

Austria's labor market during the COVID-19 crisis

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Refereed by: Markus Riegler, Parliamentary Budget Office

The impact of the COVID-19 crisis on Austria's labor market has been huge and a lot heavier than during the Great Recession of 2009 in terms of the increase in unemployment and the drop in employment. Key metrics show that the decrease in employment was broadly in line with the euro area average and that the increase in unemployment went hand in hand with an increase in long-term unemployment and the average duration of unemployment. The generous short-time work scheme rolled out by the government prevented a turn for the worse and also lessened the downward pressure on average wages induced by the strong decrease in average hours worked per employee in 2020. While manufacturing or construction were hit as well, the tourism industry was affected most by the crisis, contributing to a relatively stronger increase in unemployment in provinces with a higher tourism-related share of employment. Younger employees and especially foreigners were also relatively more affected by the increase in unemployment, while employees with tertiary education were relatively less affected. Labor supply, while losing momentum, did continue to grow in 2020, while it had stagnated during the Great Recession.

JEL classification J3, J2, E32, H2

Keywords: COVID-19, labor market, recession, public policy

COVID-19 and the associated containment measures resulted in the worst economic crisis we have seen since World War II. In Austria, real economic output dropped by about 6½% in 2020, which is roughly in line with the average GDP decline in the euro area. As shops, close contact service providers, hotels and restaurants had to close repeatedly for weeks on end, real private consumption shrank by more than 9%. Service exports (real: –19%) and especially travel expenditures (nominal: –40%)² were particularly affected by the pandemic-related measures. With the first lockdown in March 2020, the number of unemployed increased by more than 200,000 to 534,000 persons. With the easing of lockdown measures, labor market conditions improved steadily until November, when the labor market got under strong pressure again due to a second lockdown followed by a third one in early 2021.

In this article, we present stylized facts on labor market developments in Austria since the outbreak of the COVID-19 crisis.³ First, we analyze the changes in aggregate employment and map them to the respective lockdown measures (section 1). Second, we highlight the effects that economic policy measures (especially Austria's short-time working scheme) had on employment and unemployment (section 2) and on wages (section 3). This is followed by an analysis of developments in aggregate unemployment (section 4), a comparative study of the crisis impact on unemployment with respect to different socio-economic groups, regions

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² See Fenz, Stix and Vondra (2021) for details of the development in the tourism sector.

³ Other overviews of labor market developments in Austria in 2020 include Bock-Schappelwein et al. (2021).

and industries (section 5) and a discussion of the repercussions on domestic labor supply (section 6). The concluding part brings these themes together with a summary of the main results (section 7).

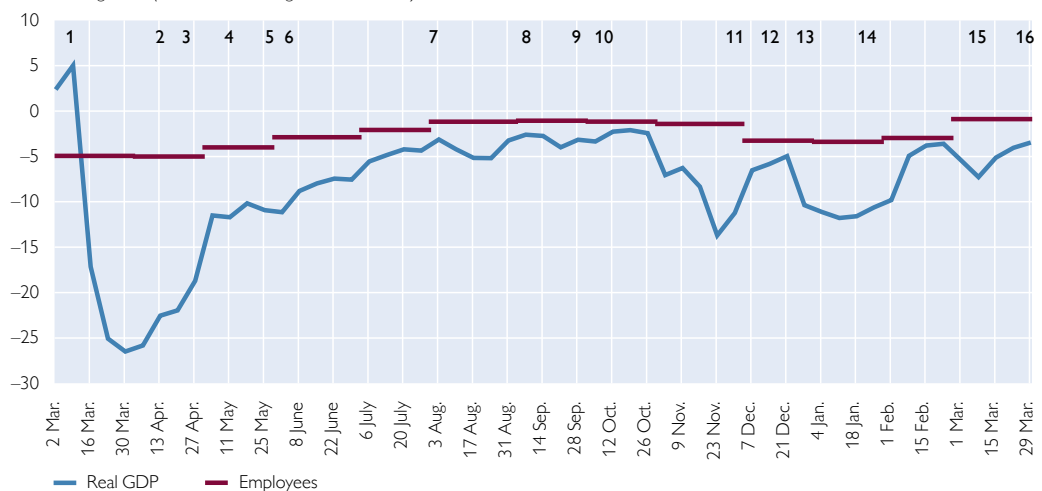
1 GDP growth and employment strongly affected by lockdown measures

Since spring 2020, employment figures have been mainly driven by the health policy measures adopted amid the COVID-19 crisis in Austria as well as in other countries. This is evident from chart 1, which cross-checks data on economic activity with Austria's different lockdown phases. Comparisons are provided for the year-on-year development of real GDP according to the OeNB's weekly GDP indicator (blue line)⁴ and the year-on-year development of monthly dependent employment (national definition, red line) based on social security statistics, which exclude self-employment and jobs paying less than the social security income threshold. For a comparison with a broader definition of employment, including information on hours worked, see chart 4, which shows seasonally adjusted figures based on quarterly national accounts data.

