-11.2	-5.7	-14.2	-23.2	-1.7	2.6	-21.2	-18.5
DA	-8.6	-9.4	-17.8	-12.0	0.6	-6.2	-12.1	-13.7
DB	-16.0	4.0	-27.5	41.3	-2.7	6.1	-17.6	9.7
DC	-15.0	12.7	-19.0		0.5	26.1	-21.8	7.1
DD	-14.0	-12.8	-23.4	-16.0	-1.7	-12.2	-11.8	-15.8
DE	-9.0	-4.5	-27.4	-21.3	5.1	13.9	-11.5	-10.3
DG	-10.0	-5.3	-21.7	-23.6	1.2	1.2	-11.5	-2.9
DH	-6.1	-3.6	-24.8	-7.8	-2.2	-4.1	-11.2	-13.4
DI	-7.5	-9.9	-31.9	-29.2	0.3	3.0	-6.0	-14.0
DJ	-16.1	-16.2	-25.6	-23.8	-13.8	-9.7	-18.1	-16.0
DK	-14.1	-15.3	-27.0	-3.1	-12.0	-10.2	-9.7	-16.3
DL	-17.4	-9.8	-30.3	-25.5	-4.1	1.1	-7.3	-4.3
DM	-20.0	-17.7	-21.7	9.1	-0.6	-0.2	-2.3	-7.3
DN	-15.2	-10.5	-15.7	-9.8	-6.0	-0.8	-9.9	12.3
E	-9.4	-11.7	-23.3	-23.5	-0.8	-3.0	-5.9	-2.3
F	-17.0	-20.7	-24.3	-28.2	-7.0	-10.7	-11.0	-13.4
G	-6.9	-8.4	-9.4	-12.7	-0.9	-1.4	-5.1	-7.1
H	-6.8	-11.9	-5.7	-7.2	-5.1	-9.2	-7.6	-12.2
I	-6.7	-10.3	-8.9	-11.7	0.0	-0.4	-3.9	-2.5
J	-21.4	-22.2	-29.6	-34.5	-22.0	-21.7	-20.3	-18.5
K	2.7	-6.6	-4.1	-10.3	-1.9	-8.9	5.6	-1.4
L	-3.7	-6.2	-4.8	-9.5	-1.7	-5.2	7.8	1.7
M	-3.7	-7.0	-5.7	-11.4	-1.0	-2.0	6.0	7.3
N	-3.7	-11.0	-2.5	-10.7	-1.2	-5.0	10.6	6.4
O	-3.5	-6.9	0.1	-5.1	0.2	-3.7	0.0	-4.9

Table 16

Projected employment in 2010 relative to 2008 and relative to trend

% difference

	The Netherlands		Denmark		Finland		Sweden	
	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend
AB	-5.5	-7.2	-10.8	-8.4	1.6	6.7	-10.3	-4.6
C	-4.4	-1.8	0.1	-4.3	3.3	4.9	-20.2	-37.8
DA	-7.8	-3.9	-9.1	-1.6	-0.7	3.5	-8.8	-1.6
DB	-17.0		-18.5	9.0	-20.3	4.3	-25.2	-10.0
DC	-16.6		-17.9	0.1	-19.6	13.6	-23.1	-40.1
DD	-13.3	-14.2	-6.5	0.2	-3.1	-4.5	-20.2	-19.3
DE	-12.1	-9.9	-13.4	1.3	-1.6	4.8	-10.2	-0.3
DG	-5.2	-4.3	-12.4	-16.6	1.8	-1.0	-10.2	-11.1
DH	-9.9	-8.6	-12.5	-4.4	-2.5	0.1	-9.5	-11.1
DI	-11.3	0.6	-17.8	-16.9	-14.4	-17.6	-16.1	-14.0
DJ	-13.5	-15.9	-11.3	-10.1	-8.2	-10.3	-12.8	-11.9
DK	-12.2	6.9	-12.6	-7.1	-15.9	-17.8	-15.5	-12.7
DL	-24.6	2.3	-18.1	-17.3	-16.3	-16.0	-13.3	5.0
DM	-20.9	-15.6	-21.3	-23.0	-19.1	-20.8	-13.5	-10.0
DN	-8.3	-16.3	-13.4	-3.0	-6.7	-9.5	-4.1	1.1
E	-3.6	-6.1	-10.4	-4.6	-3.6	4.0	2.8	6.7
F	-11.6	-14.1	-16.4	-16.3	-15.7	-18.6	-11.5	-16.6
G	-5.0	-6.2	-3.8	-6.9	-8.4	-9.9	-7.0	-8.5
H	-7.3	-14.0	-8.8	-13.4	-9.9	-11.5	-6.4	-11.7
I	-6.1	-9.7	-6.6	-7.0	-1.4	-2.9	-5.1	-6.0
J	-22.7	-22.1	-24.8	-24.5	-23.2	-24.4	-13.4	-14.3
K	1.3	-2.8	4.7	1.3	2.1	-3.4	1.9	-5.2
L	1.1	0.5	-0.2	-0.8	1.2	1.2	-1.6	-6.9
M	2.5	-0.3	3.4	0.4	2.3	0.1	-1.3	-7.1
N	3.6	-0.8	3.1	1.6	2.3	-1.2	-1.6	-0.2
O	-3.0	-5.5	2.8	-2.6	1.6	-2.5	0.8	-3.7

Table 17

Projected employment in 2010 relative to 2008 and relative to trend

% difference

	Greece		Portugal		Estonia		Lithuania	
	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend
AB	-4.5	-0.7	-8.0	-7.6	-11.8	7.3	-11.4	-0.6
C	-1.9	2.2	2.5	-5.5	-1.9	-17.0	-5.4	-8.5
DA	0.9	1.3	0.2	0.1	-7.7	6.1	-6.3	-8.6
DB	-15.9	5.1	-9.3	-1.4	-18.8	-22.9	-19.3	-12.3
DC	-13.2	37.6	-6.1	4.2	-18.4		-19.2	-4.6
DD	-16.3	-8.3	-3.1	-0.3	-15.9	-17.5	-16.9	-23.3
DE	-16.2	-17.9	0.0	5.8	-4.9	-14.2	-4.1	-5.9
DG	-8.2	-14.8	-12.3	-7.4	-18.1	-19.1	-16.4	-0.6
DH	-9.2	-7.4	-8.6	-6.2	-20.1	-26.2	-14.6	-28.6
DI	-9.9	-9.9	-3.2	-1.5	-10.1	-19.0	-10.0	-10.7
DJ	-12.1	-12.0	-5.5	-2.7	-15.5	-27.2	-13.4	-18.5
DK	-15.0	-19.0	-3.9	-11.4	-18.4	-12.6	-17.5	23.5
DL	-16.0	-18.2	-5.0	-2.6	-7.0	-12.6	-5.5	5.5
DM	-14.8	-17.7	-4.6	-3.3	-21.3	-25.2	-20.8	-17.7
DN	-8.0	-9.5	0.6	4.0	-7.0	-7.9	-6.8	-16.3
E	2.5	4.7	-4.3	-4.0	-2.6	33.8	-1.9	11.2
F	-6.6	-10.9	-9.6	-11.6	-21.1	-26.0	-21.8	-24.6
G	-0.8	-3.9	-0.8	-2.3	-7.9	-9.5	-7.3	-11.8
H	1.3	-1.8	2.6	-0.5	-11.1	-22.8	-12.2	-16.4
I	-3.5	-4.5	-1.5	-7.4	-3.1	-6.3	-2.0	-5.2
J	-16.4	-20.0	-25.4	-27.1	-19.8	-24.6	-21.9	-25.9
K	9.2	0.1	7.9	0.4	-7.8	-12.5	-7.0	-14.4
L	6.2	-0.4	3.8	2.9	-6.6	-8.6	-6.8	-8.0
M	7.9	1.8	6.2	5.0	-6.9	-8.4	-6.4	-4.8
N	4.7	-0.2	5.2	-0.2	-6.4	-9.2	-6.5	-7.2
O	-4.4	-7.1	1.6	4.1	-8.8	-14.2	-8.4	-10.4

Table 18

Projected employment in 2010 relative to 2008 and relative to trend

% difference

	Czech Republic		Hungary		Slovakia		Slovenia	
	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend	Relative to 2008	Relative to trend
AB	-0.1	12.5	-3.4	7.1	1.5	13.7	-2.3	-2.7
C	-3.5	10.8	-6.2	9.5	-2.4	34.8	-1.0	13.7
DA	-5.6	-2.8	-8.7	-5.7	-4.9	0.6	3.8	5.7
DB	-9.7	5.5	-13.4	17.2	-8.3	3.3	-17.5	-2.1
DC	-9.2		-12.7		-7.6	-5.2	-13.6	
DD	-10.0	-10.2	-13.2	-13.1	-9.2	-6.4	0.5	1.0
DE	-4.0	-7.8	-6.9	-7.9	-3.6	4.8	2.3	4.8
DG	-2.9	-3.7	-6.1	4.3	0.0	6.3	2.9	-3.3
DH	-5.5	-14.1	-8.4	-10.6	-2.6	-13.1	3.2	-5.8
DI	-7.7	-4.6	-10.9	-6.6	-6.3	-2.2	-15.3	-15.5
DJ	-9.9	-12.6	-12.7	-15.6	-8.4	-10.3	-2.9	-6.1
DK	-18.7	-14.5	-21.4	-16.8	-17.5	-21.8	-14.8	-19.1
DL	-9.8	-17.5	-12.2	-18.1	-8.6	-19.7	-1.2	0.2
DM	-22.7	-28.2	-25.2	-29.9	-20.6	-30.3	-18.8	-27.8
DN	-9.4	-10.0	-12.4	-14.4	-8.3	-17.8	-10.7	3.7
E	-1.5	2.3	-4.1	7.3	3.4	9.3	5.5	-2.9
F	-9.0	-9.3	-11.7	-14.2	-7.6	-11.1	-12.9	-17.2
G	-3.1	-1.9	-6.3	-8.9	-1.6	-4.6	-8.8	-10.0
H	-5.2	-8.1	-7.5	-11.5	-3.5	-12.0	-15.8	-20.0
I	2.4	2.5	-0.6	-0.1	4.4	4.2	0.8	-2.8
J	-9.7	-10.9	-12.7	-13.7	-8.1	-13.4	-19.9	-23.7
K	6.8	0.4	3.9	-3.8	8.6	-1.4	0.1	-7.1
L	4.0	1.4	1.5	-0.6	5.9	4.1	-2.3	-5.5
M	4.8	3.9	1.7	1.5	6.8	7.3	-1.8	-6.9
N	6.2	0.8	2.2	0.3	7.3	7.8	-2.6	-7.9
O	3.6	1.5	0.8	-0.7	5.7	3.0	-4.6	-8.2

8.2 The differential effect on employment by occupation

The implication of the differential effect of the recession on the various sectors of activity is that some jobs will be hit much than others. In other words, the effect on different occupations is likely to be far from uniform, reflecting the particular occupational composition of the sectors concerned. Skilled manual workers, in particular, are almost certain to be differentially affected given the bigger reduction in manufacturing, and, more specifically, in the engineering industries than in other sectors, while those employed in higher level jobs, which are relatively concentrated in the service sector, though experiencing some decline, are likely to be less affected.

It should be noted that the projections of employment in the different occupations – defined at ISCO 2-digit levels –are generated by assuming that past trends in the occupational composition of jobs within each of the individual sectors continue in future years. This

implies an ongoing shift, in particular, from skilled and semi-skilled manual jobs to managerial and professional ones requiring higher education levels. These trends are assumed to be unaffected by the recession (i.e. they are the same as in the trend projection), whereas, in practice, they might well be accelerated.

Over the EU as a whole, the employment of skilled manual workers (mechanics, tool-makers and so on) is projected to decline by around 9% over the two years 2008-2010 given the projected sectoral pattern of job losses (i.e. assuming no differential effect on different jobs with individual industries) (Table 19). Given the slight trend decline in such jobs which has been evident over the past decade or so (around 0.2% a year), this tends to overstate the effect of the recession a little. Taking account of the downward trend decline, the recession is estimated to reduce the employment of skilled manual workers across the EU by just under 9% over the two years (by 8.7%).

Table 19

Projected effect of the recession on employment by broad occupation in the EU15 and new Member States, 2008-2010

% change, 2008-2010

	EU15			CZ, HU, EE, LT, SI, SK		
	Projected change	Trend growth	Effect of crisis	Projected change	Trend growth	Effect of crisis
Managers	-5.4	1.5	-6.8	-4.7	1.5	-6.1
Professionals	-1.3	3.1	-4.2	-1.0	2.2	-3.2
Technicians	-2.0	3.1	-5.0	-2.0	1.9	-3.9
Clerks	-5.2	1.4	-6.6	-3.8	1.3	-5.1
Sales+service	-1.3	3.6	-4.8	-2.5	2.3	-4.8
Agricultural	-5.5	-3.8	-1.8	-5.6	-6.3	0.3
Skilled manual	-9.1	-0.5	-8.7	-10.1	0.1	-10.2
Semi-skilled manual	-7.1	0.4	-7.4	-6.1	1.8	-7.8
Elementary	-3.8	2.3	-5.9	-4.0	0.3	-4.3
Total	-4.0	2.0	-6.0	-4.4	1.3	-5.7

Employment of semi-skilled workers, those typically employed on production lines, is also projected to decline by more than that of other occupations, the fall across the EU amounting to around 7% over the two-year period. The effect of the recession is, however, estimated to be slightly more than this since a small upward trend has been evident in the past (an increase of a similar size as the decline for skilled workers, in part reflecting a shift from one to the other as a result of more automated production methods).

The decline in other types of job is projected to be less, but it still amounts to just over 5% across the EU over the period 2008-2010 for agricultural workers, clerks (i.e. most kinds of office worker, including secretaries) and managers. Given the longer-term trends in employment, the estimated effect of the recession on these broad types of job is

significantly larger for clerks and managers (almost 7% over the two years) than for agricultural workers, whose employment would have been expected to decline (by almost 4% over the period) even in the absence of recession.

The effect of the recession is likely to be greater on low-skilled manual workers employed in elementary jobs (such as labourers or cleaners), whose employment has tended to rise by around 1% a year over the recent past. Employment in such jobs is projected to fall by just under 4% between 2008 and 2010 though by 6% relative to the level in 2010 had the trend growth in jobs continued.

Jobs for professionals, technicians and sales and services workers, which over the past have shown the biggest tendency to increase, are projected to decline by least over the two-year period, by 1-2%. In relation to the trend rate of expansion, however, this still means a reduction of 4-5% as a result of the recession. This will affect those entering or re-entering the labour market – or who at least were intending to do so before the recession intervened – since such jobs are those in which net job creation has been strongest. Young people completing their education or initial training or women returning to the labour market after having children are likely, accordingly, to by hit especially hard by the lack of expansion in these jobs, though they will not necessarily show up in the unemployment figures. Young people, therefore, might choose to remain in the education system longer – by perhaps embarking on an additional course of study, even though it might only marginally affect their long-term careers prospects, while women might choose to remain at home looking after their children until employment prospects improve.

The projection of the effect of the recession in the EU15 countries is much the same as for the EU as a whole, since because of their size, these countries tend to dominate the projections (especially in the absence of Poland for which there is a lack of data). The effect is also similar in the new Member States taken together (or at least for those included in the analysis) (Table 19). Although the pattern is the same, employment of skilled manual workers is affected by more (declining by around 10% between 2008 and 2010 as well as relative to the projected level in 2010) and employment of professionals and technicians by less, largely because a smaller upward trend in the jobs for these has been evident over the past. Employment of low skilled manual workers in elementary jobs is also projected to be less affected by the recession than in the EU15 for a similar reason, though the decline over the period 2008-2010 is projected to be much the same.

The effect of the recession on the different occupations is also similar in the different EU15 countries. The extent of the projected decline in employment over the two years 2008-2010 in all them was greater in jobs for skilled manual workers than for others and, in most cases, in those for semi-skilled manual workers, while it was smaller for professionals and technicians. Once allowance is made for the differential trends in net job creation, however,

the effect of the recession on employment in each broad occupation is not so different in many of the countries (Table 20).

Table 20

Projected effect of the recession on employment by broad occupation in selected Member States, 2008-2010

% change, 2008-2010

	Germany			France		
	Projected change	Trend growth	Effect of crisis	Projected change	Trend growth	Effect of crisis
Managers	-5.4	1.1	-6.4	-4.9	3.1	-7.9
Professionals	-1.5	2.6	-4.0	-0.8	2.9	-3.7
Technicians	-1.2	2.0	-3.2	-2.9	3.8	-6.6
Clerks	-6.3	0.8	-7.0	-4.3	2.4	-6.5
Sales+service	-0.5	2.9	-3.4	-1.4	3.8	-5.2
Agricultural	-3.8	-3.6	-0.4	-9.2	-5.1	-4.5
Skilled	-8.9	-1.5	-7.5	-8.0	1.0	-8.9
Semi-skilled	-7.1	0.4	-7.5	-6.2	1.6	-7.7
Elementary	-2.9	1.4	-4.3	0.4	5.6	-5.2
Total	-3.7	1.2	-4.8	-3.4	2.9	-6.1
	Italy			**UK**		
	Projected change	Trend growth	Effect of crisis	Projected change	Trend growth	Effect of crisis
Managers	-6.1	1.8	-7.8	-3.9	1.4	-5.3
Professionals	-1.4	4.6	-6.0	-1.0	2.5	-3.5
Technicians	-1.6	4.6	-6.2	-0.3	2.5	-2.9
Clerks	-5.1	1.6	-6.7	-4.5	0.1	-4.6
Sales+service	-2.1	5.1	-7.2	1.3	3.0	-1.7
Agricultural	-5.4	-5.4	-0.2	0.9	0.5	0.4
Skilled	-7.0	0.9	-7.9	-12.4	-0.2	-12.2
Semi-skilled	-5.7	0.8	-6.4	-8.2	-2.9	-5.5
Elementary	-5.0	2.1	-7.0	-5.3	0.0	-5.3
Total	-3.9	2.7	-6.4	-3.3	1.3	-4.5
	Spain			**Ireland**		
	Projected change	Trend growth	Effect of crisis	Projected change	Trend growth	Effect of crisis
Managers	-10.6	0.0	-10.6	-14.4	-0.9	-13.6
Professionals	-4.2	4.9	-8.9	-10.4	4.9	-14.8
Technicians	-5.6	4.9	-10.2	-11.4	3.5	-14.5
Clerks	-6.5	3.7	-9.9	-11.4	3.6	-14.6
Sales+service	-5.1	5.2	-10.0	-5.3	6.0	-11.0
Agricultural	-5.0	-6.4	1.1	-20.6	-8.5	-13.8
Skilled	-14.6	1.3	-15.7	-21.8	2.5	-23.7
Semi-skilled	-9.9	0.8	-10.7	-15.0	0.6	-15.5
Elementary	-7.7	2.7	-10.1	-14.3	0.9	-15.1
Total	-7.9	2.9	-10.5	-12.6	2.9	-15.1

In Italy, in particular, the effect in reducing employment, apart from in respect of agricultural workers, was much the same on the different occupations, varying only between 6% and

8%, On the other hand, in the UK, the decline in the employment of skilled manual workers is projected to be especially marked (over 12%), while the effect on professionals and technicians as well as sales and service workers is projected to be relatively small (a reduction of just 2-3%).

