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Unemployment in the OECD

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Abstract This article examines the course of unemployment in OECD countries during the recent recession. The severity of the recession and the strength of macro policy responses varied from country to country. However, even after correcting for these differences, unemployment experiences were various. Unemployment generally rose by less in those countries which had strict employment protection legislation, as it did in those countries with relatively high collective-bargaining coverage. Various forms of work-sharing also helped some countries to dampen the rise in unemployment. So did increasing the generosity of out-of-work benefit arrangements. The latter finding suggests that search theoretic approaches need to be modified. Institutions do matter and not just in the short run. Hysteresis effects could project their influence into the medium term.

Key words: unemployment, recession, comparative labour policy

JEL classification: E24, J60, J64, J68, P16

I. Introduction

The recent recession across the OECD has had very different consequences for unemployment from country to country. This has caused economists to re-evaluate just what they know about the causes of unemployment and in particular about the role of institutions and policy. The contributions to this issue cover both theoretical and empirical issues. Ekkehard Ernst and Uma Rani discuss unemployment dynamics in a search and matching framework. Engelbert Stockhammer considers the relationship between the NAIRU and measured unemployment. Terry O'Shaughnessy pursues this theme in a UK context, exploring the impact of hysteresis on equilibrium unemployment. Michael Elsby, Jennifer Smith, and Jonathan Wadsworth investigate different types of labour market flows—the rate of job loss, the rate of job finding, and flows via non-participation—and their relative importance in explaining the volatility of UK unemployment over the last 35 years. Eric Heyer assesses the impact of tax reduction on overtime in France. David Howell and Bert Azizoglu evaluate the contentious role of unemployment insurance in understanding recent US unemployment, while Muriel Roger and Philippe Zamora discuss the impact of a French

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policy initiative, the Contrat Jeune en Enterprise, which was targeted at the young unemployed who had been school drop-outs. Their article reminds us of the particularly harsh impact of the recession on young people trying to enter the labour market, and this theme is taken up by David Bell and David Blanchflower, who evaluate youth unemployment in the UK and the US.

This assessment starts with an analysis of the differential impact of the recession across OECD countries. It shows that these differences cannot be fully explained by differing extent of falls in GDP. Employment protection legislation helped to mitigate the rise in unemployment in a number of countries, as did a variety of work-sharing arrangements (usually involving reduced working hours). It goes on to discuss other differences in institutions and their potential impact on unemployment. These include social security systems and the role of union wage bargaining. In the light of these empirical findings it questions the recently dominant theoretical paradigm for analysing unemployment—search and matching models. A critical question is what the lingering effects of the recession will be and, in this context, we evaluate the state of play on hysteresis.

II. Unemployment since the onset of the Great Recession

(i) The unemployment impact of the recession

The Great Recession led to an increase in the unemployment rate in most OECD countries that went beyond the recessions of the 1970s and early 1990s and had not been experienced since the Great Depression. For the OECD as a whole, the unemployment rate rose from an average of 5.6 per cent in the first quarter of 2008 to 7.6 per cent one year later and to 8.7 per cent in the first quarter of 2010. It decreased slightly to 8.5 per cent at the beginning of 2011.

Unemployment started to rise very early, at the end of 2007, in Spain, Ireland, and the US, whereas the increase did not start before the second quarter of 2008 in most European countries. The magnitude of the increase was very large for Spain, the US, Iceland, and Ireland, more limited for Continental European and Nordic countries and almost insignificant and transitory for Germany. The case of Germany is at first sight puzzling since it experienced a recession even more severe than the US, with a drop in GDP of 6.6 per cent between the first quarter of 2008 and the first quarter of 2009 (as compared to a 4.4 per cent drop between the fourth quarter of 2007 and the second quarter of 2009 in the US) but had only a modest 0.5 per cent increase in its unemployment rate, whereas that rate more than doubled to reach 10 per cent in the US.

In other words, there has been significant heterogeneity in countries' experiences of the recession. Before it struck, the average unemployment rate in the OECD as a whole was 5.7 per cent (third quarter of 2007). Among the countries with lower-than-average unemployment were Austria, Denmark, Iceland, Ireland, Japan, the Netherlands, the UK and the US. Finland, France, Germany, Greece, Portugal, and Spain had higher-than-average unemployment. Figure 1 shows how some (initially) low unemployment countries reacted to the Great Recession. One can clearly distinguish Ireland, Iceland, the US, the UK, and Denmark from Japan, Austria, and the Netherlands. The former group of countries experienced a substantial increase in unemployment while the increase was very moderate in the latter group.