Chart 1

Lockdowns, weekly GDP and monthly employment

Annual change in % (March 2021: change to March 2019)



Source: Real GDP: weekly OeNB indicator; employment: Main Association of Social Insurance Institutions. Variables are not seasonally adjusted.

Note: 1: Lockdown (March 16) 2: Small shops reopen (April 14) 3: All shops reopen (May 2) 4: Restaurants reopen (May 15) 5: Hotels reopen (May 29) 6: Borders reopen gradually (June 4) 7: Face masks mandatory again (July 24) 8: Travel warnings (initially for Croatia, the Balearic islands from Aug. 8) 9: Travel warnings for Austria (Sept. 16) 10: Containment measures tightened (Sept. 21, Nov. 25) 11: Partial lockdown (Nov. 3) 12: Lockdown (Nov. 17) 13: Partial lockdown (Dec. 7) 14: Lockdown (Dec. 26) 15: Partial lockdown (Feb. 2) 16: Lockdown in Vienna, Lower Austria and Burgenland (April 1).

⁴ National accounts data are not adequate for producing estimates of the short-term extent and dynamics of the GDP slump, as they are published only at quarterly intervals 30 days after the end of each quarter. For this reason, the OeNB developed a weekly indicator to estimate changes in economic output based on alternative real-time data (payment transaction data, truck mileage data, electricity consumption data or Google mobility data, to name just a few examples). The results correlate well with those of the quarterly accounts published later. See Fenz und Stix (2021) for details. Regular updates are published on www.oenb.at.

Box 1

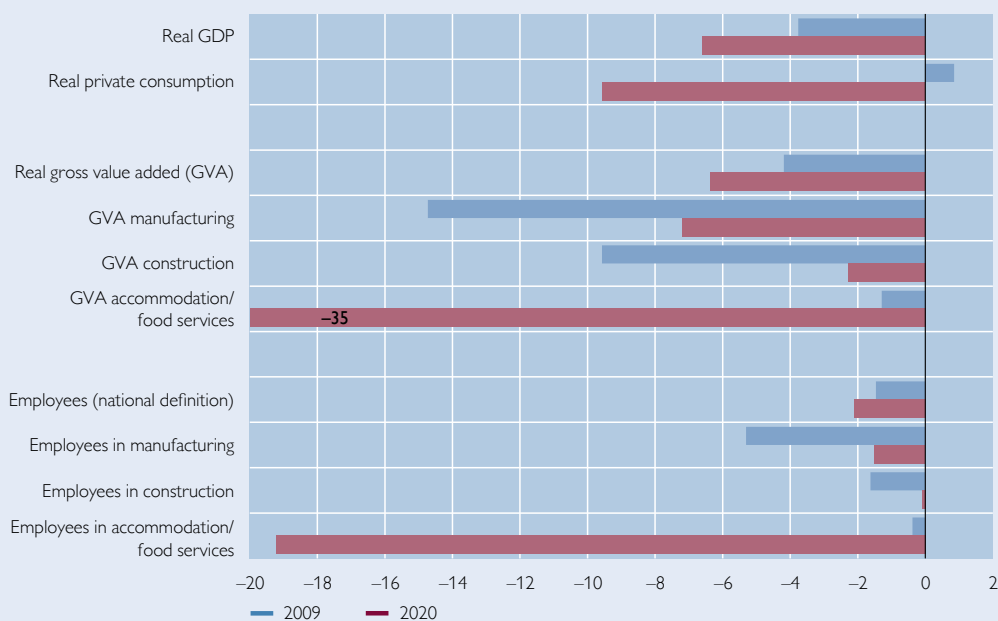
The labor market effects of the current crisis are much more severe than in 2009