The projected decline in skilled manual workers in Spain and Ireland is also particularly pronounced (an estimated reduction in jobs in 2010 from the recession of around 16% and 24%, respectively). In both countries, however, apart from agricultural jobs, the effect on employment in the other occupations is projected to be similar (in Spain, a reduction of 9-11% in each of the occupations, in Ireland, one of 14-16%).

8.3 The effect of the recession on employment by job quality

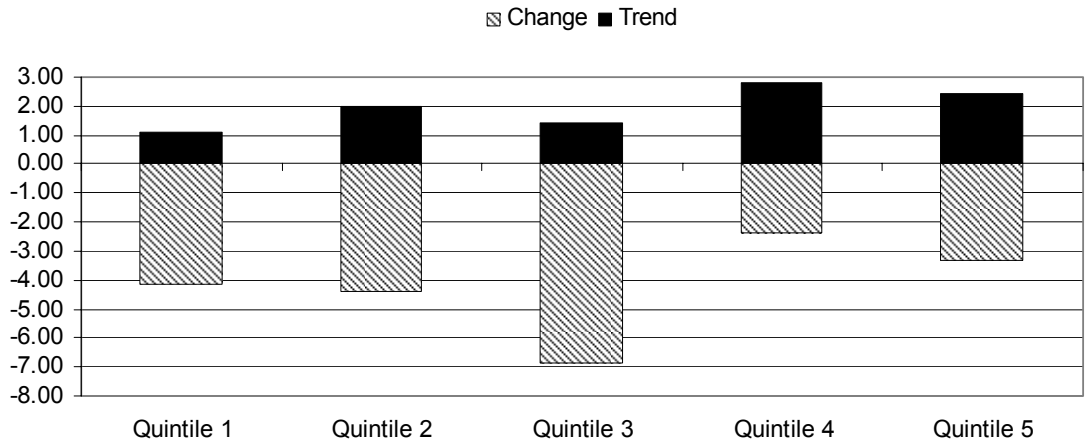
The concern here is with the implications of the projections for job quality as measured by relative wages, or more specifically, with whether the reduction in employment which is projected is concentrated more among low quality jobs on this measure – i.e. those which are have relatively low rates of pay – or among higher quality, or those which appear at the upper end of the wage distribution. The above examination of the projected effect of the recession on employment by sector and occupation already give an indication of this, insofar as the jobs which seems to be most affected are those for skilled and semi-skilled manual workers in engineering and other parts of manufacturing, which tend to be round the middle of the earnings distribution in terms of pay rates. This is borne out by examining the combined effect of the projected changes in employment in each (ISCO 2-digit) occupation in each (NACE 2-digit) sector and using the estimates of median earnings for each of these to define their relative position in the wage hierarchy in each of the countries – or, more specifically, whether they appear in the top, quintile (i.e. among the highest paid 20% of jobs), the fourth quintile (the next 20% in these terms), the third quintile and so on[4].

Taking the EU as a whole – or, more precisely, the 19 countries for which it is possible to carry out the analysis – the decline in employment over the two years 2008-2010 is projected to be largest, at around 7%, in jobs in the third quintile, i.e. among those employed in jobs which are around the middle of the wage distribution. The next largest reduction in employment is projected to be in jobs in the bottom two quintiles, i.e. in the lowest paid 40% of jobs (in both of which the number employed is projected to fall by around 4% over these two years). The smallest fall is projected to be in jobs in the fourth quintile, in the second highest paid ones, though this still amounts to a decline of more than 2% over the period (Figure 4).

[4] See R. Stehrer, T. Ward and E. Fernández Macías (2009), 'Changes in the Structure of Employment in the EU and their Implications for Job Quality', *wiiw Research Reports*, No. 354 (first published by the European Foundation, 2008).

Figure 4

Projected effect of the recession on employment by relative wage quintile, EU, 2010

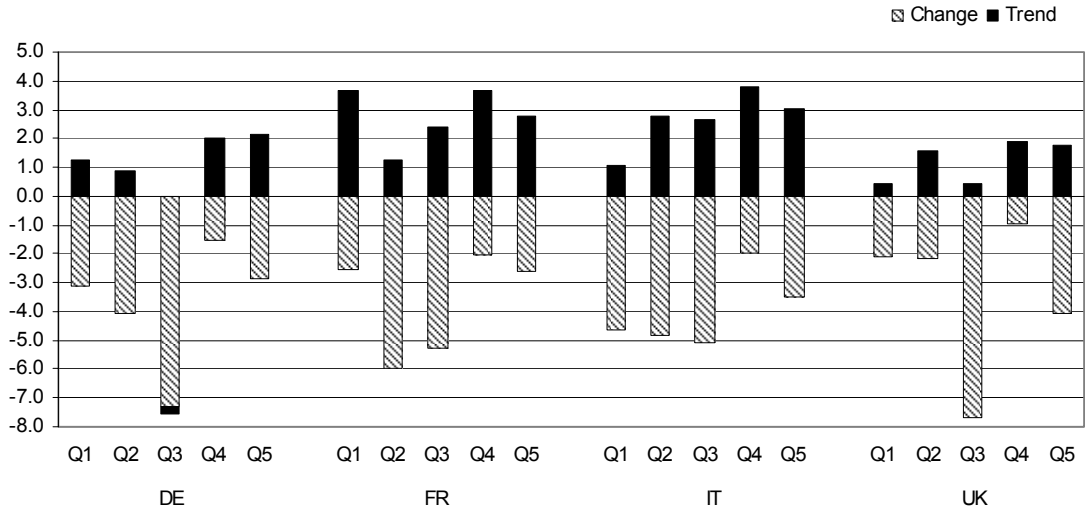


Once account is taken of the trend change in employment, however (the lighter shaded top part of the bars Figure 4), the effect of the recession is estimated to be almost as large in the higher paid jobs as in the lower paid ones simply because the number employed in the former is tending go up by more than the latter over the longer term. Employment in jobs in the top quintile, therefore, is projected to be just over almost 6% lower in 2010 than it would otherwise have been in the absence of the recession (as indicated by the total height of the bar in Figure 4), while in jobs in the bottom quintile, the projection is for it to be just over 5.25% lower. Moreover, jobs in the fourth quintile – one step down from the highest paid – are projected to be more than 5% less in 2010 relative to what might have been expected. The estimated reduction in the second from bottom quintile is about 6.5%.

Figure 5

Projected effect of the recession on employment by relative wage quintile, 2010

% change, 2008-2010



Nevertheless, even taking account of the relatively small trend growth in jobs in the third quintile, the effect of the recession on employment is still estimated to be larger in these jobs than those elsewhere across the wage hierarchy (a reduction of more than 8% in 2010).

Figure 6

Projected effect of the recession on employment by relative wage quintile, ES, IE, BE, AT, 2010

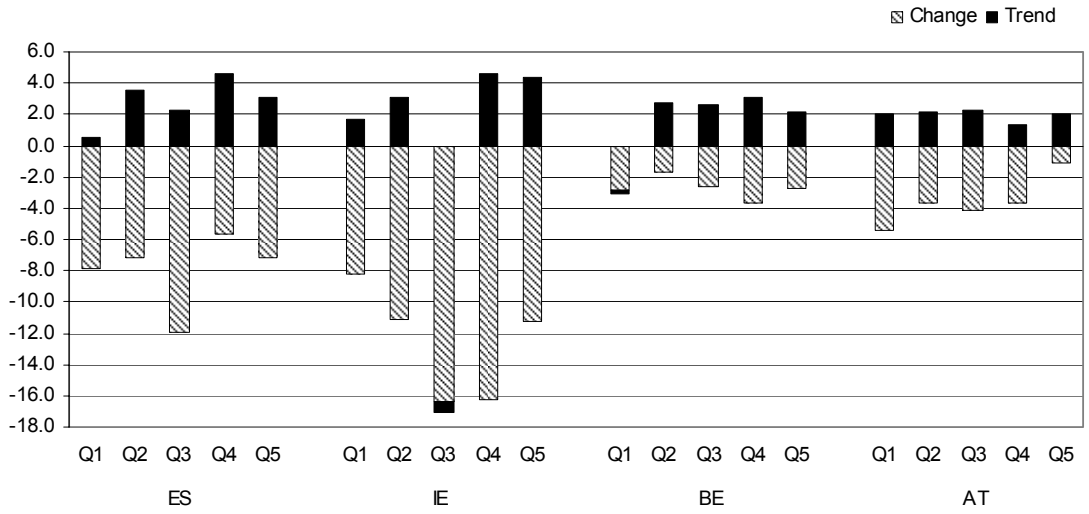
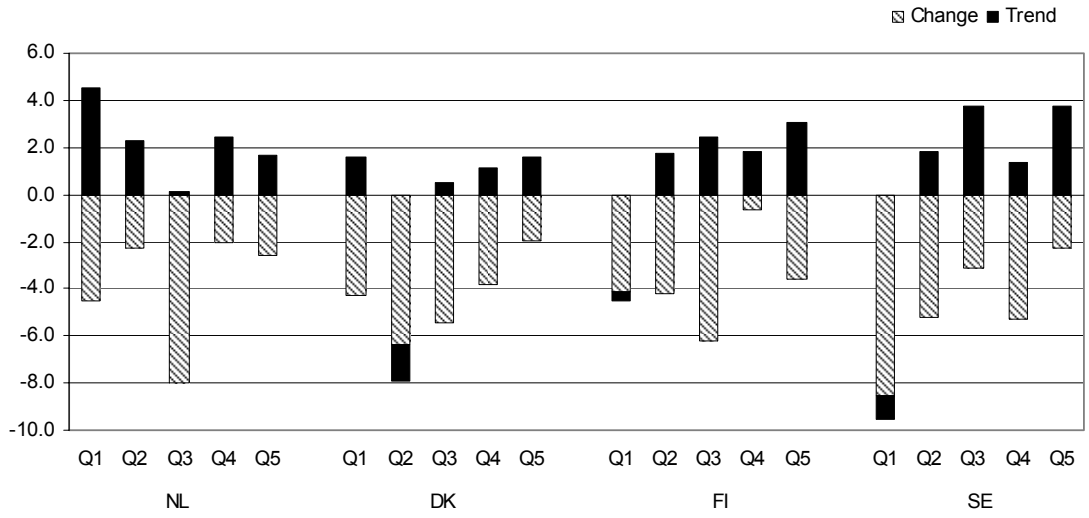


Figure 7

Projected effect of the recession on employment by relative wage quintile, NL, DK, FI, SE, 2010



The effect in individual Member States is, in most cases, projected to be similar, though the pattern of the estimated reduction in employment is by no means uniform. In Germany and the UK, the effect of the recession in pushing down employment in jobs in the third quintile is especially marked, as it is in Spain, though here the effect is relatively large in jobs right across the wage spectrum (employment in those even in the top quintile being reduced by

10%) (Figure 5). In both France and Italy, the effect is also largest in jobs in the third quintile but in both cases, it is almost as big in jobs in the second quintile. In Ireland, where the overall decline is projected to be the largest in the EU, the decline is biggest in jobs in the fourth quintile (which are reduced by 20% as compared with trend in 2010) and almost as big in the top quintile as in the third (Figure 6). The same is the case in Belgium, while in the Netherlands and Sweden, the largest reduction relative to trend is in jobs in the bottom quintile (Figure 7).

Figure 8

Projected effect of the recession on employment by relative wage quintile, GR, PT, EE, 2010

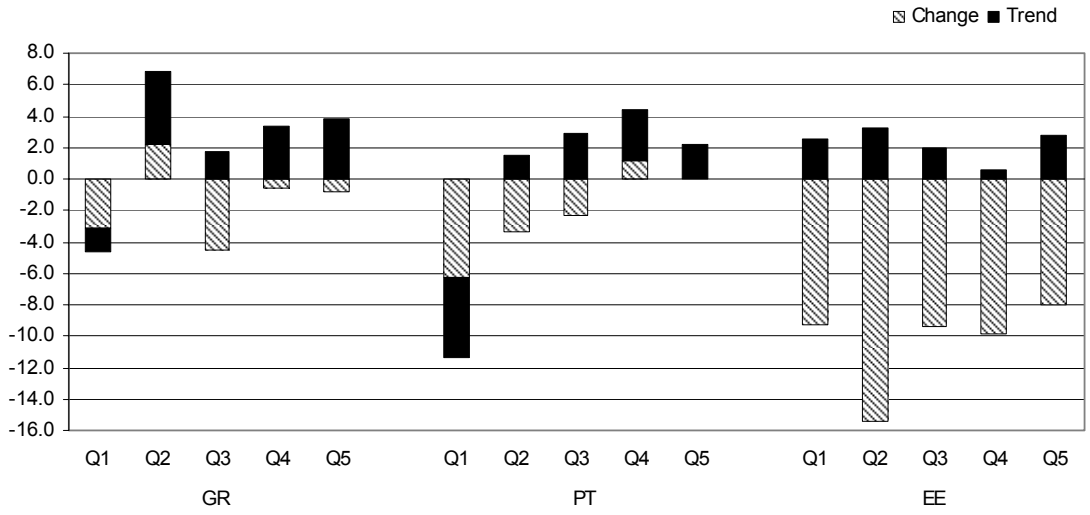
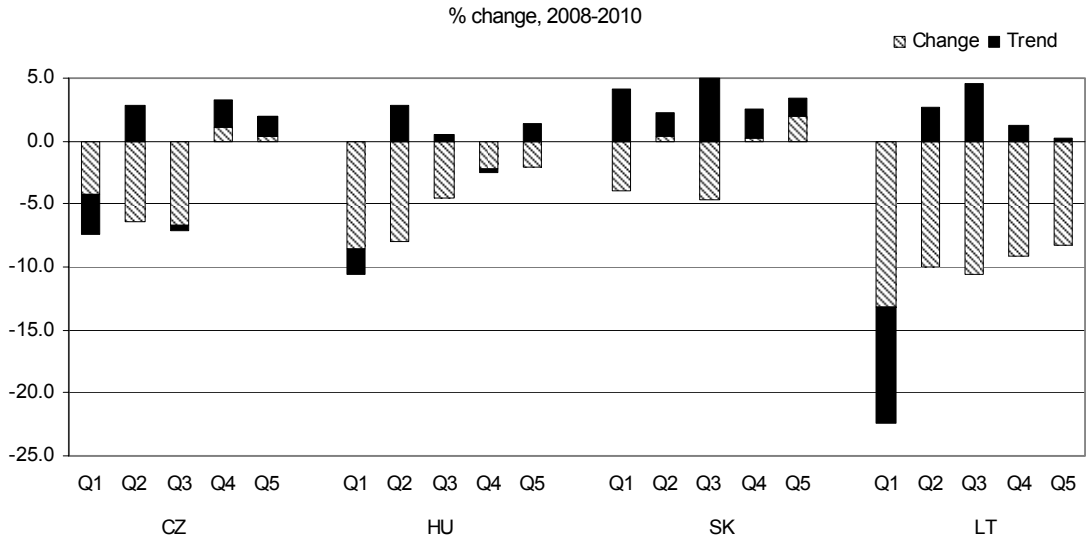


Figure 9

Projected effect of the recession on employment by relative wage quintile, CZ, HU, SK, LT, 2010



The pattern of projected job losses in the new Member States covered is somewhat different. The main effect is on employment in jobs in the second from bottom quintile in

the Czech Republic, Hungary and Estonia, while in both Slovakia and Lithuania, the effect, as in most EU15 countries, is largest on jobs in the third quintile (Figure 9). A point to note as regards Slovakia is that the effect of the recession is projected to be increase rather than to reduce employment in jobs in top wage quintile. This is because a large proportion of the jobs concerned are public sectors ones, in public administration, education and health services, which are assumed to be expanded slightly in order to offset the decline in the private sector. In Slovakia, unlike elsewhere, the effect more than compensates for the relatively small reduction in employment in higher paid private sector jobs.

The change in the index of job quality

Given the pattern of the projected decline in employment between jobs in the different parts of the earnings distribution, the effect on overall job quality, as measured in terms of the shift of employment between jobs with different relative wages, is not clear-cut. To calculate an aggregate index of this shift, the change in employment can be weighted according to the wage quintile in which the jobs in questions are located, assigning a weight of one to the bottom quintile, two to the second quintile, and so on up to 5 for the top quintile. The resulting index has a value of 3 if employment is evenly divided between the five quintiles, a higher value signifying a shift towards higher paid jobs, a lower value a shift towards lower paid ones. (In the analysis, the value of the index is normalized and set to one in 2008.) Although this is a relatively crude measure, it gives an indication of the direction of the overall shift – whether towards or away from higher paid (and assumed higher quality) jobs.

Looking first at the projected change between 2008 and 2010, there is an increase in the index in 15 of the 19 Member States for which data are available (Figure 10). In 6 of these countries, however – Germany, Spain, France, Italy, the Netherlands and Finland – the increase is marginal, leaving 9 countries, where there is a distinct increase in the job quality index and, accordingly, employment is projected to shift towards higher paid jobs, so those in lower paid jobs lose out the most. Among the other 4 counties, no change in the index is projected in Greece and only a marginal fall in Belgium and the UK, leaving Ireland as the only country in which there is a distinct reduction in the index and a shift of employment away from higher paid jobs to lower paid ones.

In relation to the projected change in the index had employment continued to increase in line with the trend evident over the preceding years, however, the picture is slightly different. Under the trend scenario, the index is projected to increase in all countries apart from Estonia, the Netherlands and Slovakia, where it is projected to fall, and in France, where it is projected to remain much the same (Figure 11). In the first three countries, therefore, the index is projected to rise by more over the recession than in the trend scenario, as it is in France, though only marginally more. In 6 other countries – the Czech

Republic, Denmark, Hungary, Austria, Portugal and Sweden, the index is also projected to rise relative to the trend increase, but only marginally in the last two.

