How do institutions affect the labour market adjustment to the economic crisis in different EU countries?

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Executive summary

The economic crisis which began in most European countries in mid-2008 has had severe effects on labour markets. Although no country has escaped the crisis, the extent of output losses and the number of jobs lost, as well as the resulting rise in unemployment, vary considerably between countries.

In order to shed light on this issue, this paper examines empirically how the current economic crisis has affected the different European economies in terms of the impact on output, and the knock-on effects, influenced by the specific institutional frameworks, on employment and unemployment. Comparable quarterly Eurostat data is used for the European Union 25 countries for GDP, employment, working hours and unemployment for the period from the first quarter of 2008 to the second quarter of 2009. On this basis we analyse the differences between countries in terms of the way that the loss of output is translated into falls in working hours and head-count employment and rises in unemployment.

We then examine, for a selected group of four countries (Germany, the United Kingdom, Denmark and Spain), a range of institutional factors expected to influence the transmission from output to employment and unemployment. The countries chosen have different welfare state and institutional configurations and are therefore expected to respond in different ways to a given output shock. For each country we consider – with some variation due to data constraints – the same set of institutions. We begin with employment protection legislation (EPL). A higher degree of EPL induces firms to retain workers in the face of a fall in product demand. Next we examine more precisely the use of and developments in work-sharing schemes and functional equivalents. Then we look at the (prior) existence of developed active labour market policies (ALMP) and the development of ALMPs during the crisis. The existence of such schemes is expected to serve as a buffer, in particular, between any fall in employment and the rise in unemployment. Finally, we consider early retirement, as a means of reducing the supply of older workers. A provisional analysis is also made of the influence of labour migration, with a focus on the UK and Spain, two countries where migrant labour inflows have played an important role during the last decade.

Looking at Europe as a whole we see that, overall, output losses do translate reliably into – considerably smaller – employment losses measured in hours, lower headcount employment and higher unemployment. However, the correlations, while strong, are far from perfect, revealing the existence of

significant buffer mechanisms, the importance of which varies strongly between countries. A number of countries depart from the average (European) coefficients considerably, showing either very large or very small buffers either between output and employment or between employment and unemployment. The most important source of differences between the countries in terms of sensitivity appears to result from changes in average working hours.

In comparison, the transition from falling headcount employment to rising unemployment appears more straightforward from a cross-country comparative perspective. In other words, the importance of the buffer between headcount employment and unemployment varies somewhat less between the EU countries than that between output and (headcount) employment, at least in the short-term.

Turning to the results of the four-country comparison, **Germany** experienced a large negative output shock while avoiding any rise in unemployment in the period considered. This can be largely explained by the average-working-hour buffer. German companies have practised extensive labour hoarding, but they have not retained workers on their previous hours schedule; rather they have made very extensive use of the opportunities to reduce average working hours. This was possible due to the prior existence of a state subsidised short-time working scheme that was quickly adapted to the new needs; in addition, many companies had annualised working-time accounts. This needs to be seen in the light of relatively strict employment protection legislation and relatively high skill levels in the industrial sectors most affected by the crisis. Given that there was no decline in head-count employment during the period considered, the labour market policy and labour supply buffer was not relevant in the current crisis. Germany has shown that, given an appropriately supportive institutional framework, high internal flexibility within companies can be a highly effective adjustment mechanism that benefits workers (job and earnings security) as well as employers (retention of skilled staff).

The **United Kingdom** experienced an output shock comparable to that in Germany and Denmark. The increase in the unemployment rate was similar to that in Denmark but much larger than in Germany. Given the very low employment protection legislation, and the lack of state-backed work sharing mechanisms, the impact on total hours and head-count employment was weaker than widely expected. The relatively low employment elasticity remains a partial puzzle; wage flexibility may have played a role. The headcount employment loss has been translated almost unbuffered into increasing open unemployment. This reflects the traditionally very low expenditure on and participation in active labour market policies and a focus on job-search assistance rather than longer-term measures. Moreover, with the exception of schemes for youth, activation measures kicked in only after an extended period of unemployment. In contrast to previous crises, there appears to have been, as in other countries, little recourse to labour-supply-reducing measures. The impact of outward migration is hard to assess at the present time.

Against the background of a similar output shock as in Germany and the UK, the reaction in terms of total working hours in **Denmark** was large. This was offset to a considerable extent by the reduction in average hours. This reduction was made possible by the prior existence of a work-sharing scheme but it remained much less important than the equivalent scheme in Germany. The relatively high employment sensitivity is not surprising in the light of comparatively low EPL. Given the size of head-count employment losses, the translation into higher unemployment, from a very low initial base, was comparable to the UK. Denmark is known for its high expenditure on active labour market policies. One explanation for the limited employment-unemployment buffer is a delay in the impact of active labour market policy for prime-age workers; some groups are activated earlier and here we already see effects from this buffer. As in most other countries, inactivity benefits did not seem to act as labour supply buffer in the current crisis. Even though both Denmark and the UK have relatively high external flexibility, an important distinguishing fact is that in Denmark high external flexibility is coupled with high security in terms of benefit receipt and, in the longer run, also in terms of employability (ALMPs).

Despite having the most limited output shock in our country comparison, **Spain** suffered the largest employment losses by far in terms of both hours and persons, while the translation of employment losses into unemployment was almost completely unbuffered. Employment losses were not prevented by rather strict EPL because the large share of temporary workers offered employers an external flexibility adjustment mechanism. The concentration of job losses in the low-productivity construction sector contributed to the high employment sensitivity to the output shock. In the absence of a state-subsidised short-time working scheme, the 'average-working-hour buffer' has not played a significant role. The active labour market policy/labour supply buffer also did not play an important role as the intensity of active measures is very low and public employment services are seriously understaffed. However, there is some evidence that additional labour supply buffers (e.g. early retirement and inactivity) have here helped to contain open unemployment, although the size of this effect is relatively small. It is too early to assess the labour supply buffer effect of migrant labour, although some outward migration is expected to have eased labour market pressure. Spain is an extreme case of external flexibility and this flexibility is coupled only to a limited degree with security components, with adjustment to the crisis largely taking place within the large segment of temporary workers.

What emerges from this analysis for Europe as a whole?

The four country comparison suggests that high EPL can have both positive and negative impacts, as the German and the Spanish cases illustrate: it is likely to support labour hoarding which can have positive impacts for both employees and employers (if relevant institutions such as short-time working schemes are in place) but, if coupled with a high temporary employment share, it is likely that adjustment in the form of external flexibility will be concentrated in this segment (dual labour market).

Short-time working schemes – also widely used in a number of other EU countries besides Germany and Denmark – have proved highly successful in smoothing the short-run adjustment. Countries which already had these schemes in place had an advantage as they avoided delayed reactions of this buffer. An important factor in making best use of these schemes seems to have been their quick adaptation to the new needs, although some countries did not avail themselves of this option, or did so to only a limited degree. Countries that introduced such schemes for the first time suffered delays in the buffer effect but, on the other hand, were able to design them directly in the manner best suited to the current crisis.

The short–run buffer function of ALMPs depends, among others, on prior expenditure and intensity levels, on timing (early activation or not) and on the focus of measures (short-term versus long-term, training versus employment subsidies). Particularly in this area, countries' longer-run performance may differ from that in the short run. In this context, a key element is the extent to which rapid increases in unemployment lead to a crowding out of active labour market policies; this, in turn depends decisively on financing systems.

The labour-force reduction schemes, especially disability and early retirement measures, have this time not been used to a large extent in order to avoid open unemployment. While this finding is in line with recent policy trends to discontinue early retirement and move people off disability schemes, the situation may change again over time if unemployment remains high. Unfortunately, the data situation on migration is very unsatisfactory in the short run, so that it is hard to assess the extent to which, in some countries at least, outward migration has acted as a buffer between falling employment and rising unemployment.

Overall it can be concluded that production structures and labour market institutions interact – as suggested by, for example, the 'varieties of capitalism' literature – to produce varying degrees of institutional complementarity. While national institutions interact, in cross-country comparison similar institutions can perform different functions and different ones can act as functional equivalents. Labour market performance in the crisis (at least in the short-run) has generally been best in those countries characterised by high internal flexibility at the workplace and well-developed and responsive institutions and government policies. Combinations of high external flexibility with weak labour market institutions, and especially labour market dualism, have produced poor outcomes for workers in terms of unemployment. In the longer run, higher unemployment stocks may also constitute a barrier to the hoped-for economic recovery, if support measures are not in place to facilitate the transition back into employment.

Introduction*

The economic crisis which began in most European countries in mid-2008 has had severe effects on labour markets. Although no country has escaped the crisis, the extent of output losses and the number of jobs lost, as well as the resulting rise in unemployment, vary considerably between countries. One of the key questions in the current economic crisis relates to the institutional factors that influence the size and speed of the labour market response to output shocks.

In order to shed light on this issue, this paper examines the developments in output, employment and unemployment for 25 EU member states. It then examines, for a selected group of four countries (Germany, the United Kingdom, Denmark and Spain), a range of institutional factors expected to influence the transmission from output to employment and unemployment. The countries chosen have different welfare state and institutional configurations and are therefore expected to respond in different ways to a given output shock.

Employment does not necessarily fall in proportion to the loss of output, nor does unemployment increase to the same extent. This is due to the existence of institutional buffer mechanisms. These include, for example, employment protection legislation, short-time working schemes, active labour market policies and early retirement. The core purpose of this study is to examine the effectiveness of such buffers in different European countries. On this empirical basis the various labour market and other institutions responsible for these effects in the different countries can be discussed.

The structure of the paper is as follows. The first section begins with a conceptual analysis of the linkages between output, employment, unemployment and institutions. We then provide an empirical cross-country comparison of labour market performance in the 2008/2009 recession bringing out the correlations between these main variables. Section 2 looks first at labour market developments in the four selected countries in a more detailed and qualitative way, considering a range of labour market groups. It goes on to conduct an in-depth examination of the institutional frameworks of the four countries, in order to assess the importance of the various buffer mechanisms. Section 3 concludes.

* The authors would like to thank Moritz von Gliszczynski and Dominik Geering for excellent research assistance, Irmgard Paz for the major improvements she made to the presentation of the figures, Kathleen Llanwarne for language revision. An earlier draft of this paper was presented at conferences in Berlin, Klagenfurt, Paris and Urbino where we received helpful comments.

1. European labour markets in the crisis – what do the data tell us about comparative performance?

1.1 The linkages between output, employment, unemployment and labour market institutions and structures

Before considering in detail the empirical relationships between declining output and labour market trends in the different European countries in the 2008-9 economic crisis, it will be useful to set out the conceptual links between the main economic and labour market variables. Although these linkages work more or less symmetrically in both directions, we will focus on the case of a recession, that is *falling* economic output, and consider the *downward* pressure on employment and *upward* impact on unemployment. Overall we can identify three sets of factors that constitute 'buffers' between falling output on the one hand and rising unemployment on the other.

All the goods and services produced in an economy in a given period, i.e. economic output, are produced by combining inputs using given quantities of human labour and capital. The rate of economic growth is the sum of the rates of growth of the volume of labour used (total hours worked) and of the productivity of a unit of labour (output per working hour). This means that a fall in output will be associated with an equal percentage fall in labour input, measured in working hours, provided the rate of hourly productivity growth remains constant.

Conversely, this means that the elasticity of labour input to economic output – in our context the extent to which a fall in output is reflected in a fall in working hours – depends on the extent of changes in the rate of productivity growth. These changes constitute the first of the three buffers between falls in output and subsequent rises in unemployment. Empirically, productivity is pro-cyclical, i.e. productivity growth falls in a recession as there are lags between falls in output and firms' decisions to lay off workers or reduce their working hours, with workers being assigned to not directly productive tasks such as maintenance or training, etc. This buffer may be called the 'hourly productivity buffer'. In the context of cross-country comparisons, a specific form of this productivity effect should be mentioned: it may arise due to differences between the sectors hit by the output loss. If the sectors in one country are predominantly labour-intensive, and in another more capital-intensive, then the employment effect in the former will be greater, other factors equal, and the average fall in labour productivity smaller than in the latter.

The second buffer comes in the form of changes in the average number of hours worked per worker. In the most extreme case, a recession-induced decline in working time could take the form of an equivalent reduction in average working hours, leaving the number of employed persons unchanged. Reductions in average working hours take the form of reduced overtime and various forms of more or less voluntary 'work-sharing', such as compulsory holidays and short-time working schemes. We can term this the 'average-working-hour buffer'.

Whereas the first two buffers are located between output and (headcount) employment, a third mitigates the effect of the fall in the number of employed persons (headcount employment) on the rise in unemployment[1]. This third buffer works through a number of measures and processes, notably government programmes that provide training to those losing their jobs, disability and early-retirement programmes that essentially redefine the status of the de facto unemployed, and individuals withdrawing, more or less voluntarily, from the labour force into 'inactivity' (unpaid housework, education, retirement, etc.), and thus no longer actively seeking paid employment.[2] In addition, the size of the working-age population may also change due to inward or outward migration or for demographic reasons. Again, to take an extreme example, an employment reduction could, theoretically, be brought about by an equivalent repatriation of immigrant labour, leaving ('native') unemployment unchanged. Depending on where the emphasis is placed, this buffer can be regarded as a labour market policy buffer and/or a labour supply buffer.

The core purpose of this study is to examine the effectiveness of these three sets of buffers in different European countries in mitigating the potential unemployment-raising effect of a given fall in output. On this empirical basis the various labour market and other institutions responsible for these effects in the different countries can be discussed. This clearly involves more normative issues of the desirability of certain outcomes and possible trade-offs between policy goals. One important point to note is that we are concerned here only with the 'simultaneous' determination of output, employment and unemployment. The size of the output loss is taken as given. We therefore do not explicitly consider the – in policy terms very important – question of whether labour market institutional buffers, by reducing the extent of the rise in unemployment for a given initial output shock, have had feedback effects that stabilise the levels of domestic demand and thus serve to reduce the extent of output falls in a dynamic sense.

1. Demographically induced changes in the working-age population are largely neglected in this analysis because they are slow-moving variables and not noticeably affected by short-run, crisis-induced factors.

2. Throughout this article we use, to ensure comparability, standardised Eurostat definitions of unemployment. These are based on survey responses and require that the respondent reports having actively sought work in the four weeks prior to the survey. Typically levels differ substantially from national administrative data based on those claiming various unemployment-related benefits.

1.2 Cross-country comparison of labour market performance in the 2008/2009 recession

This section provides an overview of how the current economic crisis has affected the different European economies in terms of the impact on output, and the knock-on effects, influenced by the specific institutional frameworks, on employment and unemployment. Comparable quarterly Eurostat national account data are available for European Union 25 countries (i.e. excluding Bulgaria and Romania) for GDP, employment and unemployment until the second quarter of 2009. Figures are available for Luxembourg, but cannot be interpreted meaningfully due to the huge proportion of GDP earned by non-residents. For that reason Luxembourg is excluded from the following presentations (but the numbers are included in the EU25 average figures). Unfortunately data are not available across Europe (as they are for some countries) on total hours worked. The working hours data used here are calculated using average-hours data from the European Labour Force Survey (LFS): total hours are obtained by multiplying actual average hours worked per person according to the LFS by headcount employment. All the national accounts data are seasonally adjusted. The average hours data, however, are not, so that small changes should not be over-interpreted; some caution is called for in interpreting the total hours figures.[3]

We discuss, in turn, the links between output, working hours, head-count employment, and unemployment, for all EU countries for which the relevant data is available. As a prelude to the country studies in section 2, a brief overview, comparing the four selected countries, is also provided in each case.

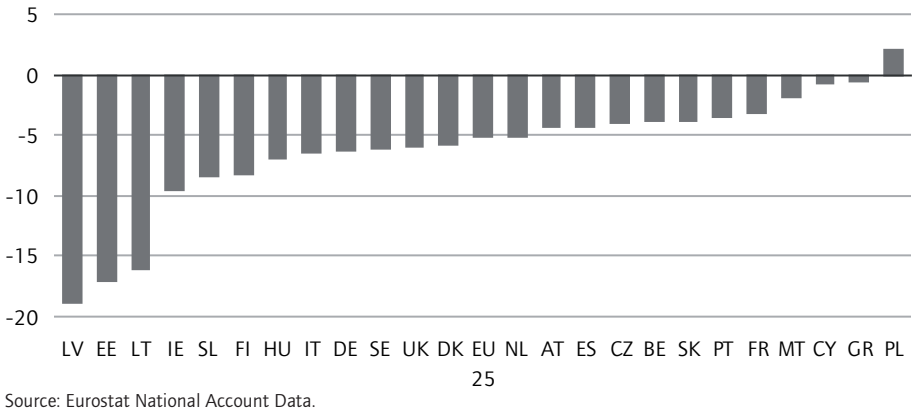
In order to make the countries' output, employment and unemployment trends comparable, the levels of these variables in the first quarter of 2008 was set at 0 for each country, and index values were calculated for the subsequent quarters. In the majority of countries Q1 2008 marked the GDP peak – that is, output had begun to decline already before 15 September 2008 when the financial crisis is usually considered to have begun, with the failure of Lehman Brothers – although in some cases GDP continued to expand slightly for one or two quarters.

1.2.1 Output

Figure 1 provides an overview of the extent of output changes over the six-quarter period. With just a single exception among the EU25 countries, the change was negative: every EU country except Poland suffered a decline in output during the crisis. Across Europe overall, more than 5% of output was lost, an unprecedented development in the history of the European Union. Not since the Great Depression of the 1930s have continent-wide output losses of such an order of magnitude been recorded (although in the wake of the post-1990 transformation shock massive losses were experienced in central and eastern Europe and Finland).