The recession of 2020 was not only particularly severe, it was also different from other deep recessions, such as the most recent “Great Recession” of 2009, in terms of its composition by industry (chart 2). During the 2009 recession, private consumption had actually increased slightly in real terms, indicating that the recession was accompanied by some degree of consumption smoothing (also helped by the temporary car scrapping premium). In 2020, the lockdowns contributed to a fall in private consumption which even exceeded the contraction of real GDP. Manufacturing and construction were hit particularly hard by the 2009 recession, while in 2020 the decline in gross value added was about as sharp as for the economy at large in the manufacturing industry and a lot more moderate for the construction industry. The pattern was reversed for accommodation and food services, which witnessed a comparatively modest decline in gross value added in 2009 compared with a decline of about 35% in 2020. This, in turn, contributed to the adverse labor market developments we saw in 2020, given that accommodation and food services are among the industries with the lowest labor productivity (measured as gross value added per person employed). Due to the severe economic contraction and despite the generous short-time work schemes, employment dropped by almost 20% in this sector, while the drop in construction and manufacturing was lower than in 2009.⁵

Chart 2

Development of macroeconomic aggregates during the recessions of 2009 and 2020

Annual change in %



Source: Eurostat, Statistics Austria.

With the beginning of the first lockdown and the associated closures of the retail, catering and hotel and personal service industries on March 16, 2020, economic output collapsed sharply. The year-on-year decrease in GDP of more than 25% in early spring 2020 was the strongest on record since World War II. After strong catch-up effects in summer, the re-intensification of the pandemic (“second

⁵ For details on the Austrian labor market during the Great Recession, see Stiglbauer (2010).

wave” of infections) and the ensuing adoption of a new set of containment measures (chart 1) led to a further decline in GDP toward the end of the year. The number of employees also dropped below pre-crisis levels, but the drop was more cushioned, among other factors by the short-time work scheme that the government expanded (section 2). Overall, the negative impact on Austria's labor market was stronger than during the Great Recession of 2009 (box 1), but broadly in line with the euro area average (box 2).

Box 2

Austria's decrease in employment close to euro area average in 2020

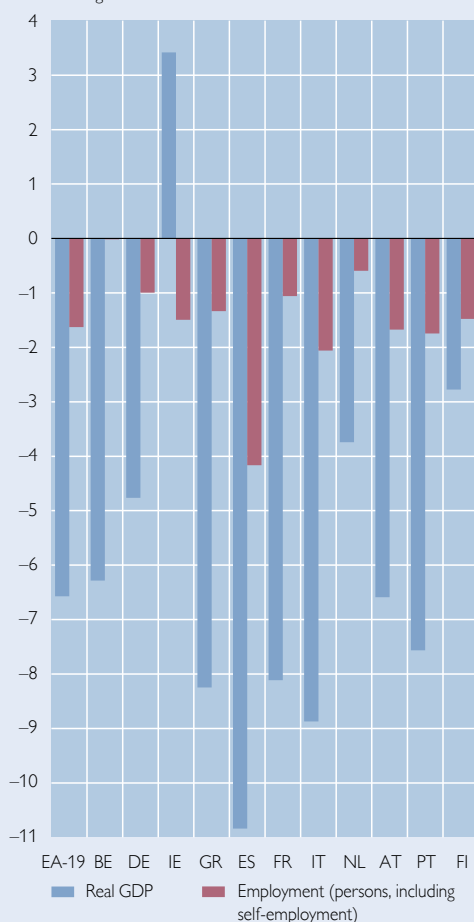
Like Austria, the euro area was heavily hit by the pandemic. The aggregate decline in employment and real GDP was quite similar to the pattern observed for Austria (chart 3, left panel). France and the Southern euro area member states were hit relatively harder, while especially Germany and the Netherlands observed much smaller declines in employment and real GDP (due to the large share of multinationals in value added in official statistics, the GDP growth of Ireland is difficult to interpret). Austria's increase in the unemployment rate as measured by