Figure 10

Projected index of job quality, based on relative wages, 2010 relative to 2008

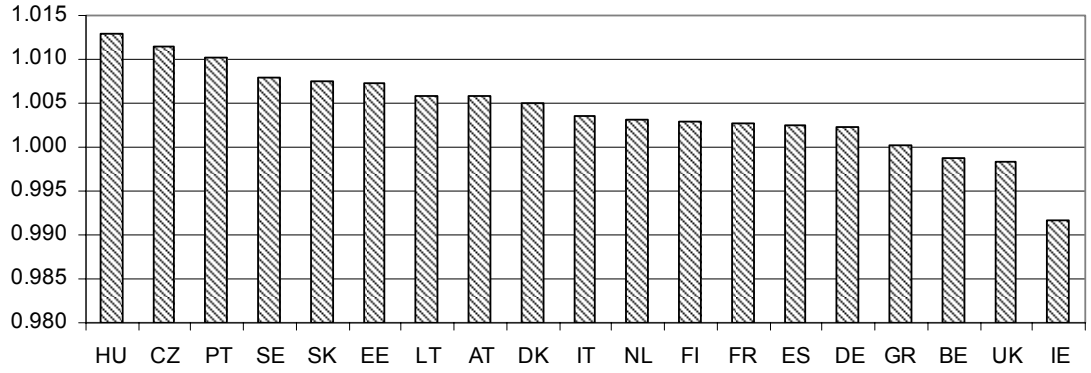
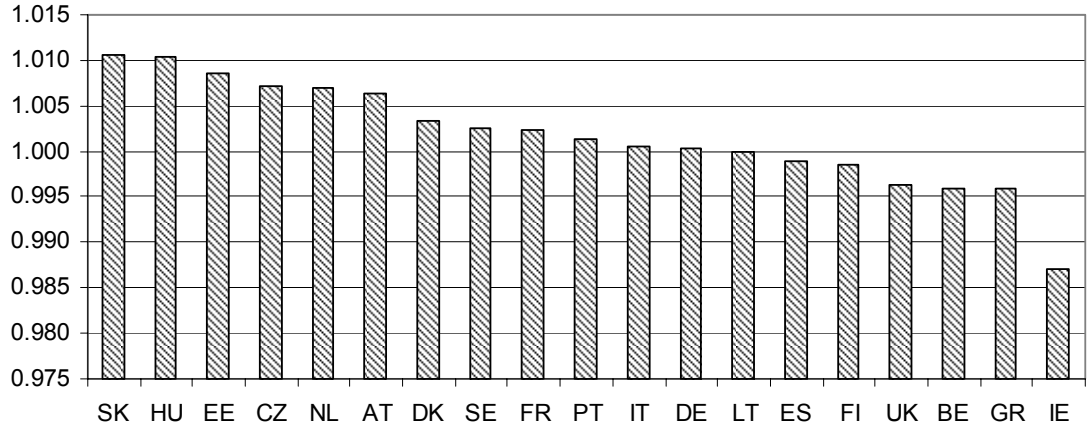


Figure 11

Projected index of job quality, based on relative wages, 2010 relative to trend



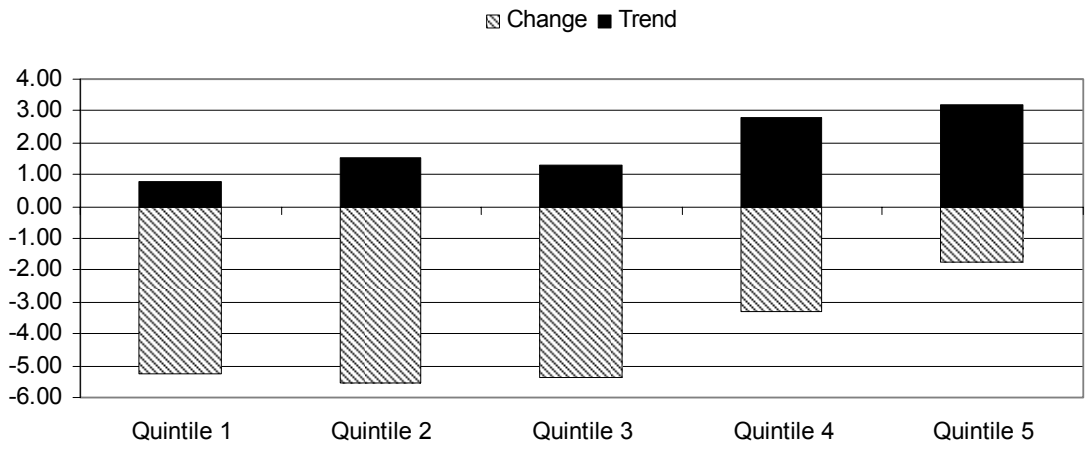
In 5 of the other countries – Germany, Spain, Italy, Lithuania and Finland – the index is projected to increase at a similar rate over the recession as in the trend scenario, while in 4 – Belgium, Ireland, Greece and the UK – a fall relative to the trend is projected. In these last four countries, therefore, the effect of the recession is projected to be to shift employment on average away from higher paid jobs to lower paid ones. In 8 countries, the recession is projected to have had relative little effect in shifting employment either towards or away from lower paid jobs, while in 7 – Estonia, the Netherlands, Slovakia, the Czech Republic, Denmark, Hungary and Austria – the projected effect is to shift employment towards higher paid jobs. In these 7 countries, therefore, it is those in lower paid jobs who are estimated to be hit most by the recession.

The projected changes in employment by relative skill level

The same exercise can also be carried out in terms of the relative skill levels of employment, measuring skills by educational attainment broken down by broad ISCED level and assigning skill levels to jobs in a base year (in this case around 2000) according to the division of employment between low, medium and high education levels[5]. This shows a similar pattern in terms of the relative change in employment by quintile over the period 2008 and 2010, as that based on relative wages as well as in relation to the trend growth which would have been expected in the absence of recession (Figure 12).

Figure 12

Projected effect of the recession on employment by relative skill quintile, EU, 2010



In the EU as a whole, therefore, employment in the bottom three quintiles in terms of education levels is projected to decline by 5-6% over the two years 2008-2010, while in the top quintile it is projected to decline by only just under 2%, much the same pattern as that for relative wages, though more pronounced. Relative to the level of employment in 2010 that would have been expected had trend growth continued, there is again less of a difference between the changes in employment by quintile, the effect of the recession being estimated to reduce employment in the bottom quintile by around 6%, slightly more than employment in the top quintile but about the same as that in the second to top quintile.

A similar pattern of change as for relative wages is also evident in individual Member States (see Annex Figures A.1-A.5).

[5] Low educational attainment corresponds to ISCED 0-2 (i.e. no education beyond compulsory schooling, medium to ISCED 3 and 4 (i.e. educational qualifications at the upper secondary level) and high to ISCED 5 and 6 (i.e. tertiary level qualifications).

Much the same pattern across countries is also evident for the aggregate index of the overall shift in employment between jobs ranked in terms of their skill needs. The index is projected to increase between 2008 and 2010 in all the Member States covered except Belgium, where the index is projected to remain unchanged, though the increase is marginal in Slovenia (Figure 13).

Figure 13

Projected index of job quality, based on relative skills, 2010 relative to 2008

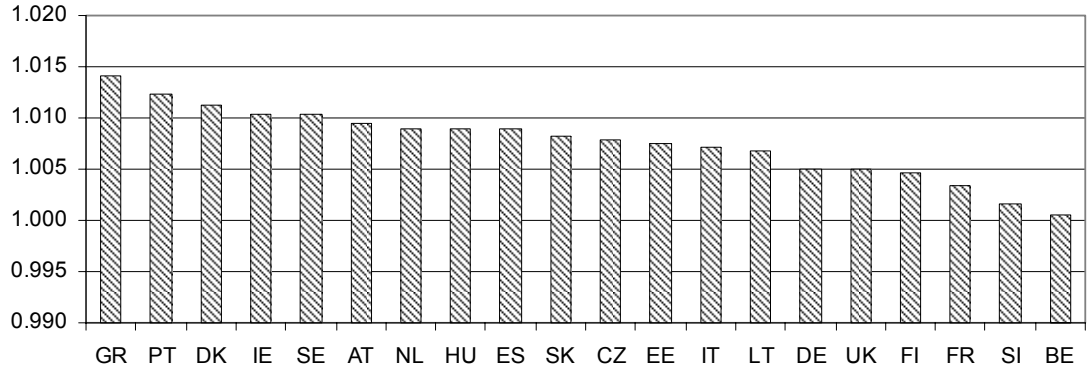
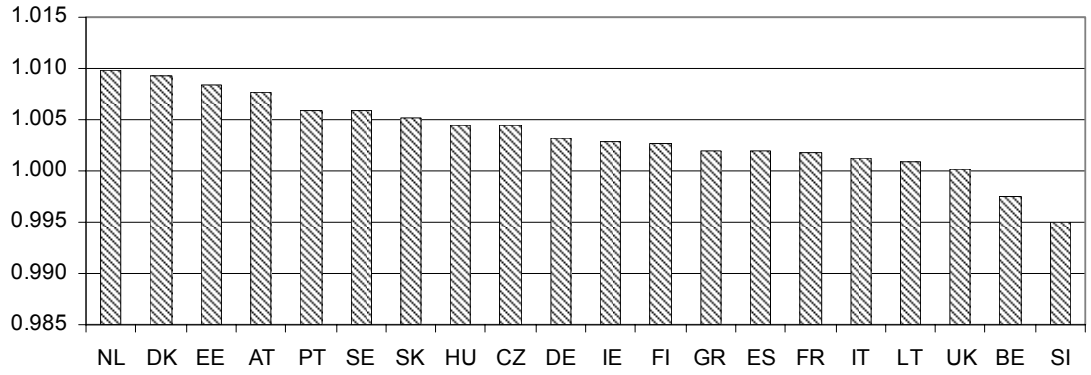


Figure 14

Projected index of job quality, based on relative skills, 2010 relative to trend



Relative to the projected trend level in 2010, however – which in all countries except Belgium (where is projected to be the same) is projected to be higher than in 2008, reflecting a general move towards higher skilled jobs – a fall in the index is projected in Slovenia (where data on relative wages are not available for this analysis) as well as in Belgium (Figure 14). In the last, therefore, the effect of the recession is projected to be to shift employment towards lower skilled as well as lower paid jobs. In 6 countries – Greece, Spain, France, Italy, Lithuania and the UK – little or no change relative to the trend is projected. In Germany, Ireland and Finland, moreover, the rise relative to trend is projected to be marginal. This leaves 9 countries in which the index is projected to increase relative

that under the trend scenario and, where, accordingly, the effect of the recession is estimated to be shift employment towards higher skilled jobs and away from lower paid ones.

These 9 countries include the 7 (the Czech Republic, Denmark, Estonia, Hungary, the Netherlands, Austria and Slovakia) in which the recession is estimated to shift employment towards higher paid jobs, plus two (Portugal and Sweden), where little effect of this kind is projected.

8.4 The effect of the recession on the employment of men and women

From the above analysis of the differential effects of the recession on sectors of activity and occupations, it is evident that the employment of men is likely to be more affected than that of women. This is confirmed by more detailed analysis of the division of men and women in different jobs (again defined in terms of ISCO 2-digit occupations in NACE 2-digit sectors).

On the assumption that the trend shift in individual jobs between men and women continues in future years but is the same under the recession scenario as under the trend on[6] – that, in particular, there is no tendency for women to be made redundant ahead of men or vice versa – jobs for men are indeed projected to be reduced much more than those for women.

Across the EU as a whole, therefore, the employment of women is projected to decline by just under 1.5% over the two years 2008-2010 as against a growth of 2.5% over the period which would otherwise be expected on the basis of past trends (Figure 15).

The effect of the recession, therefore, is estimated to reduce the employment of women by just under 4%. In the case of men, by contrast, the employment is projected to decline by almost 5% over the two years as opposed to a trend increase of 1.5% (Figure 16). The recession, therefore, is estimated to reduce employment of men by just over 6%.

The greater effect of the recession on the employment of men than of women is projected for all countries, with the exception of Slovenia, where the effect is estimated to be much the same. The difference is especially marked for the Estonia and Lithuania, where it amounts to some 4% percentage points. In terms of the overall reduction in employment projected over the two years 2008-2010, however, job losses are particularly concentrated among men in Ireland, where they are estimated to amount to almost 16% as against a

[6] More specifically, it is assumed that the relative shares of men and women in each job distinguished (i.e. each ISCO 2-digit occupation within each NACE 2-digit sector) continue to change according to the trend over the period 2000 to 2007.

figure of just over 9% for women. In Estonia and Lithuania too, the employment of men is also projected to decline by over 10% over the two years, though in these cases, employment of women is projected to fall by only slightly less (by around 9%).

Figure 15

Projected effect of the recession on employment of women, 2010 relative to 2008 and trend

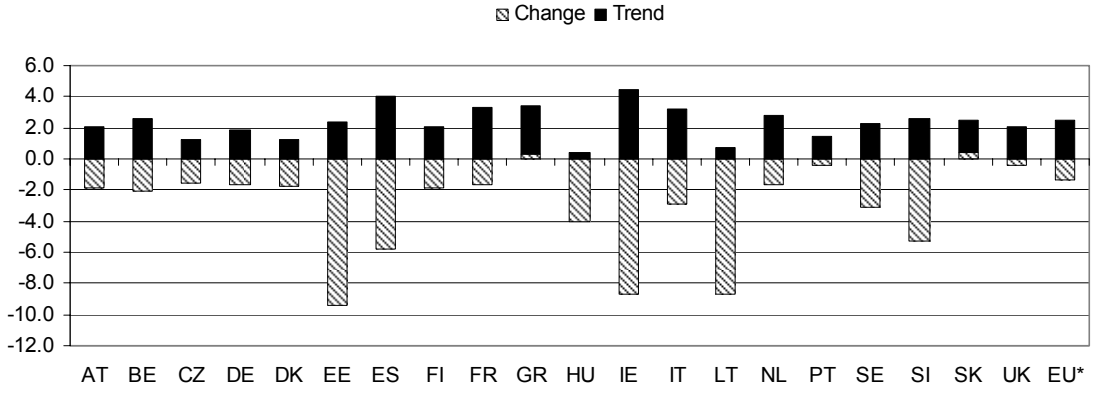
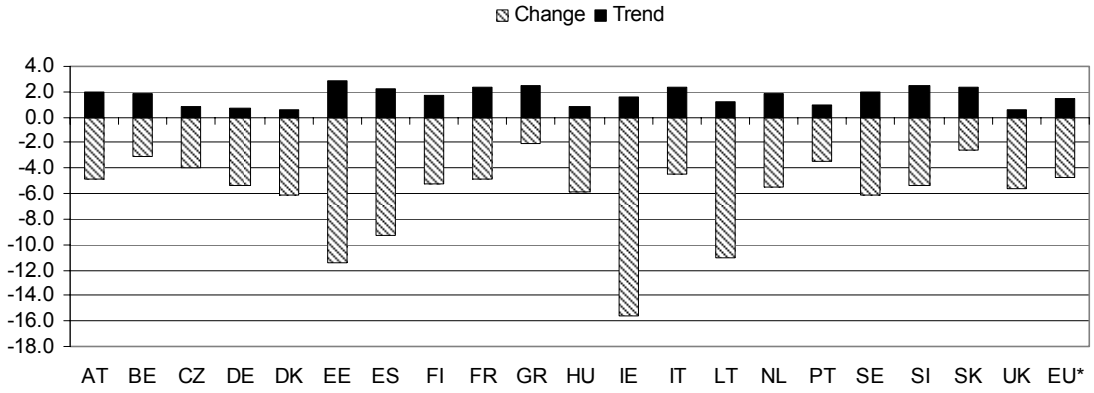


Figure 16

Projected effect of the recession on employment of women, 2010 relative to 2008 and trend



8.5 The effect of the recession on part-time and full-time employment

The implications for the recession on full-time and part-times employment can also be examined, on the assumption that the proportion of men and women working full-time or part-time in each individual jobs as defined here continues to change according to the trend over the recent past (i.e. an analogous assumption as for the division between men and women). Of course, this assumption may not prove valid insofar as employers alter working arrangements as a result of the reduction in sales caused by the recession and the consequent decline in the need for labour, though whether any such change is likely to be in the direction of reducing or expanding part-time jobs is not altogether clear.

On the assumption that the division between part-time and full-time within jobs continues to change in line with trend – i.e. that those made redundant are not disproportionately employed either full-time or part-time – employment in full-time employment is projected to decline by around 4% in the EU over the two years 2008-2010 while part-time employment is projected to decline only slightly, reflecting the differential effect of the recession on industry relative to services (Figures 17 and 18).

Figure 17

Projected effect of the recession on full-time employment, 2010 relative to 2008 and trend

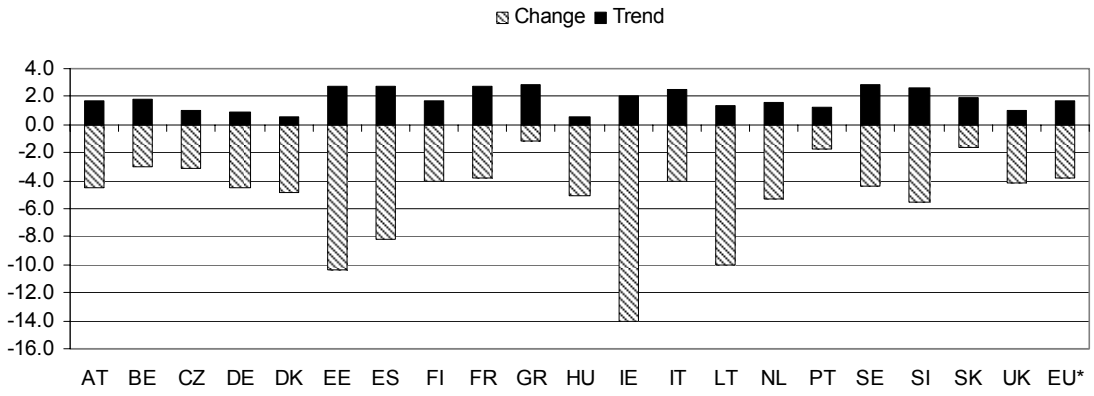
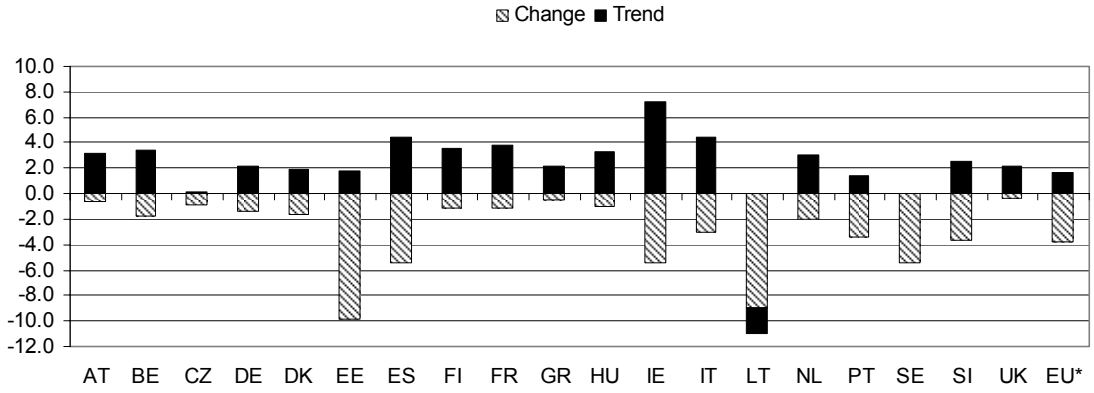


Figure 18

Projected effect of the recession on part-time employment, 2010 relative to 2008 and trend



There is slightly less of a difference once more between the effect of the recession on the two types of job if this is measured in relation to the growth of employment which otherwise would have taken place. In the absence of the recession, therefore, an increase of part-time employment of just under 3% over the two years would have been expected had employment grown as in previous years as compared with an increase of just under 2% in full-time employment on the same basis. This still implies, however, that full-time employment is estimated as a result of the recession to be some 5.5% lower in 2010 than

it otherwise would have been, while part-time employment is estimated to around 3.5% less.