3. While there are almost certainly measurement errors involved here, there should not – given that we are interested in changes over time – be a problem of comparability, unless the extent of the measurement error changes significantly over time.

Figure 1 **Change in GDP Q1 2008 to Q2 2009, EU 25 (exc. LU), in %**

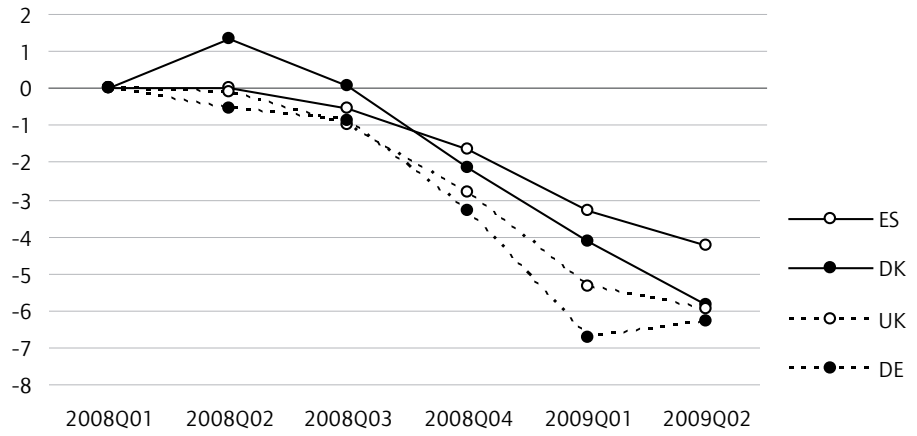


Source: Eurostat National Account Data.

Figure 2 shows the trajectory of the downturn in the four countries we have selected for a more in-depth analysis (see section 2).

Huge differences in the scale of the downturn are obvious from the figure. Against the background of the EU25 average output loss of just over 5%, the collapse in production in the Baltic states is dramatic, exceeding 15% in all three countries and almost one fifth of GDP in Latvia. Apart from that, few regional patterns emerge. The other central and eastern European countries are spread across the distribution, and the Polish economy has conspicuously continued to grow despite the crisis: Greece, Cyprus and Malta have suffered falling output more recently but initially growth held up there despite the crisis. Apart from these countries and Ireland, Slovenia and Finland, where output losses exceed 8%, the remaining member states are within a fairly tight band of +/- 2 p.p. around the European average.

Figure 2 **Output trajectory for four selected countries, 2008Q1 = 0**



Source: Eurostat National Account Data.

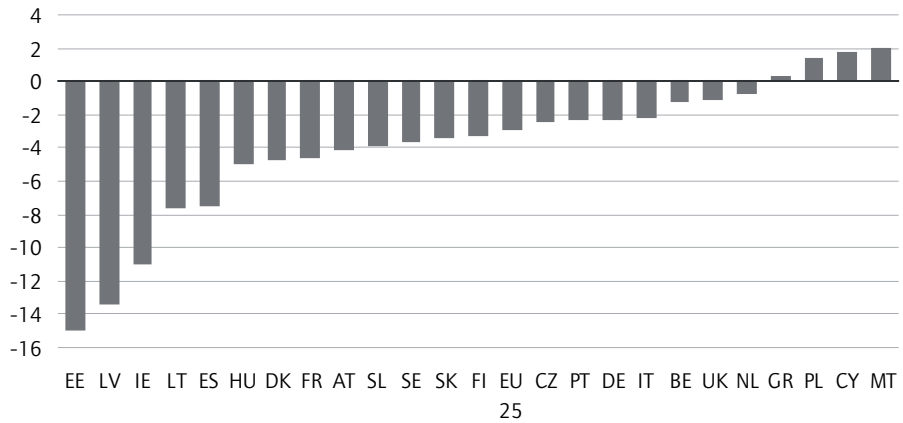
1.2.2 Employment

The path of the crisis was initially quite similar in Germany and the UK. The Danish economy initially continued to grow quite strongly, but then fell all the more steeply, so that the output losses in these three countries by the second quarter of 2009 were quite similar. In Spain the crisis was initially slow to impact output. Even though the pace of decline picked up subsequently, at the end of the period the overall contraction was 'only' a little over 4%, considerably lower than in the other countries, and especially Germany.

Figure 3 shows the extent of total employment losses expressed in hours – using our imperfect measure, the product of the change in headcount employment and that in average working hours – in EU25 (except Luxembourg) countries between the first quarter of 2008 and the second of 2009. Comparing this with Figure 1 above, two main findings stand out. Firstly, as discussed above, the extent of the job losses, measured in working hours, is overall considerably smaller than the loss of output. Indeed four countries saw an increase in total hours. On average, an output loss of 5.2% translates into a loss of labour input (i.e. total working hours) of 'only' 2.8%. The short-run elasticity of employment in hours to output is thus only just over one half in Europe as a whole (i.e. a 0.54% loss in working hours for every 1% fall in output). Secondly, the ranking of countries varies somewhat from that based on output. As an example, Germany has an above-average output loss with a below-average reduction in total labour input, whereas the opposite is true of Spain.

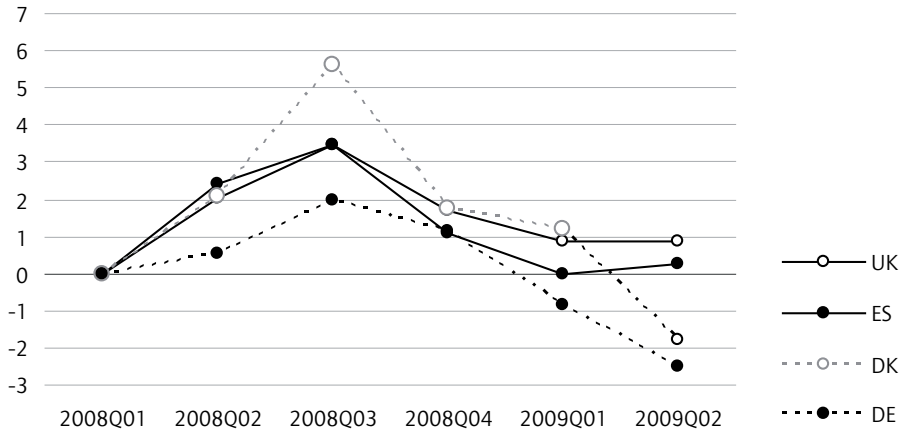
We see from this that the first buffer (the 'hourly labour productivity buffer') in Europe is substantial (the short-run elasticity is only just above one half as firms hoard labour in the face of declining output) and also that it varies substantially between countries.

Figure 3 **Change in 'total hours' employment, Q1 2008 to Q2 2009, in %**



Source: Eurostat National Accounts and Labour Force Survey Data; own calculations.

Figure 4 **Four-country comparison of changes in total hours**

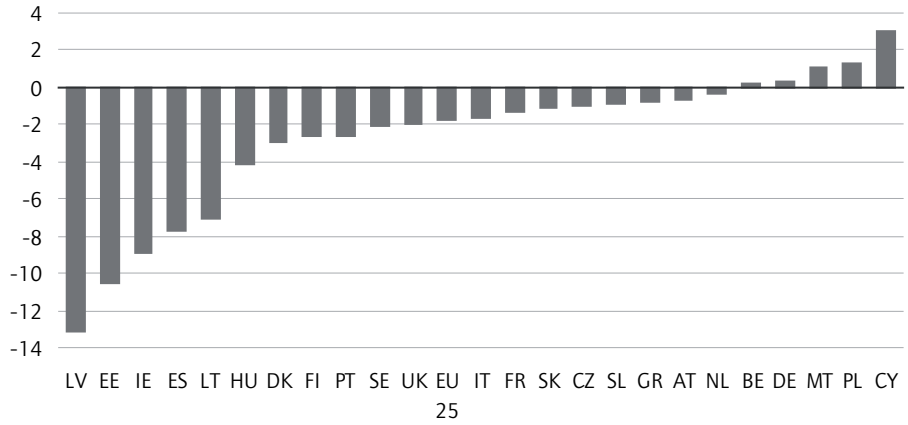


Source: Eurostat National Accounts and Labour Force Survey Data; own calculations.

This can also be seen from our four-country comparison (Figure 4). Initially working hours continued to rise despite falling output. Between the fourth quarter of 2008 and the second of 2009, Germany and the UK converged on an hours' loss of some 2%. In Denmark, after an initial expansion, the hours' contraction was sharper. Spain, on the other hand, saw a dramatic collapse in hours, which fell by almost 10% from the third quarter of 2008 and by more than 6% from the level at the start of that year.

Considering now headcount employment, we see the effect of the second buffer – the 'average-working-hour buffer'. On average the decline in headcount employment, at 1.8%, is a full percentage point below (or alternatively around two-thirds the size of) the loss in hours. Five countries actually saw an increase in the number of persons in employment over the period.

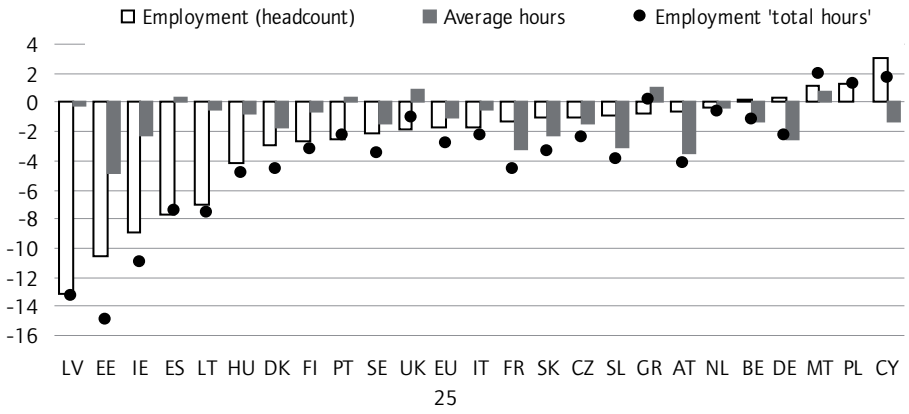
Figure 5 **Change in 'headcount' employment, Q1 2008 to Q2 2009, in %**



Source: Eurostat National Account Data.

We can see this effect more explicitly in Figure 6. The line shows the total change in working hours for each country, the left-hand bar the change in headcount employment and the right-hand bar the change in average hours. In Estonia, Ireland, France, Slovakia, Slovenia, Austria and Germany, average actual working hours declined by more than 2%. In Germany this was enough to 'transform' – in mathematical terms – a loss of total working hours into an increase in headcount employment, while in countries such as Austria, Slovenia and France the impact of the crisis on headcount employment was substantially attenuated by this means. In contrast, Spain, Portugal, the UK, Greece and Malta – one notes the concentration of 'Mediterranean countries – saw an increase in average working time. In the latter two this was in the context of rising total working hours, but in the other countries the increase in average hours had the effect of aggravating the decline in hours in terms of the number of persons forced out of employment.

Figure 6 **Comparison total hours, average hours and headcount employment, Q1 2008 to Q2 2009, in %**



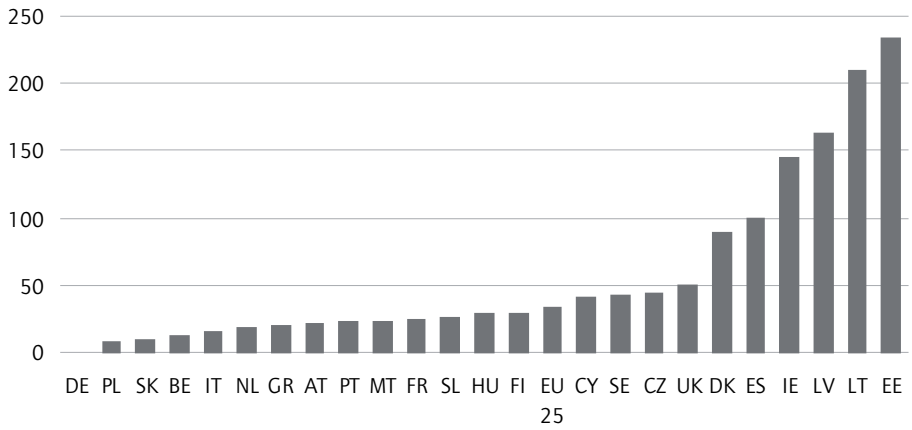
Source: Eurostat National Account and Labour Force Survey Data.

1.2.3 Unemployment

Unemployment has risen as a result of the crisis compared with its level in Q1 2008 in all European Union countries without exception (Figure 7).

The differences in the percentage increase in the number of people unemployed are, however, stark. On average, unemployment had risen by one third by the second quarter of 2009. In Spain it had virtually doubled, and Ireland and the three Baltic states recorded even more dramatic increases.

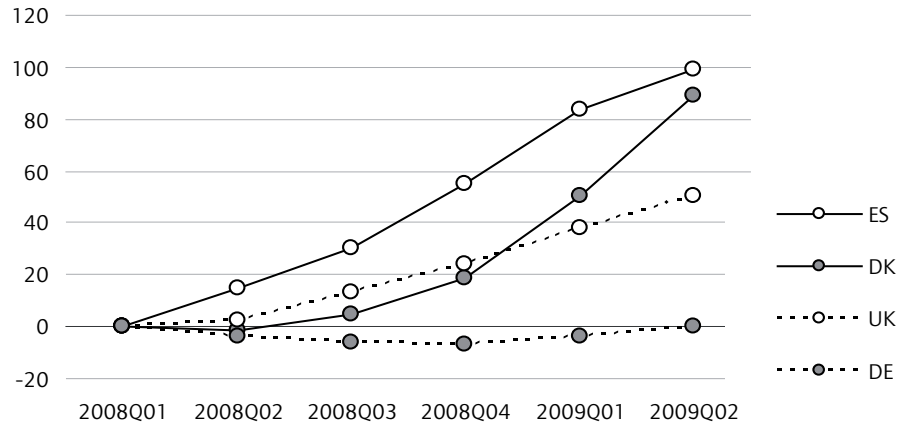
Figure 7 **Increase in the number of unemployed Q1 2008 to Q2 2009, in %**



Source: Eurostat National Account Data.

On the other hand, unemployment in Germany has scarcely budged, and a number of other countries managed, until the 2nd quarter of 2009, at least to stem the increase in unemployment in the face of what were, in some cases, substantial employment losses. (In the case of Poland, due to an increase in the labour supply, employment growth was not enough to prevent a small rise in unemployment.) It is also possible to express the increase in unemployment in terms of a percentage-point increase. This has the advantage of being less sensitive to the initial level of unemployment. In fact, however, the distribution of countries is very similar[4].

Figure 8 **Index of unemployment for selected countries**



Source: Eurostat National Account Data.

4. By way of example, for the country pair Ireland-Spain, the much higher level of unemployment in the latter country means that it performs relatively better (i.e. 'less worse') on the percentage change than on the percentage-point change metric. However, this leads only to a one-position change in their respective country rankings. As the index change is more in keeping with the type of change in output and employment, we do not discuss the alternative percentage-point measure of unemployment in this section.

If we examine the trajectory of unemployment in more detail for our four selected countries (Figure 8), we see that unemployment in Germany continued to fall throughout 2008, subsequently rising to almost exactly its initial level in the second quarter of 2009. Spain, by contrast, saw an explosive and unbroken increase in the size of the unemployed stock. In Denmark a delayed reaction was seen initially, but the unemployment rise accelerated in 2009, leading almost to a doubling of unemployment, albeit from a very low initial level. In the UK the rise in unemployment was steady, leading to an increase of about 50% in the number of unemployed[5].

1.3 Correlations and buffers between output, employment and unemployment

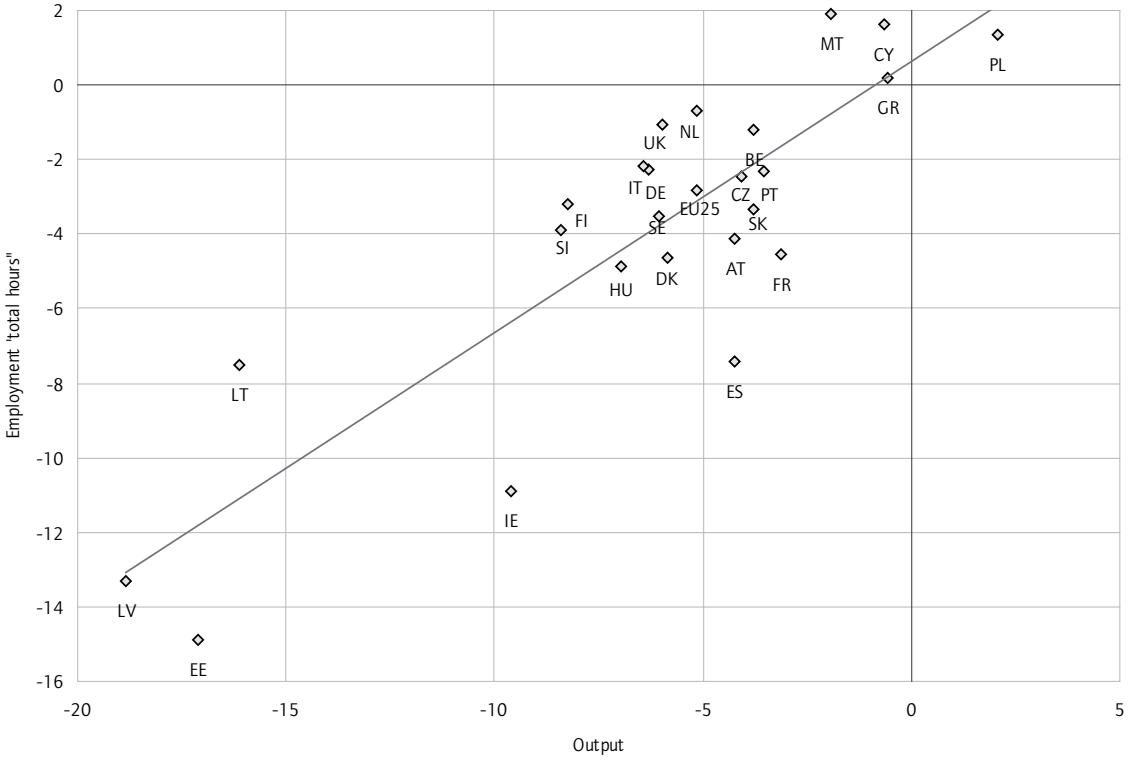
In this sub-section we bring together the conceptual analysis of sub-section 1.1 and the empirical analysis presented in the previous sub-section by explicitly comparing output, employment (in hours and persons) and unemployment outcomes by means of bi-variate correlations.

