Waiting for the Recovery: OECD Labour Markets in the Wake of the Crisis

The economic recovery has been weak or uneven and some countries have fallen back into recession. This chapter examines the implications of the lack of a vigorous recovery for OECD labour markets. Its main findings are threefold. First, almost three years since the start of the economic recovery, economic growth has not been strong enough to make more than a small dent in the cyclical hike in OECD-wide unemployment. Second, there has been an increasing marginalisation of the jobless through an increase in the number of long-term unemployed and of discouraged workers leaving the labour force. Third, there is a growing risk that at least part of the cyclical increase in unemployment may become structural even if this has only materialised to a limited extent so far. From a policy perspective, the key priority is to underpin aggregate demand. This requires appropriate macroeconomic policies coupled with structural reforms that promote a prompt and solid recovery in output and job creation. Labour market policies also have a key role to play in helping unemployed job seekers get back into work and addressing structural obstacles that prevent them from finding jobs.
Key findings

The economic recovery has been weak or uneven across the OECD countries, and some countries have fallen back into recession. While the recovery in OECD-wide economic growth was initially similar in strength to those following the recessions of the early 1990s and early 2000s, it has since slowed down and become by far the weakest recovery of the past four decades. This chapter examines the implications of the lack of a vigorous recovery for OECD labour markets. Its main findings are:

- The fragile economic recovery that occurred in 2010 and 2011 has not been strong enough to make more than a small dent in the cyclical hike in labour market slack that took place as a result of the global financial crisis:
  - Almost three years into the economic recovery, the OECD-wide unemployment rate declined by just 0.6 of a percentage point from a post-war high of 8.5% in October 2009 to 7.9% in May 2012. This leaves more than 48 million people unemployed throughout the OECD, almost 15 million more than at the start of the jobs crisis in December 2007. According to the OECD's latest projections of May 2012, the unemployment rate is expected to remain persistently high, with only a small fall to 7.7% by end 2013.
  - The employment gap, i.e. the percentage increase in employment required to restore the employment-to-population ratio to its pre-crisis level, remains substantial. The OECD-wide employment gap increased from 2% at the start of the economic recovery in the second quarter of 2009 to 2.5% in the last quarter of 2011. This implies that the OECD area needs to create about 14 million jobs to restore pre-crisis employment rates. OECD projections suggest that this measure of labour market slack is expected to stay constant in 2012 and decline to 1.8% by end 2013.
  - The employment situation of youth and the low-skilled remains particularly depressed. Low-skilled employment has decreased since the start of the crisis by almost 5 percentage points relative to overall employment, while youth employment has declined by almost 7 percentage points. The situation may now be stabilising for youth though not yet for the low-skilled. Temporary employment has picked up strongly and now accounts for a higher share of overall employment than before the crisis. This reflects the reluctance of firms to rehire workers on open-ended contracts in an uncertain economic environment.
  - Since the beginning of the crisis, there has been a striking diversity across OECD countries in labour market performance. The unemployment rate has remained within the 3.5-5.5% range in nine countries (Australia, Austria, Japan, Korea, Luxembourg, Mexico, Netherlands, Norway and Switzerland) and has declined considerably since the start of the crisis in Germany from 8.2% in December 2007 to 5.6% in May 2012. At the other end of the scale, nine countries had double-digit unemployment rates in May 2012 (Estonia, France, Greece, Hungary, Ireland, Italy, Portugal, the Slovak Republic, and Spain). For the European Union as a whole, the unemployment rate has been rising since the end of 2011, whereas there has been a renewed decline in the United States over the same period.
The absence of a strong recovery in aggregate demand has led, in most countries, to an increasing marginalisation of the jobless through an increase in the number of long-term unemployed and the number of discouraged job seekers leaving the labour force:

- Long-term unemployment of more than one year has continued to rise in the OECD area. As a ratio of the labour force, it has increased from 1.6% at the start of the crisis to 2.9% in the fourth quarter of 2011. As a share of total unemployment, the OECD average has increased from 27% to 35% over the same period. The rate of very long-term unemployment, those unemployed for two years or more, has also increased from 0.9% at the start of the crisis to 1.5% in the fourth quarter of 2011.

- The working-age population share of marginally attached workers, defined as persons out of the labour force who are willing to work and available for work, but are not actively seeking work, has increased by 0.3 of a percentage point since the crisis began. While this seems small, it represents an increase of more than 30% in its level since the start of the crisis. The rise in the number of marginally attached workers reflects an increasing number of job seekers who have become discouraged from actively looking for work because of the difficulty of finding a job. Inactivity for other reasons has been largely constant and has fallen somewhat for women.

- In addition to raising concerns about the well-being of those concerned and their families, the increasing marginalisation of the jobless also raises the spectre of the cyclical increase in unemployment becoming a structural increase:

  - A commonly-used measure of structural unemployment is the non-accelerating inflation rate of unemployment, or NAIRU. OECD estimates of the NAIRU suggest that it has risen in the majority of countries since the crisis began. In Estonia, Greece, Ireland, Portugal and Spain, the NAIRU has increased by more than 2 percentage points. Nevertheless, the estimated increase in the NAIRU tends to be small relative to the actual increase in the unemployment rate.

  - A complementary approach to documenting recent developments in structural unemployment is based on the Beveridge curve, which charts the negative relationship between job vacancies and unemployed job seekers over the business cycle. During the recession of 2008 and 2009, labour market slack has increased resulting in a shift down along the Beveridge curve. However, since the middle of 2010 the Beveridge curve has started to move outwards in many countries. This may simply reflect the normal cyclical pattern where a recovery in vacancies is not immediately reflected in declines in unemployment. However, it may also reflect an increase in matching frictions, related to the build-up of long-term unemployment or the need for structural change in the labour market. In comparison with the period following the bursting of the dotcom bubble, the outward shift of the Beveridge curve in Sweden, the United Kingdom and the United States has been particularly notable.

  - A more detailed analysis of matching frictions based on the actual and predicted evolution in job-finding and job-filling rates suggests that matching frictions have evolved very differently across countries during the current economic recovery. Matching frictions appear to have increased in countries such as Norway, the Slovak republic, Spain, Sweden and the United States. However, in countries such as Estonia and the Netherlands matching frictions may have decreased.
Given the current extent of cyclical labour market slack, the main policy priority from a labour market perspective should be to underpin aggregate demand. Given that monetary policy is already fairly accommodative and that the space for supportive fiscal policy is very limited in most OECD countries, placing more emphasis on structural reforms in product and labour markets will be key for the recovery. But labour market policies have also a crucial role to play in containing the risk of rising unemployment by:

i) making sure that job losers, and particularly those at risk of long-term unemployment, do not see their skills depreciate as a result of prolonged joblessness and will be readily employable once the labour market recovers; and

ii) addressing structural bottlenecks that prevent specific groups of workers from regaining employment and specific firms from filling vacant jobs.

Introduction

The economic recovery has been weak or uneven and some countries have fallen back into recession. For the OECD as a whole, its strength was initially on a par with the two most recent previous recoveries in the early 1990s and early 2000s. However, in the wake of a sharp slowdown in the pace of the recovery in the second-half of 2011, it has become by far the slowest recovery of the post-war period. This has important implications for reducing labour market slack and for the job prospects of the unemployed. In particular, there is a growing risk that a rising share of the unemployed will become disconnected from the labour market and, subsequently, more difficult to re-integrate into work once the labour market recovers. In other words, there is an increasing risk that the cyclical increase in unemployment will become structural.

This chapter examines how OECD labour markets have fared during the recovery in 2010 and 2011, with a focus on those groups that are at high risk of marginalisation. It also assesses the risk that the rise in cyclical unemployment will translate into a rise in structural unemployment. The chapter is organised as follows. Section 1 reviews recent labour market developments and discusses future prospects for 2012 and 2013. Section 2 documents the potential implications of the economic crisis and weak recovery for the marginalisation of the unemployed. It describes recent trends in long-term unemployment, very long-term unemployment and the number of persons marginally attached to the labour force. Section 3 discusses the possible implications of the weak recovery and the growing marginalisation of the workforce for the risk that the cyclical increase in labour market slack becomes structural. The last section briefly sums up the chapter’s analysis and offers some policy recommendations and suggestions for future research.