The effect on full-time jobs is especially pronounced in Ireland where they are projected to be reduced by 14% over the two years and to be some 16% less in 2010 than trend, while part-time employment is projected to fall by just over 5%, though this still means that it will be almost 13% lower in 2010 than it would have been if employment had continued to increase in line with recent trends. In both Estonia and Lithuania where total employment is also projected to fall substantially, there is little difference in the effect on full-time and part-time jobs since the latter account for only a small proportion of employment.

8.6 Vulnerable workers

It is also possible to identify the jobs which are likely to be experience the biggest reductions over the period 2008-2010. These differ to some extent across countries, though there are marked similarities. In particular, in nearly all countries, the biggest decline in employment in absolute terms, i.e. in terms of the numbers losing their jobs, is projected to among skilled manual workers in construction – among bricklayers, carpenters, roofers and so on (Table 20). Clerks and tellers employed in banks also figure prominently among those projected to experience the biggest job losses, as do shop assistants.

Table 21

The most vulnerable jobs in the recession across the EU

Austria	Builders	Shop assistants	Agricultural workers
Belgium	Bank clerks	Builders	Bank managers
Czech Republic	Builders	Car assembly	Skilled engineering workers
Germany	Builders	Bank clerks	Skilled engineering workers
Denmark	Builders	Banking professionals	Shop assistants
Estonia	Builders	Shop assistants	Sewing machinist
Spain	Builders	Building labourers	Shop assistants
Finland	Builders	Shop assistants	Catering staff
France	Builders	Agricultural workers	Shop assistants
Greece	Agricultural workers	Builders	Clothing workers
Hungary	Builders	Shop assistants	Catering staff
Ireland	Builders	Building labourers	Shop assistants
Italy	Builders	Shop managers	Shop assistants
Lithuania	Builders	Agricultural workers	Shop assistants
Netherlands	Builders	Bank professionals	Catering staff
Portugal	Agricultural workers	Builders	Sewing machinist
Sweden	Builders	Shop assistants	Agricultural workers
Slovenia	Agricultural workers	Catering staff	Builders
Slovak Republic	Builders	Car assembly	Skilled engineering workers
United Kingdom	Builders	Building labourers	Bank managers

9. Employment in the recovery

As recovery gets underway, whenever it occurs, the demand for investment goods is likely to expand relatively rapidly because of the prolonged postponement of replacing plant and equipment or of upgrading production facilities on the part of other industrial sectors. Experience of previous economic downturns demonstrates that this is the case. At the same time, the growth in the output of investment goods will increase the demand for producer goods – for steel, for example – so pushing up output in these industries by more than in others. How far the growth in output feeds through into a growth employment, however, and how quickly this occurs are both highly uncertain. Both will depend on the extent to which the number employed has been reduced in line with the fall in output and how much, on the contrary, the number has been maintained by short-time working and other such arrangements, whether supported by governments or not. The evidence is that schemes of this kind have been used extensively in the present recession, especially in Germany, and have had a major effect in preventing job reductions in the engineering industries in particular.

In the long-term, however, such schemes are likely to have no more than a marginal effect on the number employed in the different industries, smoothing out the fluctuations in employment – i.e. reducing job losses during the recession but also the need for job creation during the recovery.

It is also possible that the recession will cause more of a permanent reduction in employment in the sectors which have been hit hardest than the others. This seems to have been a consequence after the downturns in the early 1980s and early 1990s, more so after the latter, when in a number of countries the downturn was accompanied by an increase rather than a reduction in productivity in producer goods industries.

The assumption adopted to generate a recovery scenario is that employment in each of the sectors makes up some of the ground lost as a result of the recession, and so increases faster in the years after 2010 than it would have done under a trend scenario – i.e. one where the recession did not occur – but that it makes up only around 60% of this by 2020. This means that the number employed in the sectors hardest hit increases by more than in other sectors during the recovery but that the overall job loss relative to trend is also larger than in other sectors.

The overall number employed in the EU as a whole, therefore, is projected to grow by around 1.4% a year over the five years 2010-2015 but this still leaves the number just under 4% below where it would have been had employment continued to increase in line with the trend growth from 2008 on (Table 22).

Table 22

Change in employment by sector under recovery and trend scenario in the EU, 2010-2020

Annual average % change

	Recovery from recession		Trend	
	2010-15	2015-20	2010-15	2015-2020
Agriculture	-3.4	-4.7	-3.2	-4.5
Food, drink, tobacco	0.3	0.0	-0.1	-0.2
Clothing and textiles	-13.6	-10.2	-11.6	-9.9
Paper, pulp, printing	-1.1	-1.6	-1.3	-1.7
Chemicals, pharmaceuticals	-2.1	-3.0	-2.3	-3.1
Rubber and plastics	1.3	1.0	0.8	0.7
Glass, plastics, rubber, etc	-0.4	-0.9	-0.8	-1.1
Metal manufacture	0.7	0.3	-0.3	-0.3
Machinery and equipment	0.1	-0.4	-0.9	-1.1
Electrical, electronic equipment	0.0	1.1	-0.6	0.5
Motor vehicles, transport equipment	3.2	2.7	1.8	1.7
Furniture, other manufactures	-0.8	-0.7	-1.0	-0.9
Construction	2.4	1.9	1.3	1.2
Retail, wholesale distribution	1.1	0.8	0.6	0.5
Hotels and restaurants	3.2	2.7	2.5	2.3
Transport	1.7	1.4	1.2	1.1
Financial services	2.4	1.9	1.0	0.9
Business services	3.3	2.9	3.0	2.8
Public administration	0.8	0.7	0.8	0.7
Education	1.4	1.3	1.3	1.2
Health, social services	2.1	1.9	2.0	1.9
Personal, community services	2.2	2.0	2.0	1.9
Total	1.4	1.3	1.0	1.0

Employment in motor vehicles, construction and financial services is projected to rise in each case by over 1% more than under the trend scenario, while the gap in the other engineering industries is similar, but here a small increase is projected instead of a decline. In the service sectors other than finance, growth in employment is also projected to be higher than under the trend scenario but the difference is smaller because job losses during the recession were also smaller. In agriculture, mining and textiles and clothing, the projected reduction in employment is slightly larger than under the trend scenario since the fall during the recession was also assumed to be slightly smaller than trend because of some moderation in productivity and reduction in working time to soften the effect on jobs.

Over the following five years, the growth of employment is projected to decline slightly but to remain above trend, so that by 2020, the number in work is only just over 2% less than it would have been had employment continued to increase at its trend rate throughout the period from 2008 on. A similar pattern of relative growth rates in employment in each of the sectors is projected as in the earlier period. This means that the number employed in motor vehicles and textiles and clothing is projected to be around 8% less than the trend level in 2020, in financial services, around 7% less and in the engineering industries and

construction, some 6% less. In public administration, education and health, on the other hand, employment is projected to be only around 1% or less below the trend level.

9.1 The implications for job quality

Job quality measured in terms of relative wages

The recovery is associated with an increase in job quality in most countries, in the sense that employment is projected to shift towards the higher paid jobs over the period 2010-2015. The only countries where this is not the case are Estonia, the Netherlands and Slovakia where the index of job quality, measured in terms of relative wages, is projected to decline, though in France, the index is projected to remain unchanged and in Austria, to increase only marginally (Table 23).

Table 23

Change in index of job quality, measured in terms of relative wages, 2008-2020

	Percentage point change in job quality index					
	Recession + recovery			Trend		
	2008-10	2010-15	2015-20	2008-10	2010-15	2015-20
Austria	0.006	0.001	-0.002	-0.001	0.003	0.000
Belgium	-0.001	0.009	0.005	0.003	0.007	0.003
Czech Republic	0.011	0.009	0.007	0.004	0.010	0.008
Germany	0.002	0.006	0.005	0.002	0.006	0.005
Denmark	0.005	0.002	0.003	0.002	0.004	0.004
Estonia	0.007	-0.006	-0.006	-0.001	-0.004	-0.004
Spain	0.002	0.010	0.005	0.004	0.008	0.005
Finland	0.003	0.011	0.008	0.004	0.010	0.008
France	0.003	0.000	-0.002	0.001	0.000	-0.001
Greece	0.000	0.013	0.012	0.004	0.011	0.011
Hungary	0.013	0.002	-0.006	0.002	0.004	-0.002
Ireland	-0.008	0.016	0.012	0.005	0.011	0.009
Italy	0.004	0.010	0.004	0.003	0.009	0.004
Lithuania	0.006	0.017	0.017	0.006	0.015	0.015
Netherlands	0.003	-0.012	-0.009	-0.004	-0.010	-0.007
Portugal	0.010	0.020	0.020	0.009	0.021	0.020
Sweden	0.008	0.012	0.013	0.005	0.013	0.013
Slovak Republic	0.007	-0.009	-0.005	-0.003	-0.006	-0.003
United Kingdom	-0.002	0.005	0.003	0.002	0.003	0.002

Note: The index shows the change in employment between jobs ranked in terms of their relative wages. An increase denotes a shift towards higher paid jobs, a reduction, a shift away from such jobs.

In the former three countries, the job quality index also shows a decline under the trend scenario over this period, though it is smaller than in the recovery scenario. In Austria, the marginal rise in the index the recovery scenario is less than in the trend scenario and in France, the index also shows no change in the trend scenario. These are all countries in which the increase in the job quality index over the two years of recession was more than

projected in the trend scenario. The behaviour of the index in the recovery in these countries, therefore, can be seen as some unwinding of the increase which occurred in the recession.

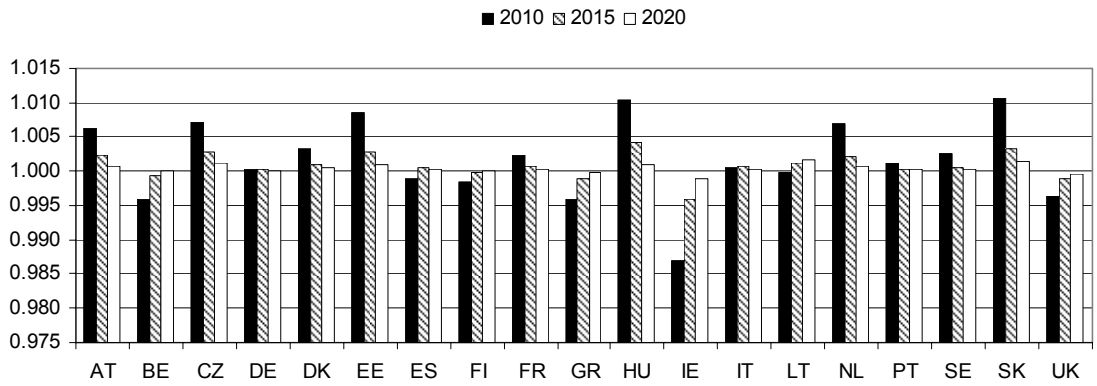
Similarly, in Denmark, the Czech Republic, Hungary, Portugal and Sweden (the last two, both marginally), it is equally the case that the rise in the index in the recovery scenario is projected to be less than in the trend scenario, whereas over the recession, the index rose by much more than in the trend scenario. Again, therefore, the smaller shift in employment towards higher paid jobs over this period relative to the shift which is projected to occur in the trend scenario can, in some sense, be seen as compensating for the larger rise in the earlier period.

In all the other countries except Germany, the increase in the index over the recovery period 2010-2015 is projected to be more than under the trend scenario, whereas in the recession period, the index is projected to have risen by less than if the trend growth of employment had continued, or, in the case of Belgium, Ireland, and the UK, to have fallen. In Germany, the rise in the index is projected to be the same in the recovery scenario as in the trend scenario, as it was over the recession period.

In the subsequent 5 years, 2015-2020, the job quality index is projected to continue to fall in Estonia, the Netherlands and Slovakia but also in Austria, France and Hungary (in which the rise in the index was projected to particularly large during the recession). In all cases, the fall is projected to be greater than under the trend scenario. Nevertheless, in all cases too, the value of the index in 2020 is projected to be higher under the recession-recovery scenario than under the trend scenario, so that an average shift of employment towards higher paid jobs is projected over the period as a whole (Figure 19)

Figure 19

Index of job quality, measured in terms of relative wages, relative to trend



In all the other countries, the job quality index is projected to increase. In the Czech Republic and Denmark, the index is projected to rise by less over this period in the recovery scenario than in the trend scenario, and in these countries too, the value of the index in 2020 is projected to be higher than under the trend scenario. In Portugal and Sweden as well as in Germany, Spain, Finland and Italy, the index is projected to rise to the same extent as under the trend scenario, and in all 5 cases, the value of the index is projected to be either the same or only marginally higher in 2020 than if employment had risen in line with the trend throughout the period.

In the other countries, the index is projected to increase by more under the recovery scenario than if the trend growth in employment had continued. Nevertheless, in three of the countries – Greece, Ireland and the UK – the value of the index is projected to be lower than under the trend scenario, while in Belgium, it is projected to be the same. Only in Lithuania is it projected to be higher.

In most countries (in 13 of the 19 covered), therefore, the effect of the recession followed by recovery is projected to be to shift employment towards higher paid jobs – or, in other words, those in lower paid jobs are to projected to be affected most. Only in Greece, Ireland and the UK, is the reverse the case, while in Belgium, Germany and Finland, no net shift at all is projected.

Job quality measured in terms of relative skill levels

A broadly similar picture emerges as regards the projected shift of employment between jobs with different skill levels. Over the 5 years of recovery, 2010-2015, the index measured in relative skills terms, is projected to increase in all countries except Estonia and the Netherlands, where the index is projected to fall, and Denmark, where it is projected to remain unchanged (Table 24). This is equally the case over the subsequent 5-year period, except that there is a marginal increase projected for Denmark.

An increase in the index, however, is also projected for all countries over the two periods under the trend scenario, with the sole exception again of Estonia and the Netherlands. Nevertheless, in most countries, the rise in the index under the recession followed by recovery scenario is projected to be larger than under the trend scenario, so that the value of the relative skill index in 2020 is higher under the former scenario than under the latter, the only exceptions being Belgium and the UK, where the value is the same, and Slovenia, where it is lower (Figure 20). The projected effect of the recession in most countries, therefore, is to shift employment both in the short and longer terms towards higher skilled jobs, or, in other words, to reduce the employment of the lower skilled disproportionately, though in many countries, the effect is very small.

Table 24

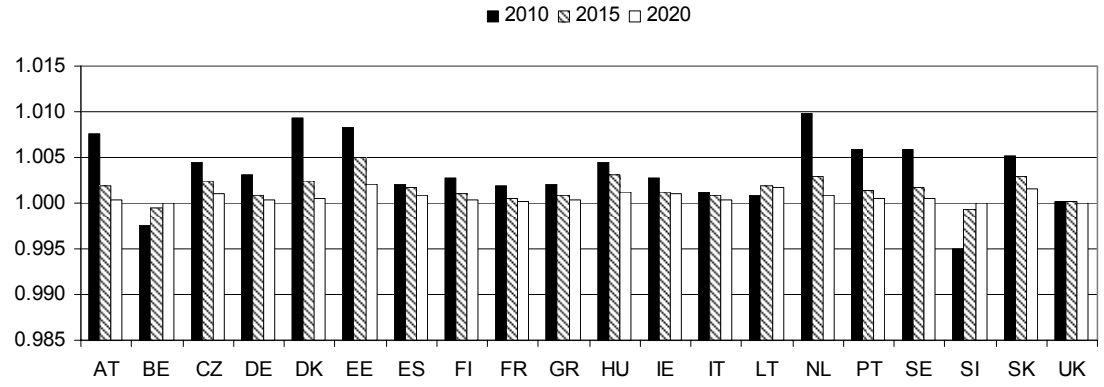
Change in index of job quality, measured by relative skill levels, 2008-2020

	Percentage point change in job quality index					
	Recession + recovery			Trend		
	2008-10	2010-15	2015-20	2008-10	2010-15	2015-20
Austria	0.009	0.003	0.004	0.002	0.006	0.006
Belgium	0.000	0.007	0.004	0.003	0.005	0.004
Czech Republic	0.008	0.009	0.007	0.003	0.009	0.007
Germany	0.005	0.004	0.004	0.002	0.005	0.005
Denmark	0.011	0.000	0.001	0.002	0.004	0.003
Estonia	0.008	-0.002	-0.009	-0.001	-0.003	-0.006
Spain	0.009	0.017	0.013	0.007	0.016	0.013
Finland	0.005	0.004	0.003	0.002	0.005	0.003
France	0.003	0.003	0.001	0.002	0.003	0.002
Greece	0.014	0.029	0.025	0.012	0.029	0.025
Hungary	0.009	0.010	0.004	0.005	0.008	0.005
Ireland	0.010	0.018	0.018	0.007	0.019	0.018
Italy	0.007	0.016	0.010	0.006	0.016	0.011
Lithuania	0.007	0.015	0.014	0.006	0.013	0.013
Netherlands	0.009	-0.006	-0.002	-0.001	-0.003	0.000
Portugal	0.012	0.013	0.014	0.006	0.016	0.015
Sweden	0.011	0.009	0.010	0.004	0.011	0.011
Slovak Republic	0.008	0.009	0.008	0.003	0.008	0.008
United Kingdom	0.005	0.009	0.007	0.005	0.009	0.007

Note: The index shows the change in employment between jobs ranked in terms of their relative skill levels. An increase denotes a shift towards higher paid jobs, a reduction, a shift away from such jobs.