As expected, overall there is a positive statistical relationship between output and changes in total working hours. This can be seen from figure 9 which plots output (on the x-axis) and employment changes, measured as total working hours, (on the y-axis) for the EU25 member countries (again excluding Luxembourg). The correlation coefficient is high at 0.85.

The trend (regression) line can be interpreted as the statistical average elasticity of the change in hours to that of output (according equal weight to each country). The EU25 average figure (which does allow for differences in country size in terms of employment) is almost exactly on this trend line, indicating that there is no systematic difference in terms of employment elasticity between small and large EU countries.

5. If the alternative measure (percentage-point change) is used, nothing much changes in the case of Spain and Germany: both countries had high initial unemployment rates. The extremely low initial unemployment rate in Denmark does mean, however, that on this second measure its unemployment performance has been almost exactly the same as the UK (rather than considerably worse).

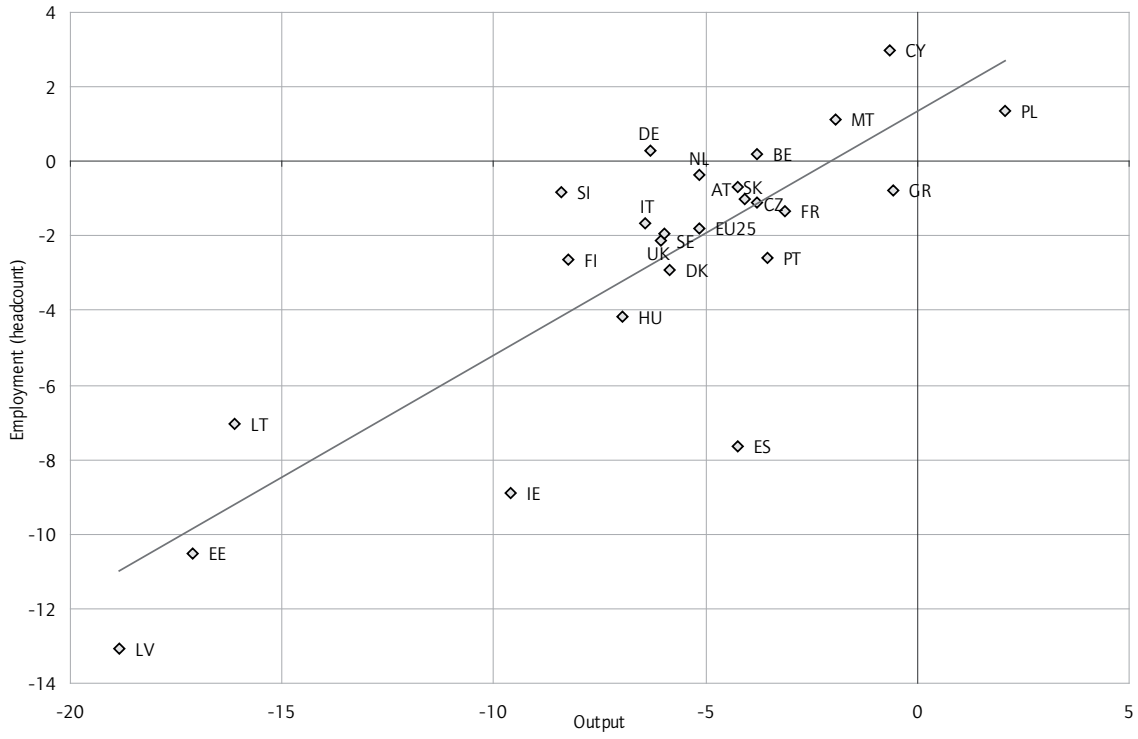
Figure 9 **Correlation between output and total employment (hours) changes Q1 2008 to Q2 2009**



Source: Eurostat National Account and Labour Force Survey Data.

Countries substantially below the trend line have a high elasticity of employment in hours to output. Notable are Estonia, and Ireland (with large negative output shocks) and Spain with a relatively small output shock. In these countries the fall in output has been transposed relatively 'unbuffered' into a fall in employment measured in terms of total hours. The opposite (low employment elasticity) is true of Lithuania (although in the face of a massive loss of output), Finland, Italy the Netherlands and Malta (in declining order of output shock). This shows that in these countries there are substantial buffers between output and employment in the form of a decline in hourly labour productivity.

Figure 10 **Correlation between output and headcount employment changes Q1 2008 to Q2 2009**



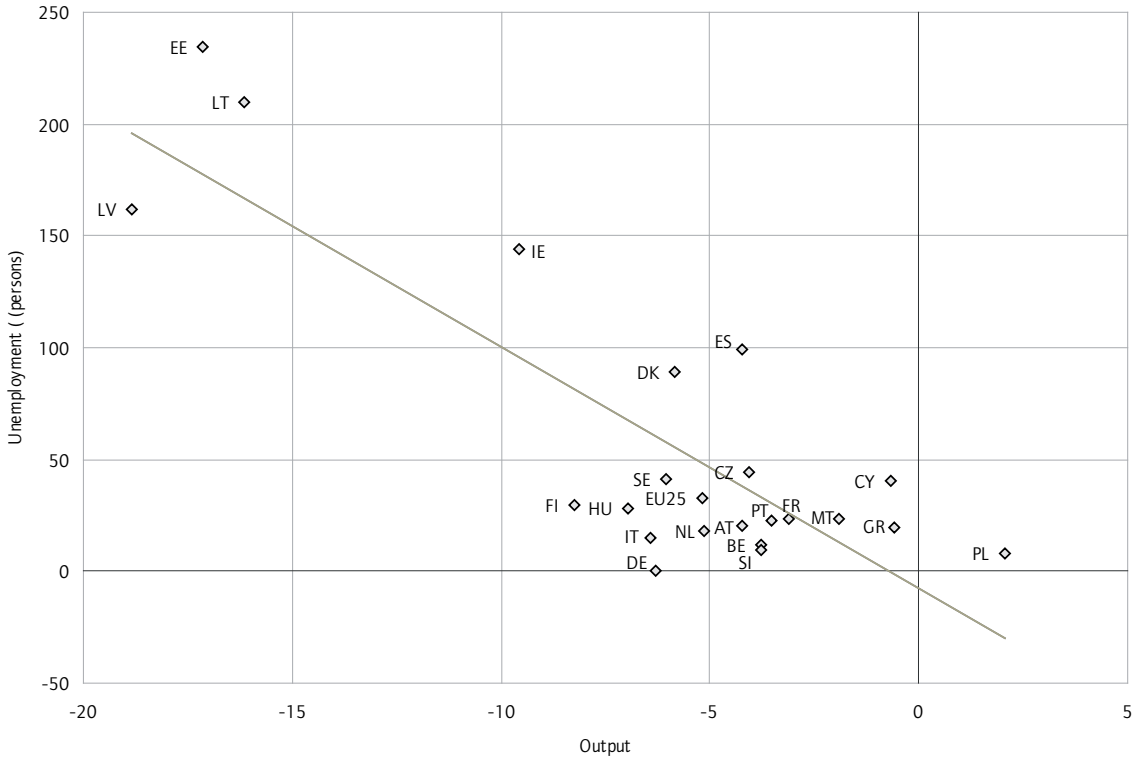
Source: Eurostat National Account Data.

A similar overall pattern emerges when headcount employment is used in place of total hours. The correlation is almost as close (0.84). However, as suggested also by Figure 6, this overall similarity hides substantial changes in the position of individual countries when the 'average working time' buffer is taken into account, as it substantially reduces the employment elasticity in some countries while raising it in others. This can be seen for example with reference to the 'trading places' between Latvia and Estonia, the two countries hardest hit by the output shock (compare the bottom left of figures 9 and 10). Of the two countries with very high employment elasticities, Ireland and Spain, the former is reduced, and the latter is exacerbated still further when changes in average hours are taken into account.

Turning to the countries with low employment elasticities, a fall in average hours – reflecting, notably, work-sharing schemes – very substantially improves the situation of Slovenia, whereas it leaves that of Finland – which lacks a substantial work-sharing scheme – virtually unchanged. Similarly, Germany, whose hours-employment sensitivity to output is quite close to the European average, changes position fundamentally when the impact of work-sharing and other forms of reduced working time is taken into account, actually posting, as we have seen, employment growth despite a considerably higher than average output loss.

The next step is to explore how changes in unemployment correlate with changes in output and in employment.

Figure 11 **Correlation between changes in output and increases in unemployment (index), EU25 countries Q1 2008 to Q2 2009**

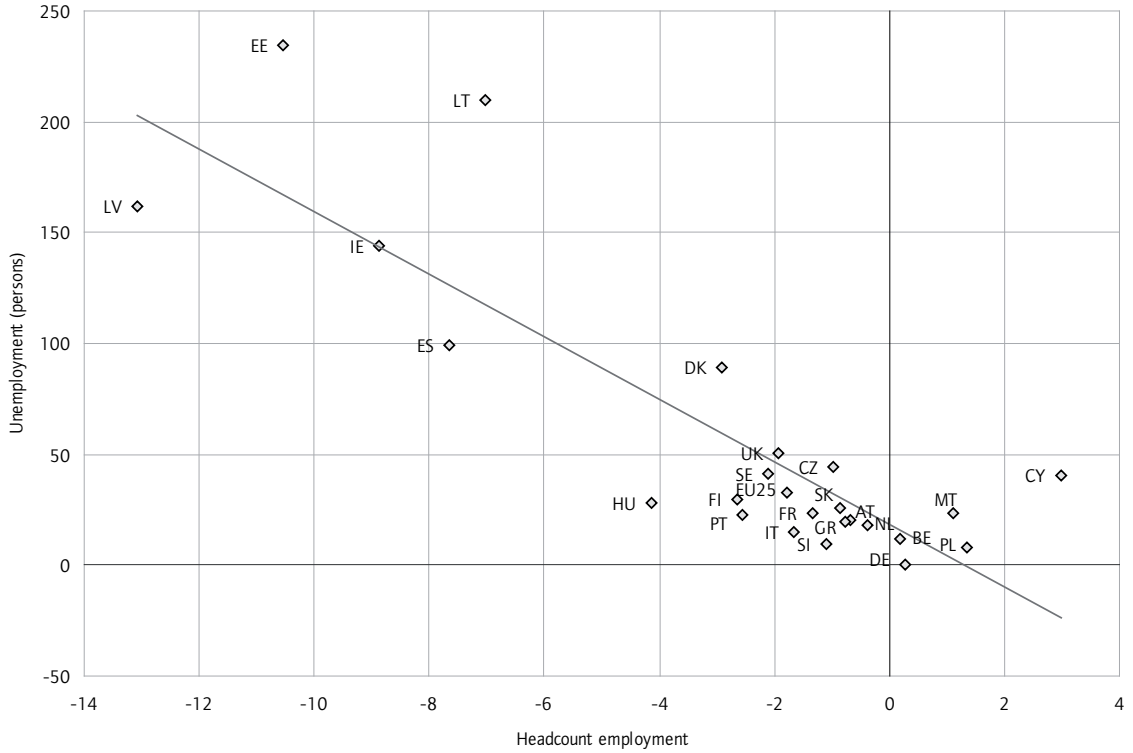


Source: Eurostat National Account Data.

As expected there is a strong negative correlation (coefficient -0.82) overall between changes in output and unemployment (Figure 11). Once again Lithuania, Estonia (but not Latvia), Ireland and Spain, but also Cyprus, emerge as having a particularly poor labour market performance, this time in terms of the percentage rise in unemployment, given the size of their respective output losses. Germany, Slovenia and Finland have suffered the least substantial percentage rise in unemployment with respect to the size of their output losses.

Finally we can consider the correlation between headcount employment changes and those in unemployment (Figure 12). As expected, we see a strong negative correlation (-0.86), indeed fractionally higher than that between output and headcount employment.

Figure 12 **Correlation between changes in headcount employment and in unemployment, EU25 countries Q1 2008 to Q2 2009**



Source: Eurostat National Account Data.

1.4 Some conclusions from the EU comparison

Looking at Europe as a whole we see that, overall, output losses do translate reliably into – considerably smaller – employment losses measured in hours, lower headcount employment and higher unemployment. However, the correlations, while strong, are far from perfect, revealing the existence of significant buffer mechanisms, the importance of which varies strongly between countries. A number of countries depart from the average (European) coefficients considerably, showing either very large or very small buffers either between output and employment or between employment and unemployment. The most important source of differences between the countries in terms of sensitivity appears to result from the second buffer – changes in average working hours.

In comparison, the transition from falling headcount employment to rising unemployment appears more straightforward from a cross-country comparative perspective. In other words, the importance of the third buffer – between headcount employment and unemployment – varies somewhat less between the EU countries than that between output and (headcount) employment, at least in the short-term.

Tentatively, we can conclude that the various institutions and policies – be they governmental, negotiated by social partners or implemented by firms autonomously – that are at work at the plant level, and serve to maintain employment despite production losses, are somewhat more important for explaining intra-European differentials in unemployment outcomes (for a given output shock and at least in the short run) than those institutions and policies that mitigate the impact of a fall in employment on the rise in unemployment.

This analysis is at an aggregate statistical level. The next step is to examine in more detail the institutional configurations behind these different buffers.

2. Explaining performance differences with labour market institutions and structures

2.1 Methodological issues

One potential approach to examining the institutional configurations across a broad number of EU countries is to explain variations in labour market outcomes in a regression analysis in which we control for the size of the output loss and then consider a set of institutional variables that are assumed to influence employment and unemployment outcomes. Examples of these variables – referring back to the classification of 'buffers' given earlier – are short-time working schemes, which can maintain head-count employment by reducing individual working hours, employment protection legislation (EPL), which slows the adjustment of head-count employment to a loss of output, and active labour market policies, which can reduce the extent to which a fall in employment translates into a rise in unemployment.

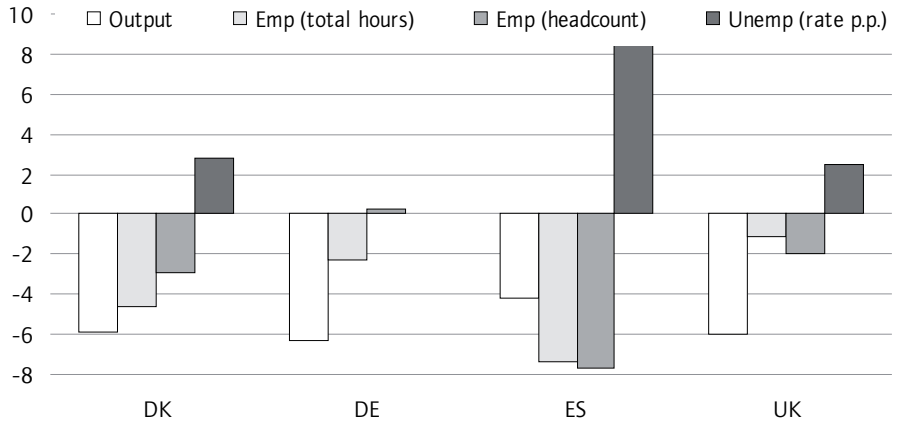
We attempted this approach but encountered a number of difficulties. Firstly, we had comparative data for only a limited number of countries, which not only limits the number of explanatory variables that can be introduced simultaneously into the model but makes it difficult to arrive at statistically robust results. Secondly, for several institutional variables, particularly EPL, the data source is the OECD, which excludes some EU members. Thirdly, the available indicators were too rough in many cases for us to be sure to capture the aspects of the institution which theory would suggest is relevant in serving as a buffer. Fourthly, for some institutions that would be expected to have an effect, no comparable and/or up-to-date measures are available.

We ran several regressions of the changes in unemployment, controlling for the size of the output shocks, on variables capturing EPL, ALMP, and the existence of short-time working and early retirement schemes. Generally these variables did have the expected negative sign, i.e. were associated with a lower sensitivity of unemployment changes to output changes. However, the results were statistically not significant. Given the data limitations just described, this result is not surprising, and thus a cross-country regression-based approach is of very limited value in teasing out the causal relationships involved, not to mention attempting to quantify them.

For this reason, we adopted a small-N, case-study approach. We have selected, as indicated in the previous section, four countries: Germany, the UK, Spain and Denmark. As we have shown in the first section and as summarised in figure 13, these countries show some interesting patterns when comparing

output, employment and unemployment outcomes. As is well known from the comparative political economy literature, these countries also represent different welfare state types or 'varieties of capitalism' (Esping Andersen 1990; Ferrera 1996; Hall/Soskice 2001). The different institutional configurations can then be studied in terms of the three labour market buffers.

Figure 13 **Summary comparison of % change in output, employment in hours and persons, and unemployment-rate changes, for four countries, Q1 2008 to Q2 2009**



Source: Eurostat National Account and Labour Force Survey Data.