1. Recent labour market developments and future prospects

The economic recovery has been particularly weak and uneven

The recovery from the financial and economic crisis that hit global markets in 2008 and 2009 has been feeble in most OECD countries and even went into reverse in a few of them (Figure 1.1 and Table 1.A1.1 at the end of this chapter). After a fall in GDP of about 4% during the economic downturn, OECD-wide economic growth rebounded in 2010 to 3.2%, but has slowed since. It decreased to 1.8% in 2011 and is projected to slow to 1.6% in 2012 before it will strengthen to 2.2% in 2013. Figure 1.1 compares the evolution of GDP since the start of the recovery with the pattern observed during previous economic recoveries. Panel A shows that during the first and much of the second year of the recovery, OECD-wide economic growth was similar to the experience of the recoveries that followed...
the recessions of the early 1990s and early 2000s, but considerably weaker than that observed during the recoveries following the oil shocks in the 1970s. However, it also shows that the recovery has lost steam relative to previous recovery episodes from its second year onward, making it by far the slowest economic recovery of the post-war period. The pattern is broadly similar for the euro zone, Japan and the United States, although there are some differences in the strength of the initial recovery and the recent slowdown. Emerging OECD economies have tended to do substantially better, with growth rates generally averaging well over 3% during the recovery period. By contrast, in a number of European countries, including Greece, Hungary, Italy and Portugal, the economic recovery went into reverse in
the second half of 2011 or has not yet started. The slow recovery in output in the majority of countries is consistent with historical evidence provided by Reinhart and Rogoff (2009) that output takes longer to recover in the aftermath of a financial crisis.

**Unemployment remains persistently high**

As a result of the weak economic recovery, the unemployment rate has declined only modestly in the two years since reaching its cyclical peak in late 2009. The OECD-wide unemployment rate decreased from a post-war high of 8.5% in October 2009 by just 0.6 of a percentage point to 7.9% in May 2012, leaving more than 48 million people unemployed throughout the OECD, almost 15 million more than at the start of the jobs crisis in December 2007. According to the OECD’s latest short-term economic projections of May 2012, the unemployment rate is expected to remain persistently high for an extended period of time. This is illustrated clearly in Panel A of Figure 1.2, which represents the evolution of the unemployment rate since the start of the crisis. It shows for the OECD area as a whole that, by the middle of 2009, the unemployment rate had increased rapidly by over 3 percentage points as a result of the crisis. It has since come down very slightly and is expected to remain broadly stable until the end of 2013. This corresponds to an OECD-wide unemployment rate at the end of 2013 of 7.7%. The persistence of high unemployment raises important concerns about the ability of the unemployed to find jobs quickly if and when the economic recovery gathers pace.

The OECD-wide evolution of the unemployment rate hides important differences across countries, both in terms of the initial impact of the crisis and prospects for the recovery. The initial impact was particularly strong in Estonia, Iceland, Ireland, Spain, and the United States (Panel B of Figure 1.2). Of these countries, only in Estonia, where the proportional increase was most pronounced, has unemployment fallen significantly from its peak. In the United States, the unemployment rate has declined from 10% in October 2009 to 8.2% in May 2012. In Japan, the initial increase in the unemployment rate was muted and unemployment has declined rather quickly since reaching its cyclical peak. In Germany, where the unemployment rate increased only slightly during the first quarter of 2009, unemployment is now about 30% lower than at the start of the crisis, continuing its declining trend since the mid-2000s. In a number of other EU countries such as Austria, Belgium, France, Italy and the Netherlands, the initial impact of the crisis on the unemployment rate was also small, but there has been little sign of a recovery. Indeed, as a result of the euro zone sovereign debt crisis, unemployment rates are expected to increase further until the end of 2013 in the majority of EU countries, particularly those in the euro zone. Possible factors driving these country differences in the impact of the crisis on unemployment are explored further in Chapter 2 on labour market resilience.1

**The employment gap remains substantial**

The economic recovery has been insufficiently strong to prevent a further increase in the employment gap, i.e. the number of jobs that need to be created to restore the pre-crisis ratio of employment to the working-age population. Figure 1.3 presents the employment gap at the start of the recovery, at the latest time for which data are available (2011 Q4) and at 2013 Q4 using the OECD’s projections from May 2012. Employment gaps in the OECD area have continued to widen through the early recovery period in most countries. The OECD-wide employment gap increased from 2% at the start of the economic recovery in 2009 Q2 to 2.5% in the last quarter of 2011. Given the current level of employment, this
implies that the OECD area needs to create 14 million jobs to restore employment rates to pre-crisis levels. The projections suggest that the extent of labour market slack is expected to stay constant in 2012 before declining to 1.8% by the end of 2013, its level at the start of the economic recovery. Thus, job creation is expected to remain insufficient to absorb the considerable labour market slack that has arisen as a result of the crisis.
There are large differences in the estimated size of the employment gap across countries. The pattern is similar to the one for unemployment in Panel B of Figure 1.2, but there are some slight differences due to the role of labour force participation and the present focus on proportional rather than percentage-point changes. The employment gaps are largest in Greece, Ireland and Spain, where they exceed 15%. Employment gaps in Denmark, Estonia, Iceland, Portugal, Slovenia and the United States are also substantial (between 5% and 10%). In Estonia and Iceland, the employment gap is expected to fall below 5% by the end of 2013, while it is expected to increase significantly further in Greece, Portugal, Slovenia and Spain. The employment gap has fully closed in ten OECD countries and is expected to do so in two other countries by the end of 2013.

**Employment outcomes continue to diverge across workforce groups**

Previous editions of the OECD Employment Outlook have shown that the initial employment impact of the crisis differed importantly across socio-economic groups (OECD, 2009, 2010 and 2011a). In particular, it was shown that the decline in overall labour demand has been greatest for youth, low-skilled and temporary workers. This is confirmed in Figure 1.4, which shows the evolution of OECD-wide employment for selected groups relative to overall employment. This figure also shows that employment growth has differed greatly across groups during the economic recovery. On the one hand, temporary employment has increased relative to overall employment since the start of the recovery.
According to the latest available data, the incidence of temporary employment is now higher on average across the OECD area (for those countries with comparable data available) than at the start of the crisis. The apparent reluctance of employers to re-hire workers on open-ended contracts may reflect the role of weak growth prospects and economic uncertainty. On the other hand, the employment situation of youth and low-skilled workers has continued to deteriorate during the recovery. Since the start of the crisis, low-skilled employment has declined by over 5 percentage points relative to overall employment in the fourth quarter of 2011. Moreover, there is no sign yet of any pick-up in employment of low-skilled workers, which may, in part, reflect the secular decline in the demand for low-skilled workers. Youth employment has declined even more than low-skilled employment, by over 7 percentage points relative to overall employment, but with some improvement in the two most recent quarters for which data are available. The decline in youth employment is mirrored by a rise in the youth unemployment rate and, in those countries particularly hard hit by the crisis, an increase in youth enrolment rates in education and training activities (see Box 1.1 for details).
Box 1.1. The share of youth at high risk of labour market marginalisation has increased

The collapse in employment opportunities experienced by youth during the crisis is of particular concern because unemployment and other labour market difficulties encountered early in their working lives can jeopardise their long-term career paths and future earnings prospects (the so-called “scarring effect”). Youth not in employment, education or training (the so-called “NEETs”) are most at risk of these scarring effects. The share of this group in the total youth population increased in the OECD area by 1 percentage point since the start of the crisis to 16.4% in the first quarter of 2011 (see Panel A in the figure below). Youth in this group may be either unemployed or inactive. The NEET rate for unemployed and inactive youth is represented separately in Panels B and C.

The NEET rate increased in all OECD countries except Austria, the Czech Republic, Portugal, Sweden and Turkey. Notable rises of more than 4 percentage points occurred in countries that were both hard hit by the crisis and where pre-crisis rates were already high (e.g. Ireland and Spain).

The increase in the NEET rate mainly reflects rising unemployment rate among youth outside of the education system. For the OECD area as a whole, the NEET rate of unemployed youth increased by 1.3 percentage points since the start of the crisis (corresponding to an increase of about 5 percentage points when expressed in terms of the youth labour force). There are striking differences across countries. Over the four year-period to the first quarter of 2011, the share of all youth who were unemployed and not in school rose sharply by 6.9 percentage points in Spain, to 12.6% in the first quarter of 2011. It increased by 5.4 percentage points in Ireland, by 3.5 percentage points in Greece and Slovenia and by 2 percentage points or more in four other countries (Estonia, New Zealand, the Slovak Republic and the United States). In contrast, this share dropped by more than 1 percentage point in Germany to 3.9% in the first quarter of 2011.