Figure 20

Index of job quality, measured in terms of relative skill levels, relative to trend



10 Concluding remarks

Although the overall effects of the recession on employment, specifically the decline that it gives rise to, may well differ from that projected here, this in itself does not invalidate the analysis set out above in respect of the differential effects of the recession on different

sectors of activity and different jobs. Both the examination of past economic downturns in the EU and the evidence from the early stages of the present recession strongly suggest that the fall in economic activity will hit particular sectors much harder than others – the investment goods industries and construction, especially. The financial services sector, as is apparent from the jobs cuts made by a number of large banks is also being disproportionately affected. The projections of job quality which result from the analysis, therefore, while they may not be fully realized, are likely to be indicative of the effect of the recession on this, and, in particular, of the likely shift in employment between lower and higher quality jobs, as measured by both the relative wages they have and the relative skill levels they require.

This shift is projected to be predominantly from jobs with lower wages and skills to those with higher levels in most countries, though not all, Austria, the Netherlands, Estonia and Slovakia being the exceptions. Such a shift is likely effectively to reinforce the shift in this direction implied by past trends continuing.

Assuming that men and women are treated equally by employers – in the sense that any losses of particular jobs affect them proportionately, then men stand to be hit much harder than women by the recession simply because of the jobs that they do. This is already apparent in the statistics up to mid-2009, which show a much larger reduction in the employment of men than of women. At the same time, partly linked to this, there are more full-time jobs likely to be lost than part-time ones, simply because they predominate in the sectors in which employment is likely to decline by most. On a full-time equivalent basis, therefore, the effect of the recession on employment is likely to be larger than the effect on job numbers.

The recovery, when it comes, is likely to see a continuing increase in job quality, in the sense of shifts of employment from lower to higher level jobs, though in most countries, at a slower pace than previously or than would be expected from the continuation of past trends, as the sectors hit hardest by the recession experience some bounce-back in employment. This is unlikely, however, to be sufficient to return the number employed in these sectors to the level it would have been had the recession never occurred.

Annex

Table A1

Spain

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	16.9	5.2	-13.2	6.1		1.0	-7.4	-4.4		-0.8	-6.3	11.0		1.6	-1.7	1.7		-0.1	-5.8	-6.0		-1.1
C	0.7	0.3	5.3	-7.0		-0.5	-1.8	-8.3		-2.1	7.2	1.4		1.4	0.0	1.8		-1.6	-1.8	-9.9		-0.1
DA	3.3	2.4	0.4	1.7		0.2	-4.1	0.9		0.7	4.7	0.8		-0.3	0.0	1.1		-0.7	-4.1	-0.2		1.3
DB	3.0	1.3	-7.0	-4.6		-1.3	-9.0	-8.6		-0.7	2.2	4.5		-0.5	0.0	1.1		-0.8	-9.0	-9.6		-1.3
DC	0.7	0.3	3.3	-3.8		-2.9	-9.8	-2.5		-2.2	14.5	-1.3		-0.2	0.8	1.1		-0.7	-10.5	-3.6		-0.6
DD	0.9	0.7	-6.8	-7.3		1.9	-10.7	-2.1		2.3	4.4	-5.3		-0.2	-1.7	3.0		-1.3	-9.2	-4.9		1.6
DE	1.3	1.2	1.6	0.5		3.4	0.3	-1.5		2.5	1.3	2.1		1.2	2.2	2.2		-0.7	-1.9	-3.6		3.2
DF	0.1	0.0	-6.5	3.3		-0.8	-16.9	-11.7		-0.1	12.6	16.9		-0.9	-4.8	-0.2		-0.8	-12.7	-11.5		0.9
DG	1.3	0.9	0.4	0.1		1.8	-3.6	-2.0		1.4	4.2	2.2		0.3	0.2	0.6		-0.5	-3.9	-2.6		2.3
DH	0.7	0.6	0.1	0.0		3.6	-7.4	-5.5		2.7	8.1	5.8		1.0	-4.3	-1.1		-0.7	-3.2	-4.4		2.7
DI	1.9	1.1	10.8	0.5		3.6	-7.2	-4.8		2.1	19.4	5.6		1.5	-1.3	0.9		-0.4	-6.0	-5.7		3.2
DJ	3.1	2.7	-5.1	-11.9		3.2	-6.0	-2.0		3.7	0.9	-10.1		-0.6	-0.6	0.5		-0.7	-5.4	-2.5		3.9
DK	1.4	1.3	-2.3	-2.8		4.8	-8.3	-3.3		4.3	6.5	0.5		0.1	0.3	0.9		-0.7	-8.6	-4.1		3.7
DL	1.3	0.9	4.6	-4.3		1.1	-4.8	-6.5		0.2	9.9	2.3		0.5	0.6	0.6		-0.7	-5.3	-7.0		1.5
DM	2.4	1.4	-7.0	-12.3		2.7	-10.1	-7.2		0.9	3.5	-5.5		1.6	-4.9	0.2		-0.7	-5.4	-7.3		2.4
DN	1.7	1.3	-0.5	-5.2		3.8	-8.4	0.1		1.9	8.6	-5.2		1.6	0.9	2.0		-0.8	-9.3	-1.9		2.3
E	0.6	0.5	13.6	3.4		4.5	2.3	1.6		-0.7	11.0	1.8		5.5	0.4	2.1		-2.1	1.8	-0.5		1.7
F	9.4	12.6	1.3	-5.1		5.3	-8.1	-6.3		7.5	10.2	1.4		-2.0	-0.6	1.2		0.6	-7.5	-7.5		6.7
G	13.2	14.5	-3.2	2.5		3.6	-1.2	0.3		2.9	-2.0	2.2		0.8	-0.3	1.2		-0.4	-1.0	-0.9		3.7
H	4.1	6.6	6.2	1.1		2.5	3.6	-0.9		4.0	2.5	2.0		-1.3	1.0	1.2		-0.7	2.6	-2.1		5.3
I	5.4	5.5	0.3	3.9		4.5	0.2	0.0		3.1	0.1	3.9		1.4	-0.7	0.7		-0.6	1.0	-0.7		4.2
J	2.3	1.9	2.4	-5.1		6.2	0.9	0.8		0.7	1.4	-5.8		4.7	-0.5	0.7		0.0	1.4	0.1		1.4
K	2.1	8.4	0.8	2.9		4.0	7.7	2.4		5.9	-6.4	0.4		-1.8	0.4	-0.8		-0.5	7.4	3.3		7.0
L	5.2	6.6	0.8	1.0		2.8	8.9	-0.9		1.3	-7.4	1.9		1.4	-2.6	-0.2		-0.4	11.8	-0.6		2.2
M	3.6	4.9	4.0	3.1		3.1	3.0	3.1		2.1	1.0	0.0		0.9	0.4	0.7		-0.8	2.6	2.4		3.5
N	3.4	6.0	0.8	2.9		3.8	-3.1	3.4		4.1	4.1	-0.5		-0.3	-1.3	0.9		-0.5	-1.8	2.5		5.3
O	2.3	4.4	0.8	9.0		4.1	4.3	-4.8		4.2	-3.3	14.5		0.0	-0.5	-0.5		-0.6	4.8	-4.4		5.7
Total			-0.1	0.5		3.5	-3.0	-1.6		3.2	2.9	2.1		0.3	-0.6	0.6		-0.4	-2.4	-2.1		3.6

There was no downturn in the early 2000s.

For sector keys see appendix table A.12.

Table A2

Netherlands

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	5.1	3.3	5.1	3.1	1.3	0.4	-0.6	1.1	-2.5	1.2	5.7	2.0	3.9	-0.8	-0.3	0.6	-1.7	1.2	-0.3	0.5	-0.8	0.0
C	0.2	0.1	-7.3	-0.4	-1.3	-0.4	3.0	3.0	-0.6	-1.2	-10.0	-3.3	-0.7	0.8	-0.2	4.0	-1.0	0.7	3.2	-0.9	0.4	-1.9
DA	3.2	1.7	1.8	3.3	0.8	0.7	-0.7	0.3	-3.7	-0.8	2.5	2.9	4.7	1.5	0.4	0.5	-1.0	-0.2	-1.0	-0.2	-2.6	-0.6
DB	1.0	0.2	-2.1	-2.9	-3.5	1.7	-6.3	-5.6	-6.3	-4.3	4.5	2.9	2.9	6.3	0.1	-2.5	1.4	-0.3	-6.4	-3.2	-7.6	-4.0
DC	0.1	0.0	-2.1	5.4	-0.9	-4.0	-6.3	-5.6	-6.4	-3.7	4.5	11.7	5.9	-0.3	0.1	-2.5	1.4	-0.3	-6.4	-3.2	-7.7	-3.4
DD	0.8	0.6	-3.1	0.2	-5.3	2.1	-1.2	1.0	-2.1	0.8	-2.0	-0.7	-3.3	1.3	0.3	0.9	-0.7	-0.5	-1.4	0.1	-1.4	1.4
DE	2.4	1.3	-0.6	-0.3	-2.6	1.7	-0.2	-2.2	-4.5	-1.2	-0.4	1.9	2.0	2.9	0.9	-0.4	-0.8	1.4	-1.0	-1.7	-3.7	-2.6
DF	0.1	0.1	-0.8	8.4	10.8	-5.7	4.4	-0.5	2.2	-1.3	-5.0	9.0	8.4	-4.5	0.2	-0.8	1.1	-0.2	4.1	0.2	1.1	-1.2
DG	1.5	0.8	1.2	2.1	5.3	4.7	-0.4	-3.7	-0.4	-0.8	1.6	6.0	5.8	5.6	-0.1	-0.1	0.1	-0.1	-0.3	-3.6	-0.6	-0.7
DH	0.4	0.4	1.0	-0.9	-0.1	2.7	-0.7	-2.5	-2.3	1.1	1.8	1.7	2.3	1.5	-0.1	0.6	0.4	-1.1	-0.7	-3.2	-2.7	2.3
DI	0.8	0.6	-3.1	-4.9	-6.1	1.8	-1.2	1.0	-2.1	0.8	-2.0	-5.8	-4.1	1.0	0.3	0.9	-0.7	-0.5	-1.4	0.1	-1.4	1.4
DJ	2.6	1.4	-1.6	-2.0	-1.4	2.0	-2.3	-2.2	-2.0	0.4	0.6	0.3	0.6	1.6	0.3	0.9	0.6	-0.5	-2.5	-3.1	-2.7	0.9
DK	1.5	1.1	-1.3	-2.4	-2.1	4.4	-2.3	-2.0	-3.0	1.8	1.0	-0.4	0.9	2.5	-0.1	0.0	0.5	-0.8	-2.2	-2.0	-3.5	2.7
DL	2.4	1.0	-0.5	0.9	-8.0	3.3	-1.1	-5.7	-5.5	-0.3	0.5	7.0	-2.6	3.7	0.5	-0.2	-0.3	-0.2	-1.5	-5.4	-5.2	-0.1
DM	1.2	0.6	1.4	-4.6	-2.9	7.5	-0.6	-8.1	-2.5	-0.3	2.0	3.8	-0.4	7.8	0.1	-0.8	-0.7	-0.4	-0.7	-7.3	-1.8	0.0
DN	1.6	1.2	-3.1	-1.1	-0.3	3.4	-1.2	1.0	-2.1	0.8	-2.0	-2.1	1.8	2.5	0.3	0.9	-0.7	-0.5	-1.4	0.1	-1.4	1.4
E	0.7	0.4	0.2	-1.2	4.7	0.2	0.1	-0.2	-0.6	-3.6	0.1	-1.0	5.3	3.9	-0.3	0.3	-0.1	-0.9	0.4	-0.6	-0.5	-2.7
F	8.6	5.8	-5.3	-1.4	-4.4	2.5	-7.0	0.4	-2.7	3.2	1.8	-1.8	-1.7	-0.7	0.4	0.9	-0.5	0.3	-7.4	-0.5	-2.2	2.8
G	16.2	16.6	-1.8	-0.2	1.2	5.3	-2.5	2.0	-1.7	1.3	0.7	-2.1	2.9	3.9	-0.7	-0.1	-1.5	-1.3	-1.8	2.1	-0.2	2.6
H	2.3	3.6	-1.1	2.3	-4.8	3.7	-0.6	4.6	-2.5	1.8	-0.5	-2.2	-2.3	1.9	-1.7	-2.8	-2.0	-0.6	1.1	7.6	-0.5	2.4
I	6.0	5.7	0.6	2.5	3.0	7.6	-0.4	2.2	-2.6	2.6	1.0	0.3	5.8	4.9	-0.6	0.7	-1.1	-0.6	0.2	1.5	-1.5	3.2
J	3.5	3.4	2.4	5.3	3.2	3.3	-0.4	0.8	-2.0	2.9	2.8	4.5	5.3	0.4	-0.2	-0.6	-0.7	-0.8	-0.2	1.4	-1.3	3.7
K	7.3	17.0	0.7	2.8	-2.4	5.4	-3.6	4.1	-2.2	5.3	4.5	-1.2	-0.2	0.1	0.6	1.7	-0.6	-0.3	-4.2	2.4	-1.6	5.5
L	8.0	6.0	2.4	1.0	2.6	1.5	1.3	-1.6	2.8	-0.1	1.1	2.7	-0.1	1.6	-0.1	-0.3	0.6	-0.8	1.4	-1.3	2.1	0.7
M	5.5	4.9	1.7	-0.5	0.8	0.1	0.6	0.1	4.2	1.5	1.1	-0.6	-3.3	-1.4	0.0	-0.7	0.8	-0.4	0.6	0.8	3.4	2.0
N	10.0	14.0	0.6	2.6	4.3	2.0	1.6	2.9	5.5	2.9	-1.0	-0.3	-1.2	-0.9	-0.8	0.2	0.1	-0.5	2.3	2.7	5.4	3.4
O	4.0	4.6	-8.4	1.8	1.0	3.5	1.8	2.7	-0.1	2.9	-10.0	-0.9	1.1	0.6	0.0	3.1	-1.1	1.6	1.7	-0.3	0.9	1.2
Total			-0.8	1.3	0.4	3.6	-1.2	1.2	-0.8	2.1	0.4	0.1	1.2	1.5	-0.3	0.3	-0.8	-0.4	-0.9	0.9	0.0	2.5

For sector keys see appendix table A.12.

Table A3

Belgium

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	3.5	2.0	3.4	9.4	-3.1	2.6	4.9	11.2	-1.2	3.6	-1.5	-1.7	-1.9	-1.0	-0.2	-0.1	1.2	1.8	-1.3	-1.6	-3.1	-2.7
C	0.7	0.1	-25.0	-11.1	-5.6	-0.8	-21.8	2.1	-0.3	1.6	-4.1	-12.9	-5.4	-2.4	-2.1	-0.7	-0.8	0.0	-2.1	-12.3	-4.6	-2.4
DA	3.0	2.3	0.7	-1.0	2.2	-0.6	3.2	1.5	2.9	-0.2	-2.5	-2.4	-0.7	-0.4	-1.1	-0.6	-0.5	-0.2	-1.4	-1.8	-0.2	-0.3
DB	3.1	1.0	-0.7	-0.7	-3.7	1.9	4.9	7.2	3.3	5.0	-5.4	-7.3	-6.7	-2.9	-1.1	-1.5	-1.4	1.0	-4.3	-6.0	-5.4	-3.9
DC	0.2	0.0	1.7	-10.7	-4.1	-5.6	7.8	-9.5	3.9	2.0	-5.7	-1.3	-7.7	-7.5	-0.3	-1.6	-1.3	0.4	-5.4	0.4	-6.5	-7.8
DD	0.4	0.3	-3.9	-0.2	6.2	4.0	2.1	2.8	7.4	3.3	-5.9	-2.9	-1.1	0.7	-1.4	-1.2	-0.4	0.2	-4.6	-1.7	-0.7	0.5
DE	1.5	1.1	2.0	1.0	0.5	1.2	4.7	3.7	3.6	1.2	-2.6	-2.6	-3.0	0.0	-0.4	-0.6	-0.3	-0.1	-2.2	-2.1	-2.7	0.1
DF	0.3	0.1	-12.9	-10.1	-3.1	-10.7	-9.2	-7.3	-5.7	-8.4	-4.1	-3.1	2.8	-2.5	-1.0	0.4	0.0	-0.2	-3.1	-3.5	2.8	-2.4
DG	2.0	1.7	15.3	1.6	-0.2	5.5	17.9	4.1	1.1	4.9	-2.2	-2.5	-1.2	0.6	-0.5	-1.2	-0.3	-0.1	-1.7	-1.2	-0.9	0.7
DH	0.7	0.6	10.1	-0.2	2.5	3.0	12.4	1.0	3.5	1.5	-2.0	-1.2	-1.0	1.4	-0.4	-0.7	-0.9	0.0	-1.6	-0.5	-0.1	1.5
DI	1.4	0.7	-3.0	0.0	-0.4	-1.1	5.3	3.5	1.8	-0.3	-7.9	-3.3	-2.1	-0.8	-0.8	-2.0	-0.7	0.1	-7.1	-1.4	-1.5	-0.9
DJ	4.5	2.4	2.2	-7.2	0.7	3.4	8.0	-2.5	2.2	3.9	-5.4	-4.8	-1.5	-0.5	-1.0	-1.4	-0.8	0.3	-4.5	-3.4	-0.7	-0.8
DK	1.6	1.0	-1.2	-10.1	-3.1	6.1	5.1	-3.4	-1.2	6.1	-5.9	-6.9	-1.9	0.0	-1.0	-1.6	-0.2	0.2	-5.0	-5.4	-1.7	-0.2
DL	2.3	1.0	2.0	-2.9	-6.4	9.1	6.8	2.1	-1.3	10.0	-4.4	-4.9	-5.2	-0.8	-0.8	-1.3	-0.4	-0.3	-3.6	-3.6	-4.9	-0.5
DM	1.9	1.3	10.0	-2.0	-0.2	4.1	13.1	1.8	3.1	4.1	-2.7	-3.8	-3.3	0.0	0.5	-2.0	-0.5	0.0	-3.2	-1.8	-2.8	0.1
DN	1.4	0.7	-4.2	-4.6	-4.2	3.4	1.4	-0.7	-1.0	5.6	-5.6	-3.9	-3.2	-2.0	-1.7	-1.2	-1.2	0.4	-3.9	-2.7	-2.0	-2.4
E	0.9	0.6	0.6	0.2	-1.5	5.8	2.5	1.7	0.3	6.8	-1.8	-1.5	-1.8	-1.0	-1.2	-0.2	-0.1	-0.1	-0.7	-1.3	-1.7	-0.9
F	7.6	5.7	-11.3	-0.5	0.2	1.9	0.4	-0.2	2.1	0.8	-11.7	-0.3	-1.9	1.1	-3.1	-1.3	-1.4	0.8	-8.9	1.0	-0.5	0.3
G	15.0	14.2	-1.6	0.7	4.3	-0.1	0.7	1.6	3.6	-0.2	-2.2	-0.8	0.7	0.2	-0.9	-0.1	-0.3	0.1	-1.3	-0.7	1.0	0.0
H	2.8	3.5	0.9	0.1	-0.4	0.6	-0.1	-1.6	-0.8	0.3	1.0	1.7	0.4	0.4	-1.4	-0.6	0.4	0.6	2.5	2.4	0.1	-0.2
I	7.9	6.9	-0.6	1.8	2.0	2.2	1.1	2.8	2.8	0.6	-1.6	-0.9	-0.8	1.7	-0.5	-0.1	-0.8	0.3	-1.2	-0.8	0.0	1.3
J	3.6	3.3	1.8	-0.7	1.1	6.1	1.1	0.8	2.8	5.9	0.6	-1.5	-1.7	0.2	-0.5	0.0	-0.5	0.1	1.2	-1.5	-1.2	0.1
K	5.4	15.4	2.5	2.9	2.2	4.0	0.5	-1.9	0.5	-2.8	1.9	4.8	1.7	7.0	-0.1	0.5	0.6	0.8	2.1	4.4	1.2	6.1
L	10.0	9.9	0.5	1.3	1.6	1.7	1.1	2.4	0.2	0.8	-0.6	-1.1	1.5	0.9	0.0	-0.2	0.0	-0.1	-0.6	-0.9	1.5	1.0
M	8.1	8.0	1.0	1.2	0.6	0.3	0.9	-0.1	-0.6	0.3	0.1	1.2	1.2	0.0	-0.6	0.8	0.0	0.2	0.7	0.4	1.3	-0.2
N	5.8	11.0	3.3	0.7	2.0	2.1	0.7	-1.8	-0.6	-0.6	2.6	2.5	2.6	2.6	-0.6	-0.4	-0.4	-0.3	3.2	2.9	3.0	2.9
O	2.8	3.6	3.4	2.7	-1.2	1.6	3.3	2.2	-2.0	0.1	0.0	0.5	0.8	1.5	-0.6	0.1	0.1	0.4	0.6	0.4	0.6	1.1
Total			0.3	0.5	1.2	2.7	2.7	1.2	0.9	1.3	-2.3	-0.6	0.2	1.4	-0.9	-0.5	-0.2	0.2	-1.4	-0.1	0.4	1.1

For sector keys see appendix table A.12.

