

# The Austrian Labor Market and the Great Recession: Developments and Measures Taken

Alfred Stiglbauer<sup>1</sup>

*As the international financial and economic crisis unfolded, labor market conditions in Austria started to deteriorate in mid-2008, marking the onset of one of the severest crisis episodes in the Austrian labor market since World War II. Its effects have been surprisingly small, however, considering the scale of the decline in real economic activity. The reason for this moderate impact was that total hours worked declined more sharply than headcount employment. The working hour reductions were much more substantial than can be explained by short-time work alone, though.*

*An international comparison shows country differences in the extent to which the decline in employment was based on reductions in headcount or hours worked per employee. Austria and Germany are among those countries in which hours worked declined most sharply, which made it possible to keep more people in employment. Even though labor market conditions in Austria have been improving over the past few months, unemployment figures and the number of participants in training programs by the Austrian Public Employment Service are still higher than they were before the crisis. Employment figures, too, have not yet returned to precrisis levels.*

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During the economic slump triggered by the international financial crisis, world economic activity declined in 2009 for the first time since the Great Depression of 1929 to 1933. Austria, too, recorded the deepest recession since World War II: Real GDP shrank by 3.9% in 2009; on a quarter-on-quarter basis, the decline was sharpest in the first quarter of 2010 (−2.1%). In light of the dramatic downturn, “Great Recession” seems an entirely appropriate term; nevertheless, we will mainly refer to it as “the crisis” in this study.

The Austrian labor market responded rather quickly to the economic downturn. This paper highlights the impact of the recession on the labor market from various perspectives: It

focuses, in particular, on (recent) developments in employment and unemployment as well as on changes in working hours, and features an international comparison.<sup>2</sup>

This study is structured as follows: Section 1 describes the labor market situation at the height of the crisis in the second quarter of 2009 and in early summer, illustrating by how much employment declined and joblessness increased. A comparison with earlier episodes shows that this crisis, albeit severe, has not been the deepest crisis the Austrian labor market has experienced since World War II, even though during the current crisis, growth slumped to the lowest level since the Great Depression of the 1930s. Section 2

<sup>1</sup> Oesterreichische Nationalbank, Economic Analysis Division, [alfred.stiglbauer@oenb.at](mailto:alfred.stiglbauer@oenb.at). The author thanks the referee and Walpurga Köhler-Töglhofer for a number of useful suggestions and corrections. Cutoff date for data: July 31, 2010.

<sup>2</sup> This study can only provide a rough sketch of labor market developments in Austria. A general overview of the macroeconomic impact of the Great Recession and the ensuing recovery of the Austrian economy can be found in Ragacs and Vondra (2009, 2010) as well as Scheiblecker (2010). Another report on the impact of the crisis on the Austrian labor market was already published in late 2009 (Mahringer, 2009), but it focuses on other aspects than this contribution. For comprehensive labor market statistics and evaluations of these data for the crisis year 2009, see AMS (2010a) and BMASK (2010). Section 3 of this study lists works that provide international comparisons.

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Andreas Buzek,  
Austrian Federal  
Ministry of Labour,  
Social Affairs and  
Consumer Protection

discusses the reasons why the labor market impact was relatively moderate in relation to the extent of the downturn. Among these reasons are Austria's active labor market policy, e.g. training programs by the Austrian Public Employment Service (Arbeitsmarktservice Österreich – AMS) and short-time working arrangements, but also the fact that working hour reductions have been substantial in general. Section 3 adds an international perspective. The impact of the crisis on national labor markets across the EU has been highly heterogeneous, which is attributable to two main factors: First, the downturn was more dramatic in some countries than in others, and second, there were differences across countries in the share of headcount and working hour reductions. Section 4 shows that labor market conditions in Austria have improved from mid-2009 but that employment and unemployment figures have by far not reached precrisis levels. Section 5 summarizes and concludes.

## 1 Employment and Unemployment at the Height of the Crisis

### 1.1 Labor Market Situation Deteriorates Rapidly from Mid-2008

Signs of worsening labor market conditions increased from mid-2008, if not earlier. Leading indicators pointed to a steep decline in economic growth,

and short-term outlooks for economic activity, like the OeNB's economic indicator, had to be revised downward several times in succession. The right-hand panel of chart 1 shows actual economic developments based on national accounts data, which are published with a time lag. After dropping in the second quarter of 2008 against the previous quarter, real GDP growth plunged dramatically in the following quarters. The early warning system of the AMS also indicated an impending increase in unemployment: Planned layoffs rose on a year-on-year basis and surged in summer 2008 (left-hand panel of chart 1).<sup>3</sup> The rise in actual unemployment occurred with a lag of several months.

When the Austrian economy started to contract in the third quarter of 2008, labor market conditions were still good, but deteriorated markedly in the following quarter. The left-hand panel of chart 2 depicts the developments based on monthly data on employment, unemployment and job vacancies that are published by the Main Association of Austrian Social Security Institutions and the AMS at the end of each month. The chart covers the period from early 2008 up until the peak<sup>4</sup> of the labor market deterioration and, in line with common practice, shows year-on-year changes.

In the first half of 2008, employment was up by around 80,000, which

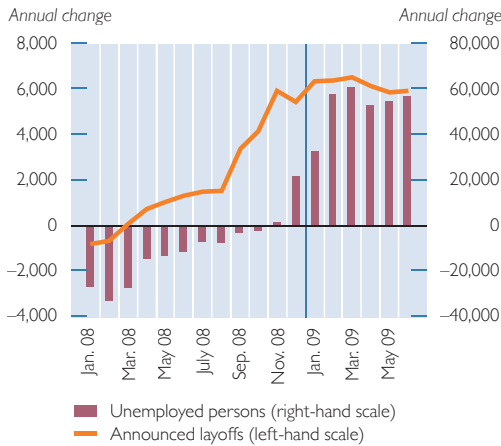
<sup>3</sup> According to the Austrian Labor Market Promotion Act (*Arbeitsmarktförderungsgesetz*), companies with more than 20 employees have to notify the AMS at least 30 days in advance before terminating employment contracts if the number of layoffs exceeds a certain threshold. Given that these notifications are subject to strong seasonal variation, we chose to depict year-on-year changes in chart 1. These values still contain considerable fluctuations due to seasonality and reporting behavior. Moreover, some companies report upcoming layoffs of the same employees over several consecutive months, and it is impossible to single out these instances in the data. This is why we smoothed the series by using moving three-month averages (centered).

