



ECFIN Economic Brief

Post-crisis unemployment developments: US and EU approaching?

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Introduction

Following the financial crisis the unemployment situation in the EU and the US has become increasingly similar in several respects. As the unemployment increase was strongest in the US, unemployment rates have converged. The share of long-term unemployment equally grew faster in the US, thereby reaching levels close to those in the EU. Finally, the US labour market seems to be losing dynamism, since not only layoff rates have spiked with the crisis, but hiring rates have also fallen considerably.

Are these indications that the US labour is in the process of becoming more "European" in terms of size, composition and dynamics? This short brief compares the unemployment response to the crisis in the US and Europe, analyses the composition and duration of unemployment, the extent and evolution of labour market mismatch and decomposes job market flows in and out of unemployment in the two world regions.

The conclusion of the analysis is that the observed convergence in the unemployment situation may not be long-lasting as it is the result of a combination of factors that will partly play in opposite directions looking forward.

Summary

This brief reviews the evolution of the US and the European labour markets since the beginning of the financial crisis.

In the US, the unemployment rate and the share of long-term unemployment grew very fast, during the crisis, thereby reaching levels close to those in the EU. Does that mean that the US labour market has split between jobs and permanent unemployment? In other words, is the US labour market in the process of becoming more "European" in terms of size, composition and dynamics? What would thus be the consequences in terms of outlook?

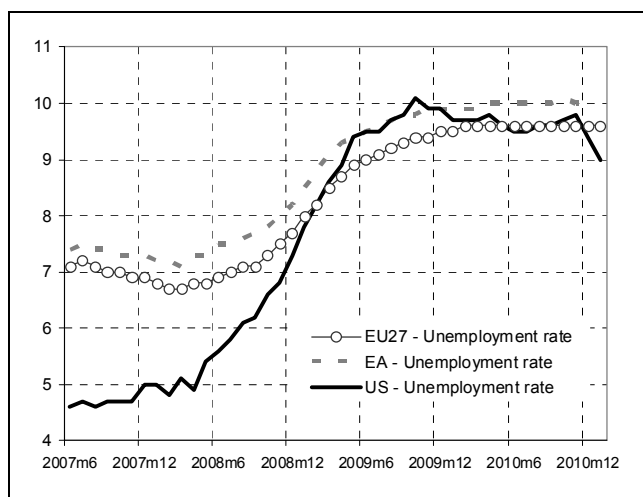
This brief analyses the unemployment response to the crisis in the US and Europe, also looking at the very different performance of labour markets across euro-area countries. In particular, while the Irish and Spanish labour markets suffered a burst of housing bubbles as the US that may have also aggravated labour mismatches, this was less a case in other EU countries, like Germany, Italy, France or the Netherlands.

This brief argues that the convergence in the unemployment situation in the US and the aggregate EU will not be long-lasting. As observed in the past, the US unemployment is expected to be relatively reactive in the coming quarters, while that of the EU, on aggregate, will be less.

Unemployment rates

The unemployment impact of the financial crisis was felt earlier and more strongly in the US than in the EU (Graph 1). In the US, the unemployment rate started to increase in the summer 2007, from a level of 4.6% of the labour force (June 2007). It doubled in less than two years and reached a peak of 10.1% in October 2009. Since then, it has been very gradually diminishing and was recorded at 9.0% in January 2011. The EU27 labour market was, on aggregate, relatively more resilient. The unemployment rate started to increase in spring 2008 (6.8% in April 2008 in the EU27) and reached its peak in February 2010 (9.7%). It has been stable at such a level since then. As a consequence of the crisis, the unemployment rate rose by less than 3 pp. compared to 5.5 pp in the US.

Graph 1: Monthly unemployment rates: US vs. EU



Source: Eurostat

This relative resilience of EU unemployment masks a considerable diversity in unemployment responses across countries (Table 1). While unemployment responded very mildly to the recession in Germany and the Netherlands, the response was more in line with standard "Okun-law" estimates in Italy and France, and major hikes in unemployment were

recorded in Spain, Greece and Ireland.¹ The size of the countries having maintained relatively stable unemployment figures drove the aggregate evidence for the euro area.