Figure 1: The impact of the Great Recession on countries with an initially low rate of unemployment

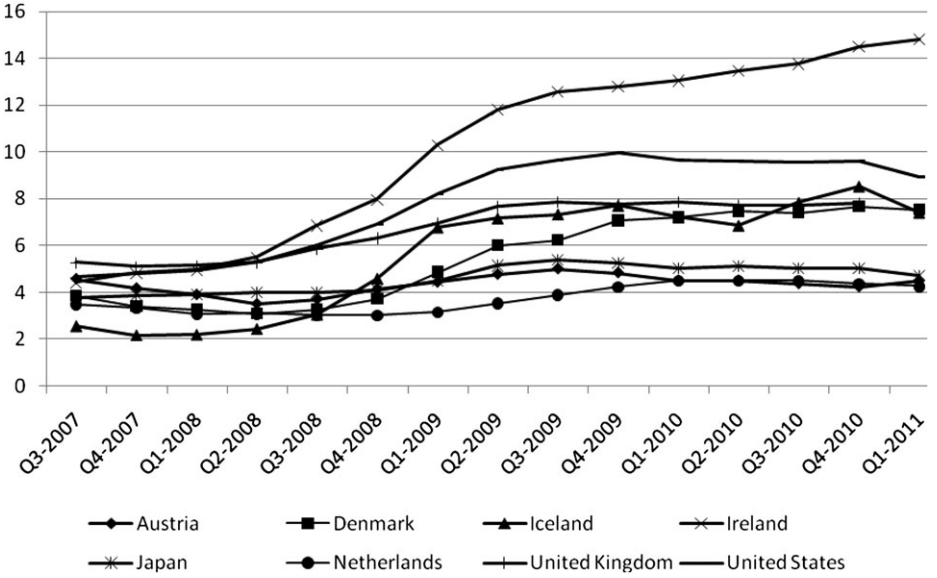
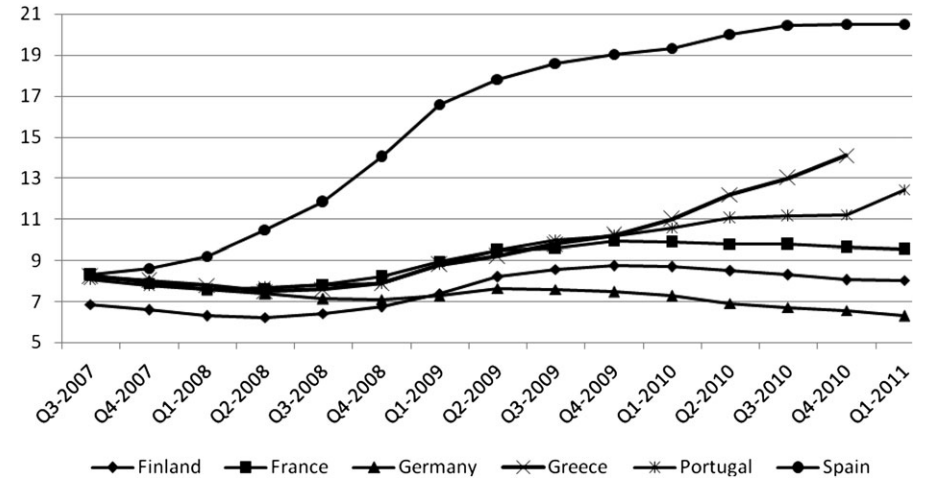


Figure 2: The impact of the Great Recession on countries with an initially high rate of unemployment