Figure 13 summarises information provided in the previous section for the four selected countries. The roughly equal size of the output shock (left-hand bar) in Denmark, Germany and the UK clearly emerges. Total working hours have been least affected in the UK; the effect was largest in Spain, with Denmark and Germany in an intermediate position. However, in both Denmark and, especially, in Germany the average-working-hour effect substantially buffered the overall employment effect (in persons), whereas in the UK the job losses were more marked than in these countries because measured average working hours actually increased. (It may be that this reflects statistical problems. Recall that the total hours figure is calculated using the product of the change in headcount employment and the change in average working hours. The latter are not seasonally adjusted. It is likely that the reported figure for employment in head-counts is more reliable.) Given the extent of the changes in employment in persons, the change in the unemployment rate[6] in these three countries is broadly commensurate. Germany, by stabilising employment, has avoided any increase in unemployment. Allowing for the somewhat larger fall in employment in persons in Denmark compared to the UK, the more pronounced rise in unemployment there is to be expected.

6. The rate change rather than the percentage change is used here for presentational reasons.

Spain differs very obviously from the three other countries. A comparatively small output shock has translated into massive employment losses, with no buffering effect of a change in average hours (if anything a small negative effect). These losses have in turn been reflected in a huge rise in unemployment. The Spanish 'regime', its institutions and other economic and labour market characteristics, appears to be characterised by extremely limited buffers in all three areas. Germany is the opposite case, with the average-working-time buffer particularly strong. Denmark's buffers – at least in the short term – are apparently more pronounced in the first area (working hours), the UK's in the third (labour supply).

The remainder of this section looks in more detail at the labour market outcomes of the crisis in the four chosen countries and in particular at the different institutional configurations. For each country we start by looking at the developments of employment and unemployment in a more detailed and qualitative way, considering, for example, different labour market groups. The extent to which different groups are affected may shed light on the role played by different institutional buffers. We then look at structural features of the respective labour market before turning to specific government policies. The average figures for the EU27 are taken as a benchmark where possible. Against the background of this analysis, the output-employment-unemployment patterns of the four countries can be interpreted.

2.2 Labour market developments

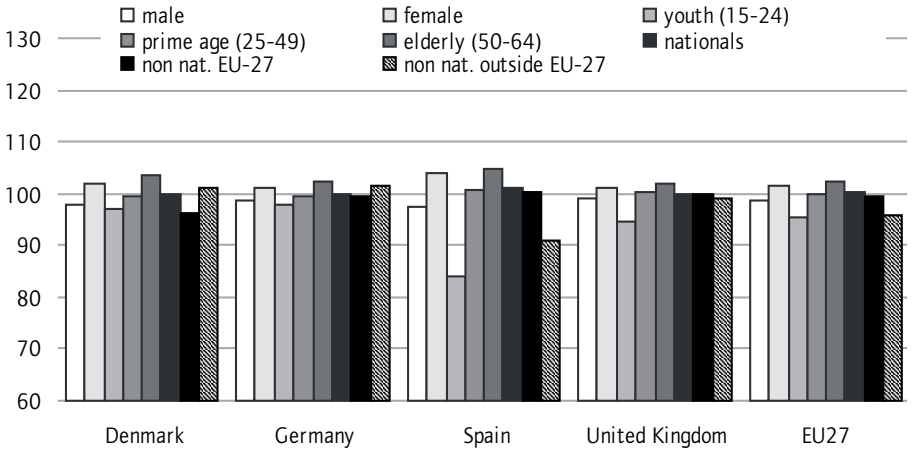
Developments in employment

Differences between the extent to which employment has changed for different labour market groups may offer insights as to underlying structural features of the four economies and labour markets and the use of institutional buffers. Figure 14 compares the percentage change in employment by gender, age group and nationality. As it is the *relative* magnitudes for the different categories that are important here, the figures have been normalised so that the 'total' change in employment for each country is set equal to 100; figures below 100 imply a sharper fall (or in some cases a less pronounced increase) for that sub-group than for the national average, while figures above 100 indicate the opposite. Where this is particularly relevant, the 'absolute' changes for various groups will be mentioned additionally in the text.

The EU27 benchmark figures point to a substantial gender gap in favour of female employment in the crisis: in absolute terms female employment declined only fractionally, whereas that of men fell by more than 3%. (In the figure this is reflected in the differences, for men and women respectively, around the 'normalised average' of 100 for both sexes, i.e. rather less than 99 and more than 101 respectively. The age distribution shows a clear 'rising step pattern', i.e. the contraction in employment is substantially more serious for younger workers than prime-aged and older workers. Indeed the latter group actually

saw a (marginal) absolute rise in employment[7]. Whereas non-nationals from other EU member states do not seem to have been affected significantly more than nationals by the crisis, there is a substantial discrepancy vis-à-vis non-nationals from outside the EU, the loss of employment in this group having been twice as large as for nationals.

Figure 14 **Rate of change of employment 2008Q2-2009Q2 (2008Q2=100), data is normalised on the respective national totals**



Source: Eurostat Labour Force Survey Data; own calculations.

Starting from these benchmarks, what can we say about the profiles of our four countries?

The Danish age profile is virtually the same as that for the EU. However the gender divide is rather more pronounced. At around 2% below and above the national average employment loss respectively, Danish women and men have been hit very differently in terms of employment levels. (Absolutely, female employment fell by less than 1%, male by close to 5%.) The picture regarding migrants (non-nationals) also differs markedly from the EU average. The employment of non-EU nationals has actually fallen less than that of 'native' Danes, while that of nationals of other EU countries has declined faster.

In Germany the gender divide is roughly in line with the EU average. The age-group distribution follows the overall pattern, but the steps are less steep: in relative terms youth has not suffered to the same extent as in Europe as a whole. The difference between natives and EU nationals is small; as in Denmark, employment of non-EU-nationals has increased relatively (and also absolutely).

Spain is the country with the most pronounced gender divide and by far the steepest age 'step'. Youth employment, in particular has drastically declined – in absolute terms it is down by almost one quarter. Also non-EU migrant

7. While in theory this could be affected by 'cohort effects' (i.e. the impact of the fact that the size of age cohorts is not the same and this leads to structural shifts in total employment of the three main age categories over time), this effect is marginal over a single year.

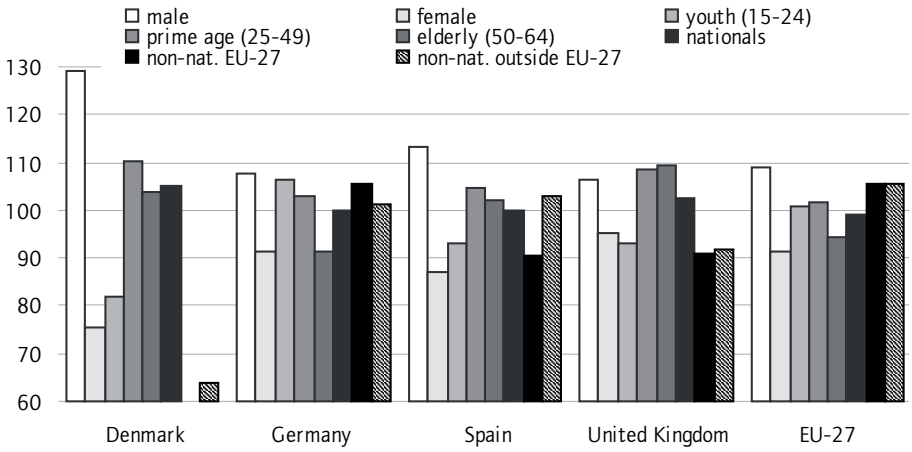
workers have borne a disproportionate share of the employment losses. We return to these characteristics below.

The UK distribution is quite close to the EU average. Both the gender divide and nationality differences are slightly less pronounced than the European average: in other words, the job losses seem to have been spread more evenly across these labour market categories in the UK than in other countries.

Unemployment

Figure 15 shows the result of a similar analysis, this time for changes in unemployment (again normalised so that the 'total' increase in unemployment for each country is set equal to 100).[8] The EU benchmark figures suggest relatively small average differences across the different labour market subgroups, except for gender. Male unemployment has risen by 40% compared to less than 20% for women. This is shown in the figure by male unemployment increasing by roughly 10 percentages points relative to total (i.e. men and women), with the rate for women, correspondingly, 10 points below the average.

Figure 15 **Rate of change in unemployment 2008Q2-2009Q2 (2008Q2=100), data is normalised on the respective national totals**



Source: Eurostat Labour Force Survey Data; own calculations.

The other significant differences are the lower rate of increase of unemployment amongst the elderly (around 5 points below average). This is likely to be attributable to the fact that older workers are better protected and/or more expensive to fire; it may also reflect the use of early retirement, but the employment numbers just discussed suggest that this effect is not decisive. The increase in unemployment, by contrast, is about 5 percentage points higher than average for non-nationals (whether coming from other EU countries or from outside the EU). This reflects the weaker position of non-

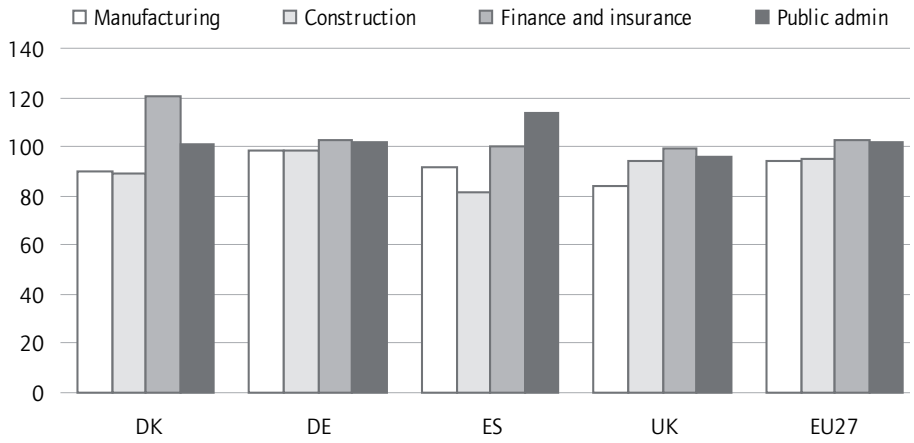
8. This does not change the figures for Germany as total unemployment remained constant.

nationals on the labour market. It also suggests a mechanism attenuating any 'repatriation effect': many migrant (actually: foreign national) workers remain in the country of residence and are counted, whether or not they receive unemployment benefit, as unemployed on the standard definition.

Taking the EU27 as a benchmark, we see notable deviations from the averages in our four countries. The gender divide is rather smaller in the UK, slightly below average in Germany, rather above average in Spain and way above average in Denmark. In the latter case, female unemployment has risen by 'only' 50%, while male joblessness was one-and-a-half times higher[9].

Interestingly, of the four countries, only in Germany does the lower increase in unemployment for older workers identified for the EU27 as a whole emerge[10]; indeed the number unemployed in this age category has actually fallen by around 10%. In the other three cases, the increase for this group is above the average of the other cohorts, whereas (particularly in Denmark) youth has suffered comparatively less from the increase in unemployment in the crisis. This may well reflect more numerous options for this group outside the labour force (especially education), a traditionally stronger focus of active policies on youth (early activation), or possibly sectoral effects (see below).

Figure 16 **Sectoral developments in employment 2008Q2-2009Q2 008Q2=100); data is normalised on the respective national totals**



Source: Eurostat Labour Force Survey Data. Note: focus on key sectors.

Figure 16 shows the sectoral breakdown of employment changes for some key economic sectors, again normalised to 100 for the total change in each country. The aggregate EU27 figures show that manufacturing and construction employment contracted to an almost equal extent (6-7%) more than the overall employment decline. Unsurprisingly, in relative terms public administration fared better; more surprisingly, this was also true of finance and insurance, a

9. The reader is reminded that in the case of Denmark these percentage increases are from a very low base.

10. Given the size of Germany, this fact of course drives the EU average to a considerable extent.

sector which, as the 'origin' of the crisis, might have been expected to suffer more than proportional job losses. In absolute terms, both of these service sectors kept employment levels virtually constant over the period considered. However, with budgetary pressure that will increase with time, we also expect stronger pressure on employment in the public sector.

Denmark exhibits more pronounced sectoral differentiation than the European average. In relative terms, the contraction in manufacturing and construction was roughly equal, as in Europe as a whole, but considerably more pronounced. The public sector acted as a brake on job cuts to a similar extent as in Europe as a whole; an anomaly is the substantial expansion of employment in finance and insurance. Germany is notable for limited sectoral differentiation; the pattern is as for the EU average, but the differentials are very small. This is in stark contrast to both the UK and, especially, Spain, the latter being characterised by a strong concentration of job losses in construction – virtually one quarter of Spanish construction jobs were lost – with manufacturing jobs also badly affected. The lower labour productivity typical of the constructio industry means that this sectoral focus of the crisis is one explanation for the high sensitivity of employment to output losses in Spain, compared to other countries. The relative figures for the UK for these two sectors are almost exactly reversed. In Spain finance employment declined in line with the national average, whereas public administration served as a strong 'brake' on job losses, expanding by 13% relative to the national average and even by more than 5% in absolute terms. In Britain, by contrast, both the financial sector and the public administration suffered above-average job cuts. Clearly, the (large) financial services sector in the UK has been relatively adversely affected by the financial crisis in employment terms, but only marginally so. Two sectors not included here for reasons of space, health and education, have so far seen substantial increases in employment during the crisis. Thus in the UK, too, the 'public sector', as a whole, has offset declining numbers of jobs in other sectors.[11]

Developments in non-standard employment

An important consideration is the type of contract under which workers are employed. A larger share of part-time workers may, for instance, be conducive to work-sharing and variable-hours arrangements. The existence of large numbers of workers on fixed-term contracts (provided their average duration is comparatively short) means that firms have an option to reduce their workforces irrespective of EPL rules and other restrictions and/or costs simply by non-renewal of such fixed-term contracts. The data for the prevalence of these two contractual forms is presented in Table 1.

11. Indeed, except in Denmark (in the case of health), both the health and education sector expanded employment in absolute terms in all four countries considered here. On the EU27 average a total increase in jobs of over 5% was recorded in these two sectors taken together.

Table 1: **Changes in part-time and temporary employment**

	part-time employment (15-64)		temporary employment 15-64	
	2008Q02	2009Q02	2008Q02	2009Q02
Denmark	23.9	25.1	8.5	9.1
Germany	25.5	25.5	14.7	14.3
Spain	11.9	12.8	29.4	25.3
United Kingdom	24.2	25	5.2	5.4
EU-27	17.7	18.2	14.1	13.4

Source: Eurostat Labour Force Survey Data.

Compared with the EU27 average, we see that part-time shares are relatively high (and approximately equal) in Denmark, Germany and the UK, but much lower in Spain. All countries except Germany have seen a modest rise in the part-time share. It may be that this has been used as a way of reducing overall average hours; however, while this seems plausible at the micro-level, it is not consistent with the fact that average hours were reduced sharply in Germany (part-time share constant), while they increased in Spain (part-time share increased).

Particularly striking are the temporary employment data. While Germany is around the EU27 average, the UK is considerably below and Denmark less so. In Spain, meanwhile, the share of temporary work is twice the EU average. This distribution correlates closely and positively with the strictness of EPL on permanent contracts: where EPL on permanent contracts is restrictive, firms are more likely to make use of temporary contracts, especially insofar as legislative provisions facilitate such arrangements. The high share of Spanish workers on temporary contracts – about one in three prior to the crisis – already suggests that this could be one reason for the high sensitivity of employment to output losses. And this is dramatically confirmed by the very sharp fall in the temporary employment share, by 4.1 percentage points. While the overall employment decline in Spain was, as we have seen, just under 8%, we can calculate that among those on temporary contracts more than 20% must have lost their jobs. This shows very clearly that job losses have been largely borne in Spain by workers on temporary contracts. As these are disproportionately young workers, this is the proximate explanation also of the concentration of job losses among youth noted earlier. By contrast, there has been little change in the share of temporary workers in the other countries.

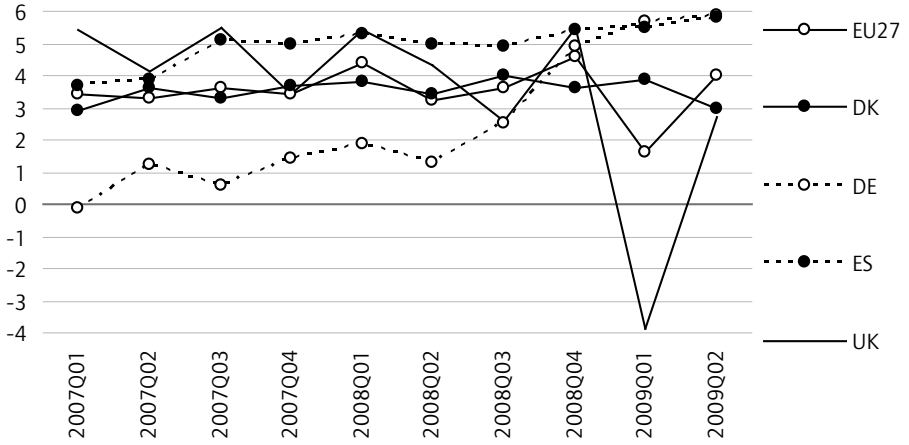
Wage flexibility

One possibly important influence that has not been discussed so far is wages. It is conceivable that greater 'wage flexibility' – in this context wage cuts or reductions in firms' non-wage labour costs – could ease the pressure faced by firms suffering demand and output losses, serving to reduce the extent of redundancies. While plausible at the micro level, it is not immediately clear whether such a strategy can be effective at the macro level, at least not in large, relatively closed economies, because of knock-on effects on aggregate demand. However, we cannot discuss this important issue here because, as emphasised

earlier, we are taking the output shock as measured by the national accounts as given, and not considering possible feedback loops between the structures and institutions discussed, on the one hand, and demand and output, on the other.