Table 1: Unemployment response across EU countries during the crisis

Country	Unemployment rate change	GDP growth	Apparent elasticity
Germany	-0,2	-6,6	0,03
Netherlands	0,2	-5,2	-0,04
Luxembourg	0,5	-8,0	-0,06
Malta	1,1	-3,3	-0,33
Austria	1,3	-5,1	-0,25
Portugal	1,3	-3,8	-0,34
France	1,5	-3,9	-0,39
Slovenia	1,5	-9,7	-0,15
Belgium	1,6	-4,2	-0,38
Italy	1,6	-6,8	-0,24
Slovakia	1,8	-7,4	-0,24
Czech Republic	2,0	-4,9	-0,41
Finland	2,3	-9,8	-0,23
Hungary	2,3	-7,9	-0,29
Sweden	2,4	-7,5	-0,32
Romania	2,5	-9,7	-0,26
Poland	2,6	5,1	0,51
Cyprus	2,7	-2,8	-0,96
Denmark	2,8	-7,4	-0,38
United Kingdom	2,9	-6,5	-0,45
Greece	4,5	-5,7	-0,79
Bulgaria	5,2	-7,1	-0,73
Ireland	7,9	-14,3	-0,55
Spain	9,2	-4,9	-1,88
Estonia	10,5	-20,3	-0,52
Lithuania	13,2	-18,3	-0,72
Latvia	14,4	-25,2	-0,57

Source: Eurostat, Commission Services

Recession is defined as the period of peak to trough of GDP

¹The factors that explain cross-country divergences in the labour market performance include: sectoral composition of output; capacity utilisation and firm profitability at the start of the crisis; characteristics of existing labour market institution and policy measures taken to contain labour shedding.

The countries mostly affected by the burst of housing bubbles were also those that suffered major employment losses and where unemployment rose to a largest extent. Unemployment more than doubled in Spain, it went up from 8% in 2007 to 20% in 2010, and in Ireland where it reached 12% in 2010 from 5% in 2007. An even higher unemployment response was recorded in the Baltic economies. In this respect, the strong US unemployment impact of the crisis shares similarities: the unemployment rate roughly doubled in the US (from 4.5% in 2007 to 9.5% in 2010).

The relatively strong reaction of unemployment in countries concerned by housing bubbles could be linked to several factors. The relatively strong reliance on temporary contracts in the construction sector implied relatively low firing costs. The limited prospects for recovery in the medium term for the construction sector limited voluntary labour hoarding. In general, in these countries there was less adjustment on the front of working hours, while this was marked in other EU countries, including in light of more voluntary labour hoarding and the implementation of Short Term Working Schemes (STW), which played a relevant role notably the case in Belgium, Italy, and Germany.²

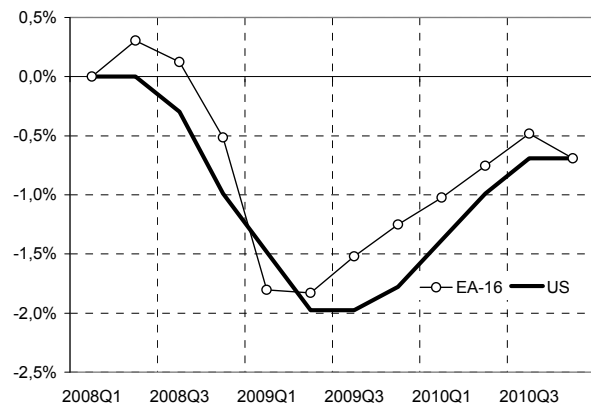
Hours worked per employee and total employment

The adjustment of the labour market to changes in GDP happens on the *extensive margin*, namely the number of persons in and out of work, but also on the *intensive margins*, i.e. changes in hours worked per employee, both being of the same relevance for economic and institutional considerations. Graphs 2 reports the different dynamics of hours worked per employee and the total number of employees in the euro area and in the US. The graph shows the cumulative change since 2008Q1, having in mind that the GDP fall was of the same range in both regions. It appears that the adjustment in terms of

² In Germany, labour hoarding was to large extent a voluntary response of firms in light of solid financial positions and a long period of employment restructuring and emerging skills shortages before the crisis, so that reductions in working time were largely initiated by employers, rather than being the result of government-sponsored short-time working schemes (see, e.g., Boysen-Hogrefe and Groll, 2010).