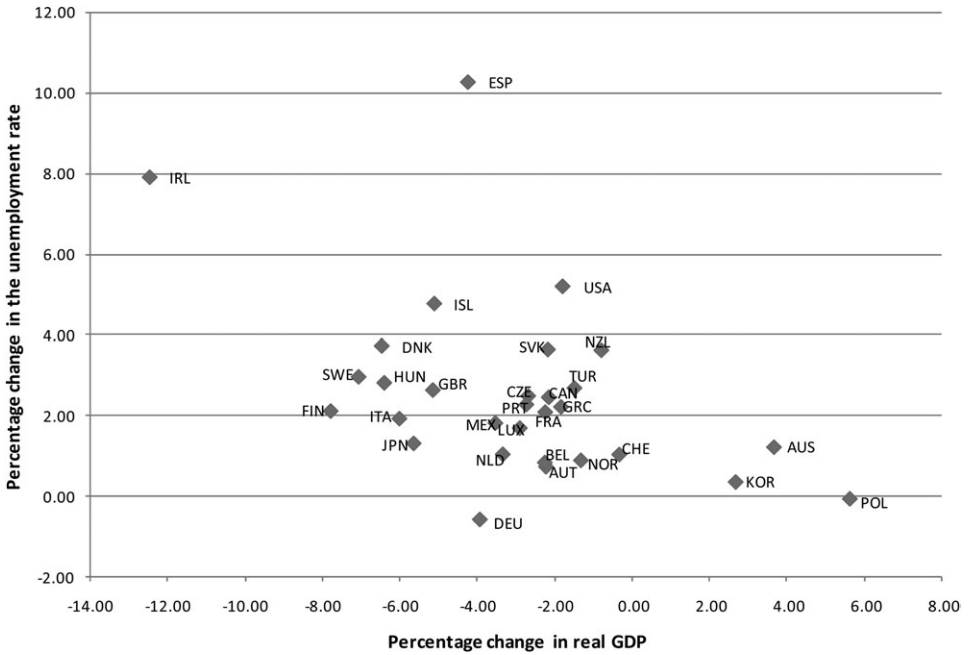
The evolution of unemployment in countries where the unemployment rate was already high before the recession also shows some heterogeneity (Figure 2). The unemployment rate in Spain more than doubled within 2 years to reach 20 per cent. The rise was less spectacular but still significant in Greece and Portugal, and more moderate in France and Finland. On the other hand, one can see that the recession only briefly interrupted falling unemployment in Germany.

The Great Recession is likely to have a lasting impact in some countries. According to OECD estimates, in order to restore, in the last quarter of 2011, the ratio of total employment to the working-age population to its value in the last quarter of 2007, Ireland would need an increase in employment of 20 per cent and Spain of 11 per cent. By contrast, this increase would be limited to 3.3 per cent in the UK, 2 per cent for France and the Netherlands, and would be negative for Japan, Germany, and Austria (2.7 per cent on average for the whole European Union). The increase necessary to restore the employment ratio of 2007 in the US would be 5.5 per cent. Katz (2010) estimates that to restore this ratio by January 2014, 6 years after the recession, would require the creation of 15m jobs (10m to make up for the job losses resulting from the recession and 5m to cover the growth of the labour force)—that is an employment growth rate of 2.9 per cent per annum on average. This would be larger than the one that was achieved during the 1993–2000 expansion.

(ii) Explaining country heterogeneity

There are several possible explanations for these differences across countries. As mentioned above, the size of the recession varied substantially. It was very strong for countries such as Ireland, with a drop of 12.5 per cent in real GDP between the end of 2007 and the end of 2009, Finland (–7.8 per cent) Sweden (–7 per cent), Italy (–6 per cent), and the UK (–5.2 per cent). It was more moderate for most continental European countries (–2.25 per cent in France, for example). These differences are only partly reflected in the changes in the unemployment rate. As seen in Figure 3, countries which experienced a drop in GDP between 5 per cent and 0 per cent or between 10 per cent and 5 per cent, had very different

Figure 3: Percentage changes in real GDP and the unemployment rate between 2007 and 2009



unemployment experiences. For instance, Norway and the USA experienced falls in real GDP of roughly similar magnitudes between the end of 2007 and the end of 2009 (respectively –1.3 per cent and –1.8 per cent) but had significantly different increases in their respective rates of unemployment (+0.9 per cent and +5.2 per cent).

Could these differences reflect national specificities in labour-market institutions (regulations affecting employment protection and rules applying to overtime work, hours averaging, and short-time work)? 'Rigidities' such as these, allegedly characterizing European labour markets, have often been blamed for high levels of unemployment (Nickell, 1997). In particular, Employment Protection Legislation (EPL) has often been held to be one of the main causes of Europe's higher level of unemployment compared to that of the US. High firing costs act as a disincentive to hire. On the other hand, high firing costs are also a disincentive to fire once the hiring decision has been taken. One would thus expect that for a given size of shock, countries with more protective employment legislation should react less strongly in terms of lay-offs than countries with highly flexible labour markets.