The share of all youth who were inactive and not in school declined slightly for the OECD as a whole, reflecting opposing patterns across countries. This means that in general the main concern is youth unemployment and not rising inactivity among youth (beyond education and training). However, in a few countries, such as Belgium, Ireland, Italy and Luxembourg, the share of inactive youth not in education or training has increased substantially.

In a number of the countries where NEET rates rose sharply in the aftermath of the crisis, there has also been a marked increase in the share of youth who are not working but studying. This share rose by more than 10 percentage points in Ireland, Iceland and Spain and 6 percentage points or more in the Czech Republic, Denmark, Iceland, Ireland, Norway, Portugal and Turkey.
Box 1.1. The share of youth at risk of labour market marginalisation has increased (cont.)

NEET rates among youth in OECD countries
Percentage of population aged 15-24,\(^a\) 2007 Q1-2011 Q1\(^b\)

<table>
<thead>
<tr>
<th>Country</th>
<th>2007 Q1</th>
<th>2011 Q1</th>
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<tbody>
<tr>
<td>NLD</td>
<td>40%</td>
<td>45%</td>
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<tr>
<td>DNK</td>
<td>30%</td>
<td>32%</td>
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<tr>
<td>ISL</td>
<td>20%</td>
<td>21%</td>
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<tr>
<td>CHE</td>
<td>10%</td>
<td>12%</td>
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<td>SWE</td>
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<td>JPN</td>
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Note: Countries are shown in ascending order of the NEET rate in 2011 Q1.

\(a\) OECD, EU27 and euro area (17) are weighted averages. OECD includes 30 countries (excluding Chile, Israel, Japan and Korea).

\(b\) 2007 Q2-2011 Q2 for Australia, 2007 Q2-2011 Q1 for Switzerland, and 2011 Q1 for Japan.

Source: OECD estimates based on national labour force surveys.
2. A growing marginalisation among the jobless?

The weak economic recovery in many OECD countries has also increased the risk that a growing number of the unemployed will become disconnected from the labour market. This can be assessed by examining changes in: exit rates from unemployment; the duration of unemployment; and the extent of movements in and out of the labour force.

The decline in aggregate demand has reduced the job-finding prospects of job seekers…

The decline in aggregate demand during the crisis and the absence of a vigorous recovery have led to a reduction in hiring by employers, reducing the probability of exit from unemployment and increasing the expected duration of unemployment spells. Figure 1.5 documents how the unemployment-exit probability has evolved during the crisis and early recovery for different groups of unemployed. The unemployment-exit probability is measured as the probability of job seekers leaving unemployment during a 12-month period. It is calculated separately for all unemployed, those unemployed for less than 12 months and those unemployed for 12 months or more:

- The probability of exiting from unemployment declines with the time spent in unemployment. This is indicated in the figure by the smaller annual unemployment-exit probability for job seekers unemployed for more than 12 months than that of job seekers unemployed for less than 12 months. This phenomenon is typically referred to as negative duration dependence. In part, this reflects composition effects that arise because unemployed job seekers with high levels of employability tend to find jobs more quickly. However, it may also reflect the impact of longer spells of unemployment on the employability of workers, i.e. the unemployed may lose valuable labour market skills and become discouraged and disconnected from the labour market the longer they are unemployed. To the extent that worker employability declines with the duration of unemployment, this raises major concerns about the implications of the increase in long-term unemployment in the context of a weak labour market recovery.

- The annual unemployment-exit probability has declined both for job seekers unemployed for less than 12 months and those unemployed for 12 months or more, but the dynamics are rather different:
  - The OECD-wide unemployment-exit probability for those unemployed less than 12 months has declined from about 0.8 to just above 0.7. This implies that the average probability of someone unemployed for less than 12 months exiting unemployment during the subsequent 12 months has declined from 80% to 70%. Consequently, the risk of long-term unemployment for this group, that is, the risk of becoming unemployed for more than 12 months, has increased. Most of this decline in the exit rate took place between 2008 and 2009 and has been largely stable since.
  - The OECD-wide unemployment-exit probability of those unemployed for 12 months or more declined somewhat more sharply during the economic downturn than that of those unemployed for less than 12 months. It initially declined from about 0.5 to about 0.35. However, it has since reversed close to its pre-crisis level. The more pronounced decline in the outflow probabilities of the long-term unemployed seems consistent with stock-flow matching models of the labour market in which the newly unemployed crowd out the employment prospects of the incumbent unemployed (Coles and Smith, 1998). The recovery of the unemployment-outflow probability to its
Figure 1.5. **Evolution of unemployment-exit probabilities**
Annual unemployment-exit probabilities for different unemployment durations\(^a, b\)

<table>
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<tr>
<th></th>
<th>Peak</th>
<th>Trough</th>
<th>Latest</th>
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<tr>
<td><strong>A. Annual average outflow probability</strong></td>
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<td><strong>B. Annual outflow probability of those unemployed less than 12 months</strong></td>
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<td><strong>C. Annual outflow probability of those unemployed for 12 months or more</strong></td>
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</tr>
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Note: Countries are shown in ascending order of the average annual unemployment exit probability at its peak.

- **a)** The outflow probability for those unemployed less than 12 months (for those unemployed for 12 months or more) is calculated as one minus the ratio of the number of unemployed with a duration of 12-24 months (number of unemployed with a duration of 24 months or more) over the number of persons unemployed for less than 12 months (number of persons unemployed for 12 months or more) one year earlier.
- **b)** The exit rates are calculated for three periods, corresponding to the trough and peak in unemployment in each country and for the latest period available. Trough (peak) dates are defined as the start of the longest spell of consecutive increase (decrease) of the average annual outflow probability since 2007 Q1.
- **c)** OECD, G7, EU27 and euro area (17) are weighted averages. OECD includes 29 countries (excluding Chile, Iceland, Korea, Mexico and New Zealand).
- **d)** Information on data for Israel can be found at: http://dx.doi.org/10.1787/888932315602.

Source: OECD estimates based on OECD Main Economic Indicators, OECD Labour Force Statistics Databases, and national labour force surveys.

StatLink: [http://dx.doi.org/10.1787/888932650895](http://dx.doi.org/10.1787/888932650895)
pre-crisis level most likely reflects the role of composition effects that arise because of
the inflow of the newly unemployed with relatively solid work histories into long-term
unemployment and the outflow of mostly disadvantaged workers from long-term
unemployment into inactivity.

... resulting in increasing long-term and very long-term unemployment

The decline in unemployment-exit probabilities, even temporarily, explains the rise in
the incidence of long-term unemployment (those unemployed for 12 months and more) in
many OECD countries. Figure 1.6 documents the evolution of the unemployment rate for
those unemployed for less than 12 months, those unemployed for 12 to 24 months, and
those unemployed for 24 months or more:

● For the OECD as a whole, the unemployment rate for those unemployed less than one
year rose rapidly during the crisis but largely recovered during the economic recovery.
The initial rise reflects the importance of job losses at the start of the crisis, while its
subsequent decline since the middle of 2009 reflects the fall in job losses and the
transition of job losers towards long-term unemployment. The rate of persons
unemployed for one to two years increased from 0.7% at the start of the crisis to a peak
of 1.6% in 2010 Q4 but has since declined to about 1.4% in 2011 Q4. In contrast to the
other categories of unemployment, the rate of very long-term unemployment
(unemployed for 24 months or more) is still increasing. The rate of persons unemployed
for two years or more increased from 0.9% at the start of the crisis to 1.5% in 2011 Q4.

● The pattern described above for the OECD area applies also to the three main economic
areas: the euro zone, Japan and the United States. The proportional rise in long-term
unemployment was particularly important in the US where it increased from less than half
a percentage point to over 2.7 percentage points in the last quarter of 2011.7 Recent data
suggest that, consistent with the general improvement in the labour market, long-term and
very long-term unemployment may have peaked. In the euro zone and Japan, the rate of
persons unemployed for one to two years has stabilised, but very long-term unemployment
is still increasing. Long-term unemployment reached 4.8 percentage points in the euro zone
in 2011 Q4, of which 2.7 percentage points are accounted for by the unemployed who have
been unemployed for two or more years. It reached 2% in Japan, with the very long-term
unemployed accounting for 1.1 percentage point.8

These large increases in long-term unemployment, and particularly in the incidence
of very long spells of unemployment, have increased the risk of a structural rise in
unemployment, as was the case in the wake of past recessions when several countries
experienced persistently high unemployment. Moreover, the long-term unemployed face
substantial declines in well-being as a result of a greater risk of poverty, health problems
and school failure of their children.