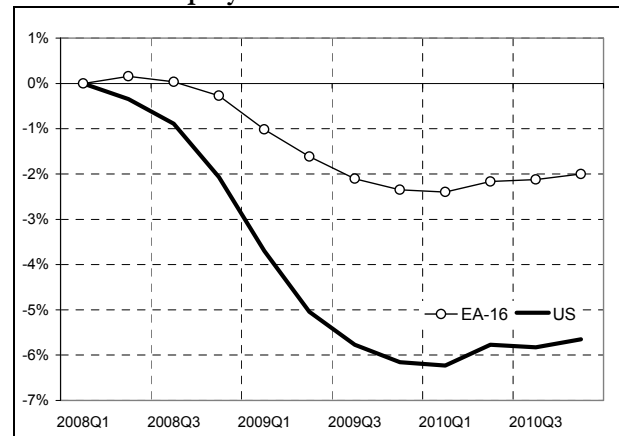
hours worked per employee was of the same magnitude in the euro area and in the US during the crisis. However, labour shedding was much higher in the US and started earlier, amounting to 6% of jobs prevailing before the crisis in 2009Q3 compared to three times less in the EU (around - 2%). Labour hoarding, short-time working schemes may have contributed to these different developments. In particular, the cumulative reduction in hours worked per employee is of the same magnitude than the reduction in employment in the euro area. In the US, on the contrary the adjustment of the labour market is mainly explained by movements in the number of employees. These differences are reflected in the stronger hike of the unemployment rate in the US.

Graph 2a: Cumulative decline in average hours worked per employee: US vs. EU



Source: Eurostat, US Department of Labor.

Graph 2b: Cumulative decline in the total number of employees: US vs. EU



Source: Eurostat, US Department of Labor.

Duration of long-term unemployment

Long-term unemployment (i.e., unemployment with duration above 6 months) also increased more in the US than in the EU after the crisis.³ In the US, long-term unemployment more than tripled for a very low level of 0.8% in summer 2007, to 4.2% in December 2010 and slightly decreased in January. In the EU27, long-term unemployment rose less steeply, from 2.8% at the beginning of 2008 to its highest level of 4.9% in autumn 2010. At the current juncture, both figures are of comparable magnitude at around 4-5% of the active population.

Conversely, the average duration of unemployment is still lower in the US than in the European Union. In 2007, it was 4 months in the US, compared to almost 16 months in the European Union.⁴ As a result of the peak in job destruction and new entrants in unemployment the unemployment duration decreased in both regions just after the crisis. As the recession went on, it started increasing again as hiring rates fell. In the US, unemployment duration reached 8.5 months in January 2011, in the EU, it reached 14 months in the third quarter of 2010.

Labour market mismatch

In the US, despite a substantial rise in private sector job vacancies over the past 12 months, the unemployment rate has declined only slightly and remains well above its pre-crisis level. Growing labour demand in the United States was reflected in a slight increase in private payroll employment in 2010 and a more substantial rise in private-sector job vacancies over the past 12 months. However, notwithstanding these signs of improvement, the unemployment rate has not fallen substantially. Graph 3a shows a possible rightward shift in the Beveridge curve in 2010, indicating a worsening of labour market mismatch resulting into higher unemployment rates for the same number of job vacancies.