<sup>4</sup> We made the simplifying assumption that the peak of the labor market crisis was in June 2009 to avoid confusion over a constantly changing observation window; not all data series are synchronous. The sharpest annual increase in unemployment was reported at the end of March 2009, whereas employment figures reached their lowest level at end-August 2009 and the seasonally adjusted unemployment rate (national definition) peaked in September 2009. Details of measurement can be found in the annex to this article.

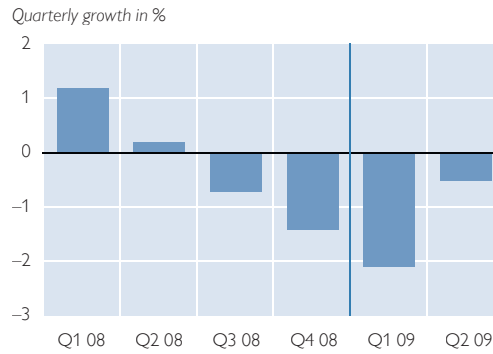
Chart 1

### Indications of Worsening Labor Market Conditions

#### AMS Early Warning System and Actual Unemployment Developments



#### Real GDP Developments



Source: AMS, OeNB.

equals some 2.3% of payroll employment. Following a considerable slowdown in the third and fourth quarters of 2008, employment growth turned

negative at the beginning of 2009. In June 2009, payroll employment shrank by around 60,000 compared to one month earlier (just under -1.9%).

Chart 2

### Labor Market Conditions in Austria Deteriorate Rapidly from Mid-2008

#### Monthly Social Security and AMS Data



#### Quarterly LFS Data



Source: Main Association of Austrian Social Security Institutions, AMS, Statistics Austria.

Growth in job vacancies was slightly negative during most of 2008 and contracted markedly in early 2009. Year-on-year unemployment figures increased from end-2008, rising by just under 60,000 in June 2009, which is in a similar range as the change in payroll employment.

The right-hand panel of chart 2 depicts the development based on micro census data from Eurostat's Labour Force Survey (LFS) for the period from early 2008 to the second quarter of 2009. Given considerable conceptual differences between national and Eurostat data<sup>5</sup>, the figures vary sometimes but still illustrate similar developments in employment and unemployment.

## 1.2 Impact of the Crisis by Industries and Workforce Groups

Table 1 shows aggregated employment and unemployment figures and the development in selected industries from the beginning of the crisis in end-June 2008 to its peak at end-June 2009.<sup>6</sup> The LFS data in the table refer to the change between the second quarter of 2008 and the same quarter of 2009. Section 4 (table 4) presents a similar comparison, but for the period from end-June 2008 to end-June 2010, comparing the current situation with the precrisis situation.

The number of unemployed persons rose by 57,000 between June 2008 and June 2009, and the number of participants in AMS training programs increased by just under 16,000. The bulk

of the increase in unemployment can be attributed to just a few industries. Manufacturing alone accounted for a rise in unemployment by 15,000 persons, with manufacturers of metal products, machinery and equipment as well as transport equipment being particularly affected. The increase in the number of unemployed was also substantial in the construction industry and the accommodation and food services industry, and above all in the wholesale and retail trade sector as well as the staff leasing industry (which hires out employees mostly to companies in manufacturing).

The sharp decline in employment in manufacturing (around -42,000) and in the staff leasing industry (-18,000) is especially conspicuous. In relative terms, employment fell the most among leased employees (-23%). Compared with permanent staff, this group earns less, receives fewer social benefits and runs a higher risk of losing their job (OECD, 2010). Taken together, employment in manufacturing and the staff leasing industry dropped roughly by the same proportion as in the rest of the economy. Reductions in employment were also pronounced in the construction industry and in retail and wholesale trade.

Despite the worsening in the labor market in general, several industries posted vigorous employment growth, such as the financial services industry (by just under 5,000) or education and the health and social work industry (by between 4,000 and 7,000).

<sup>5</sup> One reason why the micro census data show a more favorable employment development than the national data lies in the fact that the former also covers marginal employment. According to the data provided by the Main Association of Austrian Social Security Institutions, growth in marginal employment declined but remained positive throughout the crisis; however, the AMS and social security (un)employment figures do not include marginal employment. The divergent development in payroll employment and overall employment (right-hand panel of chart 2) can be explained by the fact that self-employment declined more sharply in relative terms than payroll employment.

<sup>6</sup> Unemployed persons are assigned to the industry in which they were last employed.

According to the LFS, actual hours worked declined by 5.2% in Austria and thus considerably more strongly than headcount employment (−1.8%). In absolute terms, the two common measures of unemployment in Austria (i.e. the national rate, based on AMS and social security data, and the Eurostat rate) rose by 1.5 and 1.6 percentage points, respectively.

A detailed breakdown of the workforce groups affected by the crisis can be found in Mahringer (2009), Scheiblecker (2010), AMS (2010a) and BMASK (2010). Given their large share in manufacturing employees, men were hit harder by the crisis than women. Foreign workers felt the impact of

the worsening labor market conditions earlier than domestic employees, but ultimately, this impact was not stronger (in relative terms). Among young employees, employment fell and unemployment rose more sharply than the respective rates in the prime working age and older age groups.

### 1.3 A Severe but by no Means Exceptional Crisis by Historical Standards

Unlike national accounts and LFS data, the monthly data series on payroll employment and unemployment in Austria as compiled by the Main Association of Austrian Social Security Institutions and the AMS (which are published

Table 1

## Deterioration in the Austrian Labor Market until the Height of the Crisis

Change from June 2008 to June 2009			
		Unemployment	Payroll employment
<b>Austrian social security and AMS data</b>			
Total, in absolute terms (number of persons or contracts <sup>1</sup> )		56,945	−60,617
Total, in relative terms (%)		31.9	−1.8
Participants in AMS training programs	15,773		
Vacancies	−16,659		
Selected industries:			
	<i>Number of persons</i>		
Manufacturing		15,273	−42,614
Construction		4,467	−5,720
Wholesale and retail trade		8,056	−10,664
Accommodation and food services		5,123	−2,830
Staff leasing		7,528	−18,154
Financial services		256	4,880
Public administration and defence, compulsory social security		502	−3,358
Education		649	4,466
Health		229	5,740
Social work		1,568	7,052
<b>Labour Force Survey data<sup>2</sup></b>			
Total figures, in absolute terms (number of persons)		53,000	0
Total figures, in relative terms (%)		36.4	0.0
Hours worked (quarterly, in %)	−5.2		
<b>Unemployment rate</b>			
	<i>Percentage points</i>		
National definition	1.5		
Eurostat definition	1.6		

Source: Austrian Federal Ministry of Labour (BMASK), Statistics Austria.

<sup>1</sup> Payroll contracts excluding employees on parental leave.