The increase in long-term unemployment could have important implications
for the persistence of aggregate unemployment going forward

To the extent that the employability of workers falls with time spent in
unemployment, the build-up of long-term unemployment may increase the persistence of
unemployment in the future, even if aggregate demand recovers. Conversely, one would
expect long-term unemployment to dissipate relatively quickly once aggregate demand
recovers if the employability of workers is not much affected by the duration of
unemployment. In order to assess these issues in some more detail, Figure 1.7 shows how
many more months the unemployed in 2011 Q4 may be expected to remain unemployed relative to their counterparts at the start of the crisis under a number of different scenarios. Panel A simulates how many more months the unemployed in 2011 Q4 may be expected to remain unemployed under a no-recovery scenario which assumes that unemployment-exit probabilities remain unchanged at their most recently observed values. This captures both differences in the duration structure of the unemployed and changes in the corresponding unemployment-exit probabilities. Panel B simulates how many more months the currently unemployed may be expected to remain unemployed
Figure 1.7. **Unemployment is becoming more persistent**

Simulated expected additional time spent in unemployment of current stock of unemployed relative to their counterparts at the onset of the crisis

A. No-further-recovery scenario

B. Recovery scenarios

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**Note:** Countries are shown in ascending order of the expected average duration of unemployment.

a) The average durations are calculated as the inverse of the outflow probabilities. See Figure 1.5 for further details on the calculations.

b) The no-further-recovery scenario assumes that unemployment-outflow probabilities remain at their current levels.

c) Information on data for Israel can be found at: [http://dx.doi.org/10.1787/888932315602](http://dx.doi.org/10.1787/888932315602).

d) OECD, G7, EU27 and euro area (17) are weighted averages. OECD includes 29 countries (excluding Chile, Iceland, Korea, Mexico and New Zealand).

e) The full recovery scenario assumes that outflow probabilities for all unemployed persons (i.e. those unemployed for less or more than 12 months) instantaneously return to their pre-crisis levels, while the duration structure of unemployment is assumed to remain unchanged. The partial recovery scenario assumes that the outflow probability for those unemployed for less than 12 months instantaneously returns to its pre-crisis level, while outflow probability of the long-term unemployed and the duration structure of unemployment are assumed to remain constant.

**Source:** OECD estimates based on OECD Main Economic Indicators, OECD Labour Force Statistics Databases, and national labour force surveys.

StatLink: [http://dx.doi.org/10.1787/888932650933](http://dx.doi.org/10.1787/888932650933)
under two alternative scenarios for the recovery. The first assumes that all unemployment-exit probabilities return instantaneously to their pre-crisis levels. In this case, any changes in the expected duration of unemployment are exclusively due to changes in the duration-composition of unemployment. The second recovery scenario assumes that the unemployment-exit probability returns to its pre-crisis level for those unemployed for less than 12 months, but remains constant for those unemployed for 12 months or more. This corresponds to the situation where long-term unemployment is assumed to be structural and does not dissipate once the macroeconomic situation returns to normal:

- **No-recovery scenario (Panel A).** It shows that for the OECD as a whole the unemployed in 2011 Q4 may be expected to remain about two months longer unemployed relative to their counterparts at the start of the crisis. The rise in the expected duration of unemployment is largest in Greece, Ireland and Slovak Republic where the currently unemployed may be expected to remain unemployed for about one to two and a half years longer than their counterparts at the start of the crisis. The no-recovery scenario is most relevant for countries where aggregate demand is expected to remain depressed in the near future.

- **Recovery scenarios (Panel B).** Both recovery scenarios suggest that the increase in the expected additional duration of unemployment relative to the situation before the crisis is small. This suggests that the expected duration of unemployment will come down almost entirely to its pre-crisis level once aggregate demand recovers. In the full recovery scenario, the increased persistence in unemployment tends to be largest in countries that experienced large increases in long-term unemployment such as Ireland, Spain, the United Kingdom and the United States. In the partial recovery scenario, where the unemployment-exit probability of the long-term unemployed is assumed to remain constant, the increased persistence of unemployment is largest in Estonia, Greece, Ireland and Slovak Republic. The set of countries differs because the outflow probability of the long-term unemployed is still depressed in the latter group. However, this does not mean that these countries face necessarily greater risks of increased structural unemployment. It may also reflect the different state of the business cycle. Indeed, most of these countries are still in recession. It is yet to be seen to what extent the long-term unemployment-exit probability will recover once aggregate demand starts picking up.

**The risk of long-term unemployment has risen more for some workforce groups than for others**

There has been a general increase in the risk of long-term unemployment across the workforce as a result of the crisis, but youth and low-skilled workers have suffered the largest increases (Figure 1.8 and Figure 1.A2.1 of OECD, 2012a, for individual countries). On average across the OECD, long-term unemployment for youth and the low-skilled increased by over 2 percentage points since the start of the crisis. As of the fourth quarter of 2011, youth long-term unemployment was particularly high in countries such as Greece, Italy, the Slovak Republic and Spain, where it ranged from 15 to 22 percentage points. The increase in Spain is particularly noteworthy since long-term unemployment was relatively rare before the crisis (less than 2%). In the United States, where there has been a substantial increase in the incidence of long-term unemployment, this is due to a disproportionate increase among low-skilled workers.10
Some job losers have become discouraged in their job search and left the labour force

An increased risk of marginalisation among the unemployed may not only show up in the form of increased long-term unemployment, but also in the rate at which the unemployed are dropping out of the labour force altogether. In order to analyse this issue, Figure 1.9 shows the evolution since the start of the crisis of the number of persons who are marginally attached to the labour force or inactive for other reasons as a share of the working-age population. Persons who are marginally attached to the labour force are persons who are willing to work and available for work, but who do not search actively for a job:

- The number of marginally attached workers to the labour force as a share of the working-age population has increased by 0.3 of a percentage point since the start of the crisis in the OECD. While this seems small, it represents an increase of more than 30% in its level since the start of the crisis. The rise in the number of marginally attached persons is likely to reflect an increasing number of job seekers who have become discouraged from looking actively for work because of the difficulty of finding a job in a depressed labour market. The rise in the marginally attached was particularly pronounced in countries such as Denmark, Estonia, Greece, Ireland, New Zealand and the United States, and was somewhat more pronounced for men than for women.
The rate of inactivity for other reasons has been largely constant since the start of the crisis. To some extent this reflects opposing trends among men and women. For men, inactivity for other reasons has tended to increase by over half a percentage point, while for women it has declined by slightly more. The increase in inactivity, particularly among men, probably reflects the tendency of youth to postpone their labour-market entry by prolonging their studies or the retirement of older men who have lost their job. A potential concern in this regard is the rise in the number of youth who are inactive and not enrolled in education or training. However, Box 1.1 on NEET rates suggests that, except for a number of specific countries, NEET rates of inactive youth have been stable or declined. The decline in inactivity for other reasons among women may reflect a second-earner effect (also known as the “added-worker effect”) in which women return to work to compensate for the loss of household income caused by job losses among men. The second-earner effect is most visible in Spain.11

3. Has structural unemployment started to increase?

The growing importance of marginalised jobless in a number of OECD countries raises important questions about its implications for structural unemployment and potential output going forward. The analysis on the evolution of unemployment-exit probabilities by time spent in unemployment in Section 2 provided already a first indication of the potential impact of the build-up of long-term unemployment on the persistence of aggregate unemployment. This section looks at the prospects of higher levels of structural unemployment based on the OECD’s estimates of the NAIRU, as well as by looking at changes in the relationship between unemployed job seekers, vacancies and hires.12
The NAIRU has increased in most countries but by a small amount relative to the total cyclical change in unemployment

A commonly-used measure of structural unemployment is the non-accelerating inflation rate of unemployment (NAIRU). The idea of the NAIRU is based on the notion that in the long-run, inflation has only nominal effects and unemployment depends solely on structural factors, while in the short-run, the relationship between unemployment and inflation is described by a so-called “Phillips curve”. When the unemployment rate falls below the NAIRU, and labour-market conditions are tight, inflation pressures increase until the unemployment rate returns to the NAIRU, while inflation pressures fall when unemployment rises above the NAIRU. In the aftermath of a recession, this suggests that prices and wages adjust so that the existing labour market slack will be re-absorbed. While, in principle, wages could adjust in line with productivity, this may not always happen in practice. Employers may be unwilling or unable to lower wages below a certain threshold (for example, there may be a binding wage floor imposed by a national minimum wage), while workers may be not willing to work for wages below their reservation wage. This is most likely to be the case for long-term unemployed and marginally attached workers whose employability has fallen substantially because they lack recent work experience. As a result, it is possible that the unemployment rate does not return to its pre-crisis level and the NAIRU increases.