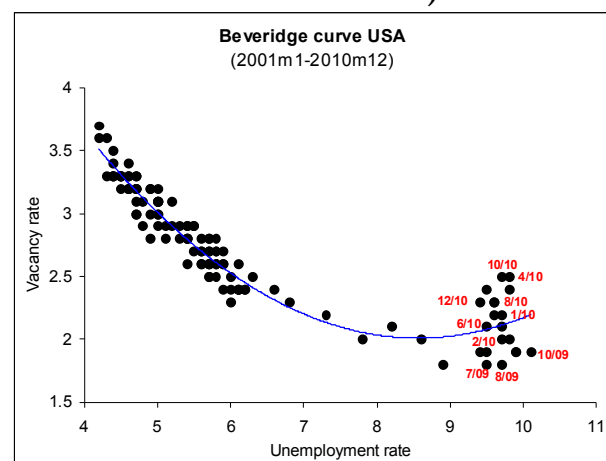
³ In the US, long-term unemployment corresponds to being unemployed for a period of 6 months or more (27 weeks and over), while it usually relates to a duration of 12 months or more in the EU. For comparison reasons, long-term unemployment is defined in this brief as greater than 6 months.

⁴ Sources DG Ecfm based on Eurostat data.

The Beveridge curve shift could be attributed to either skill or geographical mismatches. Notably, skill mismatches could arise for workers formerly employed in the construction sector that may not possess the skills required to fill vacancies in other sectors. The burst of the housing bubble may also have aggravated geographical mismatches as unemployed workers face a financial obstacle that makes it hard to move to places where jobs are more abundant due to reduced prospects from selling houses.⁵

The Beveridge curve for the euro area aggregate does not exhibit a clear-cut shift (Figure 3b).⁶ The reason is likely to be related to the very different performance of labour markets across euro-area countries. While the Irish and Spanish labour markets suffered a burst of housing bubbles as the US that may have aggravated mismatches, this was less a case in other countries.⁷

Graph 3a: US Beveridge curve (monthly December 2000 to December 2010)



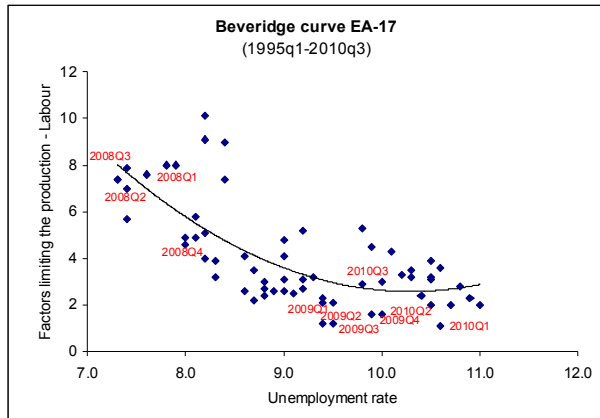
Source: Bureau of Labor Statistics, US Department of Labor, calculations Commission services

⁵ This is consistent with recent data from the U.S. Census Bureau showing historically low rates of geographic mobility.

⁶ Data used to compute the EU Beveridge curve are not similar to the US vacancy rate. In fact, the survey indicator "factor limiting the production-labour" is used in the absence of historical data for vacancy rates making thus both levels not comparable.

⁷ In particular, the Spanish labour market is characterized by a low geographical mobility of workers. See OECD Economic Survey, Spain, December 2010.

Graph 3b: EU Beveridge curve (quarterly – 2000Q4 – 2010 Q2)



Source: Eurostat, calculations Commission services

Labour market flows

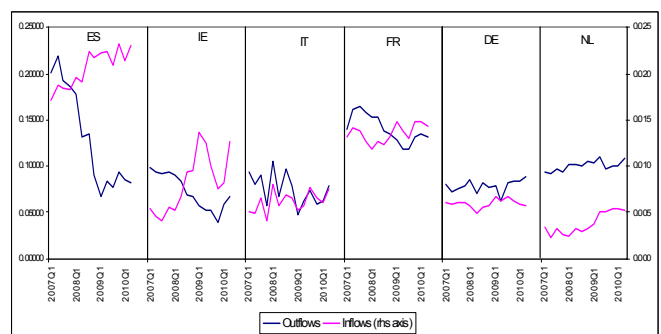
Fluctuations of unemployment are driven by a continuous process of job creation and job destruction. Thus, the analysis of job market flows could provide indications concerning the source of unemployment dynamics, notably whether changes in unemployment rates are mostly related to labour shedding or to lack of job creation. High frequency data on job market flows also help forming a view on unemployment prospects.

