4 Reducing unemployment from a historical perspective

This box reviews the macroeconomic and structural conditions that have led to large reductions in unemployment from a historical perspective. The sample under investigation covers all OECD countries over the past 35 years. By comparing the features of the historical experiences with those of the current job-rich recovery in the euro area it is possible to draw lessons that may be useful in analysing future unemployment developments.

In line with the existing literature, this box defines an episode of large unemployment reduction as one which fulfils three conditions: 1) the unemployment rate declines by at least 3 percentage points in a three-year period after the peak in the unemployment rate; 2) the decline in the unemployment rate over a three-year period is at least 25% of the initial unemployment rate; 3) after five years the unemployment rate remains below that at the beginning of the episode.[19]

When applying these three conditions to the European Union (EU) and other OECD countries over the period 1980-2015, 25 episodes in which there were large unemployment reductions can be identified. On average, for these 25 episodes, the initial level of unemployment was 13.4%; after three years it declined by 4.5 percentage points, representing 35% of the initial unemployment rate; and after five years the unemployment rate was almost halved (see the table). Across the euro area countries, the majority of these episodes started in the mid-1990s.[20] In the first half of the 1990s the unemployment rate reached historically high levels and Europe experienced jobless growth. The period from the second half of the 1990s to the early 2000s coincided with the highest intensity of reforms in labour and product markets. This increase in the momentum of reform was induced not only by the high unemployment rate, but also in all likelihood by the introduction of the euro and the process of EU integration.[21]

Currently, five euro area countries seem to fulfil the above-mentioned criteria (see the table).[22] These countries are Ireland, Spain, Cyprus, Portugal and Slovakia. Other countries with high unemployment, and which are currently observing a reduction in unemployment, are Greece, Italy and Slovenia. However, they do not yet fulfil the three criteria. Italy and Slovenia do not fulfil any of the three criteria, while Greece can be considered a borderline case, as only the second criterion, i.e. a decline that is at least 25% of the initial unemployment rate after three years, has not been met.

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19 Freund, C. and Rijkers, B. adopted a related approach in “Episodes of unemployment reduction in rich, middle-income and transition economies”, *Journal of Comparative Economics*, Vol. 42(4), December 2014, pp. 907-923.

20 The euro area countries that underwent episodes of unemployment reduction starting in the mid-1990s were Ireland (1993-98), the Netherlands (1995-2000), Finland (1995-2000) and Spain (1996-2001).

21 See, for example, Dias da Silva, A., Givone, A. and Sondermann, D., “When do countries implement structural reforms?”, *Working Paper Series*, No 2078, ECB, June 2017.

22 Given that the current episodes of unemployment reduction started in 2013, the European Commission’s June 2017 projections have been used for the years 2017 and 2018 to assess fulfilment of the third criterion.

Table

Current episodes of large reductions in unemployment

	Start of episode	Initial unemployment rate (percentages)	Decline in the unemployment rate after three years (percentage points)	Decline in the unemployment rate after three years (percentages)	Decline in the unemployment rate after five years (percentage points)
Historical average	**-**	**13.4**	**4.5**	**35**	**6.2**
Ireland	2012	14.7	5.3	36	8.3
previous episode	*1993*	*15.6*	*3.9*	*25*	*8.1*
Spain	2013	26.1	6.5	25	10.2
previous episode	*1996*	*19.9*	*6.3*	*32*	*9.3*
Cyprus	2014	16.1	4.4	27	5.5*
Portugal	2013	16.4	5.2	32	7.2
previous episode	*1985*	*9.8*	*3.1*	*32*	*4.2*
Slovakia	2013	14.2	4.5	32	6.6
previous episode	*2004*	*18.3*	*7.1*	*39*	*6.2*
Memo items:					
Greece	2013	27.5	3.9	14	-5.9
Italy	2014	12.7	1.2	9	1.4*
Slovenia	2013	10.1	2.1	21	3.8
euro area	**2013**	**12.0**	**2.1**	**17**	**3.2**

Source: ECB staff calculations based on European Commission data.
Notes: * Data up to four years since the start of the unemployment reduction. The historical average refers to the simple average of the 25 episodes identified across 41 EU and OECD countries between 1980 and 2010.

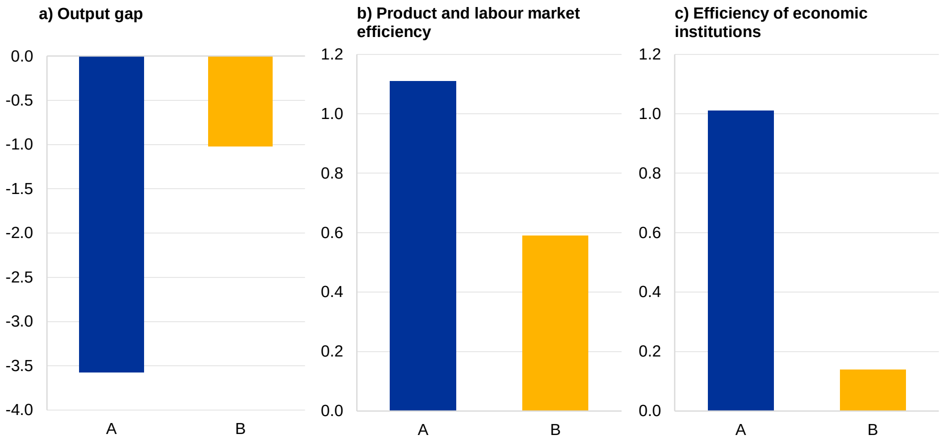
The macroeconomic and structural conditions at the onset of episodes of large reductions in unemployment were significantly different to those where such unemployment reduction did not occur. Chart A compares the macroeconomic and structural features of the 25 episodes of large reductions in unemployment with those of a group of countries that did not experience such an episode, notwithstanding the fact that in the latter group the unemployment rate was at least as high as the average unemployment rate of the former group at the onset of the episode.