Interpreting labour cost trends is not easy without a highly detailed analysis, due to the influence of productivity, inflation lags in the collective bargaining process and other issues, which would go beyond the scope of this paper. Figure 16 simply presents the quarterly changes in hourly nominal labour costs compared with the same quarter the previous year. To facilitate comparison, data from the period in the run-up to the crisis are included. A few preliminary remarks are in order: these are total labour costs, i.e. include also employers' contributions and, importantly, account also for wage subsidies received by employers, such as government support for short-time working schemes; the figures are hourly and so a 10% cut in average hours, with all other wage-related variables left unchanged, implies a 10% rise in the indicator. Uncertainty about the hours data demands caution in interpretation, especially over short periods of time. The figures refer to the 'business sector', i.e. exclude the public sector.

Figure 17 **Change in hourly nominal labour costs, on the same period the previous year**



Source: Eurostat Labour Cost Index..

The most striking result is for Germany. According to these data, 'wage moderation' does not appear to have played a role in cushioning the employment effects of the crisis. On the contrary, the rate of growth in nominal labour costs increased precisely during the crisis quarters from its previous low levels. Unless this result is due to misreporting of hours data (perhaps in the context of short-time working schemes), it is important in ruling out a possible explanation for Germany's relative success in dealing with the crisis in employment terms. On the other hand, wage costs in Spain showed a further marginal increase from a structurally higher base. It could be argued that this lack of any downward adjustment was a contributory factor to the high employment sensitivity to output in that country. The Danish figures are essentially flat over the period: the pace of hourly wage costs appears rather unaffected by the crisis, at least during this period. The UK figures are somewhat hard to interpret as they fluctuate widely. One striking feature is

the extreme fall in the first quarter of 2009. Given the immediate bounce-back in the following quarter, however, this result may be 'noise' and should not be overinterpreted. Nevertheless, taking both of the first quarters of 2009 together, it does appear that there has been some downward wage flexibility, compared to previous trends, in the UK, which may have induced firms to hold on to more workers than otherwise would have been the case. (The reader is reminded of the aggregate-demand caveat.)

Overall, the evidence regarding a possible impact of changes in labour costs – induced either by concessions by wage-earners or government policies to reduce employer's non-wage labour costs, which were a feature of some government anti-crisis packages (Watt 2009) – is rather mixed. We can, at the very least, be confident that differences in wage policies do not appear to offer even a partial explanation for employment sensitivity to output in the four countries considered here. A much more detailed study would, however, be required to shed sufficient light on the statistical correlations across Europe in order to draw firmer conclusions.

2.3 Institutional explanations for labour market developments during the crisis – country case studies

In this section we consider the institutional configurations of the four countries consecutively and in greater detail. For each country we consider – with some variation due to data constraints – the same set of institutions, as follows. We begin with employment protection legislation (EPL). This is a legal-structural feature of national labour markets. A higher degree of EPL induces firms to retain workers in the face of a fall in product demand. If EPL is extremely restrictive, it is very hard for firms to dismiss workers, at least those on permanent contracts, for 'economic' reasons. This may encourage the use of work-sharing schemes. In this case, job losses will occur either amongst those workers not on permanent contracts, as already discussed in the case of Spain, or via 'alternative' means (early retirement, firm bankruptcy). The focus, then, is on the first buffer, but there can be expected to be knock-on effects of strict EPL on the use of the second and third sets of institutional buffers.

Next we examine more precisely the use of and developments in work-sharing schemes and functional equivalents (second buffer), which have been the 'first line of defence' in many countries.

Then we look at the (prior) existence of developed active labour market policies (ALMP) as an institutional feature (the data presented are for 2007 – latest available comparative data – i.e. prior to the crisis) and the development of ALMPs during the crisis. The existence of such schemes is expected to serve as a buffer, in particular, between any fall in employment and the rise in unemployment, by providing labour market transitions such as training schemes, early retirement options, etc. (third buffer). This point is important

given the sharp onset of the crisis and the time it takes to establish new labour market policy measures, as opposed to 'merely' ramping up the volume of existing schemes.

Finally, we consider additional labour supply buffers. As explained above, we exclude natural demographic developments because they are a 'slow moving variable'. The focus is – in particular but not exclusively – on the use of early retirement, as a means of reducing the supply of older workers, or, more cynically, 'redefining' the elderly unemployed so that they no longer show up in the unemployment data. A provisional analysis is also made of the influence of labour migration, with a focus on the UK and Spain, two countries where migrant labour inflows have played an important role during the last decade. Given data constraints, this remains a qualitative and somewhat speculative exercise. Nevertheless, the substantial inward flow of migrant labour, particular from central and eastern Europe in the wake of EU enlargement in 2004, potentially constitutes an important buffer, as discussed earlier, between employment and unemployment, with the more or less 'voluntary' repatriation of migrant labour limiting the increase in (registered) joblessness in the country concerned, given a fall in employment. In general, it is still too early to make reliable inference about the impact of the crisis on migrant workers and thus on the role of migrant labour as buffer in the crisis. In fact, taking into account that this is a global economic crisis and that home countries of migrants are often at least as severely hit, and that furthermore migrant workers have already build up their own social networks in the "receiving countries", one could also predict that not much will happen in terms of return migration (compare also Trinity College Dublin, December 2008).

2.3.1 Germany — country case study

'Hourly productivity buffer'

Employment protection legislation

In comparison with other OECD countries (and notably with the UK and Denmark), Germany has relatively strict employment protection legislation in place for workers with permanent contracts. On the other hand, restrictions on the use of temporary contracts have been lifted gradually over the last two decades. Strong EPL would, by itself, be expected to limit the sensitivity of employment to a fall in output. Temporary employment in Germany is close to the European average of around 14 percent. There was only a slight decrease of 0.4 percentage points in temporary employment between the second quarter of 2008 and the second quarter of 2009 (Eurostat 2009).[12] However, the developments are much more pronounced in terms of *temporary agency work* which had been very important for employment growth in the past. In fact, despite the comparatively high degree of permanent contracts among

12. The temporary employment measure of Eurostat includes temporary agency workers as long as they are not on open-ended contracts. However, their share in temporary employment is much smaller than that of fixed-term workers.

temporary agency workers in Germany and their inclusion in the short-time working measures (see next section), temporary agency work was one of the first sectors hit by the economic crisis: whereas total employment subject to social security only began to decline at the end of 2008, for temporary agency work this trend had been observable as early as the second quarter of 2008. The share of temporary agency workers in all employed workers subject to social security decreased from a peak of 2.6% in June 2008 to less than 2 percent in May 2009 (BA August 2009) contributing to increasing unemployment, particularly among men who make up more than 70% of all temporary agency workers. Temporary agency work is of short duration, with about half of all contracts that ended in the second half of 2008 having lasted for less than three months, which makes it suitable as an adjustment tool from an employer point of view.

'Average-working-hours buffer'

Short-time working allowance

Instead of firing employees, German employers have in many cases resorted to a reduction in weekly working hours and/or overtime, a reduction of credits in working time accounts and, importantly, made use of the state-subsidised short-time working allowance. Under the short-time working scheme, workers are compensated for the loss in income caused by temporary working time reductions at the level of unemployment insurance benefits. This prevents open unemployment, at the same time as it helps employers to preserve their qualified work force, which will enable them to step up production without delay in the case of an economic upswing.[13]

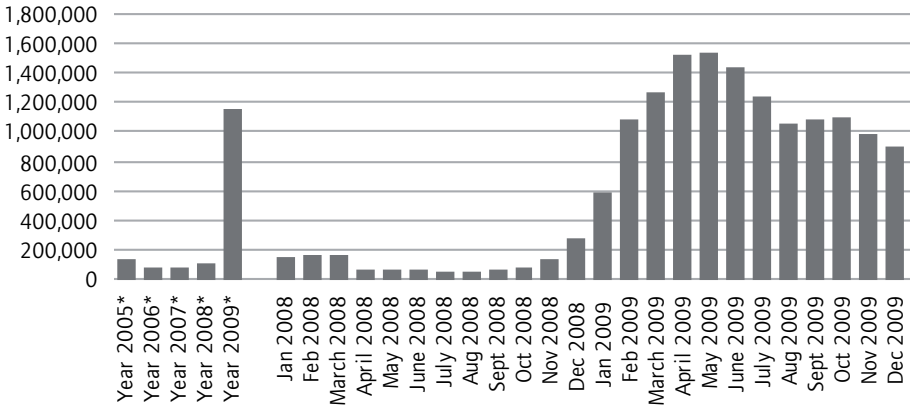
In light of the economic crisis and in coordination with the social partners, the rules regarding the use of the short-time working allowance have been modified several times to allow easier and less bureaucratic access and make the allowance available for broader groups of workers (including fixed-term and temporary agency workers). The new rules, which are part of the economic stimulus package, were originally put in place until the end of 2010 but have been extended, currently to March 2012. Employers now have easier and cheaper access to the short-time working allowance: the rule that at least 30% of employees have to be affected by short-time work has been suspended, a working-time reduction and corresponding loss of wages of at least 10% is sufficient reason (website: Bundesministerium für Arbeit und Soziales). Employers no longer have to implement measures to avoid short-time work (such as using up working time accounts) before they are eligible for the allowance. Furthermore, as of July 2009 the federal employment office can fully reimburse the employer social security contributions after short-time work of six months. During the first six months, half of the employer contributions are reimbursed. The maximum duration of the allowance has

13. In some form or other the German short-time working allowance has been in place since the 1920s. In recent periods it has been extensively used immediately after reunification and during the economic downturn of 1993 (BA Oktober 2009: 9).

been extended several times and is now 24 months. The German government has also strengthened incentives for further training during short-time work (for more information on the German short-time work allowance during the economic crisis see e.g. Eichhorst/Marx 2009).

After the modification and simplification of the regulations, large increases in benefit recipients can be observed (figure 18). The 2009 average annual number of beneficiaries was more than 1,140,000, ten times the average number in 2008 (figure 18). Since November 2008 steep increases in beneficiaries have been be observed. Beneficiary numbers peaked in May 2009 at more than 1.5 million; a year earlier there had been no more than around 60,000. By December 2009 beneficiary numbers had again fallen to around 850,250.

Figure 18 **Development of short-time work in Germany (beneficiaries)**



Source: Statistik der Bundesagentur für Arbeit 2010.
*Average annual numbers..

When these findings are related to the previous analysis for different labour market groups, the use of short-time working is seen to be highest by far in manufacturing and also comparatively important in construction (BA 2009b). And indeed, Germany showed much smaller declines in these sectors than the three other countries and the EU27 on average (figure 16, section 2.2). Moreover, the large majority of short-time workers were men (78% in June 2009), which is not exclusively due to the gender composition of the sectors with large shares in short-time work. Even in sectors where women represent more than half of the workforce (e.g. health and social services; retail), the majority of short-time workers were men (BA Oktober 2009: 14). In the absence of this arrangement, the gender differences in the development of unemployment would have been even larger.

In the past, the regulations on short-time working stipulated that certain measures – including firing temporary agency and fixed-term workers – were required before the allowance could be claimed (Deutscher Gewerkschaftsbund Bundesvorstand 2009). These regulations are currently suspended and fixed-term and temporary agency workers can now also make use of the short-time

working allowance and their contracts can be extended during periods of short-time work.[14] This may be one of the reasons why hardly any decline in temporary work can be observed for Germany (section 2). Marginal workers are not eligible for the short-time working allowance, but they do not have to be fired as a prerequisite for the firm to gain access to the short-time working allowance.

Quantifying the effect of the 'average-working-hours buffer', the average working time reduction resulting from short-time work was 31.2% in June 2009; in full-time equivalents 448,000 people were thus working short-time. The share among workers subject to social security contributions was 5.2% (about 7% men and 3% women) in June 2009, compared with less than 1% in December 2008 (BA Oktober 2009: 14; BA November 2009: 12). The 2009 share of short-time workers among all employees (derived from the labour force survey data) was about 3.4% (own calculations). As such, the quantitative and also qualitative effect of the STW-scheme in Germany has been very substantial.

'Labour market policy/labour supply buffer'

Prior-to-crisis expenditure on and participation in ALMPs

In the past, expenditure on active labour market policies, as a share of GDP, used to be comparatively high (though unemployment was also higher than in most other European countries). Since the late 1990s, however, expenditure on ALMPs (excluding public employment services (PES) which have been somewhat strengthened in financial terms) has been halved, even though unemployment continued to increase until 2005. In 2007, the most important programme, in terms of expenditure, was training, followed by labour market services. Involving about 4.9% of the labour force, participant stocks in ALMPs (exluding PES) are close to the OECD average, with training (including special support for apprentices) the most important component in terms of participant stocks (OECD.StatExtracts).

Underemployment or hidden unemployment through ALMPs

In March 2009, 1.62 million persons were participating in active measures – 0.1% fewer than one year earlier. The ratio of unemployed to those in active measures was 1.9 to 1 in June 2008 and 2.1 to 1 in June 2009 and thus somewhat more favourable in the latter period (BA Juni 2009). Since the majority of unemployed workers participating in active labour market policies are not counted as unemployed, one gains, by adding the number of participants in ALMPs to the number of unemployed persons, a more realistic picture of the size of underemployment. In March 2010 the number of registered

14. Since November 2008 (and until the end of 2010), the short-time working allowance is also applicable to the sector of supply of temporary workers. From November 2008 to May 2009 notifications (which capture potential benefit receipt) were submitted for 93,000 short-time workers from the sector of temporary agency workers supply – the bulk of these in March 2009. In March 2009 about 16,400 short-time workers in this sector received the allowance. At 52% the average working time reduction was considerably higher in this sector than the average of the other sectors.

unemployed was 3,567,944 (table 2). After adding persons who are not counted as unemployed because they are in activation, job training, early retirement and the like (lines 2 and 3), the number increases to 4,509,520; after adding persons in e.g. subsidised self-employment and partial retirement (line 5), the total becomes 4,759,342. Underemployment has increased in importance if we compare March 2010 with March 2009. In March 2010 registered unemployment was -0.5% lower than one year earlier whereas the number of persons in more broadly defined unemployment ("wider unemployment") and underemployment had increased by 3.1% (line 5).

Table 2 **Marked increases in underemployment**

	Stock (absolute) (cumulative)		Changes compared to the same months one year earlier in %	
	March 2009	March 2010	March 2009	March 2010
(1) Registered unemployment	3,585,784	3,567,944	2.2	-0.5
(2) + wider unemployment - persons close to unemployment (e.g. activation, job integration, some early retirement schemes)	3,698,285	3,905,684	2.9	5.4
(3) + underemployment - persons close to unemployment (e.g. job training, public works (ABM), subsidised employment, disability benefits, some early retirement schemes)	4,342,582	4,509,520	1.2	3.2
(4) + underemployment - persons far from unemployment (e.g. subsidised self-employment, partial retirement, short-time work allowance in full-time equivalents)	5,020,911	x*	7.6	X*
(5) + underemployment – persons far from unemployment excluding short-time work allowance	4,585,906	4,759,342	-0.1	3.1
Difference registered unemployed (1) and persons in wider unemployment and underemployment exluding short-time work (5)	1,000,122	1,191,398		

Source BA Juni 2009, März, April 2010. Note: *not yet available

In March 2009 and 2010 more than one million persons fail to show up in registered unemployment due to their participation in active measures, early retirement measures, etc. While the extent of wider unemployment and underemployment increased somewhat from March 2009 to March 2010, the 'labour market policy buffer' contributed considerably to keeping open unemployment down.

'Additional labour supply buffers'

In Germany, since the early retirement rules as defined in the relevant legislation (§428 SGBIII) expired at the end of 2007, the stocks in early retirement are now automatically decreasing. The rule in place before the end of 2007 stated that unemployment benefit recipients older than 58 were no longer required to search actively for a job and thus could receive unemployment benefits unconditionally until retirement (BA Mai 2009). In June 2009, 29,700 elderly persons were still receiving unemployment insurance benefits (ALG I)

under this rule – 79% fewer than in the previous year.[15] Unemployed persons older than 58 and previously entitled to make use of the early retirement rule (not being counted as unemployed) are now counted as unemployed. It is estimated that this leads to about 10,000 additional unemployed per month and 160,000 cumulated unemployed since January 2008 (BA Juni 2009).

The legislation on partial retirement (*Altersteilzeitgesetz*, put in place in 1996) allows employees aged at least 55 years to enter retirement on a gradual basis without any loss of retirement income. This facility was introduced, among other things, in order to counter early retirement. In June 2009, the number of partial retirees supported by the federal employment agency was 94,400 – 6.7% fewer than in the previous year and comparable to the 2005 level; in both 2006 and 2007 more than 100,000 persons were taking advantage of this measure (BA Dezember 2008). A further reason for the reduction in use of this measure is undoubtedly that the financial support by the employment agency requires that the partial retiree be replaced, and this is unlikely to be the case during the crisis.

For the above reasons, it seems likely that early and partial retirement have not represented feasible means of preventing or concealing unemployment among older members of the working population during the crisis.

According to the *International Migration Outlook 2009*, in Germany, as in most other countries, there is as yet no evidence of declines in labour migration flows. What is more, Germany has not – in contrast to the United Kingdom and Spain – seen a recent boom in legal migration inflows, and this can also be explained by the prolonged application of the transitional measures. Migration thus, at least in the short-term, does not seem to act as an additional labour supply buffer in Germany.