Job market flows differ strongly across euro-area countries. Graph 4 reports transition rates into unemployment and out of it for selected euro-area countries. In countries strongly affected by the burst of housing bubbles like Spain and Ireland the increase in job destruction after the crisis (inflows into unemployment) was much larger compared with that in other euro-area countries⁸. Transition rates over the period following the crisis were broadly stable in Germany and the Netherlands, which is consistent with relatively stable unemployment

⁸ The hazard rates in Figure 3 are obtained using the methodology developed in Arpaia and Curci in 'EU labour market behaviour during the Great Recession', *European Economy Economic Papers*, no. 405, 2010 and represent the instant probability for an employed worker to enter unemployment and for an unemployment to exit the state of unemployment.

figures in these countries. In these countries, job creation prospects (transition rates out of unemployment) appear to have slightly improved after the crisis. Conversely, in France and Italy, despite relatively stable transition rates, job creation prospects appear worsening.

Graph 4: Unemployment inflow and outflow rates (hazard rates) in selected euro-area countries



Source: Commission services.

In the US, it appears that hires rates remain lower than before the downturn, while layoffs rates have fallen. The evolution of hires rates indicates that finding a job is not yet as easy as it was before the crisis (Graph 5).⁹ In light of this evidence, the worsening of the labour market mismatch in the US seems related to a protracted weak job creation performance.

⁹ Hire and layoff rates broadly correspond to the outflow and inflow rates computed for EU countries, with the main difference being that they are normalized on the labour force rather than the number of employed and unemployed.

Graph 5: United States – Evolution of hires and layoffs rates in the total non-farm economy (as a % of employment)



Source: Bureau of Labor Statistics, US Department of Labor

Conclusion and outlook

All in all, are the US and EU unemployment conditions getting increasingly similar? In spite of evidence in this direction, conclusions need to be cautious.

The different unemployment response of the crisis in the US and EU is largely the result of a very different labour market behaviour across EU countries. While large countries like France, Italy, and especially Germany were resilient, unemployment exhibited a sudden and large increase in other countries, like Spain, Ireland, and the Baltics. The aggregate EU and euro area data are therefore driven by the performance of relatively resilient countries.

The EU countries that were similar to the US in their unemployment response to the recession were, similarly, characterised by a relatively large increase in job destruction followed by a relatively large reduction in job creation. The reduced hiring rates are also likely to be accompanied by worsened matching in the labour market. The bursting of housing bubbles was common to the US and the EU countries that similarly suffered a large unemployment increase. Matching problems could

be associated to the largely asymmetric sectoral impact of the crisis in these countries, starting from oversized construction sectors. The relatively strong reliance on temporary contracts in the construction sector implied relatively low firing costs. The limited prospects for recovery in the medium term for the construction sector limited voluntary labour hoarding.

The resilient performance of a series of EU countries including Belgium, Italy, Germany and France, was associated to adjustment on the intensive margin to a greater extent, partly as a result of implementation of STWs. This adjustment was also greater than in the past due to a more generalized use of STWs also supported by government sponsorship.

Looking forward, labour hoarding in large EU countries and the termination of STWs will play in the opposite direction compared with immediately after the crisis: the unemployment response to the recovery will be more visible in the countries that adjusted to falling demand of labour on the extensive margin, while unemployment will be more sluggish where adjustment took place to a greater extent on the front of working hours. Hence, while the US unemployment is expected to be relatively reactive, that of the EU, on aggregate, will be less.

Nonetheless, the worsened labour market mismatch after the crisis will have persistent effects in the US and in the EU countries mostly concerned by the burst of housing bubbles. In these countries, measures to strengthen job search effort, facilitate matching and reintegrate long-term unemployed will have a role to play in bringing back unemployment to pre-crisis levels.

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