Has the relatively high level of EPL prevented a large rise of unemployment in European countries? Returning to the comparison between Norway and the USA, the former country has a relatively high level of EPL on regular contracts (an OECD index of 2.25, the OECD average being 2.14) whereas the US has a very low level (OECD index of 0.17). In order to investigate this matter further, the following equation is estimated on a cross-section of OECD countries:

$$\Delta\text{Unemployment} = a + b\,\Delta\text{GDP} + c\,\text{EPL} + \epsilon$$

where Δ Unemployment is the percentage increase in the rate of unemployment between the end of 2007 and the end of 2009, ΔGDP is the percentage change in real GDP over the same period, and EPL is the OECD index of employment protection legislation for regular labour contracts in 2007. Estimation results are displayed in Table 1.

The estimation for the complete sample of countries does not lead us to conclude that employment protection has slowed down the rise of unemployment following the Great Recession. The direct influence of the recession on unemployment is significant, a drop in GDP of 1 per cent leading to a 0.3 percentage point increase in the rate of unemployment on average. However, the impact of EPL is not significant. But the case of Spain is particular, as can be seen in Figure 3: the unemployment increase has been tremendous in spite of a high level of employment protection. Bentolila *et al.* (2010) attribute a large part of the unemployment increase there to the important role played by temporary contracts and the large gap in firing costs between permanent and temporary contracts. They compare Spain and France. These two countries, and particularly Spain, have used temporary contracts as a means of making the labour market more flexible. They argue that *de facto* employment

Table 1: The impact of EPL on unemployment in the recession

	Constant	% change in real GDP	EPL on regular contracts	Number of observations	Adj. R^2
Spain included	3.1**	–0.030***	–0.67	29	0.21
Without Spain	3.2***	–0.27***	–0.84**	28	0.41
Without Spain and Ireland	3.2***	–0.17**	–0.72**	27	0.24

Notes: Significance levels: **5 per cent, ***1 per cent.

protection on temporary contracts is much weaker in Spain than in France, while the reverse is true for permanent contracts.

Estimating the model without Spain changes the conclusion regarding the impact of employment protection. The latter turns out to have significantly slowed down the rise of the unemployment rate: for the US for instance, its low level of EPL compared to the other OECD countries would alone account for a 1.6 percentage point difference in the unemployment rate in comparison to the OECD average. The model explains relatively well the evolution of unemployment in France, Poland, Sweden, and Denmark. The last two countries experienced a rise in their unemployment rate of 3.73 and 2.96 percentage points, respectively; the model (without Spain) predicts 3.64 and 2.77. The extent of the recession was somewhat stronger in Sweden than in Denmark, with a GDP fall of 7.7 per cent for the former and 6.48 per cent for the latter. That alone should have led to a slightly larger increase in unemployment in Sweden than in Denmark. The actually lower increase in unemployment rate of the former country could therefore be due to the higher level of EPL: 2.86 against 1.63 in Denmark (Figure 4).

By contrast, Germany's level of EPL could not explain much of the course of unemployment there. Unemployment in 2009 was lower by 0.5 per cent than in 2007. Its relatively high EPL would imply an impact on the unemployment rate of –0.7 per cent which could not have compensated for the impact of the recession (+1.1 per cent) and the average unemployment increase reflected in the value of the estimated constant term (3.2 per cent).

Indeed, Germany's rate of unemployment has followed a distinctly different path from the rest of the OECD (Figure 5). Although the recession was very severe in 2008, unemployment rose only moderately and resumed its downward trend after the second quarter of 2009. The most common explanation for this peculiar picture is that German firms chose to maintain employment but to diminish the level of hours worked. This has the advantage of preserving the employment relationship while allowing for some flexibility in the pay bill.

In the United States, the employment reaction to the recession was particularly strong. Employers have massively shed labour in response to deteriorating business conditions. The differences between Germany and the US have been the object of research for some time. Abraham and Houseman (1993) showed that, in comparison to the US, a cyclical adjustment in Germany was more likely to involve a reduction in the number of hours worked than lay-offs. In the current recession other countries, including Japan and Austria, have also reduced hours. These tend to be the non-liberal economies or, in the terminology of Hall and Soskice (2001), 'coordinated market economies' (CMEs). In a CME, it is argued, the competitiveness of firms is dependent on the firm-specific human capital embodied in the workforce. Therefore, labour hoarding in a downturn can be a competitive corporate strategy in order to retain these assets. In liberal market economies (LMEs), on the other hand, fewer such specific investments exist and firms are more likely to reduce their workforces in order to keep profitability at an acceptable rate for shareholders. One should therefore expect that substantial lay-offs in a recession should be more characteristic of LME labour markets. For the USA, Elsby *et al.* (2010) estimate that the total hours reduction in the recession were 70 per cent lay-offs and 30 per cent hours per worker.