<sup>2</sup> Change from Q2/2008 to Q2/2009.

at the end of each month) goes back almost to the end of World War II. Therefore, we are able to compare the employment and unemployment effects of the most recent recession with those caused by earlier substantial labor market deteriorations.

The following criteria were applied in the selection of crisis episodes affecting the labor market: (1) Unemployment growth must reach at least 1% of total payroll employment, and (2) the sharpest decline in employment must be at least one-half of the rise in unemployment. While the first – admittedly somewhat arbitrary – criterion means that we focus on “significant” labor market crises only, the second criterion serves to select periods in which labor

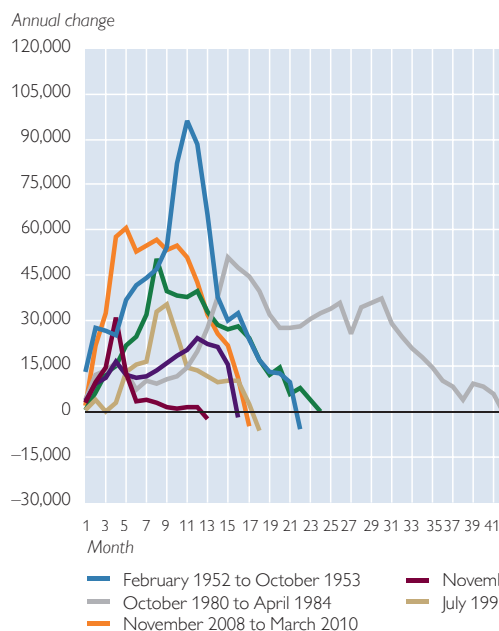
demand actually contracted. A case in point of a period that does not meet this requirement is the immigrant labor supply shock of the early 1990s, when a rise in unemployment coincided with a substantial increase in employment.

The time frame of labor market crises was also defined in a simple way: The first month in which unemployment figures increase on a year-on-year basis is the beginning of the crisis, and the first month in which the changes in unemployment turn negative (or close to zero) is the end.<sup>7</sup> The same definition is used for the employment data series. Chart 3 shows the data series on seven labor market crises in Austria since World War II.

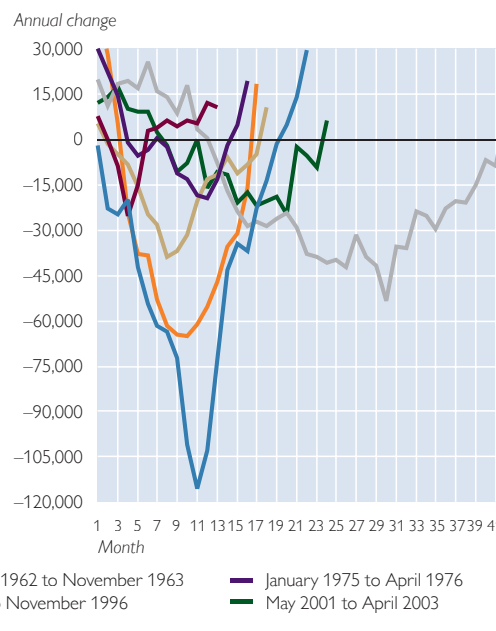
Chart 3

### Developments during Selected Labor Market Crises

#### Unemployment



#### Employment



Source: AMS, Main Association of Austrian Social Security Institutions.

<sup>7</sup> This simple method of defining the beginning and end of a crisis distorts the temporal dimension, though (see annex). Moreover, AMS training programs for unemployed people are stepped up during a crisis, which dampens the impact on unemployment as recorded by the AMS, which in turn has an (albeit small) effect on the calculated duration of the labor market crisis. Figures on training program participation are not considered, as they are available only for the period since 1998.

The left-hand panel of chart 3 (Unemployment) is almost a mirror image of the right-hand panel (Employment), but changes in employment are frequently larger than those in unemployment, which points to a decline in labor supply in times of crisis (see also section 1.4).

The chart shows that, compared to the other episodes, the latest labor market crisis was rather severe both in terms of its intensity (measured by the highest and lowest point) and its duration. Still, in the early 1950s, unemployment increased much more than it did now. While the rise in unemployment in the early 1980s and early 2000s was comparable to that observed in the latest crisis, it took longer in the earlier two episodes (and even substantially longer in the period from 1980 to 1984) before employment increased and unemployment declined again on a year-on-year basis.

Chart 3 also shows that unemployment rose very steeply in the 2008–10 crisis, surging within just a few months, but abating almost as quickly when the crisis subsided. According to our definition, the current crisis lasted 16 months, from November 2008 to March 2010.<sup>8</sup>

All seven episodes are dwarfed by the Great Recession of the 1930s. While unemployment figures initially rose by 75,000 between 1929 and 1930 (and thus by not much more than in 2008–09), they increased by a hefty 315,000 (i.e. total unemployment roughly doubled) until 1933. The unemployment rate climbed above 27%<sup>9</sup> and declined only slightly over the following years (Mitchell, 2000).

#### 1.4 Effects on Employment and Joblessness Remain Modest

While the changes in unemployment and employment have been substantial in the current labor market crisis, they have been surprisingly moderate in relation to the dramatic real economic downturn and the severe recession.

What would have been the outcome if employment and joblessness had reacted to fluctuations in economic activity like they used to in the past? In chart 4, we attempt to provide a simple answer based on annual data. The scatter plot in the left-hand panel shows GDP growth and changes in the unemployment rate (national definition) for the period from 1985 to 2007. The average relationship of the two variables is also called Okun's law. A simple regression line through the data points yields an Okun coefficient of  $-4$ . This means that, on average, a rise in GDP growth by 1% dampens the increase in the unemployment rate by 0.25 percentage points. Real GDP growth would have to be at least 2.5% for the unemployment rate to drop. Chart 4 shows the actual data point for 2009 and the point marked in the regression line that results from the average relationship given the same annual GDP contraction ( $-3.9\%$ ). According to Okun's law, the unemployment rate would have had to rise slightly more than it did, but the difference is just under 0.3 percentage points.

There are good reasons for not focusing on the unemployment rate, though: Unemployment tends to react only to a certain extent to business cycle fluctuations. This is because labor supply, too, typically declines in a re-

<sup>8</sup> Just like at the onset of the crisis, the AMS early warning system again indicated in advance that unemployment would recede.

<sup>9</sup> Austria's population and labor supply were much smaller then than they are today.

cession, as some people withdraw from the labor market, discouraged by bleak job prospects, while others are not counted in unemployment figures because they participate in AMS training programs.<sup>10</sup> Both groups are no longer registered as employed or unemployed and thus have no impact on labor supply figures.