Figure 1.10 relates the change in actual unemployment rates since the start of the crisis and the last quarter of 2011 to the corresponding change in the NAIRU, as estimated by the Economics Department of the OECD. It shows that in the majority of countries, and particularly those hardest hit by the 2008-09 global crisis, the NAIRU has tended to
increase. However, it also shows that the estimated increase in the NAIRU is rather small relative to the actual increase in the unemployment rate, which indicates that there is considerable labour market slack. For example, in the OECD, the actual unemployment rate increased by 2.3 percentage points, while the NAIRU is estimated to have increased by only 0.4 percentage points. Similarly, in the United States, the actual unemployment rate increased by 3.9 percentage points, while the NAIRU has increased by just 0.4 of a percentage point. From a policy perspective, this suggests that the priority should be to promote economic growth and hence aggregate demand. Nevertheless, in a number of European countries, the increase in the NAIRU appears to be more significant. In Estonia, Greece, Ireland, Portugal and Spain, the estimated NAIRU has increased by more than 2 percentage points. These are all countries that were hit hard by the crisis and where the build up of long-term unemployment has been particularly pronounced. This means that in those countries an expansion of aggregate demand will not be sufficient to bring unemployment back to pre-crisis levels. Specific measures with respect to training and job-search assistance will also be required.

While these NAIRU estimates provide a timely indication of the level of unemployment that is consistent with constant levels of inflation, they have important limitations from a labour market policy perspective. Not only is there considerable uncertainty and controversy concerning their measurement and their policy use, reduced-form estimates of this kind provide little information about the determinants of structural unemployment and the role of policies and institutions (Richardson et al., 2000).

Matching frictions tended to increase in countries where the unemployment impact of the crisis was relatively large...

A complementary approach to assessing developments in structural unemployment is based on the Beveridge curve, which traces out combinations of job vacancies and job seekers over the business cycle, for a given level of matching frictions. Recessions are characterised by a fall in vacancies and an increase in unemployment, and vice versa during recoveries. For a given level of matching frictions, the Beveridge curve should thus trace out a negatively sloped curve. An increase in structural unemployment would show up in this framework as an outward shift in the Beveridge curve, indicating that a higher level of unemployment now prevails for any given level of vacancies, because it has become more difficult to locate job seekers who are qualified to fill the existing vacancies (i.e. “matching frictions” have increased).

Figure 1.11 charts the empirical relationship between vacancy and unemployment rates from 2001 until the end of 2011 for selected OECD countries, allowing developments to be followed in the aftermath of both the dotcom bubble and the more recent recession. As is typical, these charts exhibit a lot of seemingly erratic movement, making it rather difficult to detect where the theoretical Beveridge curve is located at any given time, as well as any significant inwards or outwards shifts of the curve. One complication is that vacancies often respond more quickly to changing business-cycle conditions than the unemployment rate, so that the data charted trace out counter-clockwise loops around the underlying Beveridge curve. However, this pattern is less present in countries with high levels of worker flows, including Australia, Estonia, Spain, the United Kingdom and the United States, where the unemployment rate responds more quickly to changes in
Figure 1.11. Beveridge curves in selected OECD countries
Rates are expressed as a percentage of the labour force, 2001 Q1-2011 Q4

Note: Dark blue line corresponds to the period up to 2007 Q4, while the light blue line corresponds to the period since 2007 Q4.

a) Results for other countries can be found in Annex Figure 1.A3.5 of OECD (2012a).

Source: OECD calculations based on OECD Main Economic Indicators Database, and various national sources (see Annex Table 1.A3.3 available online at www.oecd.org/employment/outlook and Annex 1.A2 for details on the data sources used for job vacancies).

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vacancies. Bearing in mind the number of measurement issues associated with the vacancy data in particular (see Annex 1.A2 at the end of this chapter), the following key points emerge from this analysis:\(^{16}\)

- Counter-clockwise loops were evident in the aftermath of the dotcom bubble in a number of countries, with Japan and the Netherlands being good examples of this pattern. However, there are quite a few countries that initially exhibit a similar pattern, but where the relationship between vacancies and job seekers does not return to its starting point. Examples are Sweden and Switzerland, where matching frictions appear to have increased in the aftermath of the dotcom bubble. In other countries, including Australia, Spain, the United Kingdom and the United States, there is little evidence of an outward shift of the Beveridge curve.\(^{17}\)

- During the 2008-09 recession, countries initially moved down along their Beveridge curves, consistent with the increase in cyclical labour market slack. However, these curves appear to have started to shift outwards in the middle of 2010 in many countries. At this point, it is difficult to ascertain whether these movements simply reflect the usual lag in the response of the unemployment rate to the recovery in vacancies or, instead, are the first sign of an increase in matching frictions related to the build-up of long-term unemployment. While it is too soon to draw strong conclusions from these Beveridge curves about whether structural unemployment has risen, it is worth noting that the apparent outward shift is relatively large in Sweden, the United Kingdom and the United States.\(^{18}\)

... but declined in others where the unemployment impact tended to be smaller

The potential increase in matching frictions during the recent recovery can be analysed in more detail by using so-called “matching functions”, which describe the ease with which unemployed job seekers can find jobs and job openings can be filled. Figure 1.12 compares the evolution of actual job-filling and job-finding rates before and during the crisis with their predicted evolution based on the estimates of aggregate matching functions using data from before the crisis.\(^{19}\) Under the assumption that the responsiveness of job-filling and job-finding rates has remained unchanged from its historical pattern before the crisis, any differences between the actual and fitted series can be interpreted as changes in matching frictions relative to the pre-crisis period:

- Matching and labour market tightness. Job-finding rates have tended to increase in the run-up to the crisis, consistent with increasing labour market tightness; they have fallen sharply during the economic crisis, reflecting the sudden decline in aggregate demand and the subsequent hiring freeze; and they have recovered partially during the two years to 2011 Q4. The job-filling rate remain largely depressed in Italy, Norway, the Slovak Republic, Spain and the United States. The opposite pattern is observed for the job-filling rate. In the run-up to the crisis, the growing importance of labour shortages is reflected by a decline in the job-filling rate. During the crisis, the job-filling rate rose as more and more job seekers were competing for a declining number of vacancies. In countries where unemployment started to decline and labour demand picked up, the job-filling rate has started to decline again (e.g. Finland, Japan, the Slovak Republic, Sweden and the United States).

- Matching frictions. Matching frictions have evolved very differently across countries. In a number of countries, actual job-finding and job-filling rates have fallen significantly below the respective rates that would have been observed had matching efficiency
Figure 1.12. **Comparing actual and predicted job-finding and job-filling rates**
Rates are expressed as a percentage of the labour force, 2001 Q1-2011 Q4

- **A. Job-finding rate**
- **B. Job-filling rate**

---

**Estonia**

**Finland**

**Italy**

**Japan**

**Netherlands**

**Norway**
Figure 1.12. **Comparing actual and predicted job-finding and job-filling rates** (cont.)

Rates are expressed as a percentage of the labour force, 2001 Q1-2011 Q4

<table>
<thead>
<tr>
<th>Country</th>
<th>A. Job-finding rate</th>
<th>B. Job-filling rate</th>
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<tbody>
<tr>
<td>Poland</td>
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<td>Slovak Republic</td>
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<td>United States</td>
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</table>

**Note**: Shaded area refers to the forecast period.

a) Fitted values are obtained from estimating matching functions for the job-finding (defined as the ratio of hires over unemployment) and job-filling (defined as the ratio of hires over vacancies) rates for each country using data up to 2007 Q4. See footnote 19 for further details. Hires are defined as workers working for the same employer for less than one month.

Source: Data on hires are obtained from the European Union Labour Force Survey (EULFS) for European countries and Job Openings and Labour Turnover Survey (JOLTS) for the United States. See Annex Table 1.A3.3 available online at www.oecd.org/employment/outlook for data sources on job vacancies.

[StatLink](http://dx.doi.org/10.1787/888932651028)
remained at its pre-crisis level. This suggests that matching frictions have increased. This pattern is observed in, for example, Norway, the Slovak Republic, Spain, Sweden and the United States, some of which also displayed large outward shifts in their Beveridge curves. In other countries, however, the predicted job-finding and job-filling rates fall short of their actual levels during the recovery. This suggests that labour-market frictions have decreased. Countries where this appears to be the case include Estonia and the Netherlands.