2.3.2 United Kingdom — country case study

'Hourly productivity buffer'

Employment protection legislation

While the UK has generally very low employment protection legislation for both permanent and temporary contracts (notwithstanding some recent re-regulation)[16], it should be noted that restrictions on collective dismissals, which are likely to be particularly relevant in the context of the crisis, are actually quite close to the OECD average. Even so, it seems plausible that generally liberal EPL rules in the UK serve, by themselves, to reduce the incentives for firms to hoard labour in a downturn, compared with countries where state-mandated firing costs are higher. One consequence of liberal EPL rules is that the UK has a comparatively low share of temporary employment –

15. No available information for basic benefit (ALG II).

16. The overall OECD EPL indicator is 0.75 and compares with an OECD average figure of 1.94 (on a 1-6 scale).

around 5 percent of the labour force – and, in contrast to most other countries, this is also a relatively insignificant phenomenon among young workers. The UK labour force survey data (in line with section 2.2) shows that adjustment has taken place through regular contracts – both temporary and part-time employees saw slight employment growth (in the period Oct-Dec 2008 and Oct-Dec 2009) while regular full-time employees saw employment losses (Office for National Statistics February 2010).

'Average working hour buffer'

Short-time working and voluntary leave schemes

While there is no state-funded short-time working scheme in place covering the United Kingdom as a whole, Wales launched the so-called ProAct scheme in January 2009. With a budget of £68 million, it is co-financed by the European Social Fund and was initially scheduled to run until April 2010. Involvement in the scheme is granted for short periods only. It is open to firms that have introduced or are planning to introduce short-time working at a minimum level of one day a week for approximately 40 days. These firms are granted training costs of up to £2000 per individual and a wage subsidy of £50 a day (up to a maximum of £2000) whilst training is undertaken (Welsh Assembly Government 2009). The wage subsidy can also be used to secure apprenticeships. Both the British employers' confederation (CBI) and the national trade union confederation (TUC) have called for the implementation of state-subsidised short-time working schemes throughout the country (compare TUC 2009; Eironline 5.8.2009). Workers who are temporarily laid off or placed on short-time work may, however, be eligible to claim unemployment benefits (Jobseekers Allowance (JSA)) (ACAS May 2009).

Functional equivalents to short-time working schemes are voluntary leave schemes in the form of paid or unpaid sabbaticals, temporary shut-down of firms and cutting back on shift work.[17] As a response to the crisis, these measures have been used in various companies and particularly by the automotive industry (for specific examples see Glassner and Galgóczi 2009; Eurofound 2009a; Eurofound 2009b). British Airways, for example, has asked its staff to volunteer for unpaid work or to leave for up to one month to save jobs; the loss in salary will be spread over a period of between three and six months (Labour Research Department June 2009; BBC News (16 June 2009)).

According to the Office for National Statistics (July 2009), between March-May 2008 and the same period a year later average working hours fell by about 1 per cent partly because of a shift towards part-time working.[18] However, incentives for firms to offer short-time work are limited. Similarly,

17. Cutting back on shift-work has in several sectors, and particularly manufacturing, been used to adapt to lower production due to the crisis (Labour Research Department December 2009).

18. In figure 4 UK average working hours actually increased slightly – this deviation derives from slight differences in the periods. Neither the increase nor the decrease should be over-interpreted.

voluntary leave schemes and sabbaticals are likely to only play a minor role. This leads us to the conclusion that in the UK the average-working-hour buffer is considerably less important than in Germany.

'Labour market policy/labour supply buffer': active labour market policies (ALMP)

Prior-to-crisis expenditure on and participation in ALMPs

Expenditure on active labour market policy measures as share of GDP is among the lowest in the EU27 and is well below the EU15 average (OECD. StatExtracts). New Labour's New Deal reforms of the late 1990s strengthened the focus on job search support and supply-side measures including the threat of sanction. In contrast to most other EU countries, the bulk of recent UK expenditure on active measures is on labour market services (job search assistance and support). Expenditure on other types of measure, such as training, employment incentives or direct job creation, is negligible, and this too is reflected in the low participant stock in active measures (excluding PES) of only about 0.3 % of the labour force in 2007 (OECD average: 4.28). The bulk of participation is in employment incentive measures. However, considering the very low overall participant stocks, this is unlikely to have any significant buffering effect on the conversion of employment losses into unemployment losses.

ALMPs in the crisis

As part of an encompassing welfare reform agenda[19], planned and conceived before the economic crisis, the job-seekers allowance (JSA) and the New Deal programmes are currently being revised. As far as the active measures are concerned, from October 2009 the Flexible New Deal is phased in, establishing a new unified individualised and personalised approach for all job-seekers with barriers to finding work (DWP December 2009: 36). The programme is mandatory after 52 weeks of unemployment and consists of a package of work preparation and job-search support (for more information, see DWP 2010).[20]

As a response to the economic crisis, some temporary measures were also implemented. However, employment measures make up only about 5% of total expenditure on the *UK* stimulus package (Khatiwada 2009). Additional resources were put in place in terms of employment services, job-search support for the newly unemployed was strengthened, and the "Six Month Offer" – introduced in April 2009 – provides additional voluntary advice and guidance including recruitment subsidies, self-employment, volunteering and work-focused training for JSA recipients reaching 6 months of unemployment (DWP *et al.* 21 April 2010). Moreover, in order to take account of youth

19. The welfare reform agenda also includes changes to benefits for lone parents and the disabled (see next section). The overarching ambition of the reform agenda is to get 80% of the working-age population in employment.

20. It is likely that the focus of this programme will remain on employment services, as the stipulated minimum of work-related activities or supported employment is only four weeks (Department for Work and Pensions 2010: 12).

unemployment that was on the increase even before the crisis, in January 2010, the "Young Person's Guarantee", financed by the Future Jobs Fund, came into force. This guarantees all longer-term unemployed youth (> 6 months on JSA) an offer of a job, training or work experience (Council of the European Union 2009) and is mandatory upon reaching 10 months of unemployment. With regard to young people, funding for over 300,000 additional youth training and job opportunities has been made available (DWP December 2009: 9). In order to help business to meet staff training requirements during the economic crisis, from autumn 2008 onwards more resources have become available for small and medium-sized enterprises under the "Train to Gain" programme.[21]

Participation in ALMPs

Table 3 shows changes in participant stocks for the obligatory New Deal measures and the Employment Zones measures. The impact of activating measures in mitigating the rise in unemployment has been mixed. While the JSA case load almost doubled, participation in the New Deal measure for adults decreased by about 10 percentage points. This partly reflects the fact that the New Deal 25+ becomes mandatory only after 18 months of JSA receipt.

Table 3 **Participants (thousands) in active measures: comparison 2007, 2008 and 2009**

	May 2007	May 2008	May 2009
		Thousands	
JSA claimant count*	874.7	818.7	1536.3
New Deal 25+	60.96	60.48	51.66
New Deal for young people	91.73	77.21	115.68
Employment Zones**	n.a.	30.04	24.74

Source: Department for Work and Pensions, Information Directorate.
Downloadable at: http://research.dwp.gov.uk/asd/asd1/tabtools/tabtool_nd.asp
*Seasonally adjusted; **Employment Zones data refer to July instead of May.

The potential unemployment-reducing effect of this measure will, accordingly, be delayed by a year and a half.[22] This institutional feature emerges from the contrast with the New Deal scheme for young people, participation in which is mandatory after 6 months of claiming benefits and has increased by more than a half. Finally, there has been a decline also in the number of participants in the so-called Employment Zones.[23] These pool funds for training and Jobcentre Plus support with the aim of helping long-term unemployed people to find sustainable employment. Employment Zones are a mandatory programme for participants, aged 25 or over, in receipt of Income-Based Jobseekers

21. See http://www.traintogain.gov.uk/Helping_Your_Business/extrasupport/

22. From October 2009 onwards the Flexible New Deal will be phased in; it is mandatory from 12 months of unemployment onwards.

23. Employment Zones were introduced in April 2000 to originally 15 areas with consistently high levels of long-term unemployment. They are more flexible than the New Deal programmes offering intensive and tailored interventions. For comprehensive information on the Employment Zones refer to DWP 2007.

Allowance and who have been unemployed for 12 or 18 months (depending on the Zone).

With regard to the measures that have been introduced in response to the crisis, table 4 shows that participant numbers in the Six Month Offer are very small. Only 7890 people started one of the options of this measure in August 2009, compared with a total JSA caseload of 1,606,000. There were a total of 71,190 starts from April 2009 to January 2010, with work-focused training and recruitment subsidies being the most popular measures. Participation figures for the Young Person's Guarantee are not yet available.

Table 4 **Six Month Offer – starts**

	Recruitment Subsidies	Self-employment credit	Volunteering Placement	Work Focused Training	Total
Total starts from Apr 2009 to Jan 2010	22,990	9,760	8,670	29,770	71,190
Aug 2009	2,860	970	930	3,130	7,890

Source: DWP et al. 21 April 2010: 5.

So far only the New Deal for Young People programme has seen a notable increase in participation in line with the increase in JSA claimant counts, which was particularly strong among young people. This programme, or at least some parts of it, may thus have contributed to cushioning increases in youth unemployment according to the ILO definition (section 2.2). Schemes such as the New Deal 25 plus will have an effect only after an extended period of unemployment. Some new programmes were introduced that are available in relatively early stages of unemployment but participant numbers are limited. Such active measures can have the effect of reducing the inflow into unemployment (assuming that participants report that they are not looking for work while on the schemes). However, compared to other European countries, the content of the active schemes in the UK is focused on job search support rather than on longer-run training and employment programmes. Furthermore, quantitatively, in terms of participant stocks, active programmes are of very limited significance and they were not substantially expanded in the economic crisis to address the rise in unemployment quickly. All this information together suggests the existence in the UK of no more than a limited buffer, in the form of active labour market policy, between employment and unemployment changes.

'Additional labour supply buffers'

Inactivity benefits

State-supported early retirement schemes have been abolished, and indeed postponing retirement is encouraged (MISSOC 2008). Moreover, during the last decade the trend – that had started in the late 1970s – of increasing numbers of people claiming out-of-work benefits other than unemployment benefits has begun to reverse. This has been due to sustained economic growth

and the implementation of a more active system of support to those claiming benefits (DWP December 2009: 28).[24] In past recessions some redundant workers were provided for under various disability schemes, rather than via the unemployment benefit system. This does not seem to be the case in the current recession. The numbers of working-age people receiving Employment and Support Allowance/incapacity benefits were increasing slightly from August 2008, followed by an estimated decrease from August 2009, but the figure remained always below the 2007 levels. Income support for lone parents has constantly and markedly declined since February 2007, largely because the working requirements on lone parents have been strengthened by successively reducing the age of the youngest child giving entitlement to income support on the sole ground of being a lone parent (DWP 21 April 2010)

To judge from the above figures, inactivity schemes do not seem to have acted as a labour supply buffer in the current economic crisis. This assessment is supported by Sissons (2009) through an in-depth analysis of the potential role of the Employment Support Allowance in absorbing open unemployment during the current recession.

Migration

Since the 2004 opening up of the EU labour market, the UK has been the destination of choice for large numbers of migrant workers from central and eastern Europe (Galgoczi/Leschke/Watt 2009). A possible adjustment mechanism to falling employment would therefore be the return (outward) migration of some of these workers. Unfortunately, we lack reliable, timely data with which to gain an idea of the size of this effect.

What does seem clear is that labour inflow has slowed: during the first quarter of 2009 the number of applications approved under the workers' registration scheme was 21,275 – more than 50% down from the 46,645 approved during the first quarter of 2008 (Dobson/Latham/Salt 2009). Similarly, workers' registration was down by about 45%, comparing the fourth quarter of 2008 and 2007 (OECD 2009a). What is of key concern, however, is the net in/outflow, but information on the numbers returning to their country of origin is limited, due to a lack of suitable timely statistics, either in the UK or in the countries of origin (Dobson/Latham/Salt 2009).

Thus, although it is still too early for any clear assessment of the impact of the economic crisis on net migration flows, the above data do indicate that, at least in terms of migrant inflows, pressure on the UK labour market has been eased. It is not clear, however, that there has been an outflow of migrant workers that would be sufficient to represent any significant buffer between a fall in employment and a rise in unemployment.

24. In October 2008, Employment and Support Allowance was introduced to replace Incapacity benefits. The changes are designed to both reduce on-flows as well as increase off-flows.

2.3.3 Denmark — country case study

'Hourly productivity buffer'

Employment protection legislation

According to the composite EPL indicator of the OECD, which in its latest version incorporates more generous EPL provisions resulting from collective bargaining[25] (Venn 2009: 18, 19), Denmark is among the countries with the most lax employment protection in Europe (OECD 2004; Venn 2009). It is not surprising, therefore, that employment has reacted quickly to output losses. However, comparatively low EPL may also contribute to the fact that unemployment periods in Denmark are still relatively short, compared with the other three countries in our sample, and particularly with Germany, despite the fact that the situation has worsened between 2008Q2 and 2009Q2 (compare table 1, annex). Not least due to relatively lax EPL, the incidence of temporary employment – accounting for 8.5 percent of total employment in 2008Q2 – is lower in Denmark than in the EU on average. However, given that temporary employment has been constantly moving slightly up and down during the previous decade, the yearly increase of 0.6 percentage points to the 2009Q2 level of 9.1% (against the downward trend on the European average) cannot be interpreted conclusively.

'Average-working-hour buffer'

Work-sharing

Denmark has a work-sharing instrument in place. Work-sharing provisions are laid down in collective agreements but the rules of payment are set by the law on supplementary unemployment benefit (Eironline 1.6.2009). Under the work-sharing provision, the maximum duration of supplementary unemployment benefits is 13 weeks but these may be spread over a period of 26 weeks. The sectoral agreements, however, allow companies to apply to the Regional Employment Council for a prolonged period of work-sharing of up to 26 weeks, spread over a period of 52 weeks (Arbejdsmarkedsstyrelsen 2009). During receipt of supplementary unemployment benefits due to work-sharing, the usual job-search requirements apply (Eironline 1.6.2009).

As in Germany, the incidence of work-sharing has increased considerably in Denmark during the crisis but the maximum duration is very short compared to the German one. What is more, the Danish government has been much less forthcoming than the German one in responding to the call by companies and social partners to modify the rules on short-time work. The regulations governing work-sharing became somewhat more flexible as of March 2009 but the maximum duration is one of the aspects that has remained unchanged (Eironline 1.6.2009).

25. This is an important improvement for making the EPL more reliable, in particular for countries such as Denmark where collective bargaining plays an important role in terms of employment security.

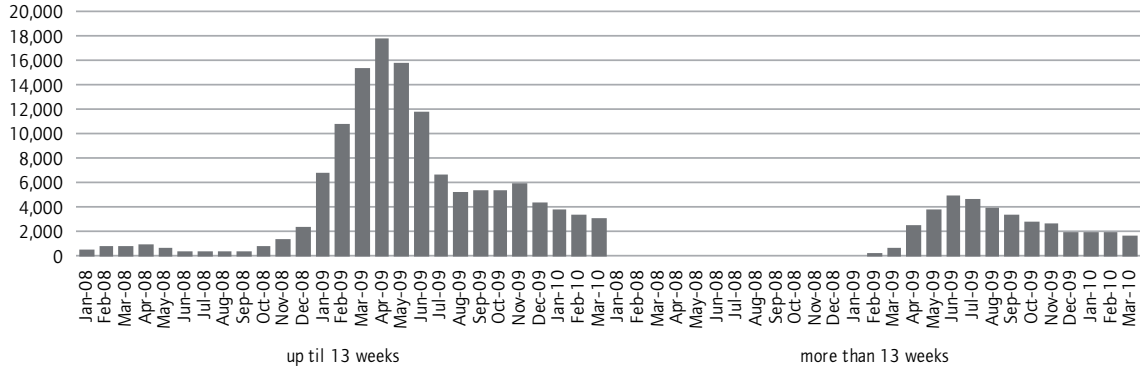
Table 5 **Number of workers in work-sharing under supplementary unemployment benefit provision: comparison between 2008 and 2009**

			Number of workers	Number of cases
country level	up until 13 weeks	2008	3718	200
		2009	32364	1926
	more than 13 weeks	2008	98	9
		2009	8515	508

Source: http://www.jobindsats.dk/, 5.5.2010

In 2008 about 3800 workers received supplementary unemployment benefits under the work-sharing provision, a number that increased more than tenfold to approximately 40,800 in 2009 (table 5). The monthly stock numbers for the supplementary unemployment benefit up until 13 weeks peaked in April 2009 at 17,780 and were down to about 2,900 in March 2010 (Figure 19). Far fewer workers receive supplementary unemployment benefits of more than 13 weeks – here the stock numbers peaked in June 2009 at about 4,900 and were down to 1,600 in March 2010.

Figure 19 **Developments in supplementary unemployment benefit under work-sharing provision: January 2008 to May 2010**



Source: http://www.jobindsats.dk, download 5.5.2010.

In 2009, by far the largest participation in the short-time working scheme took place in industry, extraction and utilities with a share of 86%, followed by commerce and transport (5%) and construction (2%). As section 2.2 showed, manufacturing, despite this buffer, saw important declines in terms of employment in the 2008Q2-2009Q2 period.

To conclude, the average-working-hour buffer contributes to cushion the direct conversion of output losses into employment losses in Denmark but, with a share of only about 0.5% of short-time workers among all employees in 2009 (own calculations), this cushioining effect is considerably smaller than in Germany where the equivalent share of short-time workers was 3.4% in 2009.

