Comparisons and contrasts of the impact of the crisis on euro area labour markets

Report prepared by ad hoc ESCB Team

Robert Anderton, Team Chairman
Deputy Head of Surveillance Division (SUR)

Report coordinators/editors: V. Jarvis, B. Szörfi (OAD)
Presentation prepared by V. Jarvis, M. Périnet and B. Szörfi (OAD), on behalf of the ESCB Team.

Presentation to OECD 18 March 2015
## Overview of the presentation

1. Labour market dynamics and unemployment over the crisis
2. Labour market slack and structural unemployment
3. Wage adjustment
4. Concluding remarks: summary of main findings and policy implications
Both recession phases of crisis had strong impacts on euro area labour market, despite a much milder downturn second time around…

Euro area employment across recessions
(index T=100 at cyclical peak in GDP; intervals are quarters)

Source: Eurostat and ESCB calculations.

Euro area employment, GDP and unemployment since 1999
(year-on-year growth rates; % of labour force)

Source: Eurostat and ESCB calculations.
Differential impacts of the two recessions on euro area labour markets

... with stronger impacts across the stressed euro area countries.

Evolution of unemployment rates across euro area countries

![Graph showing the evolution of unemployment rates across euro area countries.](image)

Sources: Eurostat and ESCB calculations.
Note: within groups, countries are ordered according to their unemployment rate level in 2008.
Flows out of employment into unemployment over the crisis
(job separation probabilities)

Flows from unemployment to employment over the crisis
(job finding probabilities)

Source: Eurostat (EU Labour Force Survey microdata) and ESCB calculations.
Notes: EA11 excludes Portugal for which data are not available before 2008. Separation probabilities computed as percentage of the labour force each quarter. Separations include voluntary quits. Job finding rates are computed as a share of those unemployed in the previous quarter.
Job losses heavily concentrated by country, sector, skills and age

Employment losses by sectors and worker groups

*(percentage change in employment between 2008 and 2013)*

**by sectors**
- construction
- manufacturing
- services
- others
- total

**by educational attainment**
- primary
- secondary
- tertiary
- others
- total

**by age**
- 15-24
- 25-54
- 55-64
- total

Source: Eurostat and ESCB calculations.
Were young people “pushed out” of employment by older workers?

Increased employment of older workers also reflects rising participation of this group following pension reforms in many countries…

Euro area participation rates by age groups
(annual change in the participation rate, in percentage points)

But micro analysis shows no negative impact on young persons from higher employment propensities of older workers …perhaps even complementary?

Estimation of the potential displacement effect of young workers by older workers.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Probability of being employed for a young person</th>
<th>Probability of being unemployed for a young person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment rate</td>
<td>0.017</td>
<td>-0.0751*</td>
</tr>
<tr>
<td>(55-64)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Probability of young persons entering employment</th>
<th>Probability of young persons exiting employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0393</td>
<td>0.0258</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change in employment rate (55-64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0393</td>
</tr>
</tbody>
</table>

Notes: Eurostat and ESCB calculations. Besides the aggregate employment rate of senior workers, the other regressors are gender, age, education, aggregate employment rate for the 40-49 age group (expressed in changes for entry/exit), constant, fixed effects: region, year, country, year*country. Sample period: 2006-2012.

* Indicates statistically significant at 10% level.
Nevertheless, the crisis resulted in a strong rise in youth unemployment. … as a consequence in part of “last in, first out” practices, lower human capital, and a higher propensity of temporary contracts among the young…particularly in the stressed countries…. …but unemployment ratios give less dramatic picture…

Unemployment rate (total and youth) in euro area, stressed countries and other euro area economies

Unemployment rate and unemployment ratio (as % of youth labour force and youth population), 2013

Sources: Eurostat and ESCB calculations.
Note: the unemployment ratio is defined as the share of youth unemployed over the youth population.
Overview of the presentation

1. Labour market dynamics and unemployment over the crisis
2. Labour market slack and structural unemployment
3. Wage adjustment
4. Concluding remarks: summary of main findings and policy implications
Significant rise in: (1) **discouraged** workers and (2) **underemployment** (involuntary part-time workers who would like to work more hours). Implies labour market slack is considerably greater than suggested by headline unemployment rate...

**Broader measures of economic slack for the euro area**

*(annual averages)*

- PTER as % active labour force
- Discouraged as % active labour force

Source: Eurostat, EU Labour force survey and ECB calculations

Notes: PTER refers to those working “part time for economic reasons”. Active labour force includes discouraged workers, where appropriate.
Long-term unemployment has also risen and the Beveridge curve shows an outward shift.

Long term unemployment (>12m) has grown substantially and the euro area Beveridge curve shows a marked outward shift (statistically significant in econometric analysis)....

Long term unemployment in stressed and other euro area countries
(as a percentage of total unemployment)

Movements in the euro area Beveridge curve
(as % of labour force; limits to production from shortage of labour)

Source: Eurostat and ESCB calculations.
Notes: Long-term unemployment is defined as those without jobs for 12 months or more.