Why may matching frictions have increased in some countries?

There are a number of factors that could contribute to an increase in matching frictions in the aftermath of a recession:

- **Mismatch.** Mismatch represents imbalances between labour demand and supply across geographic regions, sectors, occupations and skills. An increase in the degree of mismatch complicates the task for unemployed job seekers to find a job and for employers to fill a vacancy. Since it tends to be time-consuming to train or relocate workers, an increase in mismatch is likely to engender a prolonged increase in the structural rate of unemployment. To the extent that the recent crisis was not just the result of an aggregate demand shock, but was also associated with re-allocative shocks that have permanently depressed the size of certain activities, such as banking and construction, it may have increased sectoral and occupational mismatch. The collapse in housing prices may also have increased mismatch by reducing the geographical mobility of unemployed job seekers who are unable to sell their house and move because the value of their house has fallen below that of their mortgage. It is noteworthy that a number of countries that are likely to have experienced increases in matching frictions did indeed have important construction and housing-bubble collapses. The crisis may also accelerate ongoing structural changes. One example of this may be the gradual up-skilling of the economy. To the extent that there is a tendency to try to replace low-skilled layoffs by more skilled workers in the recovery, this will increase skill mismatch. This could also explain why the employment situation of low-skilled workers has continued to deteriorate into the recovery.

- **Search intensity.** The intensity of workers to search for a new job (“job-search intensity”) or the intensity of firms to search for new recruits (“recruitment intensity”) may have declined:
  - **Job-search intensity.** Average job-search intensity may fall due to changes in the institutional environment or due to changes in the composition of the jobless. In the United States, there has been an intensive debate on the potential adverse effects of the temporary extension of the maximum duration of unemployment benefits from 26 to 99 weeks on job-search intensity and the willingness of unemployment-benefit recipients to accept job offers. While the majority of empirical studies suggest that the impact of the extension of the maximum duration of unemployment benefits has been limited, the substantial increase in their generosity in the absence of an effective activation strategy does raise concerns about its potential implications for the labour market recovery (OECD, 2011a). Perhaps, more importantly in the context of this chapter is the potentially adverse impact of long-term unemployment on job-search intensity. Job seekers who have been unemployed for longer are more likely to become discouraged from intensive job search due to the lack of suitable job opportunities.
Recruitment intensity. While little is known about the variation in recruitment intensity across countries, firms and time, recent work by Davis et al. (2012) for the United States suggests that changes in recruitment intensity account for a substantial proportion of the evolution of the job-filling rate during the recent recession and the subsequent recovery. Moreover, they show that aggregate movements in the job-filling rate and recruitment intensity are disproportionately driven by the construction sector: they estimate that construction accounts for more than 40% of the time variation in aggregate job-filling rates during the period 2007-11.26

Hiring remains depressed for youth, low-skilled workers and in the construction sector

The analysis so far suggests that most of the increase in the unemployment rate since the start of the crisis is cyclical, but that structural unemployment may also have increased, particularly in countries where unemployment and long-term unemployment have risen most strongly. From a policy perspective, this means that the key priority is to support aggregate demand. This can be done through the use of accommodative macroeconomic policies but also, given the already accommodative monetary policy stance and the limited fiscal space, by promoting growth and employment-friendly structural reforms. However, active labour market policies also have a key role to play in containing the risk of rising structural unemployment. They can help minimise the risk that the cyclical rise in unemployment becomes structural by helping unemployed job seekers back into work as quickly as possible, while they can also contribute to bringing structural unemployment down by addressing any emerging obstacles that prevent unemployed job seekers from finding jobs and employers from filling job openings (see Box 1.2 for a more detailed discussion of the role of active labour market policies in containing the risk of rising structural unemployment).27

Box 1.2. Active labour market policies have a crucial role to play in containing the risk of rising structural unemployment

In the context of a weak economic recovery following a severe economic downturn, active labour market policies have a key twofold role to play in containing the risk of rising structural unemployment. First, they can play a preventive role by helping job losers find their way back into work as quickly as possible and helping those at risk of long-term unemployment by maintaining their skills through the provision of (temporary) work opportunities that make use of their existing skills. This can prevent skills depreciation among the unemployed and reduce the risk that they become discouraged and drop permanently out of the labour force. From this perspective, active measures that are likely to be most effective include job-search assistance (e.g. face-to-face interviews, individual action plans, job clubs) and employment subsidies (e.g. gross hiring subsidies, reductions in employer social-security contributions, marginal employment subsidies). Second, the role of ALMPs can be remedial by addressing structural bottlenecks that prevent unemployed job seekers from getting back into work. This may be because their skills have become obsolete or depreciated as a result of prolonged joblessness. Active measures that can help to remedy structural labour market difficulties faced by the unemployed include training and work-experience programmes.

In order to effectively contain the risk of rising structural unemployment, it is crucial that sufficient resources for ALMPs are available. However, since the start of the crisis, resources for ALMPs increased relatively little in most OECD countries compared with the increase in the number of unemployed job seekers. Between 2007 and 2010, the latest year for which data on ALMP spending are available, it increased 21% on average in the OECD area, while the number of unemployed increased by 54%. This implies that the value of ALMP spending per unemployed job seeker declined by 21%. While the increase in
Box 1.2. Active labour market policies have a crucial role to play in containing the risk of rising structural unemployment* (cont.)

ALMP spending was insufficient to keep the value of resources available per job seeker constant, it was considerably larger than what might have been expected on the basis of historical patterns. As shown in the figure below on the responsiveness of ALMP spending to changes in unemployment before the crisis, an increase in trend unemployment of 1% was associated with an increase in ALMP spending of 0.4%, while a similar increase in cyclical unemployment was associated with an increase in ALMP spending of 0.1% (not statistically different from zero). This suggests that ALMP spending traditionally responded fairly strongly to changes in structural unemployment, but tended to be relatively insensitive to changes in the business cycle. These findings are consistent with previous results reported in OECD (2009). The actual change in ALMP spending between 2007 and 2010 is also compared with the predicted change in spending based on the traditional relationship between ALMP spending and unemployment. It shows that the increase in actual ALMP spending was almost three times as large as might have been expected based on historical patterns. ALMP spending actually increased by about 21% compared with a predicted increase of just 8%. This implies that if historical patterns had continued into the recession, the value of ALMP spending per unemployed person would have declined by almost 30% instead of 21%.

The responsiveness of ALMPs spending to cyclical changes in unemployment tends to be very low

A. Responsiveness of ALMP spending to changes in unemployment* % change in ALMP spending due to 1% increase in the number of unemployed persons

B. Actual and predicted change in ALMP spending since the start of the crisis* % change between 2007 and 2010

C. Actual and predicted change in ALMP resources per unemployed person* % change between 2007 and 2010

**: Statistically significant at the 5% level.
a) The elasticity of ALMP spending to the number of persons unemployed is obtained from a panel regression of the log of ALMP spending on the cyclical and trend components of log unemployment, log real GDP, log labour force and the two decadal dummies for the 1990s and the 2000s. The model is estimated using data for 28 OECD countries (i.e. excluding Chile, Estonia, Iceland, Israel, Slovenia and Turkey) for the period 1985-2007.
b) The predicted change in ALMP spending is obtained by taking the difference between the out-of-sample prediction for 2010 from the model described in footnote a) and the prediction for 2007.
c) For Panels B and C, the data refer to weighted averages of the countries included in Panel A but excluding Korea and the United Kingdom because of missing data on ALMP spending for 2010.

Source: OECD estimates based on the OECD Labour Market Programmes and OECD Main Economic Indicators Databases.

StatLink http://dx.doi.org/10.1787/888932651085
In order to implement active labour market policies effectively, it is essential to have a good understanding of which job seekers have most difficulty in finding work and which firms find most difficulty in recruiting new workers. As a first indication, Figure 1.13 documents the proportional change in the number of hires across different groups of job-seekers and firms in different industries since the start of the crisis in 2007 Q4 and 2009 Q4 (the start of the recovery) as well as 2011 Q4 (the latest date for which data are available):

- **Workers.** The initial decline in hires has been most pronounced for youth, amounting to over 25%. Hires have tended to recover for all groups since the fourth quarter of 2009, but the extent of the hiring recovery has been uneven. Whereas the hires of high-skilled workers have almost returned to pre-crisis levels, hires of low-skilled workers have only recovered marginally. The hiring of youth remains the most depressed, at more than 20% lower in the fourth quarter of 2011 than at the start of the crisis.