'Labour market policy/labour supply buffer'

Prior-to-crisis expenditure on and participation in ALMPs

Despite its low unemployment rate, in 2007 – the latest available year – among the EU countries Denmark had the third highest expenditure on passive unemployment benefits and the second highest on active labour market policies, measured as a percentage of GDP. With 1.31% of GDP, expenditure on active policies was more than one and a half times greater than in Germany and Spain, both of which had considerably higher unemployment rates, and more than four times higher than in the UK which had somewhat higher unemployment rates (OECD.StatExtracts). Spending on active and passive benefits went down over the last few years, at least partly reflecting falling unemployment. This raises questions, however, as to how fast active measures can be boosted in light of the drastic developments in unemployment with levels close to doubling between 2008Q1 and 2009Q2 (compare section 1). At 4.8% of the labour force, participant stocks (excluding PES) were somewhat above the OECD average and close to the German level. In 2007, the bulk of participants were in supported employment and rehabilitation (which plays hardly any role in Germany, Spain and the UK), followed by training, and thus in time-intensive measures. High expenditure at average participation levels means that participation in active labour market policies is comparatively intensive. The labour market reforms initiated in the mid-1990s introduced a mutual obligations approach and, among other things, made UI benefit receipt conditional on participation in ALMPs (see below).

Underemployment or hidden unemployment through ALMPs

In Denmark, insofar as expenditure on active labour market policies rises automatically with unemployment, the need for discretionary measures is limited (OECD 2009b). In response to rapidly rising unemployment rates, there have been several labour market initiatives. In March 2009, the government issued the following four initiatives: the rules for the work-sharing scheme were made more flexible (see above); faster assistance from the employment services would be granted when enterprises announce lay-offs; funds for job-search courses and short-run further training courses (up to 8 weeks) were increased; and the monitoring of labour market developments was strengthened (Eironline 1.6.2009; Beskæfigelsesministeriet 2009).

Furthermore, in the light of rising youth unemployment, at the end of 2009 a range of measures were introduced aimed at intensifying and improving activation of youth under 30 years.[26] The general activation requirement (already in place before the crisis set in) for this group of benefit recipients is participation in ALMPs after three months of unemployment. Those who are younger than 25 and lacking upper secondary education have to participate in education-related training or preferably ordinary education (OECD 2010: 122). Very early activation and a stipulation to attend regular education may have contributed to the fact that the developments in unemployment among youth were less drastic than those among the other age groups, while decreases

26. For detailed information refer to OECD 2010:123ff.

in employment were more marked than in the other groups (compare section 2.2.). For benefit recipients aged over 60 activation measures usually start after six months and for prime-age workers (30 to 60 years) after a maximum of nine months of benefit receipt (OECD 2010: 122). The fact that prime-age workers experienced stronger increases in unemployment than the other two groups may be related to the delayed buffer function of ALMPs in this group.

The main ALMP programmes in Denmark are the following: a guidance and upgrading of skills and qualifications programme; practical work training in enterprises for hard-to-place workers in the private and public sector; and wage subsidies for both private and public employers.[27] The programmes are the same for recipients of unemployment benefit and social assistance.[28] Table 6 shows developments in full-time participation in active measures in relationship to developments in registered unemployment. Comparison of the 2008Q2 and 2009Q2 data reveals that registered unemployment has more than doubled while participation in the main active programmes increased only slightly. Guidance and skills-upgrading measures have increased by 15 percent, while subsidised employment has increased by only 4 percent. There is, however, large variation in the different sub-programmes. In relation to the active measure of guidance and skills upgrading, there has been a steep fall in the contribution of ordinary education (about 35%), whereas the more short-run activities have gained in importance. When it comes to subsidised employment measures, the largest gains – amounting to some 40 percent – can be seen in business in-service training. Losses are recorded in terms of sheltered jobs, service jobs and adult apprentice support.

The 2009Q4 data seems to suggest that participation in active measures is increasing at a stronger pace than before. Due to seasonal effects, however the figures are not fully comparable.

During the period from 2008Q2 to 2009Q2, and taking account of developments in registered unemployment, the youngest group of unemployed (16-24 years) was considerably more likely to participate in subsidised employment measures, and particularly in the guidance and skills upgrading measures, than all other age groups. For the older youth group (25-29 year), this was true only for the guidance and skills measures, whereas unemployment benefit recipients aged 60 and over were more likely than other age groups (except for the very young) to benefit from subsidised employment (http://www.statbank.dk, table not shown).

27. The latter two programmes are subsumed under the category "subsidised employment" in table 5.

28. Employment services in Denmark have been decentralised successively. As of August 2009, all job centres are run by the municipalities.

Table 6 **Full-time participation in active measures, all age groups – developments in the crisis**

	2007Q2	2008Q2	2009Q2	2009Q3	2009Q4	% change 2008Q2 to 2009Q2
Registered unemployed persons, total	**78,784**	**44,994**	**96,190**	**96,975**	**11,1236**	**213.8**
Guidance and activities upgrading skills	**40,431**	**42,766**	**49,166**	**45,228**	**53,067**	**115.0**
Guidance and clarification activities (s+k)	9,739	9,707	12,359	12,101	14,930	127.3
Specially adapted projects and education activities (s+k)	16,996	20,205	27,813	25,064	28,408	137.7
Ordinary education (s+k)	13,491	12,508	8,131	7,226	8,790	65.0
Special activities upgrading skills (k)	205	346	862	837	939	249.1
Subsidised employment	**73,597**	**81,179**	**84,698**	**84,800**	**89,211**	**104.3**
Business in-service training (s+k)	7,002	7,742	10,709	10,452	12,740	138.3
Employment subject to wage subsidies (s+k)	7,859	7,388	8,144	8,688	11,127	110.2
Flex jobs	43,720	49,147	51,207	51,659	52,070	104.2
Sheltered jobs	4,661	5,145	4,877	4,754	4,676	94.8
Service jobs	558	456	412	386	359	90.4
Adult apprenticeship support	9,797	11,301	9,350	8,860	8,238	82.7
Integration education (Danish lessons)	**1,701**	**2,505**	**2,512**	**2,454**	**2,817**	**100.3**

Source: http://www.statbank.dk, download 6.5.2010
Note: s means activation by central government and k means activation by local government.

As shown above, there is a delayed effect in the 'labour market policy/ labour supply buffer' – the buffer effect is already more visible for youth and elderly who are required to participate in active measures earlier than prime-age workers. The 2009Q4 data suggests that participation in activation is increasing at a stronger pace now than before, which supports the assumption of a delayed buffer effect. However, we can assume that on top of the "natural" delay in the buffer effect of ALMPs, it will also be a challenge to actively manage the rapid increase in unemployment under an intensive activation regime. Moreover, during the crisis measures such as ordinary education, sheltered jobs and adult apprenticeship support have declined in significance in comparison with potentially more short-run measures which are less likely to act as buffers between employment and unemployment.

'Additional labour supply buffers'

Inactivity benefits

With the exception of social assistance (for non-employable) recipients, which increased by about 10% between 2008Q2 and 2009Q2, the numbers of people in receipt of all other forms of 'inactivity benefit' declined (table 6). The total number of early retired persons fell very slightly. Early retirement pension (*Førtidspension*), which is paid out only when work capacity is strongly reduced and a person does not have access to disability benefits and is not seen to benefit from activation or rehabilitation measures, went up very slightly.[29] By contrast, the number of persons on "voluntary" early retirement pay (*efterløn*), which is granted to long-term members of the UI funds (see Parsons *et al.* 2003) and is thus not stigmatising – in contrast to

29. New stricter rules on the førtidspension were introduced in 2003; further information on these rules is available at: https://www.borger.dk/Emner/pension-og-efterloen/typer-af-pension/folkepension-foertidspension-mm/foertidspension/Sider/default.aspx

the '*førtidspension*' – decreased somewhat (see table 7). Recourse to parental leave, other rehabilitation measures, and sickness benefits for those without a job, all fell in the crisis period.

Table 7 **Development of 'inactivity benefits'**

	2007Q2	2008Q2	2009Q2	2009Q3	2009Q4	comparison 2008Q2 2009Q2
Parental leave	2,786	2,419	1,694	1,794	1,140	70.0
Early retirement, total	371,907	370,878	366,938	367,101	368,317	98.9
Early retirement pension (Førtidspension)	234,682	234,682	236,846	237,510	238,078	100.9
Early retirement pay (Efterløn)	137,225	136,196	130,092	129,591	130,239	95.5
Social assistance	58,381	55,732	61,805	63,297	64,218	110.9
Other rehabilitation	8,469	6,104	5,390	5,469	5,403	88.3
Sickness benefits, without job	39,611	40,935	37,826	37,048	37,679	92.4

Source: http://www.statbank.dk, download 10.5.2010

When all 'inactivity benefits' are viewed together, they appear not to have acted as labour supply buffers in the current economic crisis.

Migration

According to the International Migration Outlook 2009, we do not yet, as for most countries, have any evidence of declines in labour migration flows in Denmark. In terms of possible outward migration as a reaction to the crisis, it is interesting to note that in November 2009 Denmark, in the light of rising unemployment, was one of the few EU countries that increased financial incentives for third-country migrants willing to return to their home countries. However, it is pointed out that the effects of such rules are difficult to assess, not least because the migrants' home countries are also affected by the financial crisis (HWWI 2009). In fact, since 1997 only 2524 people had taken advantage of the earlier voluntary return programme.[30]

2.3.4 Spain — country case study

'Hourly productivity buffer'

Employment protection legislation

Spain has long been the European country with the highest share of temporary employment in total employment (around one third of total employment since the early 1990s). Without any notable success, succeeding Spanish government have enacted various initiatives aimed at curbing temporary employment, including reduced social insurance contributions for employers who hire specific labour market groups on a permanent contract (compare e.g. Bertelsmann Foundation 2009). The aim of curbing temporary employment is also reflected in the developments in EPL for permanent and temporary contracts. Spain is one of the few countries to have noticeably relaxed its

30. Under the former programme they received about 3800 Euros. This has been raised to about 13.440 Euros the bulk of which is only to be paid one year after return (HWWI 2009).

EPL regulation on permanent contracts, while it has seen a slight increase in regulation of temporary employment since the end of the 1990s (OECD. StatExtracts). Despite the changes, Spain still has a very high EPL level for permanent contracts, considerably above the EU average.[31] One characteristic of this strict regulation is the "employment regulation procedure" (*Expediente de Regulación de Empleo*, ERE) which employers are obliged to draw up when they want to terminate or temporarily suspend an employment contract on economic grounds (Industrial Relations Service, 14.1.2010). Section 2.2 illustrated that temporary employment shares in Spain decreased substantially by 4 percentage points between 2008Q2 and 2009Q2 and, taking the whole crisis period into account, by almost 10 percentage points (Agett 31.2.2010). The fact that it is particularly young people who hold temporary contracts also explains the large employment losses among youth. In light of the strict EPL for permanent workers that prevents employers from easily adjusting labour through regular employment, adjustment in Spain has, at least during the first phase of the economic crisis, largely taken place through the extensive temporary segment of the labour force. However, with the scope for reducing temporary employment largely exhausted, in 2009Q3 permanent employment decreased markedly[32], while temporary employment increased slightly for the first time since 2007Q3 – new job creation had been restricted almost entirely to temporary hiring (Agett 28 November 2009).

'Average-working-hour-buffer'

Short-time working allowance, temporary lay-offs and voluntary leave schemes

During the period considered in this paper, there was no state-subsidised short-time working scheme in place in Spain. In February 2010 new talks between the social partners and the Spanish government started with the aim of reaching an agreement on a number of labour market reforms in response to the crisis. Among other things, the government has proposed a subsidised short-time working scheme, possibly based on the German model, incentives to encourage part-time employment and to discourage temporary employment and several measures to promote youth employment (e.g. incentives, greater use of combined work and training contracts). Moreover, it proposes to reform the collective bargaining system to allow for more flexibility at the company level and wants to promote greater flexibility within companies, for example through more variability in working time, in order to avoid job losses (Industrial Relations Service 18.3.2010 and 22.04.2010). By the end of March 2010 the negotiations had made scant progress. The employers proposed far-reaching reforms, and the liberalisation of some aspects of employment law, which makes it likely that the final agreement – if concluded – will cover only a limited set of issues (ibid).

31. This average refers only to EU countries which are members of the OECD.

32. Permanent employment experienced the second largest fall ever after that recorded in 1992Q1 (Agett 28 November 2009).

Already in 2009, negotiations between the social partners on collective bargaining and labour market reforms to deal with the economic crisis and steep increases in unemployment had failed. In response to this, the Government approved a decree-law on 'urgent measures to maintain and promote employment and protect unemployed people'. Among other measures, temporary lay-offs, rather than redundancies, are promoted by way of allowing employers to only pay 50 percent of the normal social security contributions in respect of the laid-off employees, during lay-offs lasting up to 240 days. A prerequisite is, however, that employers agree to not make the employees redundant for at least a year after the temporary lay-off. The "employment regulation procedure" (ERE) that is obligatory in case of redundancies or temporary lay-offs affected 9.2 times more workers in the period January to September 2009 as compared to the same period of 2008 (Industrial Relations Service 14.1.2010). 11.5% of the 435,564 workers affected by the 2009 EREs (first 9 months) were made redundant, 84.5% were temporarily laid off and only 4% were affected by a cut in working hours (ibid).

Some Spanish firms have also made use of voluntary leave schemes in the form of paid or unpaid sabbaticals. The example that is most often cited is that of the BBVA financial group, a company operating worldwide and the second largest bank in Spain. Since 2007 it reduced staff numbers by about 10% and in May 2009 offered a number of voluntary career break measures to about 30,000 employees in order to cut costs. Among the measures offered were partly compensated leaves (30% of annual pre-tax pay and health care coverage) between 3 to 5 years for personal and professional projects for long-term staff members (at least 8 years) as well as special leaves of up to two years for post-graduate studies (with a smaller compensation) and periods of unpaid family leave for employees who had been in the firm for at least three years in the former case and one year in the latter. Furthermore, shorter working days or working weeks were offered with pay reductions proportional to the working time reduction (Eurofound 2009b). It is not possible to quantify the buffer effects of such voluntary leave schemes, given the lack of comprehensive data on participation.

In the absence of a state-subsidised short-time working scheme and the low incidence of individual working time reductions at least in the "employment regulation procedure" (EREs) the 'average working hour buffer' has not played nearly as important a role in Spain as in Denmark and, even more so, Germany. In fact, average hours increased slightly (see figure 6). Temporary lay-offs may be seen as a functional equivalent of short-time working. Temporary lay-offs, as recorded in the EREs, affected almost 370,000 workers during the first 9 months of 2009 within a workforce of almost 19 million in 2009.[33] Despite the fact that we lack reliable figures on participation in voluntary leave schemes, it is rather unlikely that they will make any significant contribution to buffering the falls in headcount employment.

33. We cannot calculate the buffering effect as we do not have information on the duration of the temporary lay-offs.

As there is still no agreement on further labour market reforms, which may include a state-subsidised short-time working scheme, there are substantial potential delays, in comparison to Denmark and Germany, in the reaction of the 'average-working-hour buffer'.

'Labour market policy/labour supply buffer'

Prior-to-crisis expenditure on and participation in ALMPs

Amounting to 0.80% of GDP in 2007 (latest available data) expenditure on active labour market policies was similar to the German level at comparable unemployment rates. The most important active measure in terms of expenditure and participant stocks was employment incentives, more particularly recruitment incentives. Looking at longer-term trends, expenditure on ALMPs (as a share of GDP) increased markedly since the mid-1990s, while unemployment fell drastically over the same period. Participant stocks in active measures as a percentage of the labour force have more than doubled since 2002 (earliest available data), whereas, during the same period, expenditure on active measures as a share in GDP did not increase markedly; it did however increase in absolute terms. The participant stock in active measures excluding PES was 19.6 of the labour force in 2007. Germany, with similar expenditure, and Denmark, with considerably higher expenditure, recorded participant stock of only about a quarter of the Spanish one, indicating that in Spain much less is spent per participant on average and that measures are thereby considerably less intensive.

Active labour market policies in the crisis

Only very limited up-to-date data on active labour market policy participation in Spain is available. The following analysis is therefore preliminary.

Given the large increases in terms of unemployment, and an unemployment benefit system with deficient coverage in comparison to e.g. Denmark and Germany (compare Leschke 2008), it is not surprising that many of the labour market measures implemented in response to the crisis were geared to improve passive benefit receipt and much less so active.[34] In fact, according to the Consejo Económico y Social Espana (2009: 318), in light of the fast and unforeseen increases in unemployment, the financial means allocated for employment policies have for the major part been directed towards passive unemployment benefits.

ALMPs in Spain have in the past focused on employment incentives and there is also a strong focus on these measures in the crisis, as can be seen from the additional incentives geared to maintaining employment and creating new (permanent and part-time) employment as well as self-employment (CAUCES 2010: 10). Although we lack up-to-date statistics on the impact of these additional incentives, it is unlikely that, in times of economic

34. For concrete examples refer to *Cuadernos del Consejo Económico y Social (CAUCES)* 2010: 10, 11.

downturn, recruitment incentives will acquire an important buffer function. In comparison to employment incentives, training, and particularly supported employment and rehabilitation, have played a minor role in Spain in the past. It is thus unlikely that these measures can be easily expanded in the crisis to serve as an effective buffer to open unemployment. Moreover, public employment services (PES) are badly equipped – the staff ratio to unemployed persons is very low in comparison with, in particular, Denmark and the UK, but also Germany.[35] Despite some new PES staff hiring in the face of the large increases in unemployment (as in most other countries), it is fair to assume that, due to insufficient staffing, the possible buffer function of ALMPs is bound to be limited at this very first stage of unemployment mediation.