This suggests that employment figures should be used for assessing the responsiveness of the labor market to GDP developments (see Möller, 2010, for Germany). The right-hand panel of chart 4 shows the relationship of the cyclical components<sup>11</sup> of payroll employment (based on national accounts data) and real GDP growth. The employment data series represents estimated values that are obtained by regressing cyclical employment on contemporary and one-year lagged cyclical GDP growth for the period from 1985 to 2009.

The two series follow roughly the same patterns, but employment growth fluctuates less than GDP growth. Even when we take this into account, the chart suggests that the reaction of employment in 2009 was weaker than could be expected in light of the downturn. In the following, we will show that this can be attributed to the substantial decline in average hours worked per employee in Austria, which made it possible to keep a relatively large number of people in employment.

## 2 Reasons for the Relatively Moderate Worsening of the Labor Market

Economic policy measures have contributed substantially to mitigating the effects of the crisis on the labor market. In 2009, Austria adopted two labor market packages, which included many measures with a direct impact on the labor market. In addition, the two

Chart 4

### Expected and Actual Developments

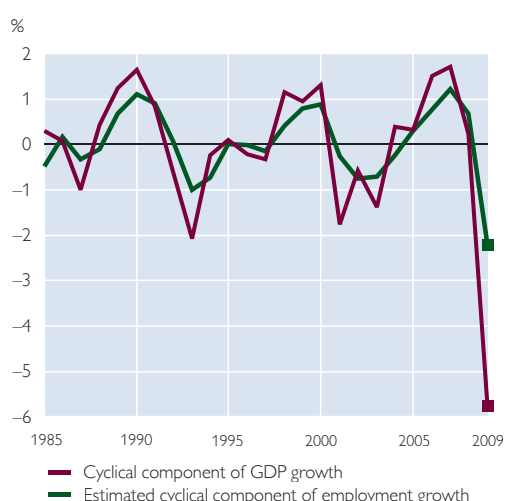
#### Okun's Law 1985 to 2007

Change in the unemployment rate (national definition) in percentage points



Source: OeNB, author's calculations.

#### Employment and GDP Growth



<sup>10</sup> AMS training measures have, in fact, been extended substantially (section 2).

<sup>11</sup> The cyclical components are isolated by subtracting actual employment growth from trend growth, which is obtained by applying a Hodrick-Prescott filter ( $\lambda=100$ ) to the series from 1985 to 2009.



general economic stimulus packages and the last tax reform had an indirect impact, and the funds allocated to the AMS for active labor market measures were increased by 27% to more than EUR 1.1 billion. Table 2 shows that in 2009, spending on active labor market measures increased by a larger margin in relative terms than expenditure for passive measures (unemployment benefits and social assistance).

The labor market packages include above all consulting, training and employment measures for youth and young adults. Another element is the subsidized wage scheme for companies that hire people reentering the workforce, older employees or people with special needs (“Kombilohn Neu”). Other subsidized wage schemes are the “Aktion 4000” campaign, which creates employment opportunities in the public and nonprofit sectors for the long-term unemployed (or those in danger of becoming long-term unemployed), and the “Aktion +6000” initiative, which benefits youth with limited employment chances. In addition, the government changed the provisions on phased retirement, making it easier for older employees to reduce working hours before retirement. The packages are

rounded off by a number of qualification measures (the introduction of an AMS-financed bonus for participants in training programs, easier access to study leave, special training courses for migrants, qualification initiative in the health and social services sector). Finally, the number of people who received study leave benefits also rose sharply during the crisis; in the first half of 2010, it was up by around 70%<sup>12</sup> (or just under 3,000 in absolute figures) compared with the first half of 2009.

A detailed overview of the labor market measures taken in Austria can be found in BMWFJ (2010). A much-discussed measure, the short-time working subsidy, will be presented in greater detail in section 2.2.

## 2.1 AMS Training and Education Measures

Training and further education measures account for a large share of active labor market policy in Austria and are reflected in the number of participants in AMS training programs, which (like unemployment figures) are published by the AMS on a monthly basis. As mentioned earlier, the number of training participants rose by around 16,700 between June 2008 and June 2009

Table 2

### Expenditure on Labor Market Measures in Austria

	2009	2008	Change
	EUR million		%
Active measures (e.g. qualification measures, including short-time work)	1,119.51	882.24	31.4
Passive and activating measures (e.g. unemployment benefits)	4,147.33	3,411.16	21.6
Total	5,266.84	4,293.40	23.6

Source: AMS (2010b).

<sup>12</sup> Preliminary figure provided by the Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection (BMAK).

(table 1). Chart 5 (left-hand panel) shows that this was a strong increase from an already high level. Based on annual averages, the number of training participants rose steadily between 1998 and 2009 (except in 2007 and 2008), more than tripling from 20,000 to above 60,000. This rise is, in principle, positive – both the European Commission and the OECD have for years promoted the use of these (and other) tools of active labor market policy. Given the large funds involved and the broad range of programs and courses available, however, evaluations are in order.<sup>13</sup>

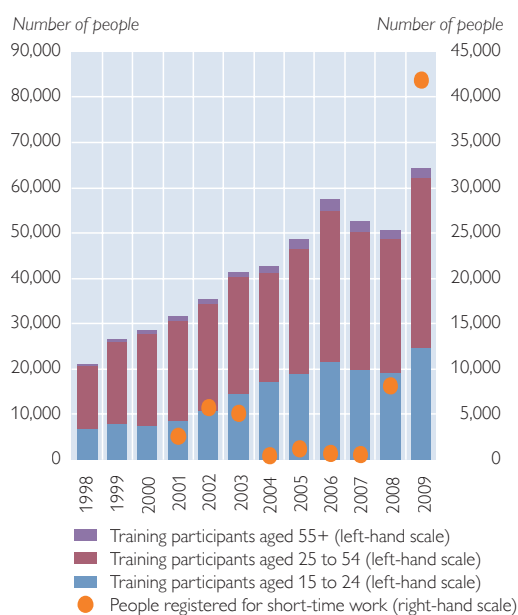
## 2.2 Short-Time Work Surged during the Current Crisis Compared with the Last Economic Downturn

Short-time work has probably been the most prominent tool of active labor market policy during the crisis. It is an arrangement that allows companies experiencing a sales crisis to reduce the working hours<sup>14</sup> of their employees, who are compensated for part of their loss in earnings by the AMS in an amount based on notional unemployment benefits. The two labor market packages included the extension of the duration of the short-time working