- **Industries.** The initial decline in hires has been most pronounced in manufacturing, where it declined by almost 40%, consistent with the large negative output shock in this sector. The initial decline in hires was similar in construction, distribution services and producer services, amounting to around 20%, while it was relatively limited in social personal services. In the two years since the fourth quarter of 2009, there has been a recovery in hires in all sectors except construction, where it has remained almost constant. The lack of an apparent hiring recovery in the construction sector reflects the structural problems of this industry in many OECD countries.

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**Box 1.2. Active labour market policies have a crucial role to play in containing the risk of rising structural unemployment**

There may be several reasons why active spending does not increase more strongly to changes in cyclical unemployment. First, governments may not be convinced that additional investments in ALMPs will translate into correspondingly better labour market outcomes. On the one hand, the marginal costs of helping job seekers back into work may increase during an economic downturn due to the decline in available job opportunities. On the other hand, the marginal benefit from helping a job seeker back into work may also increase in recessions, given the greater expected duration of unemployment. As a result, it is difficult to determine a priori how recessions affect the returns to ALMPs. Unfortunately, the available empirical evidence is limited. Providing evidence on the role of ALMPs in the context of a depressed labour market, therefore, represents an important priority for future research. Second, the low responsiveness of ALMPs to cyclical changes in unemployment may also reflect capacity constraints related to the difficulty of quickly recruiting and training skilled case managers or expanding the number of training slots while maintaining quality levels. One possibility that may help to overcome capacity constraints is to rely on private-sector employment service providers to scale up the provision of activation services in response to a cyclical downturn.

Nevertheless, the sharp decline in resources per unemployed person for ALMPs between 2007 and 2010 represents a major concern. Moreover, there is a risk that the ongoing process of fiscal consolidation will squeeze the resources available for ALMPs. Given the limited progress that has been made in reducing the cyclical rise in unemployment; the build-up of long-term and very long-term unemployment; and the growing risk of rising structural unemployment, reducing the value of resources devoted to ALMPs may be inappropriate. This is likely to aggravate the already difficult labour market situation and, in addition, might jeopardize the long-term potential for economic growth.

* All references to changes in ALMP spending in this box are expressed in real terms.
Conclusions

The weak and uneven economic recovery in many OECD countries has major implications for the labour market. First, it has been insufficiently strong to make a large dent in the cyclical hike in OECD-area unemployment. Second, it has led to an increasing marginalisation of the jobless through an increase in the number of long-term unemployed and of discouraged job seekers. Third, there remains a risk that the cyclical increase in unemployment becomes structural even if this has not yet materialised to any significant degree. This risk remains highest for those countries where the increase in labour market slack has been most pronounced.

Given the extent of cyclical labour market slack, the main policy priority from a labour market perspective should be to underpin aggregate demand. However, as the scope for supportive macroeconomic policies has narrowed in most OECD countries, placing more emphasis on the potential role of structural reforms in product and labour markets may help to provide the right conditions for a vigorous recovery in output and labour markets. Indeed, the crisis and the subsequent need for fiscal consolidation already appear to have acted as important catalysts for structural reforms, particularly in countries where reforms
were most needed (OECD, 2012e). Labour market policies also have a key role to play in containing the risk of rising unemployment by: i) making sure that job losers, and particularly those at risk of long-term unemployment, do not see their skills depreciate as a result of prolonged joblessness and will be readily employable once the labour market recovers; and ii) addressing any emerging structural obstacles that prevent unemployed seekers from finding jobs and employers from filling job openings. This requires identifying as early as possible any emerging skill shortages; specific groups of workers with inappropriate or obsolete skills; and providing training opportunities to help them get back into work.

A key issue going forward relates to improving our understanding of the mechanisms that render cyclical increases in labour market slack more persistent or even structural. While this chapter has adopted a number of different approaches to analyse these issues, it remains difficult to draw definitive conclusions about the increased persistence of labour market slack, let alone about any increase in the level of structural unemployment. However, the intense debate on the possible increase in structural unemployment, particularly in the United States, has led to a flurry of new research in this area that has yet to make its way into mainstream labour market policy analysis.28

Notes
1. Among other things, Chapter 2 examines the role of aggregate demand and different margins of adjustment (e.g. wages, working time, labour productivity) for the evolution of unemployment during the crisis and the recovery.
2. The OECD-wide employment gap peaks substantially later than the OECD-wide unemployment rate. This is due to the significant decline in labour force participation during the initial phase of the economic recovery in a number of countries, including in the United States.
3. Differences in the evolution of employment between men and women are very small. Employment fell slightly more for men than that for women during the crisis, but has since recovered slightly more for men than for women. While suitable data to analyse the employment position of immigrants are lacking, OECD (2012c) suggests that immigrants have been hard hit by the economic downturn in most OECD countries. This is mainly explained by the greater presence of immigrants in sectors that have been affected most by the crisis in comparison with natives and the over-representation of immigrants in non-standard jobs.
4. Differences in the evolution of relative employment across socio-economic groups may, in part, reflect differences in trend labour force participation and/or population growth. One way to abstract from the influence of secular labour market developments is to express the evolution of employment in terms of its deviation from the pre-crisis trend. While the qualitative results by age and type of contract are similar to those presented in Figure 1.4, the results by skill are qualitatively different. The relatively weak employment performance of low-skilled workers during the crisis largely reflects the trend decline in the demand for low-skilled workers, whereas the cyclical impact of the crisis on the relative demand for low-skilled workers appears to be fairly minor.
5. This may to some extent be linked to the uptick in temporary jobs.
6. For the further details on the calculation of unemployment-exit probabilities by time spent in unemployment, see note a) of Figure 1.5.
7. It is worth noting that nearly half of all long-term unemployment in the United States takes the form of very long-term unemployment (two years of more). This suggests that it is unlikely to be related in an important way to the temporary extension of unemployment insurance benefits from 26 to 99 weeks.
8. Unlike long-term unemployment, the increase in very long-term unemployment occurred only in a few countries hardest-hit by the deep and protracted recessionary shock such as Ireland, Greece, Portugal, Spain and the United States. See Figure 1.A3.1 of OECD (2012a).
9. This represents a simplified version of the unemployment simulations in Elsby et al. (2010, 2012) for the United States.

10. While job seekers without previous work experience have traditionally been more likely to be unemployed, the increase in long-term unemployment during the crisis is largely accounted for by job losers with recent work experience. See Annex Figure 1.A3.3 of OECD (2012a) for details.

11. In addition to a second-earner effect, it may also reflect the secular increase in labour force participation.

12. Structural unemployment refers to the equilibrium level of unemployment that remains after accounting for cyclical fluctuations in aggregate demand.

13. This view of the economy may be contrasted to that of full hysteresis in which unemployment reflects the cumulative effect of all past shocks to the economy, including those to aggregate demand. This implies that unemployment can be maintained indefinitely at any level with stable inflation. While there exists considerable evidence against the hysteresis model in this extreme form, unemployment persistence associated with a relatively weak and slow-acting relationship between unemployment and inflation can have important implications for the relationship between actual unemployment and the NAIRU (see Richardson et al., 2000, for further details).

14. These estimates are based on a reduced-form Phillips-curve equation smoothed by means of a Kalman filter (see Guichard and Rusticelli, 2011, for details).

15. While for some countries data are available for earlier years, this time period was chosen as it allows comparing the most recent experience of recession and recovery with the corresponding period following the bursting of the dotcom bubble in 2001, without obscuring the visual representation of the empirical Beveridge curves.

16. Two recent European Commission reports suggest a risk of increased skill mismatch and higher structural unemployment at the EU level, with both vacancy and unemployment rates increasing since early 2010 (European Commission, 2011 and 2012).

17. It is also noteworthy that in a number of countries the Beveridge curve appears to have shifted inwards in the period before the recent crisis since 2001, signalling increased matching efficiency. These are Chile, Germany, Italy and Japan. In Germany, this is widely attributed to the Hartz IV reforms that took place in the mid-2000s.

18. Using more comprehensive data on job vacancies, Barnichon et al. (2011) also find that the Beveridge curve drifted rightwards in the United States since the Great Recession. They argue that the drift is transitory.