Source: Eurostat and ESCB calculations.
Notes: vacancy developments approximated by DG-ECFIN series of labour shortages as reported by manufacturing employers.
... due to increasing skill mismatch

Skill Mismatch Index (SMI) suggests notable increase in skill mismatch over the course of the crisis, particularly in stressed economies

Skill mismatch in the euro area labour market
(difference between skill distributions between employed workers vs. all labour force participants)

Skill mismatch across stressed and other euro area countries
(difference between skill distributions between employed workers vs. all labour force participants)

Source: Eurostat and ESCB calculations.
Migration trends helped to alleviate occupational bottlenecks and demographic pressures (eg, declining national populations).

**Population growth and contributions, stressed countries**  
(*annual percentage growth*)

**Population growth and contributions, other euro area countries**  
(*annual percentage growth*)

Source: Eurostat and ESCB calculations.
Strong increase in structural unemployment

Structural unemployment estimates have risen substantially since the crisis... consistent with rising long-term unemployment and higher mismatch.

Structural unemployment rate in the euro area

Evolution of the structural unemployment rate between 2008 and 2013

Source: EC, Eurostat, IMF, OECD and ESCB calculations.

Source: European Commission
Notes: the dark line is a trend line
<table>
<thead>
<tr>
<th></th>
<th>Overview of the presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Labour market dynamics and unemployment over the crisis</td>
</tr>
<tr>
<td>2</td>
<td>Labour market slack and structural unemployment</td>
</tr>
<tr>
<td>3</td>
<td>Wage adjustment</td>
</tr>
<tr>
<td>4</td>
<td>Concluding remarks: summary of main findings and policy implications</td>
</tr>
</tbody>
</table>
While wage response was low over the first phase of the crisis, there has been some increase over the second phase, implying a ‘steeper’ Phillips curve compared to first phase...

\[(\text{annual percentage point changes; annual percentage changes})\]

Source: Eurostat and ESCB calculations.
**Downward wage rigidities declined over the crisis**

**Panel estimates of euro area wage equation**

*(elasticities)*

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>-0.465***</td>
<td>-0.411***</td>
</tr>
<tr>
<td>Δprod</td>
<td>0.782***</td>
<td>0.754***</td>
</tr>
<tr>
<td>ΔCPI</td>
<td>0.779***</td>
<td>0.777***</td>
</tr>
<tr>
<td>D*U</td>
<td>0.105***</td>
<td>0.194***</td>
</tr>
<tr>
<td>D<em>U</em>Trend</td>
<td></td>
<td>-0.008**</td>
</tr>
<tr>
<td>Constant</td>
<td>4.089</td>
<td>3.677</td>
</tr>
</tbody>
</table>

| Observations | 874 | 874 |
| R²           | 0.75 | 0.751 |
| Nb of euro area countries | 14 | 14 |
| SER          | 1.428 | 1.424 |
| Adj-R²       | 0.74 | 0.741 |

**Sources:** Eurostat and ESCB calculations.

**Notes:** Dependent variable - nominal compensation per hour; sample period maximum data range 1991Q4-2013Q4.; unbalanced panel, fixed effects; Long-run parameters; D*U*Trend begins in 2008Q1.

**D*U:** lower wage response to unemployment during downturns (confirms downward wage rigidities).

**D*U*Trend:** wages become more responsive to unemployment as crisis becomes more protracted (downward wage rigidities become weaker: reforms, public sector pay constraint, threshold effects?).
## Overview of the presentation

<table>
<thead>
<tr>
<th></th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Labour market dynamics and unemployment over the crisis</td>
</tr>
<tr>
<td>2</td>
<td>Labour market slack and structural unemployment</td>
</tr>
<tr>
<td>3</td>
<td>Wage adjustment</td>
</tr>
<tr>
<td>4</td>
<td>Concluding remarks: summary of main findings and policy implications</td>
</tr>
</tbody>
</table>
Concluding remarks – summary of findings and policy implications

• **The crisis had uneven impacts on EA labour markets**
  – lower GDP fall in second EA recession, but almost as many job losses, mostly in stressed economies

• **Labour market flows suggest sharp rise in unemployment in 2nd recession due to marked decline in job-finding probabilities**

• **Young and less-skilled most heavily affected, while older workers’ employment continued to increase...**
  … but older workers did not displace younger workers
  More emphasis on reducing labour market dualism – focusing on reducing average adjustment costs - and enhanced ALMPs would help increase transitions to employment

• **In wider labour market, discouragement and underemployment have risen** implying considerably more slack than suggested by headline unemployment figures.

• **Long-term unemployment and structural mismatch have increased, leading to strong rises in structural unemployment, particularly in stressed economies**
  – more emphasis on increasing mobility will help alleviate high local unemployment.
  – ALMPs are needed to help the displaced retrain for changing sectoral composition of employment.

• **Downward wage rigidities reduced as crisis persisted**
  – but more wage and employment flexibility – and greater wage differentiation - required to accelerate adjustment/reallocation and reduce structural unemployment.
Upward shocks to euro area unemployment tend to persist (rigidities), while reversed in the US (flexibility)

Unemployment rate in the euro area and the United States

Source: OECD, Area Wide Model Database (AWM, ECB Working Paper Series No 42)