Hours per worker in Germany fell by about 3 per cent, an extent roughly similar to other recessions (1973–5, 1979–82, 1991–3, 2002–5). What distinguishes the 2008–9 recession from the previous one is that employment increased, albeit very slightly. The decrease in the total hours worked was therefore substantially less than during the 1973–5 recession, for instance, when they dropped by almost 8 per cent (Burda and Hunt, 2010). Consequently the

Figure 4: Decomposition of the differential evolution of the rate of unemployment in Denmark and Sweden

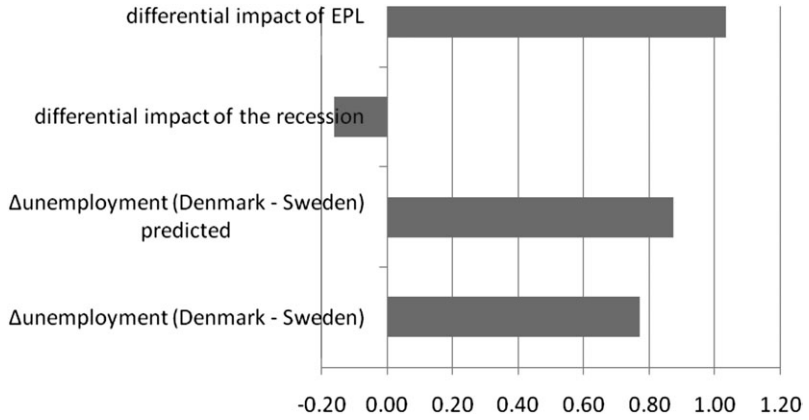
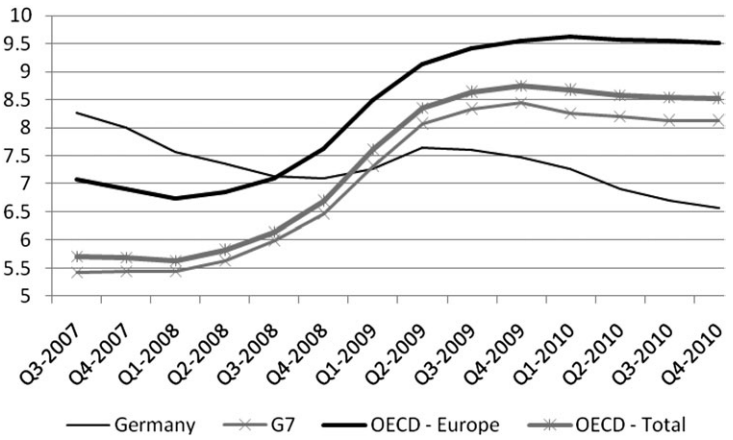


Figure 5: The unemployment rate in Germany



relatively moderate reduction in hours worked combined with a substantial decline of output led to a 4 per cent reduction in productivity in 2008–9. By contrast, all previous recessions had been accompanied by strong increases in productivity.

For Burda and Hunt (2010), a decisive factor explaining the increase in employment during the 2008–9 recession is the failure of employers to hire during the expansion that preceded it. The 'missing' employment increase in the preceding boom would represent 35 per cent of the 'missing' employment decline in the recession. Why did employers not hire in the boom? Burda and Hunt argue that they did not have enough confidence that the boom would last and that they therefore adopted a cautious attitude towards hiring. The workers not hired during the upturn could, of course, not be laid off during the recession. Wage moderation played only a minor role while working time accounts, which make it possible for employers to use overtime without paying an extra wage premium when it is expected that working time will be cut in the future, were important.

We have emphasized that the different institutional characteristics of different countries have mattered for the course of unemployment during the recession. The extent of collective bargaining coverage is a feature which separates the non-liberal from the liberal market economies. We use the *Adjcov* variable taken from the ICTWSS database (Visser, 2009) in a regression similar to those presented in Table 1 (Spain is excluded from the sample). Our regression analysis (Table 2) indicates that, controlling for the impact of the recession, the rise in unemployment and the fall in employment diminished with the extent of bargaining coverage.