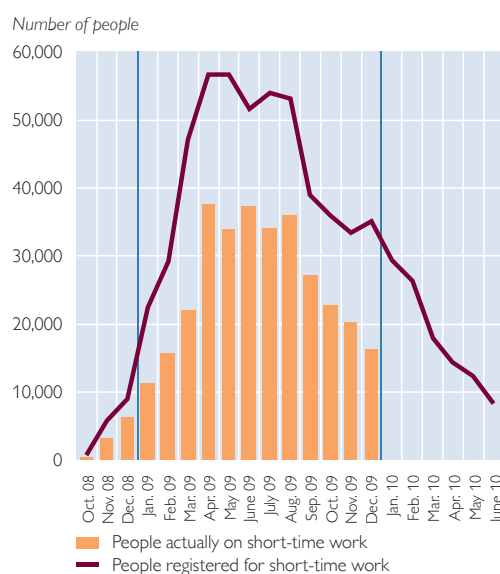
Chart 5

### Active Labor Market Policy in Austria – Key Measures

#### AMS Training Programs and Short-Time Work from 1998 to 2009



#### Short-Time Work during the Crisis



Source: AMS, Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection (BMAK).

<sup>13</sup> According to an analysis by Lutz and Mahringer (2007), subject-specific qualification measures have considerably larger employment effects than measures that support people in their job search and in taking up work (e.g. career orientation or job application training courses). The practice of making unemployed people attend the same course several times has also been debated. In an interview with the daily newspaper Der Standard, for instance, the Austrian Minister of Labour, Social Affairs and Consumer Protection, Rudolf Hundstorfer, declared that in future, people should not be required to attend one and the same job application training three times (Der Standard, May 25, 2010).

<sup>14</sup> The reduction in working time can be between 10% and 90%.

subsidy to up to 24 months. The number of short-time work arrangements deemed eligible by the AMS came to above 40,000 on average in 2009, which is about eight times higher than the figure recorded during the crisis of 2001–02 (left-hand panel of chart 5).<sup>15</sup> A breakdown by industries shows that above all the automotive and automotive supply industry as well as the machinery industry – industries where output declined particularly sharply – made use of this option. The total costs of this labor market measure ran to EUR 114 million in 2009.

The number of people registered for short-time work peaked in spring and summer 2009, coming to almost 57,000 in April 2009 (right-hand panel of chart 5). This figure declined steadily and quickly from August 2009 to reach just around 8,000 by June 2010.

The number of employees that were actually put on short-time work was considerably smaller, though, peaking, also in April, at almost 38,000 (right-hand panel of chart 5).<sup>16</sup>

On average, around 26,000 short-time working arrangements were actually subsidized in 2009, with an average reduction in working hours of around 26% (BMWFJ, 2010). This information allows us to make a rough estimate of the employment effects of short-time work. Assuming that 26% of these 26,000 employees would have lost their jobs if short-time work had not been introduced, the employment effect would come to just under 6,800 or 0.2% of payroll employment. While the calculation itself is not without problems

(see section 3.3), the result clearly shows that short-time work alone cannot have prevented employment from declining more sharply than it did.

### 2.3 Decline in Hours Worked

Another reason for the comparatively moderate effects of the crisis on employment and joblessness was the reduction in total hours worked, which dropped by 5.2%<sup>17</sup> – that is, by much more than employment (–1.8%) – between the second quarter of 2008 and the same quarter one year later (table 1).

This significant decline in the number of hours worked was attributable to two factors: First, capacity utilization in the Austrian economy had been high and people had worked many overtime hours before the crisis. Reducing hours was therefore an obvious measure. Second, regular working hours per week also declined in the wake of the crisis. According to an evaluation of LFS data (OECD, 2010), just under 45% of the reduction in hours worked per employee in Austria was due to a decline in overtime hours, while the remaining more than 55% was achieved through a reduction in regular working hours. How much did short-time work contribute to this decline? Based on the number of employees actually put on short-time work (26,000) and the associated average decline in working hours by 26%, an evaluation of LFS data shows that the contribution of short-time work to the total reduction in hours worked (–5.2%) was just 0.26 percentage points.

<sup>15</sup> Pre-2001 figures on short-time work are not available.

<sup>16</sup> No final data are available for 2010, as the final settlements are made with considerable delay.

<sup>17</sup> According to seasonally adjusted national accounts data, the total number of hours worked fell by just 1.2%, which does not seem plausible. The international comparisons in OECD (2010) and European Commission (2009), too, are based on LFS data on hours worked.

### 3 An International Comparison

How severe was the deterioration of the Austrian labor market by international standards?<sup>18</sup> The effects of the crisis have been highly heterogeneous across national labor markets, which can be ascribed to two main factors: First, some countries were hit harder than others by the macroeconomic shock (measured by the decline in real GDP), and second, the employment response differed across countries regarding the extent to which it was based on a reduction in headcount or working hours.

the euro area and the U.S.A. Employment dropped in all countries but Poland. The decline was especially pronounced in the Baltic countries, which also posted a more dramatic slowdown in GDP growth than the other countries. In some countries, like Ireland, Spain and the U.S.A., employment dropped relatively sharply measured by the average relationship between growth and employment (regression line), while the reaction of employment was rather weak in other countries (e.g. Germany and Austria).

#### 3.1 Substantial Country Differences in the Size of the Macroeconomic Shock and the Employment Response

Chart 6 shows a scatter plot of changes in real GDP and employment for all EU Member States, the EU aggregate,

#### 3.2 Headcount or Working Hour Reductions?

To make the differences in response patterns better visible and to abstract from the size and composition of the macroeconomic shock, chart 7 shows the elasticity of employment and work-

Chart 6

#### GDP and Employment Growth in the Wake of the Crisis (Q2/2008 to Q2/2009)



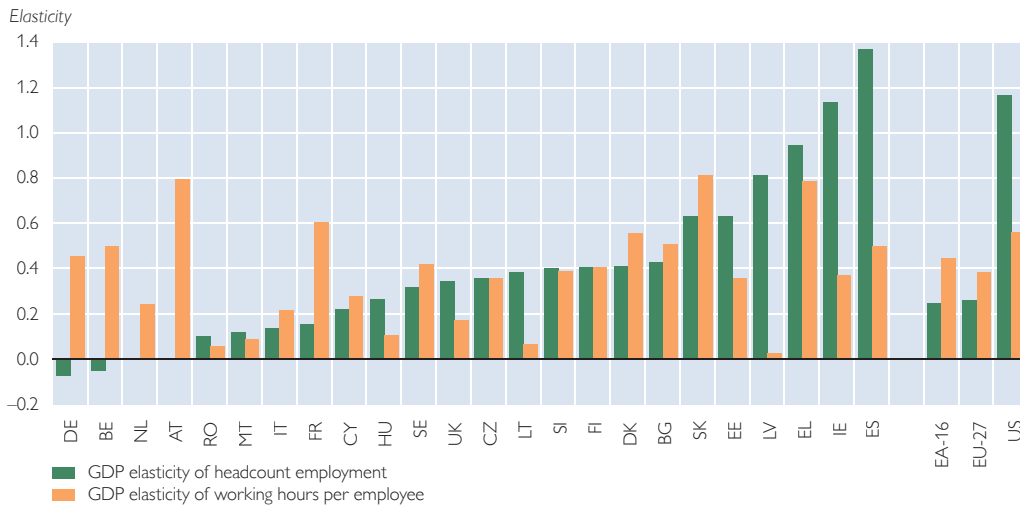
Source: Eurostat, Bureau of Labor Statistics (BLS), Bureau of Economic Analysis (BEA).