Generally, the onset of an episode of large unemployment reduction occurs in the presence of a large degree of economic slack. Chart A(a) shows that countries undergoing an episode of large unemployment reduction have a larger negative output gap than countries in which the unemployment rate remains high.

Episodes of large reductions in unemployment occur in the presence of more efficient structures and institutions. When comparing the group in which there is a large reduction in unemployment with the group in which there is not, the latter is characterised by significantly weaker structures/economic institutions, as measured by product market efficiency and overall efficiency of economic institutions (see Chart A(b) and (c)). This seems to suggest that successful episodes of unemployment reduction come about when structural conditions, including product and labour market regulations and the overall quality of institutions, are more sound.

Chart A

Comparison of macroeconomic and structural features of countries with high unemployment that saw a large reduction in unemployment (A) with those of countries that did not see a large reduction in unemployment (B)



Source: ECB staff calculations based on Eurostat data.
Notes: A refers to observations with average unemployment rate above 13%, followed by a large reduction in unemployment.
B refers to observations with average unemployment rate above 13%, not followed by a large reduction in unemployment.
The 13% threshold relates to the average unemployment rate at the onset of episodes of large reductions in unemployment (see table).

The evolution of key macroeconomic and structural variables around historical episodes of unemployment reduction can shed further light on patterns of unemployment reduction. Chart B shows developments in the unemployment rate, GDP growth, compensation per employee and the reform stance[23] in the countries that witnessed large reductions in unemployment compared with the sample average.[24] It shows that real compensation per employee moderates substantially before an episode of large reduction in unemployment starts and sees hardly any growth until three years after the start of the episode. GDP growth falls substantially in the two years preceding the episode. Following the start of the episode of large reduction in unemployment, GDP grows significantly during the five-year period. In addition to the role played by the economic cycle, the increase in reform efforts is associated with a subsequent reduction in the unemployment rate. This can be seen in Chart B, as the number of reforms peaks before the episode of unemployment reduction starts.

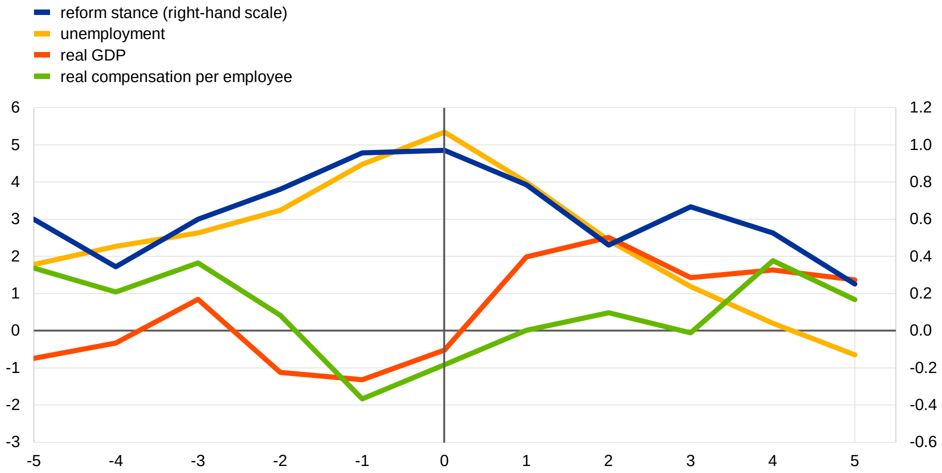
23 The reform stance is computed using the change in the OECD's indicators of employment protection legislation (EPL) and of regulation in network industries, i.e. energy, transport and communications (ETCR), and a measure of the degree of centralisation of wage bargaining, as compiled by the Fraser Institute. The changes in these series are used as a proxy for labour and product market reforms, which are likely to have an impact on labour demand and supply and thus on the unemployment rate. The focus is on relatively large reforms, which are defined as reforms that exceed two standard deviations of the change in the indicator over all observations in each series. The reform stance indicator assumes a value of 0 if no large reforms are implemented, 1 if a large reform is implemented, 2 if large reforms are implemented in two areas, and 3 if large reforms are implemented simultaneously across the three indicators.

24 All variables have been demeaned to account for covariate shocks and time trends.

Chart B

Evolution of macroeconomic variables and the reform stance before and after episodes of large reductions in unemployment

(reform stance (index 0-3, demeaned); unemployment rate (as a percentage of the labour force, demeaned); real GDP (annual percentage change, demeaned); real compensation per employee (annual percentage change, demeaned))



Source: ECB staff calculations based on European Commission and OECD data.
Notes: "0" marks the beginning of the unemployment reduction episode. Each variable is demeaned by the sample average of observations in each year. The unemployment rate is expressed as a percentage of the labour force. GDP growth and real compensation per employee are expressed as year-on-year growth rates. The reform stance is measured as an index ranging between 0 (no reforms) and 3, and has been demeaned by the average sample of observations in each year. Data on structural variables are not available after 2013.

Overall, the above static and dynamic analyses of past episodes show that structural factors are key elements for a successful reduction in unemployment. Large and sustained reductions in unemployment took place in the presence of supportive cyclical conditions and responsible wage policies, and after extensive product and labour market reforms.