19. Practically, this involves estimating for each country the following empirical model using pre-crisis data: $\ln(y_t) = \alpha_0 + \alpha_1 \ln(u_t) + \varepsilon_t$, where $y$ refers to either the job-filling or the job-finding rate, $u$ and $v$ refer to the number of vacancies and unemployed job seekers and $\varepsilon$ is an independent error term. $\alpha_1$ captures the sensitivity of matching measured in terms of either the job-filling or the job-finding rate with respect to labour market tightness and $\alpha_0$ measures the degree of matching frictions conditional on labour market tightness. The evolution of the job-filling and job-finding rates since the start of the crisis can be predicted by combining the estimated parameters with the actual evolution of labour market tightness since the start of the crisis. The results are qualitatively similar when the lagged value of labour market tightness is used or a linear trend is included. See Petrongolo and Pissarides (2001) for a survey of the matching function.

20. See also Daly et al. (2011).

21. Sahin et al. (2011) analyse the relative importance of different forms of mismatch in the United States for the recent rise in unemployment. They show that sectoral and occupational mismatch increased during the crisis, but that regional mismatch increased little. They suggest that increased mismatch may account for 0.8 to 1.4 percentage points of the recent rise in the unemployment rate. However, some of the increase in mismatch is likely to be temporary.

22. See Fereira et al. (2010, 2011) and Farber (2012) for evidence on the potential negative effects of the housing bust on housing mobility in the United States.

23. Jaimovich and Shiu (2012) suggest that the secular process of job polarisation may be related to the emergence of jobless recoveries in the United States. They argue that most of the semi-skilled jobs tend to disappear during the recessions, while jobless recoveries arise because these semi-skilled jobs do not return in the recovery.

25. This may account to some extent for the pattern of negative duration dependence that was documented in Section 2.

26. Daly et al. (2011) note that economic uncertainty may make employers more selective with respect to applicants which is consistent with a decline in observed recruiting intensity.

27. See also OECD (2011a, Chapter 4) for a broader discussion of policies to tackle skills mismatch.

28. Another issue is to improve the quality and comparability of job vacancy data. In line with the search-and-matching literature, this chapter has emphasised the importance of vacancy information as a way of bringing labour demand into the analysis and for distinguishing between the relative contributions of changes in aggregate demand and labour market mismatch to changes in unemployment. However, the importance of vacancy information goes well beyond the issues raised in this chapter. Job vacancy information also plays a crucial role in the more day-to-day work of identifying skills shortages and obsolete skills.

References


1. WAITING FOR THE RECOVERY: OECD LABOUR MARKETS IN THE WAKE OF THE CRISIS


ANNEX 1.A1

OECD Labour Market Projections from May 2012
Table 1.A1.1. Recent and projected developments in OECD countries

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1. WAITING FOR THE RECOVERY: OECD LABOUR MARKETS IN THE WAKE OF THE CRISIS

OECD EMPLOYMENT OUTLOOK 2012 © OECD 2012
Table 1.A1.1. Recent and projected developments in OECD countries

<table>
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<th>Real GDP growth (percentage change from previous period)</th>
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<th>Unemployment rates (percentage of labour force)</th>
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1. WAITING FOR THE RECOVERY: OECD LABOUR MARKETS IN THE WAKE OF THE CRISIS

OECD Europe refers to the countries belonging to the OECD area (30).

OECD Total includes the euro area (15) and the remaining OECD countries.

OECD Total includes the euro area (15), as well as the remaining OECD countries.

Oceania includes Australia, New Zealand and the remaining OECD countries.

The OECD Secretariat’s projection methods and underlying statistical concepts and sources are described in detail in “Sources and Methods” in OECD Economic Outlook which can be downloaded from the OECD Internet site (www.oecd.org/dataoecd/47/9/36462096.pdf).

Information on data for Israel can be found at: http://stats.oecd.org/OECDStat_Metadata/ShowMetadata.asmx?Dataset=WDI
c

Aggregates are computed on the basis of 2008 GDP weights expressed in 2008 purchasing power parities for real GDP growth, employment weights for employment growth and labour force weights for unemployment rates.

ANNEX 1.A2

Job-vacancy Statistics

Job-vacancy data play a key role for understanding recent labour market dynamics. Job vacancies are the number of job openings posted by employers at a given point in time for recruiting employees outside their establishments to fill vacant job positions. The process of recruitment may take more or less time depending on: prevailing labour market conditions; the job-search intensity of prospective employees and the recruitment intensity of employers; and the availability of workers with required qualifications for the jobs offered. Job applicants can either be in employment, unemployment or out of the labour force. Unfilled job openings are jobs remaining vacant for some time after the job announcement has been posted, either because employers or the job-brokering agency cannot find suitable matches to fill vacant jobs or because employers do not wish or need to fill those job positions immediately. In the former case, it is a measure of unmet labour demand for different reasons including labour shortages.

Unlike harmonised unemployment rates, job vacancies are derived from a variety of data sources and concepts that are often not internationally comparable. Ideally, analogous to unemployment statistics, job-vacancy data should provide a point-in-time estimate of a job currently vacant or an unoccupied post for which the employer places an announcement and undertook, in the recent past, active search of a suitable candidate to fill the vacant job, at current wages, that is immediately available or within a specified period (Layard et al., 2001; Farm, 2003). However, there are few national survey instruments conducted on a regular basis that capture the extent of job openings at a point in time; contain questions on the ensuing recruitment process; and provide information on unfilled job vacancies. This is the case, for example, of the quarterly job vacancy surveys in Australia, Finland and Sweden. Moreover, a job position may not be actually vacant at the time of recruitment and the methods of active job search or specific recruiting action are specified only in a few cases, such as the Job Openings and Labour Turnover Survey (JOLTS) conducted in the United States since December 2000. Clark and Phillips (2002) compare JOLTS with job vacancy surveys developed in Europe and Eurostat's recommendations for defining job vacancies and find that generally the concepts are comparable as well as the results. However, further work needs to be undertaken to assess the comparability of employer-based job-vacancy survey information.

In practice, there are three main sources from which information on vacancies can be obtained: general job-announcement counts; employer surveys on job openings; and job announcements managed by public employment services. Job vacancies may be advertised through a wide range of channels such as newspaper advertisements, public employment...
services, private recruitment agencies (e.g. private job placement agencies, head hunters, temporary work agencies) as well as dedicated web platforms on the Internet. In some countries, job-announcement counts are estimated and subsequently expressed as indexes, such as the Help Wanted Index in Canada, Chile, New Zealand and the United States. Nowadays, this count takes into account job announcements placed online on the Internet, such as New Zealand’s Department of Labour Jobs Online Index and the Help Wanted Index of the US Conference Board. In some countries, job-vacancy statistics are collected through a dedicated job-vacancy survey addressed to employers, such as in Australia, Germany, Finland, Japan, the Netherlands, Sweden and the United Kingdom, while in other countries, job-openings data are collected through questions in regular employment surveys, such as the quarterly Activité et conditions d’emploi de la main-d’œuvre (Acemo) in France and similar surveys in Greece, Italy, Slovenia, Spain and Switzerland. In a few other countries, job-vacancy statistics rely only on job announcements managed by public employment services (e.g. Austria, Japan and Switzerland) and thus understate total vacancies, because this is only one of a wide range of recruitment channels.

The available information on vacancies, generally, does not fully account for all job openings, as some survey instruments are limited to job openings issued by establishments with ten or more employees in non-farm business sectors (Acemo) or establishments in non-farm private and public sectors (JOLTS). Zanda and Fondeur (2009) report that the French Acemo-based job vacancies, after accounting for missing sectors including the public sector, represent only one third of job openings placed with the public employment service (Pôle Emploi). Moreover, job openings do not capture all available jobs. Many job positions are filled by employers without posting formal job offers. Job openings that are filled very quickly may also not be captured well in available vacancy statistics (Diamond, 2011). Workers can get hired through direct job applications, employers can re-hire laid-off workers or hire workers at work fairs or at the end of training programmes, for instance, for apprentices and public servants (Farm, 2003).

The job vacancy statistics reported in Figure 1.11 have been compiled for 27 OECD countries. Data from job vacancy surveys and the count of job advertisements, apart from some known limitations, appear to be the most extensive measures of the number of job openings and thereby of labour demand at a given point in time to be matched with labour supply measures of unemployed job seekers. However, due to unavailability in many countries of survey-based quarterly data for the period under consideration, the data in Figure 1.11 refer to job announcements managed by public employment services for 16 of the 27 countries considered (see sources and notes in Annex Table 1.A3.3 in OECD, 2012a).