Table A4

Denmark

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	7.3	3.0	6.1	19.0	-0.3	2.2	-4.8	-5.7	-1.6	-0.3	11.5	26.2	1.2	5.2	-1.5	0.2	-0.4	0.7	-3.4	-5.9	-1.2	-3.4
C	0.1	0.1	4.5	-1.3	1.3	13.1	-3.1	-3.6	-1.3	2.1	7.9	2.4	2.6	15.4	-1.5	0.1	-0.4	0.8	-1.7	-3.6	-0.9	-2.8
DA	3.9	2.5	-1.1	-1.7	-3.9	-1.4	-1.4	-2.1	-1.6	-1.6	0.3	0.5	-2.4	-0.2	-1.6	0.1	-0.6	1.3	0.2	-2.3	-1.0	-2.5
DB	1.4	0.3	-0.3	-8.0	-5.2	-3.8	-5.1	-5.0	-6.6	-5.2	5.0	-3.2	1.5	2.8	-0.6	0.3	-1.5	1.9	-4.5	-5.3	-5.2	-8.2
DC	0.2	0.0	4.7	-25.6	-21.6	1.0	-2.4	-17.2	-20.9	-19.9	7.3	-10.1	-1.0	9.3	-1.0	0.1	-1.0	2.1	-1.3	-17.3	-20.0	-9.5
DD	0.5	0.5	1.7	-0.5	0.1	1.2	3.0	2.4	-4.9	7.3	-1.3	-2.8	5.2	0.3	-2.3	1.3	-2.1	0.6	5.5	1.1	-2.9	0.3
DE	2.3	1.5	-8.6	-2.4	-1.5	1.9	-10.4	-6.3	-3.8	3.3	1.9	4.1	2.4	0.8	-2.9	-0.9	-0.4	0.8	-7.7	-5.4	-3.4	0.4
DF	0.0	0.0	-37.0	-48.0	-3.3	-8.0	1.9	-21.8	-0.3	-37.5	-38.1	-33.4	-3.0	-1.9	-0.6	0.0	-1.9	0.3	2.4	-21.8	1.6	-6.4
DG	0.9	1.0	3.4	-4.9	-1.5	10.1	-3.1	-1.9	0.4	1.8	6.8	-3.1	-1.9	10.9	-1.9	0.5	-1.2	0.7	-1.2	-2.4	1.7	-1.4
DH	0.6	0.7	5.3	-13.1	1.0	3.3	-4.9	-3.3	-2.1	1.9	10.7	-10.1	3.2	0.3	-1.8	-0.8	-1.5	1.7	-3.2	-2.5	-0.6	1.4
DI	1.2	0.5	-10.6	-15.0	-1.2	2.1	-14.8	-4.0	-7.5	3.1	4.9	-11.5	6.8	1.5	-2.7	-1.1	-1.9	1.4	-12.4	-2.9	-5.7	-0.7
DJ	2.2	1.7	-12.4	8.8	-2.4	0.0	-10.8	-4.3	-3.9	-2.6	-1.8	13.7	1.5	-0.5	-0.9	0.4	-0.8	1.6	-10.0	-4.7	-3.2	-1.0
DK	2.9	2.2	-10.2	0.2	-1.2	-1.9	-10.1	-3.0	-3.2	-1.6	-0.1	3.3	2.1	-1.6	-2.2	-0.1	-1.3	0.6	-8.2	-2.9	-1.9	-1.0
DL	1.8	1.6	2.2	-6.0	-0.3	6.7	-2.3	-1.5	-3.9	-3.7	4.6	-4.6	3.8	3.0	-0.9	0.2	-1.5	1.7	-1.4	-1.7	-2.5	1.9
DM	1.0	0.4	14.5	5.0	1.5	-8.6	2.4	-2.2	-7.1	-16.4	11.8	7.3	9.2	-3.0	-0.7	0.2	-1.8	0.7	3.1	-2.4	-5.3	-6.4
DN	1.3	0.9	1.7	-10.6	-2.7	-1.6	-5.1	-2.6	-3.9	0.0	7.1	-8.2	1.2	-1.2	-0.5	-1.1	-0.6	1.3	-4.6	-1.5	-3.3	-1.6
E	0.6	0.5	-5.4	-8.3	-1.4	1.0	-2.1	-3.1	-1.8	-1.7	-3.4	-5.3	0.3	3.3	-1.8	0.4	-0.1	0.0	-0.4	-3.5	-1.7	-2.2
F	7.2	6.2	-16.0	-12.6	0.6	3.5	-15.6	-1.6	-1.1	2.2	-0.5	-11.1	1.8	-0.6	-3.0	0.1	-0.3	1.4	-13.0	-1.8	-0.9	2.6
G	15.9	15.7	-2.9	2.8	0.4	4.6	-5.3	-2.0	-0.5	3.1	2.5	4.9	0.9	2.0	-1.9	-0.5	0.0	1.2	-3.4	-1.6	-0.5	1.3
H	2.2	3.3	2.4	-10.8	-1.4	-2.0	-3.1	-0.2	0.7	0.9	5.6	-10.6	-2.0	-4.8	-2.5	-0.3	0.7	0.7	-0.6	0.0	0.0	2.2
I	6.5	6.5	0.9	-7.3	1.8	5.7	-0.9	-3.4	-1.0	2.4	1.8	-3.9	2.8	2.8	-1.2	0.5	-0.5	1.6	0.2	-4.0	-0.5	1.2
J	3.0	2.9	-3.7	-5.9	8.1	4.6	-0.4	-4.0	0.7	3.9	-3.3	-2.0	7.3	5.6	-1.7	0.0	-0.1	-0.3	1.4	-4.0	0.8	-0.6
K	5.9	11.7	1.6	2.8	-1.0	2.7	-3.0	-0.3	0.3	3.5	4.7	3.1	-1.3	-4.4	-1.4	0.3	-0.5	1.4	-1.6	-0.6	0.8	5.9
L	6.4	6.0	5.8	2.8	0.1	0.6	3.0	-0.8	-1.2	-0.8	2.8	3.6	1.3	1.8	-1.6	-0.6	0.6	0.0	4.7	-0.2	-1.7	-1.2
M	6.6	7.4	2.7	3.2	0.4	2.3	2.0	4.2	0.5	-0.1	0.7	-1.0	-0.1	1.3	-1.6	1.2	0.0	-0.4	3.7	3.0	0.5	1.4
N	14.1	17.4	2.4	2.8	0.9	2.5	2.4	-0.9	1.3	0.9	0.0	3.8	-0.4	0.7	-1.6	-0.3	0.5	0.0	4.0	-0.7	0.8	1.8
O	3.3	4.7	4.1	2.2	-0.4	0.0	0.8	2.9	-0.1	3.0	3.3	-0.7	-0.3	-2.2	-1.4	-0.3	-0.1	0.7	2.2	3.2	0.0	1.5
Total			-0.8	-0.4	0.4	2.8	-3.2	-1.5	-0.6	1.7	2.5	1.2	0.9	1.0	-1.7	0.0	-0.2	0.7	-1.6	-1.5	-0.4	1.0

For sector keys see appendix table A.12.

Table A5

Ireland

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	16.2	5.6	-4.9	-2.2	3.6	0.6	-7.6	-10.2	-7.8	-2.1	2.9	8.9	12.3	2.8	-1.5	-1.0	-0.9	-0.6	-6.2	-9.3	-6.9	-1.5
C	0.8	0.4	-8.4	108.5	26.4	0.4	-1.5	3.0	-2.0	2.4	-7.0	102.5	28.9	-2.0	-1.5	2.2	-1.5	-0.5	0.0	0.7	-0.5	2.9
DA	5.0	2.9	3.7	-1.6	20.8	5.4	-3.9	-0.8	2.6	1.0	7.9	-0.8	17.8	4.4	-1.5	-1.1	-0.5	-0.2	-2.5	0.3	3.1	1.2
DB	2.4	0.4	10.4	-5.5	-0.9	-6.1	-3.9	-0.8	-1.2	-9.1	14.9	-4.8	0.3	3.3	-1.5	-1.0	11.5	-0.8	-2.5	0.3	-11.3	-8.4
DC	0.1	0.0	0.4	11.5	-0.3	1.0	-3.9	-0.7	15.0	-8.3	4.4	12.3	-13.3	10.1	-1.4	-1.0	0.0	0.4	-2.5	0.3	15.1	-8.7
DD	0.5	0.5	3.5	-3.5	11.2	8.6	-3.9	-0.8	11.0	5.0	7.7	-2.7	0.2	3.5	-1.5	-1.1	-0.4	-0.3	-2.5	0.3	11.5	5.2
DE	1.8	1.3	-1.5	-8.5	7.1	12.6	-3.9	-0.7	-0.4	3.3	2.5	-7.8	7.5	9.0	-1.5	-1.0	0.1	-0.3	-2.5	0.3	-0.5	3.6
DF	0.1	0.0	-28.3	-4.3	56.0	2.3	-3.9	-0.8	-2.7	2.0	-25.4	-3.5	60.4	0.3	-1.4	-1.2	-0.7	0.2	-2.5	0.3	-2.1	1.8
DG	1.5	1.5	19.6	-1.1	-11.3	20.6	-3.9	-0.8	-2.3	4.9	24.4	-0.3	-9.2	14.9	-1.5	-1.0	-0.6	-0.4	-2.5	0.3	-1.8	5.4
DH	0.9	0.6	13.4	-6.2	9.3	4.4	-3.9	-0.8	9.5	1.6	18.0	-5.4	-0.1	2.7	-1.4	-1.0	1.3	-0.2	-2.5	0.3	8.1	1.8
DI	1.0	0.7	6.5	-6.7	6.0	2.8	-3.9	-0.8	0.9	4.2	10.9	-6.0	5.0	-1.3	-1.5	-1.0	-0.7	0.5	-2.5	0.3	1.6	3.6
DJ	1.6	1.0	-7.5	-2.5	9.7	5.5	-3.9	-0.8	-0.8	2.9	-3.7	-1.7	10.7	2.4	-1.5	-1.0	-0.4	-0.1	-2.5	0.3	-0.4	3.0
DK	1.4	0.8	10.7	-6.6	3.3	4.7	-3.9	-0.8	-1.4	0.4	15.2	-5.9	4.8	4.3	-1.5	-1.0	-0.7	0.0	-2.5	0.3	-0.7	0.4
DL	3.5	3.2	31.7	-5.1	3.9	19.4	-3.9	-0.8	-1.5	5.4	37.0	-4.4	5.5	13.4	-1.5	-1.0	-0.7	-0.1	-2.5	0.3	-0.8	5.5
DM	0.7	0.5	11.7	-4.1	2.1	5.6	-3.9	-0.8	5.6	1.9	16.3	-3.4	-3.4	3.6	-1.5	-1.0	0.3	0.2	-2.5	0.3	5.3	1.7
DN	1.1	0.7	-0.2	-4.3	7.9	2.3	-3.9	-0.8	-2.9	3.5	3.9	-3.5	11.1	-1.1	-1.5	-1.1	-0.7	0.2	-2.5	0.3	-2.2	3.3
E	1.4	0.8	-12.0	85.1	9.5	1.4	-1.5	-2.9	-5.4	1.8	-10.7	90.7	15.8	-0.4	-1.5	-3.7	-0.1	0.2	0.0	0.7	-5.4	1.5
F	7.8	12.5	1.2	1.9	6.4	8.5	-3.4	1.5	3.9	9.8	4.7	0.4	2.5	-1.2	-1.5	-1.0	-0.7	0.1	-1.9	2.5	4.6	9.7
G	13.0	13.0	3.4	-2.4	0.2	7.2	-1.5	-0.9	3.0	3.2	5.0	-1.6	-2.7	3.8	-1.5	-0.5	-1.1	-1.0	0.0	-0.4	4.1	4.3
H	3.5	6.4	-0.3	4.3	6.5	5.0	-1.5	4.3	3.6	0.9	1.2	0.0	2.8	4.0	-1.5	4.7	-1.1	-1.9	0.0	-0.4	4.7	2.9
I	6.7	6.1	-4.5	6.2	2.5	10.5	-1.5	-6.4	-0.6	7.1	-3.1	13.4	3.1	3.2	-1.5	-0.2	-1.1	-0.2	0.0	-6.2	0.5	7.3
J	2.1	4.4	0.1	19.1	15.9	9.3	4.6	9.3	3.5	6.0	-4.3	9.0	11.9	3.1	-1.5	1.1	-0.3	0.0	6.2	8.1	3.8	6.0
K	3.8	8.9	0.1	-2.8	-0.7	8.7	4.6	1.9	-3.0	6.0	-4.3	-4.6	2.4	2.5	-1.5	1.1	-0.3	-0.4	6.2	0.8	-2.7	6.5
L	5.9	5.1	0.5	-0.7	2.1	1.7	1.1	5.3	1.2	3.8	-0.6	-5.7	0.9	-2.0	-1.4	-3.1	-0.8	0.0	2.6	8.7	2.0	3.8
M	5.7	6.4	-1.4	-1.4	0.8	1.5	1.1	-4.7	3.5	3.3	-2.5	3.5	-2.5	-1.8	-1.4	-0.7	-0.8	-0.3	2.6	-4.1	4.3	3.6
N	6.3	9.7	-1.4	2.8	4.8	7.0	1.0	-1.2	5.8	5.5	-2.4	4.0	-0.9	1.4	-1.5	-0.3	-0.8	-0.7	2.6	-0.9	6.7	6.3
O	3.7	6.0	5.3	6.4	6.6	5.3	1.1	6.8	-5.5	6.1	4.2	-0.4	12.8	-0.8	-1.5	3.2	-0.8	-0.2	2.6	3.5	-4.7	6.3
Total			0.7	1.2	2.3	8.5	-2.4	-1.3	0.7	3.7	3.2	2.6	1.6	4.7	-1.7	-0.5	-0.8	-0.6	-0.7	-0.9	1.6	4.3

For sector keys see appendix table A.12.