Though some action has indeed been taken in terms of active labour market policies in the crisis, the impact of the measures in question is currently hard to assess in the absence of up-to-date participation data and mere 'pre-assessments' by the Spanish government of their employment effect. Among the measures adopted is the "2009 Employment Plan for Socially Useful Jobs" which is intended to reorganise and adapt active policies with funding of €1.106 million. The aim is to improve the labour market re-integration of 100,000 unemployed persons by allowing them to work for or provide services to the community and participate in training activities (CAUCES 2010: 10-12).[36] Another measure initiated in April 2008 is the "Extraordinary Plan containing Orientation, Professional Training and Labour Market Insertion Measures" with a total funding of €201 million. However, despite the ambitious name, the measures are geared to improving job matching (new PES staff (see above) and aid for geographic mobility) rather than to training measures. Moreover, as a measure designed to improve qualifications, 70 million euros have been earmarked for supporting the enrolment of unemployment benefit recipients aged between 25 and 40 years in masters programmes at public universities. This measure is in operation in 2009 and 2010 (ibid). Among broader stimulus measures not strictly in the category of ALMPs, it is also possible to mention the 'Local investment fund' (*Fondo Estatal de Inversión Local*), endowed with €8 billion and geared to public investment and infrastructure policies, and the 'Special fund for the stimulation of the economy and employment' (*Fondo Especial del Estado para la Dinamización de la Economía y el Empleo*) with actions in "strategic" sectors of the economy and a budget of €3 billion. Both were put in place in the end of 2008. According to Spanish government figures, the local investment fund has contributed to 180,000 new contracts. Estimates for the 'special fund' are 75,000 jobs (CAUCES 2010: 11, 12).

Despite some employment stimulus deriving particularly from the 'Local investment fund' and the 'Special fund', the active labour market policy/labour supply buffer does not, overall, seem to have played a large role in Spain,

35. In 2006 the staff to unemployed ratio was 4.4 to 1000 in Spain, 17.4 to 1000 in Germany, 42.9 to 1000 in the UK and 56.2 to 1000 in Denmark (Consejo Económico y Social Espana 2009: 321, 322).

36. For more information on these measures refer to Consejo Económico y Social Espana 2009: 318-335 and "Plan Español para el Estímulo de la Economíca Empleo (Plan E)": http://welcome.plane.gob.es/eje/employment/

although this is admittedly somewhat hard to assess in light of the deficient data situation. The traditional focus of ALMPs on employment incentives, and the ongoing focus on measures of this kind in the crisis, as well as the low intensity of measures and the understaffing in terms of public employment services, are hardly likely to act as an effective buffer in times of low labour demand. What is more, active measures seem to have been crowded out by the strong requirement for passive benefits.

'Additional labour supply buffers'

Rising inactivity

Due to the discouragement effect, in 2009Q3 the size of the Spanish labour force had fallen by 89,000 persons, compared with the previous quarter; this compared with job losses of 75,000 (Agett 28 November 2009). Accordingly, given a diminishing labour force, the unemployment rate was falling slightly. A 19,000 decline in the labour force had been observed as early as 2009Q2 – a result not seen since the first quarter of 2001 (Agett August 2009). The discouragement effect can, to some extent at least, be attributed to the inadequate unemployment benefit coverage in Spain, insofar as unemployment benefits (insurance and assistance type) are of comparatively short duration – in spite of some improvements during the crisis – with persons formerly employed on temporary contracts suffering particularly poor coverage (Leschke 2008).

Early retirement

Spanish government policy initiatives during the last decade aimed at limiting early retirement schemes. However, in the current economic crisis early retirement schemes have come once again within the government's focus as a strategy to adjust the workforce during economic difficulties (Eironline 5.1.2009b). Trade unions in the construction sector had called on the government to introduce a law providing early retirement to construction workers aged at least 60 and with at least 10 years of seniority. Construction was one of the sectors hardest hit by the economic downturn. These organisations estimate that about 50,000 construction workers, equivalent to 2.5% of all employees, could benefit from this measure (Eironline 14.11.2008).The set of measures for the road transport sector, which are part of the government's crisis-response package "Plan E", include subsidies and thus incentives for retirement and compulsory retirement of self-employed older workers in the transport sector. These measures have received a considerable budget (http://welcome.plane.gob.es/eje/employment/).

Looking at inactivity and early retirement – despite the fact that the latter cannot yet be quantified – there would seem to be some evidence, in contrast to the other three countries, that additional labour supply buffers have contributed to containing open unemployment, albeit to a relatively small extent.

Migration

Between 2001 and 2007, 4.3 million net new jobs were created in Spain and more than half of these were taken up by immigrants (Eironline 14.4.2009). The economic downturn that first affected the construction sector, followed by hotels and restaurants, personal services, and then other sectors, resulted in a strong increase in unemployment which mostly hit low-skilled workers, including many immigrants (Eironline 14.4.2009).

In an attempt to curtail further increases in unemployment, the Spanish government has recently implemented a number of measures to curb migrant labour. In September 2008, for example, it introduced a voluntary return programme for non-EU migrants (Royal Decree 4/2008 of 19 September). Under this programme unemployment benefits are paid out in a lump sum (40% in Spain and the remaining 60% 30 days after return to the home country) and, in some cases, financial assistance is granted to cover the travel cost for migrant workers and their families. Migrant workers who opt to take part in this programme cannot return to Spain for three years. To date 8,724 applications have been submitted and, one year after approval of the programme, only about 10% of the target population have taken up the offer, according to the Minster for Work and Integration (Eironline 23.12.2009).

Return migration is very difficult to assess, in particular in the short run. There is, however, some evidence that migrants are leaving Spain: in 2009Q3 the foreign labour force fell by 51,800 while inactivity at the same time increased by only 41,500. Some 10,300 foreign workers have thus not moved into the inactivity group and may have left the country (Agett 29 December 2009).

In order to reduce the supply of migrant labour, the list of "hard-to-fill occupations", which defines the jobs for which migrants can be recruited, has been reduced, while the conditions for reuniting families have at the same time been made stricter (Eironline 23.12.2009).[37] What is more, the Spanish government has not accepted a proposal by the main trade unions who have suggested a moratorium under which migrant workers without a job can renew their residence card (Eironline 23.12.2009). According to Eironline (14.4.2009) the number of residence permits has fallen by 50,000.

According to the latest International Migration Outlook (OECD 2009a), entries into Spain seem to have been on the decline already prior to the period considered here. Under the employer-nominated system, new entries fell from more than 200,000 in 2007 to 137,000 in 2008. In Catalonia, the leading region in terms of resident foreigners, the share of applicants for all different categories of permit (first work permit, renewal, family reunification and residence) fell by 15% in 2008.

As for the British case, it is too early to assess the labour supply buffer effect of migrant labour. However, in terms of migrant inflows, the pressure on the

37. Family reunification fell significantly to less than 100.000 in 2008 compared to 128.200 in 2007.

Spanish labour market has been eased, and there is some patchy evidence of increased outflow.

2.4 Conclusions from country case studies

Germany experienced a large negative output shock while avoiding any rise in unemployment in the period considered. Our analysis shows that this can be largely explained by the average-working-hour buffer. The reaction of total working hours to the output shock was rather strong. German companies have practised extensive labour hoarding, but they have not retained workers on their previous hours schedule; rather they have made very extensive use of the opportunities to reduce average working hours. This was possible due to the prior existence of a state subsidised short-time working scheme that was quickly adapted to the new needs, in particular in terms of easier access to the scheme and longer duration of benefits, making it highly attractive to both employers and workers. In addition, many companies had annualised working-time accounts, and these were often full after the previously relatively strong performance of (at least the export sector of) the German economy. This needs to be seen in the light of relatively strict employment protection legislation and relatively high skill levels in the industrial sectors most affected by the crisis. Despite important cut-backs in the last decade, Germany has relatively well-developed active labour market policies which focus on longer-term measures such as training. In the past, it also made use of early retirement schemes. However, given that there was no decline in head-count employment during the period considered, the labour market policy and labour supply buffer was not relevant in the current crisis. Germany has shown during the crisis that, given an appropriately supportive institutional framework, high internal flexibility within companies can be a highly effective adjustment mechanism that benefits workers (job and earnings security) as well as employers (retention of skilled staff).

The **United Kingdom** experienced an output shock comparable to that in Germany and Denmark. The increase in the unemployment rate was similar to that in Denmark but much larger than in Germany. Given the very low employment protection legislation, the impact on total hours and head-count employment was weaker than widely expected based on the experience of previous recessions. An adjustment of average working hours is not a plausible explanation, given the lack of a country-wide state subsidised short-time working scheme. While there is evidence of the use of voluntary leave schemes at firm level, these do not show up in the macro-data. To this extent, the relatively low employment elasticity remains a partial puzzle; wage flexibility may have played a role but the data are not clear. On the other hand, the head-count employment loss has been translated almost unbuffered into increasing open unemployment. This reflects the traditionally very low expenditure on and participation in active labour market policies and a focus on job-search assistance rather than longer-term measures where participants are likely to not define themselves as unemployed. Moreover, with the exception of schemes for youth, activation measures kicked in only after an extended period of

unemployment during the period considered here (but this has subsequently been reduced). In contrast to previous crises, there appears to have been, as in other countries, little recourse to labour-supply-reducing measures such as disability schemes and early retirement. The impact of outward migration is hard to assess at the present time, but at least some of the large numbers of recent immigrants from central and eastern Europe will have returned to their countries of origin.

Against the background of a similar output shock as in Germany and the UK, the reaction in terms of total working hours in **Denmark** was large. This was offset to a considerable extent, however, by the reduction in average hours. Given the size of head-count employment losses, the translation into higher unemployment, from a very low initial base, was comparable to the UK. The impact on total hours and head-count employment is not surprising in the light of comparatively low EPL and traditionally high turn-over. The reduction in average hours was made possible by the prior existence of a work-sharing scheme (supplementary unemployment benefits). This scheme played an important buffer role in the crisis, but remained much less important than the equivalent scheme in Germany, due to only marginal adaptations in the crisis and particularly due to the much shorter duration of support. Denmark is known for its high expenditure on, and high intensity of, active labour market policies. Its ALMP expenditure, moreover, rises automatically with unemployment. However, in the short-run employment losses have been translated relatively unbuffered into unemployment. One explanation is a delayed effect in the labour market policy/labour supply buffer. This explanation is supported by the fact that, for those labour market groups that are activated at an earlier stage of unemployment (e.g. youth), this buffer is already working to some extent. However, during the crisis we have also seen some shifts from more long-term measures, such as regular education and sheltered jobs, to more short-run measures which will be less likely to act as buffers between employment and open unemployment. Indeed, it may in fact prove difficult to maintain an intensive activation strategy in light of the rapid increases in unemployment. The fact that unemployment insurance is, unlike in most other countries, voluntary, and that at least some sections of the non-insured will also lack access to "activating" social assistance, may also have played a role. As in most other countries, inactivity benefits did not seem to act as labour supply buffer in the current crisis. Even though both Denmark and the UK have relatively high external flexibility, as can be seen in the reaction of employment and unemployment to the output shock, an important distinguishing fact is that in Denmark high external flexibility is coupled with high security in terms of benefit receipt and, in the longer run, also in terms of employability (ALMPs).

Despite having the most limited output shock in our country comparison, **Spain** suffered the largest employment losses by far in terms of both hours and persons. What is more, the translation of employment losses into unemployment was almost completely unbuffered. Employment losses were not prevented by rather strict EPL because the large share of temporary workers offered employers an external flexibility adjustment mechanism.

The concentration of job losses in the low-productivity construction sector contributed to the high employment sensitivity to the output shock in international comparative terms. In the absence of a state-subsidised short-time working scheme (discussions on possibly introducing such a scheme were still ongoing in March 2010), the 'average-working-hour buffer' has not played nearly as important a role in Spain as in Denmark and, even more so, in Germany. Temporary lay-offs and voluntary leave schemes provided only a very limited functional equivalent. Active labour market policies in Spain have gained in importance over the last decade and a half. However, they traditionally focus strongly on employment incentives, and at times of low labour demand recruitment incentives are unlikely to play an effective buffer role. Moreover, in comparison to Germany and Denmark, the intensity of active measures is very low and public employment services are seriously understaffed. On top of this, the fast and large increases in unemployment led to a financial shift from active to passive benefits. Thus, overall, the active labour market policy/labour supply buffer does not seem to have played an important role in Spain. However, in contrast to the other three countries, there is some evidence that additional labour supply buffers (e.g. early retirement and inactivity) have here helped to contain open unemployment. But the size of this effect is relatively small. As for the British case, it is too early to assess the labour supply buffer effect of migrant labour, although some outward migration is expected to have eased labour market pressure. Spain is thus an extreme case of external flexibility and this flexibility is coupled only to a limited degree with security components. Adjustments to the crisis largely took place within the segment of temporary workers, a group of workers that is less likely to fulfil the eligibility criteria for unemployment benefits.

3. Conclusion

This paper has sought to shed light on the way that labour market institutions and other institutional features have influenced the sensitivity of employment and unemployment to the economic shock of the Great Recession. It has examined the developments in output, employment and unemployment for 25 EU member states and then looked in more depth, for a selected group of four countries, at a range of institutional factors expected to influence the transmission from output to employment and unemployment.

The magnitude of the output shock is taken as given in this analysis: the feedback impact of employment protection and other measures on demand and output is not considered, although it is likely to be significant. Also important in interpreting the findings is the fact that the data enable us to look only at the short-run responses. Country performance may differ in a longer-term perspective, particularly as some of the institutions are designed in a way that makes a delayed buffer effect likely (e.g. active labour market policies).

Overall, output losses do translate reliably into – considerably smaller – employment losses measured in hours, lower headcount employment and higher unemployment. However, the correlations, while strong, are far from perfect, revealing the existence of buffer mechanisms the importance of which varies strongly between countries. The most important source of differences between the countries in terms of sensitivity to the given output shock appears to result from the second buffer – changes in average working hours. In comparison, the transition from falling headcount employment to rising unemployment appears more straightforward from a cross-country comparative perspective, at least in the short-term.

The four country comparison (summarised in the previous sub-section) suggests that high EPL can have both positive and negative impacts, as the German and the Spanish cases illustrate: it is likely to support labour hoarding which can have positive impacts for both employees and employers (if relevant institutions such as short-time working schemes are in place) but, if coupled with a high temporary employment share, it is likely that adjustment in the form of external flexibility will be concentrated in this segment (dual labour market).

Short-time working schemes – also widely used in a number of other EU countries besides Germany and Denmark – have proved highly successful in smoothing the short-run adjustment. Countries which already had these

schemes in place had an advantage as they avoided delayed reactions of this buffer. An important factor in making best use of these schemes seems to have been their quick adaptation to the new needs, although some countries did not avail themselves of this option, or did so to only a limited degree. Countries that introduced such schemes for the first time suffered delays in the buffer effect but, on the other hand, were able to design them directly in the manner best suited to the current crisis.

The short–run buffer function of ALMPs depends, among others, on prior expenditure and intensity levels, on timing (early activation or not) and on the focus of measures (short-term versus long-term, training versus employment subsidies). Particularly in this area, countries' longer-run performance may differ from that in the short run. In this context, a key element is the extent to which rapid increases in unemployment lead to a crowding out of active labour market policies; this, in turn depends decisively on financing systems.

Both the four-country comparison and anecdotal findings at the European level suggest that labour-force reduction schemes, especially disability and early retirement measures, have this time not been used to a large extent in order to avoid open unemployment. While this finding is in line with recent policy trends to discontinue early retirement and move people off disability schemes, the situation may change again over time if unemployment remains high. Unfortunately, the data situation on migration is very unsatisfactory in the short run, so that it is hard to assess the extent to which, in some countries at least, outward migration has acted as a buffer between falling employment and rising unemployment. One reason to be sceptical is that, insofar as all EU countries and many non-EU countries have been hit by the crisis, returning home is often not a viable option. In any case, the outcomes will strongly depend on institutions (access to unemployment benefits, etc.), alongside, of course, the importance of previous immigration in the country concerned.

Overall it can be concluded that production structures and labour market institutions interact – as suggested by, for example, the 'varieties of capitalism' literature – to produce varying degrees of institutional complementarity. While national institutions interact, in cross-country comparison similar institutions can perform different functions and different ones can act as functional equivalents. Labour market performance in the crisis (at least in the short-run) has generally been best in those countries characterised by high internal flexibility at the workplace and well-developed and responsive institutions and government policies. Combinations of high external flexibility with weak labour market institutions, and especially labour market dualism, have produced poor outcomes for workers in terms of unemployment. In the longer run, higher unemployment stocks may also constitute a barrier to the hoped-for economic recovery, if support measures are not in place to facilitate the transition back into employment.

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Annex

Table 1 **Duration of unemployment, 2008Q2 and 2009Q2**

		<1 month	1-2 months	3-5 months	6-11 months	12-17 months	18-23 months	24-47 months	48+ months	Not started/ unknown	Sum
2009 Q2	Denmark	20.9	28.9	25.0	15.5	3.4	:	:	:	:	94
	Germany	6.1	14.7	16.5	16.0	7.9	5.9	10.7	20.7	:	98
	Spain	8.9	20.2	24.8	24.6	9.6	4.2	4.7	3.0	:	100
	UK	12.1	21.2	22.5	20.4	8.6	4.1	6.4	3.7	:	99
	EU27	8.3	17.1	20.5	20.5	10.1	4.8	8.8	8.4	1.5	100
2008 Q2	Denmark	34.1	20.8	16.7	10.4	6.8	5.5	7.1	6.2	:	108
	Germany	5.3	11.6	13.8	15.4	6.7	7.4	14.7	24.0	:	99
	Spain	16.3	28.8	21.2	16.1	6.1	3.4	4.7	3.4	:	100
	UK	15.4	22.0	18.6	17.4	8.5	4.9	7.5	4.4	1.6	100
	EU27	9.7	17.2	16.3	16.8	9.7	5.7	11.5	11.3	1.8	100

Source: European Labour Force Survey.

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