Note: EA-16 stands for the 16 euro area countries.

<sup>18</sup> See OECD (2009, 2010), European Commission (2009), Verick and Islam (2010) or Eichhorst et al. (2010) for detailed discussions of labor market developments during the crisis.

Chart 7

### Employment Response: Reductions in Headcount or in Working Hours per Employee?



Source: Eurostat, Bureau of Labor Statistics (BLS), Bureau of Economic Analysis (BEA), author's calculations.

Note: The three member states with a negative elasticity of working hours (Luxembourg, Poland and Portugal) are not included in this chart. EA-16 stands for the 16 euro area countries.

ing hours<sup>19</sup> in relation to the decline in real GDP during the crisis for the same countries, which are sorted in ascending order of employment elasticity.

While the reaction of working hours per employee was rather similar in the U.S.A. and the EU (and the euro area), the number of layoffs in relation to the size of the downturn was much higher in the United States. Employment dropped significantly in some European countries, too, above all in Spain, Ireland and Greece, whereas in other EU countries, like Germany, Belgium, Austria and France, the number of layoffs was very small and the necessary adjustments were achieved through sharp reductions in the number of working hours. In still other countries, e.g. the Czech Republic, Sweden, Slovenia and Finland, the elasticity of employment and of working hours was in a similar range. The combination of a low elasticity of employ-

ment and a high elasticity of working hours usually means that the productivity per employee drops, but it does not necessarily imply a decline in the productivity per hour (see OECD, 2010).

How can we explain the stark differences in response patterns? One plausible reason is that in several countries (in particular Spain, Ireland and the U.S.A.), speculative real estate bubbles burst as the financial crisis hit, which led to a slump in the construction industry. The precrisis share of the construction industry in total employment is, in fact, negatively correlated with the change in total employment during the crisis (European Commission, 2009). These developments can be assumed to be structural changes in the respective economies, so that employment in construction will likely not return to precrisis levels. This explains the drastic decline in employment in this industry.

<sup>19</sup> EU Member States: Hours worked per employee in principal job.

Another factor is that several countries, e.g. Germany and Austria, faced shrinking exports during the crisis, but the affected companies tended to keep their highly qualified employees, assuming that the crisis would only be temporary (Möller, 2010; OECD, 2010; The Economist, 2010).

In addition, there may be country-specific differences in companies' willingness to keep people employed, and this willingness may also change over time. Since the 1970s, U.S. companies have increasingly laid off staff instead of reducing working hour in response to declining labor demand (OECD, 2010). Hallock (2009) identifies a fraying of the implicit employment contract, which involves expectations about employers' and employees' loyalty toward each other, for instance as regards the avoidance of layoffs. This may also have contributed to the differences in employment reactions in the U.S.A. and in Europe. In those European countries that posted substantial declines in employment, leased staff (to whom this implicit contract does not extend) were affected the most, as the example of Spain shows.

### 3.3 The Effects of Short-Time Work – An International Comparison

Many countries relied on short-time work during the crisis, either by adapting existing arrangements (e.g. by extending maximum periods) or by introducing such schemes (OECD, 2010). Measured in terms of total employment, short-time work was used more widely in Germany than in Austria. Based on a calculation analogous to that used in section 2.3 for Austria, the employment effect in Germany would be 350,000 or around 1% of total payroll employment. In this case, too, short-

time work can only partly explain the moderate reaction of employment figures. More important were (1) the fact that companies voluntarily reduced working hours per employee and (2) the flexibility of working hours through working time accounts, as foreseen in many collective agreement contracts (Möller, 2010).

The figures obtained in such simple calculations of the effects of short-time work (as those mentioned for Austria and Germany) probably reflect the upper limit of the actual impact. For one thing, the subsidies may lead to deadweight effects (i.e. companies would not have cut these jobs anyway), and for another thing, it is possible that companies cut the jobs once the subsidies expire. To assess the impact of short-time work accurately, we would have to know the counterfactual outcome, that is, the change in employment without short-time work, which, obviously, can only be estimated. An attempt at estimating the counterfactual development to gauge the permanent effects of short-time work on employment was made in OECD (2010) based on a panel-econometric analysis of 19 EU Member States.

Table 3

#### Estimated Permanent Effects of Short-Time Work on Employment

	%	1,000 persons
Portugal	0.01	0.4
Denmark	0.06	1.5
France	0.09	18.1
Netherlands	0.09	5.6
Hungary	0.09	3.0
Austria	0.12	4.0
Spain	0.24	30.3
Czech Republic	0.43	17.3
Germany	0.73	221.5
Italy	0.74	124.0
Finland	0.78	15.3
Belgium	1.27	43.3

Source: OECD (2010).

The results are shown in table 3. In a number of countries, short-time work contributed significantly to safeguarding employment (above all in Germany, Italy and Finland). The effect was most pronounced in Belgium at around 1.3% of total employment. At 0.12%, the results for Austria were somewhat smaller than those obtained in the rough estimation presented in section 2.3 (0.2%).

#### 4 Visible Labor Market Recovery

Labor market conditions in Austria have improved markedly since mid-2009. Chart 8 shows two seasonally adjusted unemployment rates for Austria (Eurostat and national definition). Both rates rose until mid-2009 and have been falling since, with the Eurostat rate declining much more strongly than the AMS rate. The chart also illustrates that the unemployment rate in the euro area stabilized at 10% but has not dropped yet on average.