Table A6

Austria

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	19.8	12.3	-2.7	-1.1	-1.5	2.0	-3.3	-4.8	9.7	-2.5	0.7	3.9	0.8	4.6	-1.3	-3.2	-1.4	-1.6	-2.1	-1.7	-0.8	-0.9
C	0.4	0.1	-8.5	0.9	9.4	1.2	-5.2	-9.3	-13.3	-3.3	-3.5	11.2	12.7	4.6	0.1	-6.4	-0.5	-0.9	-5.3	-3.1	-2.4	-2.4
DA	3.1	1.9	-23.2	-2.9	1.0	2.3	-3.8	-0.7	7.6	-3.0	-20.2	-2.2	2.8	5.5	-1.5	1.6	-0.6	-0.8	-2.3	-2.3	-1.1	-2.2
DB	2.6	0.6	1.4	-13.6	-2.3	2.6	-7.0	-9.6	2.1	-6.0	9.1	-4.4	4.8	9.2	-2.0	-0.5	-0.7	-1.0	-5.1	-9.2	-6.1	-5.1
DC	0.5	0.1	14.0	1.6	-5.2	3.2	-6.5	-7.5	3.7	-5.0	21.9	9.9	-1.5	8.6	-1.8	-2.0	-2.3	-1.4	-4.9	-5.7	-1.5	-3.6
DD	1.1	0.9	-9.3	-7.7	3.3	2.5	-4.0	0.3	10.7	-1.7	-5.5	-8.0	6.0	4.3	-0.5	0.4	0.1	-1.0	-3.5	-0.1	-2.7	-0.7
DE	1.6	1.1	-0.4	8.7	0.7	5.6	-4.3	-2.5	10.7	-2.7	4.1	11.6	1.5	8.5	-0.3	2.0	0.0	-1.3	-4.1	-4.4	-0.7	-1.4
DF	0.1	0.0	13.1	9.7	-14.7	6.8	-7.2	-4.6	86.9	-8.2	21.8	15.0	-5.0	16.3	-3.3	0.6	-4.3	-2.5	-4.0	-5.1	-6.1	-5.9
DG	0.9	0.6	-1.5	6.7	1.5	5.8	-8.2	-3.7	4.0	-2.7	7.3	10.8	2.4	8.8	-3.3	0.5	0.4	-2.7	-5.1	-4.2	-1.2	0.0
DH	0.9	0.7	0.1	0.9	-1.4	6.3	-7.4	-0.7	5.0	-0.1	8.1	1.7	0.3	6.4	-3.2	0.5	0.2	-0.7	-4.3	-1.2	-1.9	0.6
DI	1.2	0.8	-6.7	-2.8	-0.2	1.8	-8.0	-1.0	-0.6	-3.3	1.4	-1.8	1.2	5.2	-4.3	1.6	-0.5	-1.1	-3.8	-2.6	-0.9	-2.2
DJ	3.7	2.5	-0.2	-6.8	2.3	3.6	-7.9	-2.8	5.7	-0.6	8.4	-4.1	2.7	4.2	-4.4	1.8	-0.3	-0.9	-3.6	-4.5	-0.1	0.3
DK	2.3	1.9	0.9	-5.9	2.1	4.4	-5.9	-4.4	3.1	0.3	7.2	-1.5	1.2	4.0	-4.4	1.8	-0.5	-0.6	-1.5	-6.1	1.3	0.9
DL	2.2	1.7	6.5	2.0	2.0	4.5	-4.6	-1.4	6.3	-1.8	11.7	3.4	5.5	6.4	-4.5	1.8	-0.7	-1.0	-0.2	-3.2	-2.6	-0.7
DM	0.8	1.1	1.5	-3.5	6.8	8.4	-4.8	-0.1	3.0	1.9	6.7	-3.4	4.2	6.4	-4.4	1.8	0.3	-1.7	-0.4	-1.9	2.2	3.7
DN	1.7	1.1	-0.6	-6.0	0.6	6.2	0.0	-0.8	3.1	-2.5	-0.6	-5.2	4.0	8.8	-0.6	0.4	0.5	-0.9	0.6	-1.1	-3.8	-1.5
E	0.9	0.7	-5.0	3.2	8.4	3.6	-7.2	0.9	-0.2	-1.9	2.3	2.3	11.2	5.6	-8.2	0.6	0.3	-1.1	1.1	0.3	-2.9	-0.8
F	7.3	6.3	-3.6	2.8	-1.5	2.0	-3.4	0.6	0.8	-1.8	-0.2	2.1	1.0	3.8	-1.8	0.0	0.7	-1.2	-1.7	0.6	-3.2	-0.6
G	13.1	14.7	-3.6	-1.8	2.1	3.7	-1.8	-1.0	2.8	0.8	-1.8	-0.8	1.8	2.9	-2.6	-1.3	-0.1	-0.3	0.9	0.3	0.5	1.1
H	4.5	5.8	5.4	-2.4	2.5	1.9	-0.6	-0.8	1.9	1.0	5.9	-1.6	2.0	0.8	-0.5	-1.2	-0.7	-0.1	-0.1	0.4	1.2	1.1
I	5.9	6.1	-1.8	1.6	0.7	2.6	-2.4	-0.5	-2.3	0.7	0.6	2.0	1.3	1.9	-3.5	-1.8	-0.2	0.2	1.2	1.3	-0.4	0.5
J	2.5	2.8	5.0	0.8	-7.8	1.9	-4.8	-0.8	0.9	0.1	10.3	1.7	-7.7	1.8	-6.4	0.9	0.0	-0.2	1.7	-1.7	-0.1	0.3
K	4.1	11.4	7.1	1.0	3.1	4.1	-4.2	4.8	3.8	10.0	11.8	-3.6	-2.0	-5.3	-7.2	2.6	1.7	0.0	3.3	2.2	3.5	10.0
L	5.5	6.2	2.1	3.8	-0.9	0.4	-4.2	3.1	3.1	0.5	6.6	0.7	-0.6	0.0	-4.8	0.5	-0.4	0.4	0.6	2.5	0.1	0.1
M	5.1	5.2	1.7	1.1	0.5	1.4	-11.4	-0.7	2.3	2.4	14.8	1.8	-1.6	-1.0	-12.5	0.0	-0.2	1.6	1.3	-0.7	2.3	0.8
N	5.0	8.9	4.0	4.8	-0.1	2.3	0.1	1.1	2.6	2.2	3.9	3.6	-1.7	0.1	-4.1	0.6	-0.7	-0.1	4.4	0.6	2.4	2.3
O	3.0	4.4	-1.6	-0.3	-1.3	0.5	1.8	0.9	-0.3	2.6	-3.3	-1.2	-1.8	-2.1	-1.9	-1.2	0.4	0.4	3.8	2.1	0.1	2.2
Total			-1.6	0.3	0.8	2.9	-3.7	-0.6	3.3	0.8	2.2	0.9	0.5	2.1	-3.3	-0.1	0.0	-0.2	-0.4	-0.5	0.2	1.0

For sector keys see appendix table A.12.

Table A7

Portugal

Annual average % change

	% total employed		Change in value added				Change in labour input (total hours worked)				Change in labour productivity				Change in average hours worked				Change in number employed			
			Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*	Recession years			*Trend*
Sector	1980	2005	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*	1980s	1990s	2000s	*1990s*
AB	22.2	11.8	3.7	-1.5	0.0	-3.2	-3.0	-5.5	-1.5	-1.2	6.8	4.2	1.6	-2.1	-0.8	-0.4	-0.6	-0.6	-2.2	-5.2	-1.0	-0.6
C	0.4	0.3	-5.8	1.0	-8.4	3.4	-5.7	-0.9	-0.8	2.1	-0.2	1.9	-7.6	1.2	-0.8	-0.4	-0.6	-0.6	-5.0	-0.6	-0.3	2.7
DA	2.9	2.3	-3.8	0.9	0.8	1.2	-1.9	-0.9	-0.8	-1.0	-1.9	1.8	1.7	2.2	-0.8	-0.4	-0.5	-0.5	-1.1	-0.5	-0.8	-0.5
DB	6.9	4.3	2.4	-4.1	-4.2	0.2	-3.3	-2.1	-4.4	-2.3	6.0	-2.1	0.2	2.6	-0.8	-0.4	-0.6	-0.6	-2.6	-1.8	-3.9	-1.7
DC	1.4	1.1	14.6	2.2	-5.0	-4.2	0.9	1.0	-3.8	-2.5	13.5	1.2	-1.2	-1.7	-0.8	-0.4	-0.3	-0.3	1.7	1.3	-3.3	-2.2
DD	1.6	1.1	-2.2	-3.7	2.4	3.2	-3.9	-2.6	-2.8	-1.1	1.8	-1.1	5.4	4.4	-0.8	-0.4	-0.4	-0.4	-3.2	-2.3	-1.9	-0.7
DE	1.1	1.0	-1.8	0.4	-1.3	0.6	-1.4	-1.1	-1.2	-2.3	-0.5	1.5	-0.1	3.0	-0.8	-0.4	-0.7	-0.7	-0.6	-0.7	-0.3	-1.6
DF	0.1	0.0					-0.8	-11.0	9.3	-9.9					-0.8	-0.4	-4.7	-4.7	0.0	-10.6	-1.7	-5.5
DG	0.8	0.4	3.1	-14.9	1.6	-0.1	-4.3	-7.4	0.1	-2.9	7.7	-8.1	1.5	2.8	-0.8	-0.4	-0.5	-0.5	-3.5	-7.0	0.9	-2.4
DH	0.5	0.5	-0.4	-11.3	-1.2	5.5	-5.4	-0.9	1.7	1.1	5.3	-10.5	-2.9	4.3	-0.8	-0.4	-0.3	-0.3	-4.6	-0.6	2.4	1.4
DI	1.6	1.2	0.3	3.1	-3.4	3.8	-5.5	-0.6	-2.2	-0.9	6.1	3.8	-1.2	4.7	-0.8	-0.4	-0.9	-0.9	-4.7	-0.3	-2.9	0.0
DJ	2.3	2.0	-10.9	-3.0	0.2	4.7	-4.3	-3.6	-1.1	1.3	-6.9	0.7	1.3	3.4	-0.8	-0.4	-0.5	-0.5	-3.5	-3.3	-0.7	1.8
DK	1.2	0.9	-9.5	-5.3	-0.3	5.3	-2.2	-3.7	0.7	-0.7	-7.5	-1.7	-1.0	6.0	-0.8	-0.4	-0.5	-0.5	-1.4	-3.3	0.8	-0.2
DL	1.2	0.9	6.2	4.5	2.0	9.2	0.8	-1.3	-11.7	0.4	5.4	5.9	15.6	8.8	-0.8	-0.4	-0.4	-0.4	1.6	-1.0	-7.9	0.7
DM	0.9	0.7	-16.6	-7.2	2.1	1.3	-6.9	-4.2	-1.5	1.0	-10.4	-3.1	3.7	0.3	-0.8	-0.4	-1.3	-1.3	-6.2	-3.8	-1.7	2.4
DN	1.6	1.3	-4.2	1.0	-2.7	3.3	-0.5	-1.4	0.4	1.2	-3.7	2.4	-3.1	2.1	-0.8	-0.4	-0.3	-0.3	0.3	-1.0	1.2	1.5
E	0.8	0.4	9.6	4.5	4.2	5.3	-1.8	-3.5	-5.1	-3.6	11.7	8.3	9.8	9.2	-0.8	-0.4	-0.6	-0.6	-1.1	-3.2	-4.5	-3.0
F	9.9	10.2	-4.4	-0.1	-6.3	5.0	-3.7	-3.0	-1.0	5.0	-0.8	3.0	-5.4	0.0	-0.8	-0.4	-0.6	-0.6	-3.0	-2.7	-0.5	5.6
G	15.4	17.4	-4.5	0.2	-1.0	3.6	-2.4	-1.6	0.1	2.4	-2.2	1.9	-1.1	1.2	-0.8	-0.4	-0.6	-0.6	-1.6	-1.3	0.6	3.0
H	4.8	6.1	0.9	-1.9	-4.2	3.8	-0.7	-0.5	0.2	4.3	1.6	-1.5	-4.4	-0.5	-0.8	-0.4	-0.6	-0.6	0.1	-0.1	0.8	4.9
I	4.1	3.9	3.0	2.5	2.0	6.1	-3.2	-2.8	0.5	1.9	6.4	5.4	1.4	4.2	-0.8	-0.4	-0.6	-0.6	-2.4	-2.4	1.1	2.5
J	1.7	1.6	-7.5	-13.8	7.5	12.0	3.0	-3.1	-3.0	-2.6	-10.2	-11.1	10.8	15.0	-0.8	-0.4	-0.6	-0.6	3.8	-2.7	-2.5	-2.0
K	1.9	6.4	1.6	0.6	-0.2	2.6	-1.1	1.7	2.1	4.4	2.7	-1.0	-2.2	-1.7	-0.8	-0.4	-0.6	-0.6	-0.3	2.0	2.6	5.0
L	4.5	7.0	2.7	0.1	3.5	2.8	1.1	0.1	1.7	1.5	1.5	0.0	1.8	1.2	-0.8	-0.4	-0.6	-0.6	1.9	0.5	2.3	2.1
M	3.6	5.8	2.7	0.1	-1.0	1.6	1.1	0.1	-0.7	1.8	1.5	0.0	-0.4	-0.2	-0.8	-0.4	-0.6	-0.6	1.9	0.5	-0.1	2.4
N	3.2	5.5	2.7	0.1	0.5	2.6	1.1	0.1	1.2	2.7	1.5	0.0	-0.7	-0.1	-0.8	-0.4	-0.6	-0.6	1.9	0.5	1.8	3.3
O	1.5	2.9	2.7	0.1	2.7	2.9	1.1	0.1	1.6	2.2	1.5	0.0	1.0	0.7	-0.8	-0.4	-0.6	-0.6	1.9	0.5	2.2	2.8
Total			-0.3	-1.1	0.4	3.6	-2.1	-2.0	-0.6	1.4	1.9	0.9	1.0	2.2	-0.9	-0.5	-0.5	-0.5	-1.3	-1.6	0.0	1.9

For sector keys see appendix table A.12.

Table A.8

Assumptions for value-added, productivity and hours worked for projections

Percentage point difference per year from total change

	The Netherlands			Belgium			Denmark			Finland			Sweden		
	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked
AB	2.0	2.0	0.0	3.0	-1.0	0.0	-1.0	2.0	0.0	0.5	-1.5	0.0	-0.5	3.0	-1.0
C	-2.0	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	-5.0	4.0	-1.0
DA	2.0	3.0	0.0	1.0	-1.0	0.0	-2.0	0.0	0.0	4.0	3.0	0.0	0.0	1.5	0.0
DB	-4.0	3.0	-1.0	-4.0	-4.0	-1.0	-6.0	2.0	-1.0	-7.0	3.0	-0.5	-8.0	1.5	0.0
DC	-2.0	4.0	-1.0	-5.0	-4.0	-1.0	-6.0	2.0	-1.0	-7.0	2.0	0.0	-8.0	1.5	0.0
DD	-6.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0	2.0	-1.0	2.0	3.0	-0.5	-6.0	1.5	0.0
DE	-3.0	1.0	0.0	1.0	-3.0	0.0	-2.0	3.0	0.0	3.0	3.0	-0.5	0.0	2.0	0.0
DF	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0
DG	4.0	4.0	-0.5	1.0	-1.0	-0.5	-3.0	2.0	-0.5	3.0	1.0	0.0	4.0	6.0	0.0
DH	-1.0	1.0	0.0	0.0	-1.0	-0.5	-3.0	2.0	-0.5	2.0	3.0	0.0	4.0	6.0	0.0
DI	-6.0	-3.0	0.0	-1.0	-2.0	-1.0	-4.0	3.0	-1.0	-6.0	1.0	-1.0	-5.0	0.0	0.0
DJ	-4.0	0.0	0.0	-8.0	-2.0	-1.0	-3.0	1.0	-1.0	0.0	4.0	-1.0	-1.0	3.0	-0.5
DK	-4.0	0.0	-1.0	-8.0	-2.0	-1.0	-3.0	2.0	-1.0	-6.0	2.0	-1.0	-4.0	1.0	0.0
DL	-8.0	4.0	-1.0	-4.0	-3.0	-1.0	-5.0	3.0	-1.0	1.0	9.0	0.0	-3.0	1.0	0.0
DM	-6.0	4.0	-1.5	-3.0	-3.0	-1.5	-6.0	5.0	-1.5	-8.0	3.0	-2.0	-4.0	1.0	-1.0
DN	-2.0	0.0	-1.0	-5.0	-3.0	-1.0	-5.0	0.0	-1.0	-4.0	-1.0	-1.0	1.0	0.0	0.0
E	2.5	1.5	0.0	0.0	-2.0	0.0	0.0	2.0	0.0	4.0	5.0	0.0	4.0	1.0	-1.0
F	-5.0	-2.0	0.0	-4.0	-1.0	-1.0	-6.0	1.0	-1.0	-5.0	3.0	-1.0	-3.0	1.0	-1.0
G	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0	0.0	1.0	-0.5
H	-5.0	-4.0	0.0	-2.0	-1.0	0.0	-5.0	-3.0	0.0	-7.0	-4.0	0.5	-3.0	-3.0	0.0
I	1.5	2.0	0.0	1.0	-1.0	0.5	1.0	2.0	0.5	2.0	1.0	0.5	2.0	1.0	0.5
J	-5.0	5.0	0.0	-6.0	4.0	0.5	-6.0	5.0	0.5	-9.0	2.0	0.0	-3.0	2.0	-1.0
K	2.0	-1.5	0.0	3.0	2.0	0.5	3.0	-2.0	0.5	2.0	-1.0	0.5	3.0	-1.0	0.0
L	2.0	-2.0	0.5	1.0	-0.5	0.5	3.0	0.0	0.5	0.5	-2.0	0.5	1.5	-1.5	0.5
M	0.5	-4.0	0.5	1.0	0.0	0.0	3.0	-1.0	0.0	1.0	-2.0	0.5	1.5	-1.5	0.5
N	2.0	-2.5	0.0	2.0	1.0	0.0	3.0	-1.0	0.0	0.5	-2.0	0.0	1.5	-1.5	0.5
O	0.5	-1.0	0.0	2.0	0.0	0.0	2.0	-2.0	0.0	-1.0	-3.0	0.0	2.0	-1.5	0.0

	Austria			Ireland			Greece			Portugal		
	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked	Value added	Productivity	Hours worked
AB	2.0	2.0	0.0	3.0	-1.0	0.0	-1.0	2.0	0.0	0.5	-1.5	0.0
C	-2.0	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
DA	2.0	3.0	0.0	1.0	-1.0	0.0	-2.0	0.0	0.0	4.0	3.0	0.0
DB	-4.0	3.0	-1.0	-4.0	-4.0	-1.0	-6.0	2.0	-1.0	-7.0	3.0	-0.5
DC	-2.0	4.0	-1.0	-5.0	-4.0	-1.0	-6.0	2.0	-1.0	-7.0	2.0	0.0
DD	-6.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0	2.0	-1.0	2.0	3.0	-0.5
DE	-3.0	1.0	0.0	1.0	-3.0	0.0	-2.0	3.0	0.0	3.0	3.0	-0.5
DF	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DG	4.0	4.0	-0.5	1.0	-1.0	-0.5	-3.0	2.0	-0.5	3.0	1.0	0.0
DH	-1.0	1.0	0.0	0.0	-1.0	-0.5	-3.0	2.0	-0.5	2.0	3.0	0.0
DI	-6.0	-3.0	0.0	-1.0	-2.0	-1.0	-4.0	3.0	-1.0	-6.0	1.0	-1.0
DJ	-4.0	0.0	0.0	-8.0	-2.0	-1.0	-3.0	1.0	-1.0	0.0	4.0	-1.0
DK	-4.0	0.0	-1.0	-8.0	-2.0	-1.0	-3.0	2.0	-1.0	-6.0	2.0	-1.0
DL	-8.0	4.0	-1.0	-4.0	-3.0	-1.0	-5.0	3.0	-1.0	1.0	9.0	0.0
DM	-6.0	4.0	-1.5	-3.0	-3.0	-1.5	-6.0	5.0	-1.5	-8.0	3.0	-2.0
DN	-2.0	0.0	-1.0	-5.0	-3.0	-1.0	-5.0	0.0	-1.0	-4.0	-1.0	-1.0
E	2.5	1.5	0.0	0.0	-2.0	0.0	0.0	2.0	0.0	4.0	5.0	0.0
F	-5.0	-2.0	0.0	-4.0	-1.0	-1.0	-6.0	1.0	-1.0	-5.0	3.0	-1.0
G	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0
H	-5.0	-4.0	0.0	-2.0	-1.0	0.0	-5.0	-3.0	0.0	-7.0	-4.0	0.5
I	1.5	2.0	0.0	1.0	-1.0	0.5	1.0	2.0	0.5	2.0	1.0	0.5
J	-5.0	5.0	0.0	-6.0	4.0	0.5	-6.0	5.0	0.5	-9.0	2.0	0.0
K	2.0	-1.5	0.0	3.0	2.0	0.5	3.0	-2.0	0.5	2.0	-1.0	0.5
L	2.0	-2.0	0.5	1.0	-0.5	0.5	3.0	0.0	0.5	0.5	-2.0	0.5
M	0.5	-4.0	0.5	1.0	0.0	0.0	3.0	-1.0	0.0	1.0	-2.0	0.5
N	2.0	-2.5	0.0	2.0	1.0	0.0	3.0	-1.0	0.0	0.5	-2.0	0.0
O	0.5	-1.0	0.0	2.0	0.0	0.0	2.0	-2.0	0.0	-1.0	-3.0	0.0

For sector keys see appendix table A.12.