These different national reactions to the recession have raised the question of the existence and stability of Okun's law—the relationship between changes in GDP and changes in employment. The Great Recession is atypical because of a significant change in Okun's coefficient with respect to its historical average (OECD, 2010): it substantially increased in Spain and the US, for instance, while substantially decreasing in most other OECD countries (Germany, France, and Sweden, for example). The increased sensitivity of employment to output fluctuations in some countries is a sign that employers are more ready to make workers redundant in recessions, which could be the consequence of an increase in the competitive pressures faced by firms (Amable and Gatti, 2004). More intense competition on the product markets characterizes liberal varieties of capitalism. In this sense, the US seems to have become more liberal as far as labour-market fluctuations are concerned.[1] By contrast, Germany seems to have been less liberal during the Great Recession than might have been expected after the labour-market reforms of the early 2000s. Gordon (2010) analysed the break in Okun's law for the US case. In Okun's original formulation, the labour market would react to a drop in GDP by a two-thirds downward adjustment in aggregate hours and a one-third decrease in productivity. Gordon shows that the role of productivity in the adjustment has progressively vanished since the mid-1980s and even reversed during the Great Recession. In contrast to the German case, the level of US productivity increased, which reflects a more aggressively labour-shedding attitude from US firms and the rise of involuntary part-time employment.

Table 2: The impact of union coverage on unemployment and employment in the recession

Dependent variable	Constant	% change in real GDP	Adjusted bargaining coverage	Number of observations	Adj. R^2
% change in unemployment	2.5***	–0.020***	–0.02*	21	0.18
% change in employment	–1.3	0.52***	0.31*	21	0.39

Notes: Significance levels: **5 per cent, ***1 per cent

[1] Katz (2010) mentions an increasing polarization of the US labour market with strong growth in high-skill jobs and in traditionally lower-wage jobs in the service sector, but a weak demand for traditional middle-class jobs, such as manufacturing production jobs and middle management positions.

III. Economic policies and unemployment in the Great Recession

(i) Labour-market policies

Many countries tried to limit the number of lay-offs during the 2008–9 recession. One method was the use of short-time work schemes (STW), programmes that encourage work sharing and provide income support to the workers concerned. Countries such as Austria, Denmark, France, Germany, and Japan already had these schemes before the recession. Some other countries, such as the Netherlands and Poland, introduced them as a response to it.

STW schemes take the form of a shortened work period or even a temporary lay-off. Avoiding permanent lay-offs potentially has many advantages: it decreases the job matching-related costs that firms will incur when labour demand picks up again; since the work contract between the worker and the firm is maintained even in the case of temporary lay-off, this preserves workers' human and social capital and hence their 'employability'; it shares the burden of economic adjustment between the whole workforce and the firms.

Hijzen and Venn (2011) estimated the impact of such schemes on employment and average hours worked of both permanent and temporary employees, conditional on the change in output, using a panel of 18 European countries plus Japan. It can be concluded from their estimates that STW schemes had an important impact during the 2008–9 recession. They helped preserve permanent jobs but had little if any impact on temporary jobs. Of all the countries in their sample, Germany and Japan, where, respectively, 416,000 and 235,000 jobs (0.9 and 0.8 per cent of employees) were saved, are those where STW schemes had the largest absolute effect. Finland, Belgium, and Italy were the countries where the proportional effects were the largest: 1.29, 1.24, and 1.09 per cent of the workforce. However, deadweight was a problem—there is some evidence that STW schemes ended up supporting jobs which would have been maintained anyway, possibly one-third of the jobs preserved, when one considers all the countries in the sample.

As a reaction to the increase in unemployment, some countries modified their unemployment benefit policies. Eligibility was extended, notably in the direction of people who had been on temporary labour contracts. This was done in Finland and France (Erhel, 2010), and in Japan and the United States (Howell and Azizoglu, 2011). Some countries—for example, Portugal, Japan, and the US—also increased the level of the benefits or the period of eligibility. In Bulgaria benefits were increased by 20 per cent.

Unemployment benefits have several effects. In a context of a large recession, they provide a source of aggregate demand support and help cushion the recessionary effects of significant lay-offs. Besides this macroeconomic effect, some microeconomic effects have been examined in the literature. The effect most often studied is on the incentive for an unemployed person to take up a job. As Howell and Azizoglu (2011) show in their contribution to this issue, the dominant tone of the debate on unemployment insurance (UI) in the US reflects the view that the recent extension of UI to 99 weeks would lead to a substantial increase in unemployment, because of the work disincentive effect. According to this perspective it would seem to have been a mistake to extend the UI eligibility period during the recession. However, extreme caution is needed in drawing this conclusion.