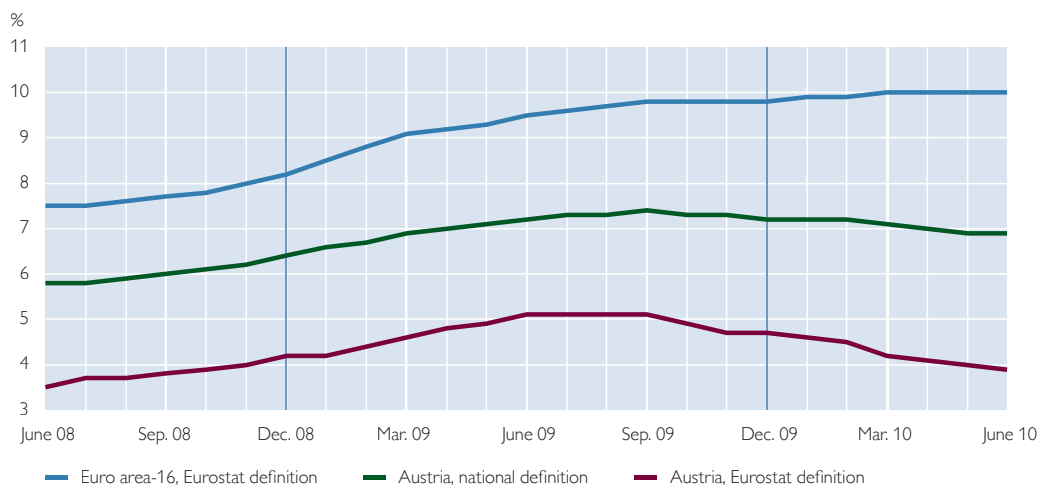
#### 4.1 Unemployment still Above, Employment still Below Precrisis Levels

To establish whether employment and joblessness have returned to precrisis levels, table 4 compares Austrian labor market data from end-June 2008 (the first quarter of 2008) with data from end-June 2010 (the first quarter of 2010).

While the situation has improved from June 2009, unemployment was still 40,000 above and employment almost 20,000 below the mid-2008 level. The number of AMS training participants was also 25,000 higher than the precrisis level. Moreover, AMS data show that the labor market support measures taken in addition to short-time working subsidies generally continued at a higher level than before the crisis. Further, the LFS results suggest that the total number of hours worked increased from 2009, but still remained 2.1% below the precrisis level.

Chart 8

#### Seasonally Adjusted Unemployment Rates from June 2008 to June 2010



Source: OeNB.

## 4.2 No Improvement in Manufacturing but More Jobs in the Public, Education, Health and Social Services Sectors

Looking at individual industries, it turns out that manufacturing employment has not improved at all: Job figures in this sector are 45,000 below the June 2008 level. A comparison with table 1 shows that the situation even deteriorated slightly from mid-2009. Construction employment showed no improvement from 2009, either.

A rise in employment from June 2009 was observed in wholesale and retail trade and above all in the staff leasing industry, which points to un-

certainty regarding the sustainability of the recovery. Apparently, companies are hesitant to hire permanent staff. However, this could also be a lasting effect, with companies in the manufacturing industry permanently replacing part of their core staff with leased employees.

Compared with 2008 and 2009 figures, employment improved in the public sector as well as the education, health and social services sectors. On the one hand, this rise has to do with increased demand for childcare employees (free access to kindergarten was introduced in several Austrian provinces, and one year of mandatory

Table 4

### Current Situation in the Austrian Labor Market Compared with the Precrisis Situation

	Change from June 2008 to June 2010	
	Unemployment	Payroll employment
<b>Austrian social security and AMS data<sup>1</sup></b>		
Total figures, in absolute terms (number of people or contracts <sup>2</sup> )	40,095	-19,505
Total figures, in relative terms (%)	23.2	-0.6
Participants in AMS training programs	25,398	
Vacancies	-9,617	
Selected industries:		
	<i>Number of people</i>	
Manufacturing	5,811	-45,222
Construction	3,092	-6,742
Wholesale and retail trade	6,789	-7,564
Accommodation and food services	4,626	-4,944
Staff leasing	3,491	-7,364
Financial services	139	4,789
Public administration and defence, compulsory social security	874	8,049
Education	1,099	11,715
Health	454	6,548
Social work	2,468	10,266
<b>Labour Force Survey data<sup>3</sup></b>		
Total figures, in absolute terms (number of persons)	1,700	-14,300
Total figures, in relative terms (%)	1.0	-0.4
Hours worked (quarterly, in %)	-2.1	
<i>Percentage points</i>		
<b>Unemployment rate</b>		
National definition	1.0	
Eurostat definition	0.4	

Source: Austrian Federal Ministry of Labour (BMASK), Statistics Austria.

<sup>1</sup> Change from May 2008 to May 2010 for employment data (owing to a reclassification).

<sup>2</sup> Payroll contracts excluding people on parental leave.

<sup>3</sup> Change from Q1/2008 to Q1/2010.



preschool education was introduced throughout Austria). On the other hand, it probably reflects the effects of several AMS labor market programs (section 2).

### 4.3 Eurostat Unemployment Rate for Austria Plunged

At 3.9% as of end-June 2010, the Eurostat unemployment rate was just 0.4 percentage points higher than the June 2008 level (chart 8 and table 4). This seems somewhat surprising in light of the above-described conditions in the Austrian labor market. One caveat is that the data for April, May and June 2010 are preliminary and will be revised once the LFS results for the second quarter of 2010 become available. Then the Eurostat rate will again be adjusted for seasonality. The next revision of the Eurostat rate might result in a somewhat higher rate for Austria, but this should not change the fact that Austria currently has the lowest unemployment rate in the EU.

## 5 Summary and Conclusions

Labor market conditions in Austria started to deteriorate from mid-2008 during the international financial and economic crisis. Employment declined by some 60,000 until mid-2009, and joblessness increased by more than 50,000 year on year, in particular in manufacturing, construction, accommodation and food services as well as staff leasing.

In terms of its duration and its quantitative effects on employment and unemployment, this episode has been one of the severest crises since World War II. In relation to the decline in real GDP, however, the impact has

been surprisingly moderate, which was attributable to a sharp decline in total hours worked that was more substantial than the decline in headcount employment.

The stabilization of the Austrian labor market can be ascribed, among other things, to the massive use of active labor market measures, with the extension of the short-time working subsidy receiving the most public attention. The actual working hour reductions were much more substantial than can be explained by short-time work, though.

An international comparison shows considerable heterogeneity in the degree to which national labor markets deteriorated. This has to do with differences in the size of the macroeconomic shock on the one hand, and on the other hand with differences in the extent to which the decline in employment was based on headcount or on hours worked per employee. Austria and Germany are among those countries in which hours worked per employee declined the most, which made it possible to keep more people in employment. Another factor was probably companies' assessment of the extent to which the crisis would have structural implications in the respective countries.