Table A.9

Change in production and employment in the UK, 2007-2008 and 2008-2009

% change between 2nd quarters of years

	Production		Employment	
	2007-08	2008-09	2007-08	2008-09
Manufacturing	-1.2	-11.9	-1.4	-7.8
Food products	-2.1	-1.4	-0.8	-1.9
Drink products	1.9	-2.8	0.0	-7.7
Tobacco products	-22.7	15.5	0.0	0.0
Textiles	1.4	-5.6	-5.0	-10.1
Cothing	0.6	-14.4	-5.2	-5.4
Leather, footwear	8.6	-12.1	-12.5	0.0
Wood, wood products	-2.0	-17.7	-3.9	-9.5
Paper, paper products	-1.4	-16.4	-3.1	-6.3
Printing	-1.0	2.4	-5.8	-6.9
Chemicals	1.0	-14.8	-2.3	-5.6
Pharmaceuticals	0.2	10.8	-1.9	-5.8
Rubber, plastic products	-4.1	-14.4	-2.7	-10.4
Non-metallic mineral products	-4.3	-17.6	-1.0	-16.2
Basic metals	3.1	-25.4	-1.0	-8.5
Metal products	-2.0	-19.5	-1.3	-8.1
Computer, electronic prods	-4.1	-8.9	-3.4	-7.8
Electrical equipment	4.6	-25.8	-2.8	-9.3
Machinery+equipment	1.6	-20.7	0.5	-8.7
Motor vehicles	3.0	-38.2	-1.2	-16.6
Other transport equip	-5.6	-2.2	3.5	-2.5
Furniture	-0.9	-17.6	-2.2	-11.4
Other manufacturing	-4.7	-4.0	-1.1	-4.6
Electricity, gas	4.2	-12.2	7.1	0.0
Construction	1.0	-14.6	3.5	-2.8
Retailing+wholesaling	18.5	-9.5	0.6	-3.3
Land transport	38.3	-5.9	1.7	-2.9
Water transport	5.0	0.8	-5.9	0.0
Air transport	15.7	-0.3	-3.3	-10.3
Postal services	5.3	-8.0	1.9	-6.7
Hotels and restaurants	3.2	-7.9	0.7	-2.6
Publishing activities	3.8	-1.2	0.4	-3.6
Telecommunications	-1.7	5.2	-2.8	-6.3
Computing	8.8	-1.3	1.6	-1.3

Note: Changes in production for service sectors relate to turnover

Source: Eeurostat, Short-term statistics

Table A.10

Change in production and employment in France, 2007-2008 and 2008-2009

% change between 2nd quarters of years

	Production		Employment	
	2007-08	2008-09	2007-08	2008-09
Manufacturing	-0.8	-15.8	-1.6	-4.5
Food products	-3.0	5.0	-0.6	-1.1
Drink products	-9.9	-6.9	-6.4	-3.3
Tobacco products	6.5	-16.2	-25.0	0.0
Textiles	-6.3	-28.0	-7.3	-8.9
Cothing	-22.7	-31.6	-10.5	-10.3
Leather, footwear	-1.4	-10.6	0.2	-7.5
Wood, wood products	-3.5	-18.4	3.9	-6.3
Paper, paper products	-4.3	-12.2	-6.9	-7.2
Printing	-9.8	-8.9	-7.3	-7.3
Chemicals	0.2	-13.8	-2.8	-3.8
Pharmaceuticals	-1.0	0.5	-0.4	-2.1
Rubber, plastic products	-4.6	-22.9	-1.0	-6.0
Non-metallic mineral products	-3.2	-18.5	-2.9	-6.6
Basic metals	-2.6	-39.2	-6.3	-7.1
Metal products	0.7	-26.5	-0.8	-5.4
Computer, electronic prods	0.7	-10.5	0.3	-5.4
Electrical equipment	2.0	-20.7	0.9	-4.0
Machinery+equipment	4.9	-35.5	1.4	-4.5
Motor vehicles	-5.4	-31.6	-4.1	-3.8
Other transport equip	8.4	-4.9	-4.8	-1.5
Furniture	-8.0	-17.4	1.1	-7.4
Other manufacturing	4.6	-1.6	-0.5	-6.2
Electricity, gas	6.3	-7.9	-3.8	1.9
Construction	3.0	-5.1	2.6	-1.5
Retailing+wholesaling	5.8	-9.7	1.2	-1.6
Land transport	6.6	-6.9	1.6	-1.8
Water transport	11.3	-7.9	19.7	7.9
Air transport	4.6	-11.5	1.1	0.0
Postal services	0.6	0.1	-3.8	-3.2
Hotels and restaurants	2.4	-3.5	0.8	-1.6
Publishing activities	4.6	-0.5	6.2	-1.0
Telecommunications	7.4	-1.4	1.9	-4.0
Computing	5.5	2.0	9.7	-1.0

Note: Changes in production for service sectors relate to turnover

Source: Eeurostat, Short-term statistics

Table A.11

Change in production and employment in Lithuania, 2007-2008 and 2008-2009

% change between 2nd quarters of years

	Production		Employment	
	2007-08	2008-09	2007-08	2008-09
Manufacturing	9.3	-21.6	-4.1	-18.7
Food products	-4.3	-12.2	-4.1	-5.9
Drink products	38.1	-20.0	1.7	-15.1
Tobacco products	-16.7	-32.2	-23.7	-31.0
Textiles	-15.4	-29.5	-13.6	-22.8
Cothing	4.4	-55.9	-12.6	-27.7
Leather, footwear	-9.4	-29.6	-7.5	-23.7
Wood, wood products	-6.0	-3.1	-3.3	-14.1
Paper, paper products	8.0	-34.0	11.6	-12.0
Printing	13.9	-14.6	10.1	-4.7
Chemicals	-33.3	37.4	-2.3	-19.0
Pharmaceuticals	-7.3	-25.3	0.8	-25.1
Rubber, plastic products	-18.9	-42.4	0.6	-23.4
Non-metallic mineral products	119.4	-26.6	18.0	-30.0
Basic metals	-26.6	-47.2	-10.3	-22.5
Metal products	-20.5	27.9	-12.7	-15.1
Computer, electronic prods	11.1	-45.6	5.6	-31.3
Electrical equipment	78.0	-37.6	15.2	-13.6
Machinery+equipment	-10.3	-75.6	-8.4	-50.9
Motor vehicles	20.1	-16.7	10.6	-6.5
Other transport equip	10.0	-23.9	7.4	-22.8
Furniture	29.0	-2.8	-3.9	-5.4
Other manufacturing	1.4	-10.4	1.5	-5.8
Electricity, gas	9.5	-49.4	11.3	-20.2
Construction	20.1	-26.3	7.0	-10.3
Retailing+wholesaling	8.7	-28.3	8.2	-9.8
Land transport	-2.8	-25.0	-7.4	3.5
Water transport	41.3	-47.6	-12.8	-12.6
Air transport	18.9	-8.1	2.3	0.4
Postal services	20.5	-16.4	6.4	-9.4
Hotels and restaurants	17.1	-16.5	5.6	1.9
Publishing activities	13.5	-13.1	1.6	-0.4
Telecommunications	25.9	-7.4	25.9	22.7
Computing	5.5	2.0	9.7	-1.0

Note: Changes in production for service sectors relate to turnover

Source: Eeurostat, Short-term statistics

Figure A.1

Projected effect of the recession on employment by relative skill level, DE, FR, IT, UK, 2010

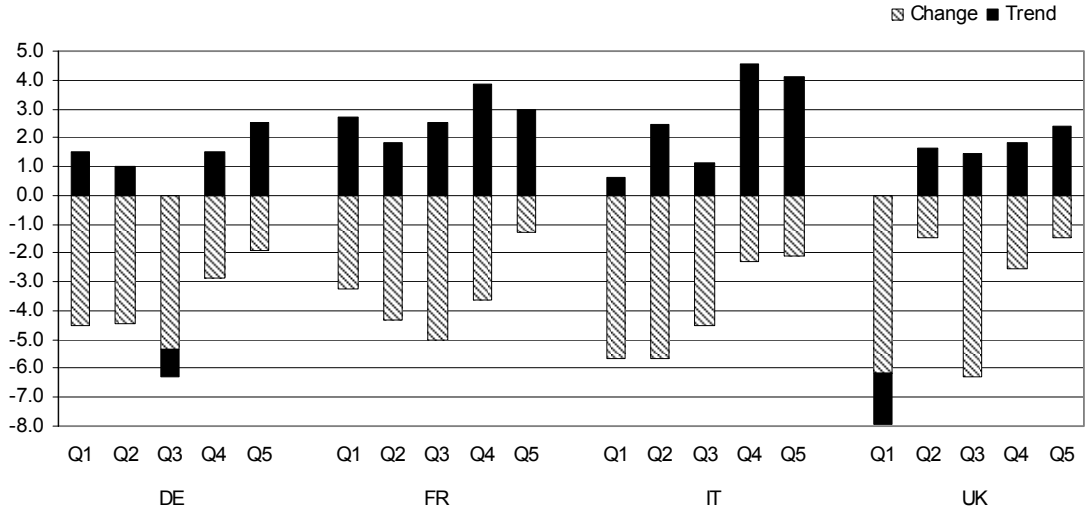


Figure A.2

Projected effect of the recession on employment by relative skill quintile, ES, IE, BE, AT, 2010

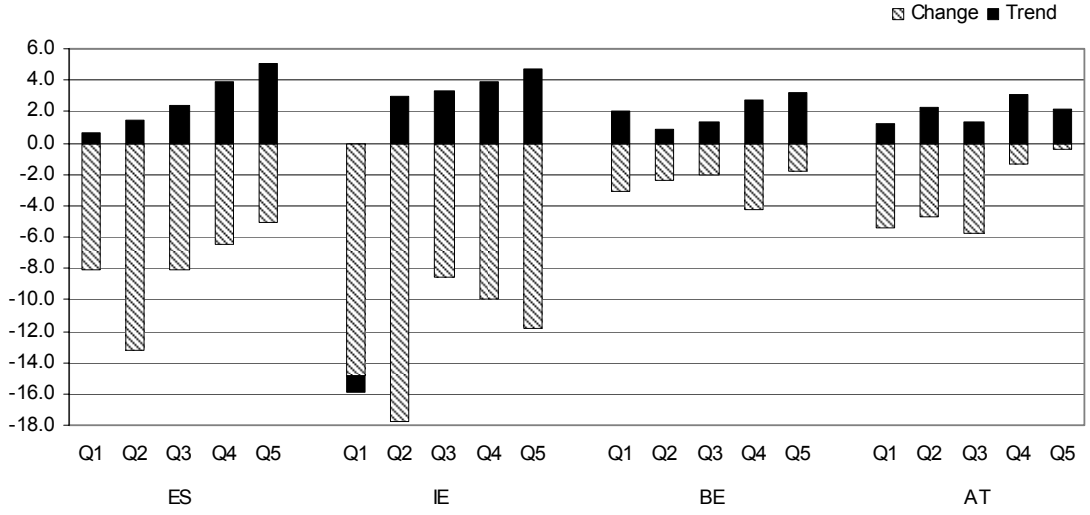


Figure A.3

Projected effect of the recession on employment by relative skill quintile, NL, DK, FI, SE, 2010

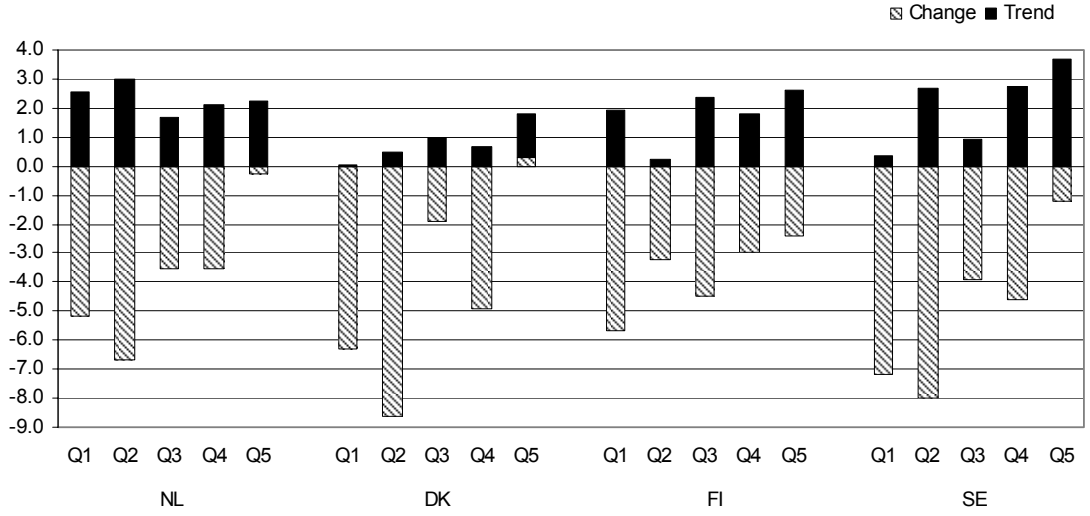


Figure A.4

Projected effect of the recession on employment by relative skill quintile, GR, PT, EE, LT, 2010

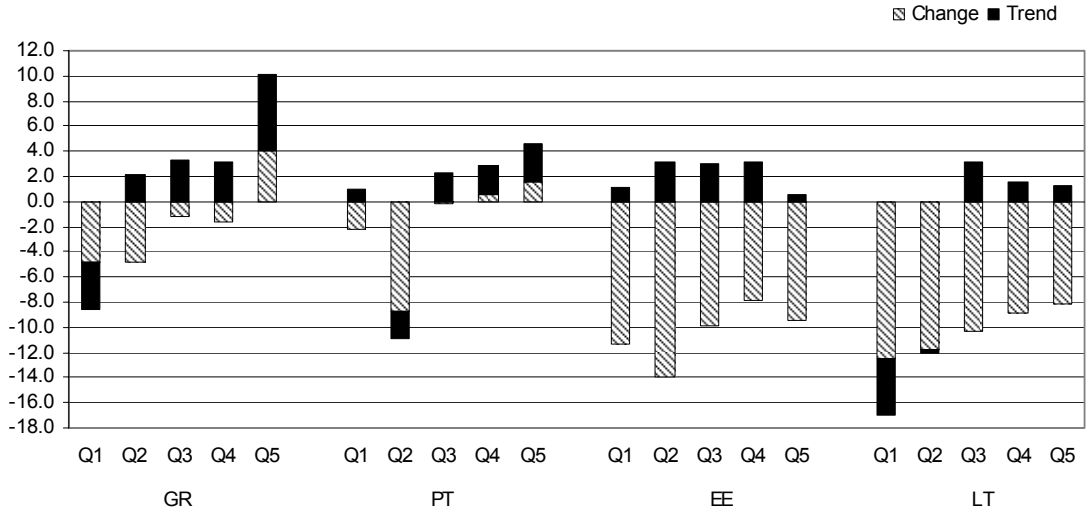


Figure A.5

Projected effect of the recession on employment by relative skill quintile, CZ, HU, SK, SI, 2010

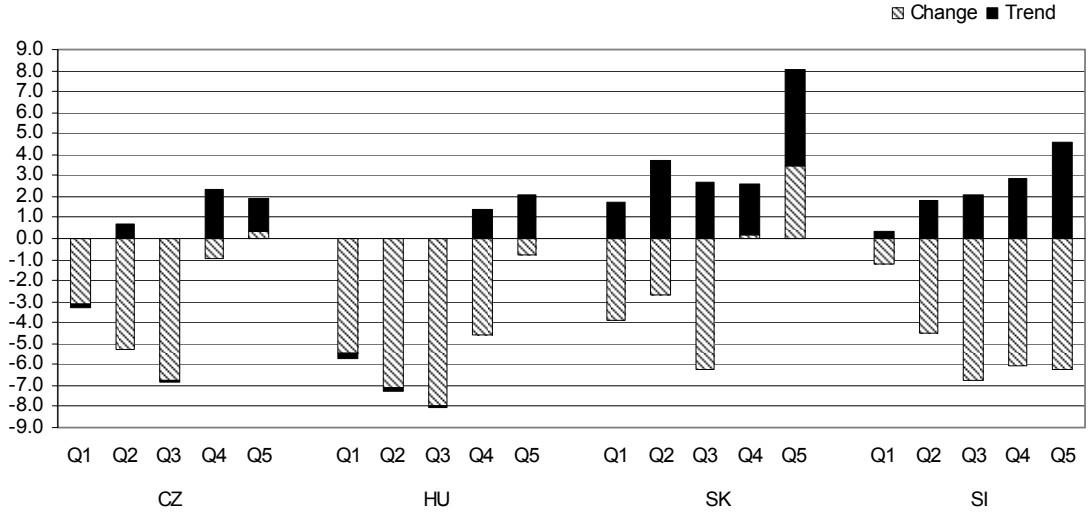


Table A.12

Sectoral classification

AB	Agriculture
C	Mining
DA	Food, drink, tobacco
DB	Clothing and textiles
DC	Leather and footwear
DD	Wood and wood products
DE	Paper, pulp, printing
DF	Petroleum refining
DG	Chemicals and pharmaceuticals
DH	Rubber and plastics
DI	Glass and non-metallic mineral products
DJ	Metal manufacture
DK	Machinery and equipment
DL	Electrical and electronic equipment
DM	Motor vehicles and transport equipment
DN	Furniture and other manufacture
E	Electicity, gas and water
F	Construction
G	Retail and wholesale distribution
H	Hotels and restaurants
I	Transport
J	Financial services
K	Business services
L	Public administration
M	Education
N	Health and social services
O	Personal and community services

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