The question of the optimal unemployment insurance scheme has been analysed in some recent research. Andersen and Svarer (2009) consider the consequences of having a state-contingent system of unemployment insurance benefits in a search-matching model with

shifts between 'good' and 'bad' states of nature. The argument for state contingency is that insurance arguments are stronger, and incentive effects weaker, in 'bad' than in 'good' states of nature. Optimal unemployment benefits should be low when unemployment is low and high when unemployment is high; in other words, the direction taken in the US and the countries mentioned above in their reaction to the recession. Moreover, cyclically changing unemployment benefits lead to a lower, though more volatile, rate of unemployment averaged over the cycle.

Landais *et al.* (2010) address the same issue in a similar theoretical setting, a search model. In booms, unemployment comes from matching frictions, as is standard in search models.[2] A higher search effort leads to a lower level of unemployment, and anything (such as unemployment insurance) that leads individuals to lower their search effort is likely to increase equilibrium unemployment. The situation is different in slumps, where unemployment is mostly due to job rationing and matching frictions are only of secondary importance. In such conditions, job-search efforts cannot significantly improve the equilibrium level of unemployment. This implies that the work disincentive effects of UI are reduced in recessions. Furthermore, job-search efforts increase the individual probability of finding a job but create a negative externality in the presence of job rationing, by reducing other job-seekers' probability of finding one. This negative externality is neglected by individuals when they choose their job-search effort and they search 'too much'. Since unemployment benefits reduce search effort, the extent of this externality is diminished. On this argument unemployment benefits should be higher in recessions than in booms.

(ii) Macroeconomic policies

The magnitude of the recession was such that almost all OECD countries initially introduced fiscal stimulus packages. Their total cumulative impact on fiscal balances over the period 2008–10 is estimated to have been 4 per cent of GDP (OECD, 2009). The size and composition of the stimulus differed across countries, as did automatic stabilizers. Among OECD countries, those that had the largest discretionary fiscal packages were Korea (6.1 per cent of the GDP in 2008), the United States (5.6 per cent) and Australia (5.4 per cent). The lowest were in Switzerland, France, and Portugal (less than 1 per cent of GDP). Most countries used tax cuts and spending increases in roughly equal proportions, alongside moderate cuts in employers'national insurance contributions. Countries where automatic stabilizers are the strongest are those where the welfare state is the most developed: Northern Europe (Sweden, Denmark, Norway) and Continental Europe (Netherlands, France, Belgium). By contrast they are particularly weak in Korea, Japan, and the USA (OECD, 2009).

The employment impact of the fiscal stimulus packages can be derived from the consideration of two elements: the GDP multiplier effect of the fiscal packages and the (short-run) elasticity of employment with respect to GDP. The variation across countries of the employment multipliers computed by the OECD (2009) is rather limited: from 0.19 for Belgium, the Netherlands, and Korea, to 0.28 for the USA and Japan. Countries for which the fiscal stimulus had a large impact on employment are Australia, Japan, and the US, because

[2] Unemployment insurance can also contribute to improving the quality of the match by allowing job-seekers to wait until they find a 'good' job (Acemoglu and Shimer, 1999; Marimon and Zilibotti, 1999; Acemoglu, 2001).

of the size of the package and the large employment multiplier. With an employment multiplier of 0.26 and a fiscal stimulus package equal to 5.35 per cent of GDP, the average employment effect for Australia is roughly equal to 1.4 per cent of employment. Likewise the respective impacts for the US and Japan are 1.6 per cent (0.28 times 5.65) and 1.4 per cent (0.28 times 5). The impact was estimated to be more modest for other countries.

IV. Modelling of unemployment: are search models really that helpful?

Over the past two decades the search model (Pissarides, 1990) has become the dominant framework in which to analyse 'equilibrium unemployment'. Rogerson and Shimer (2010) provide an assessment of the search model and, while they consider it useful for understanding empirical regularities in unemployment and labour market flows, they believe that it has a limited ability to improve the understanding of unemployment volatility. They consider a benchmark business-cycle model with search frictions and assess whether the model can account for the key facts characterizing the labour market of the US and the OECD relative to the frictionless equivalent. The introduction of search frictions into the model dampens the extent of fluctuations in employment. Search frictions act as an adjustment cost on labour: in comparison with a frictionless economy, hiring involves a time-consuming search and entails, therefore, an additional cost for firms, which will influence their labour-force adjustment decisions over the business cycle. Firms hoard labour during downturns in order to avoid costly rehiring during booms. Therefore, the introduction of search frictions does not improve the fit between model and data since by themselves they generate fewer fluctuations in unemployment. One possible way to improve on this is to replace the commonly found Nash bargaining assumption for the sharing of the (job match) rent with some type of wage rigidity (Hall, 2005). This would add to the search model a fluctuation amplification mechanism necessary to reproduce the fluctuations found in the unemployment series.