Labor market conditions in Austria have been improving over the past few months, but unemployment figures and the number of AMS training participants are still markedly higher than they were before the crisis. Also, total employment is still below the precrisis level, especially in the manufacturing industry. Employment has risen sharply in the public sector and in the education, health and social services sectors.

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## Annex Notes on the Dynamics of Seasonal Labor Market Time Series

Most monthly (or quarterly) time series we used to describe general developments in the Austrian labor market show seasonal fluctuations with significantly larger amplitudes than the fluctuations of the business cycle. This applies e.g. to total employment and unemployment figures as well as the unemployment rate. The first panel in chart 9 shows non-seasonally adjusted data on the change of the monthly unemployment rate according to the national definition, which is calculated using payroll employment as reported by the Main Association of Austrian Social Security Institutions and AMS-registered unemployment, for the period from January 2007 to June 2010.

The chart reveals the pronounced seasonal pattern of unemployment: The graph peaks toward the turn of each year and reaches a trough around the middle of each year, with the average difference between peak and trough coming to almost 3 percentage points each year. The impact of the economic downturn is difficult to discern from this chart, and the exact timing of the labor market crisis cannot be determined. While it is clear that unemployment peaked in January 2010, it is impossible to distinguish between seasonal and cyclical (crisis-related) effects.

It is customary in Austrian labor market statistics to eliminate seasonality

from the time series by calculating year-on-year changes for each month. The result is shown in the second panel of chart 9 (Annual Change). Now it is possible to identify distinct phases: After declining until November 2008, unemployment increased until February 2010 (with the strongest rise being recorded in March 2009) and dropped again from March 2010 on a year-on-year basis.

Does this help in determining the exact timing of the labor market crisis and its peak? The third panel of chart 9 (Seasonally Adjusted Data) illustrates that a graph based on annual changes, too, can be misleading in establishing the timing of the crisis in the labor market. The graph – like the one in the first panel – shows monthly data, but this time, the data have been adjusted for seasonality.<sup>20</sup> The chart shows that the unemployment rate started to rise already in spring 2008 and peaked in September 2009.

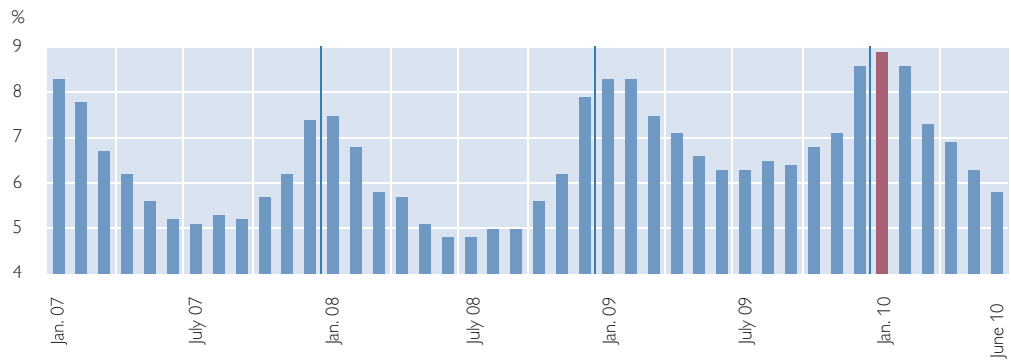
Using seasonally adjusted data is certainly advantageous in several respects. However, no official seasonally adjusted time series<sup>21</sup> are available for Austria – unlike in the U.S.A., where such data are provided by the Bureau of Labor Statistics (BLS). This means that each institution would produce its own data series, which would inevitably lead to confusion, because there are different seasonal adjustment methods, and economic statisticians have to select several parameters themselves for each method.

<sup>20</sup> The time series was obtained from the Austrian Institute of Economic Research, WIFO (adjustment method: Census X12).

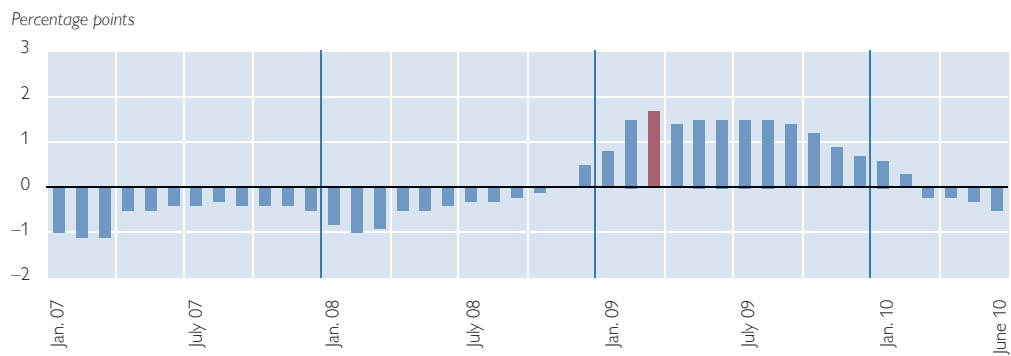
<sup>21</sup> The only exception is the Eurostat unemployment rate, which is published by Statistics Austria for the purpose of international comparisons.

### Unemployment Rate, National Definition (January 2007 to June 2010)

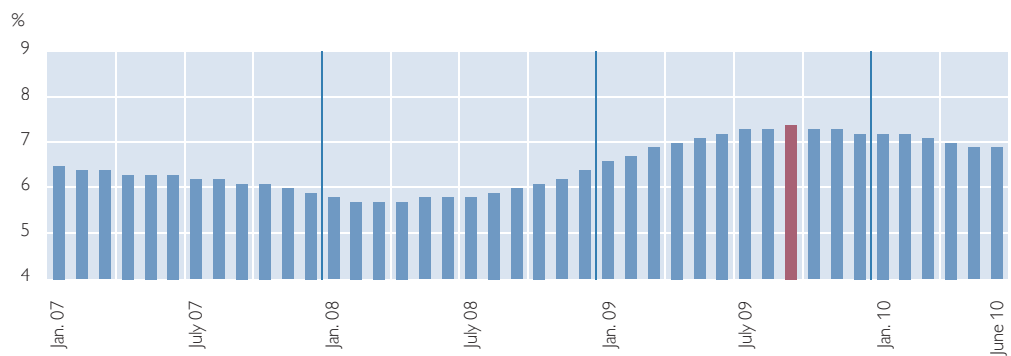
#### Non-Seasonally Adjusted Data



#### Annual Change



#### Seasonally Adjusted Data



Source: AMS, Austrian Institute of Economic Research (WIFO).