Rogerson and Shimer (2010) also consider the performance of search models in advancing our understanding of long-term trends in unemployment. They pay particular attention to the heterogeneity of the unemployment experiences of different countries. Since the mid-1960s most countries have seen their unemployment rates rise to a peak and decrease thereafter, but the timing and the extent of the increase differs considerably across countries: the increase was relatively moderate in the US and the peak was attained in the early 1980s, whereas the increase was very substantial and the peak attained in the mid-1980s in the UK. The peak was in the mid-1990s for France and the early 2000s in Germany. Can persistent changes in the inflow and outflow rates account for these inter-country differences? Rogerson and Shimer (2010) observe that the large differences in unemployment inflow and outflow probabilities across countries are not systematically related to differences in unemployment rates and that one cannot identify a systematic pattern regarding the importance of changes in unemployment inflows and outflows that holds across OECD countries or over time. Other important trends are changes in labour-force participation and the number of hours per worker. Since the mid-1960s, the former has increased and the latter decreased across the OECD, but at different paces according to the country considered. It seems unlikely that search frictions can explain these important trends: the change in labour-force participation is

due to the increased participation of women, and the decline in hours worked has most probably little to do with search and matching frictions.

V. Hysteresis

An important question is what the long-term impact of the recession might be on the non-accelerating inflation rate of unemployment (NAIRU) and on equilibrium unemployment. The NAIRU is defined as that rate of unemployment consistent with stable inflation, and equilibrium unemployment as that rate of unemployment consistent with stable inflation *and* balanced trade. When the concept of hysteresis entered the discourse of macroeconomics it was in the context of earlier recessions and trend rises in unemployment. The essential idea was the cyclical rises in measured unemployment could have long-lingering effects and cause an increase in equilibrium unemployment and the NAIRU. This might happen via a variety of mechanisms affecting the supply side of the labour market. For example, a group of workers who are laid off fail to bid their way back into work quickly because of the power of employed workers to resist any bidding down (the insider/outsider hypothesis) and/or because of the reluctance of employers to respond to their bidding down (the efficiency wage hypothesis). The longer this goes on, the more likely there are to be scarring effects and the ability of these unemployed workers to discipline the labour market at all diminishes. They become structurally unemployed. More recently macroeconomists have started to take more seriously what O'Shaughnessy (2011, this issue) calls 'good' hysteresis. A sustained rise in GDP and in the demand for labour may have positive effects on the supply side and thus reduce equilibrium unemployment. For example, there is some evidence for this during the UK's Great Moderation in the 1990s and early 2000s.

Several lessons can be drawn from this about the lingering effects of the latest recession. Everything else being equal, by definition those countries which took effective steps to limit the unemployment consequences of any given fall in GDP will suffer less negative hysteresis. So will those countries which experienced limited and/of brief falls in GDP. Those countries which exhibit fastest recovery in GDP are most likely to benefit from good hysteresis.

VI. Conclusions

The recent recession had very different unemployment implications for different OECD countries. In part this was the consequence of varying severities of the initial fall in GDP, of different macro policy responses, and of different impacts of any given macro stimulus. Abstracting from these considerations, however, labour-market policy and labour-market institutions did make a difference. Those countries with stricter employment protection legislation experienced smaller increases in unemployment than those with loose employment protection. It has long been acknowledged that EPL is a dual-edged sword. In recessions it has the advantages that we have recorded, but in better macro climes it can cause firms to be reluctant to hire. It is the latter effect which has tended to dominate mainstream discourse, but recent experience may help to redress the balance in evaluating the merits of EPL. Similarly, everything else being equal, those countries with higher collective bargaining coverage tend to experience lower unemployment increases. As with EPL, the

debate about the overall macro and micro impact of collective bargaining and union presence is a complex one. However, what is clear is that in times of severe downturns high coverage appears to reduce job loss. Given the potential importance of long-lingering effects of cyclical rises in unemployment—that is, of potential hysteresis effects—these institutional features may have long-term advantages. Similarly, the various forms of work-sharing that we have described may have long-term, as well as short-term, benefits. In terms of theorizing about unemployment, an important lesson to be learnt from the recent recession is the need to enrich conventional search models.

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