Chart 3

Macroeconomic and labor market developments in the euro area in 2020

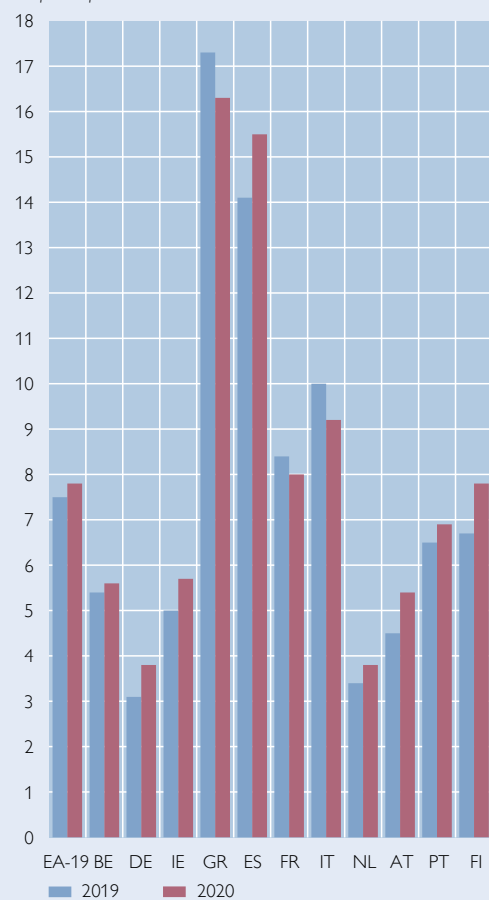
GDP and employment in 2020

Annual change in %



Unemployment rate (EU labor force survey)

% of labor force



Source: Eurostat.

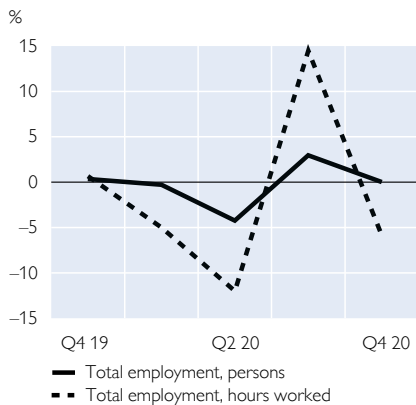
the EU labor force survey was somewhat above the euro area average as it witnessed a lower increase in the measured number of inactive persons than other countries (see box 4 for a discussion of the underlying measurement problem). Unemployment rates in Greece, France and Italy actually decreased in 2020, even though employment decreased by more than 1% in the former two countries and by more than 2% in the latter. Therefore, changes in aggregate employment are currently likely a more meaningful indicator of labor market developments than changes in the unemployment rate. However, both indicators were strongly influenced by the extent of short-time work schemes, which were implemented across Europe (for a discussion of the influence this scheme has had on the Austrian figures, see section 2).

Total hours worked tend to be more responsive to the business cycle than the number of persons employed. Amid the current crisis, this pattern became particularly pronounced. In the second quarter of 2020, the total number of hours worked collapsed by an unprecedented 12% compared to the previous quarter,⁶ while the number of employed persons dropped by “only” 4%. In line with this quarter-on-quarter pattern, the increase for hours worked in the third quarter and the decrease in the fourth quarter was much stronger than for employment in persons. In an economic downturn, firms will generally cut overtime and not require extra hours to be offset before laying off workers. Especially in industries where labor shortages are a recurring issue, firms seek to keep on employees so as not to be confronted with labor shortages in an expected future upswing. Furthermore, the short-time work scheme has been very effective in preventing an even stronger rise in unemployment.

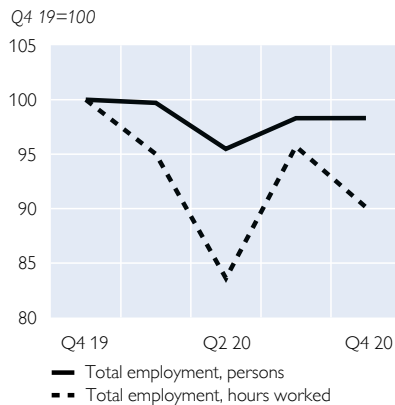
Chart 4

Number of employees more volatile than number of self-employed

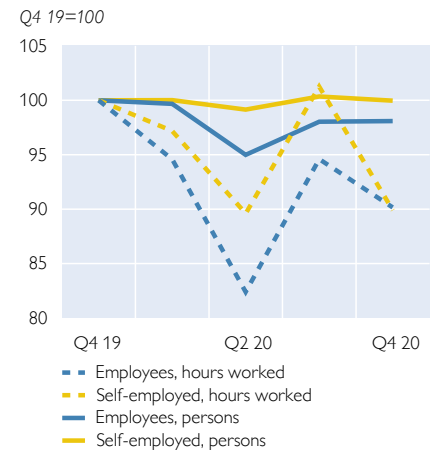
Total employment, growth on previous period



Total employment, index



Employees and self-employment, index

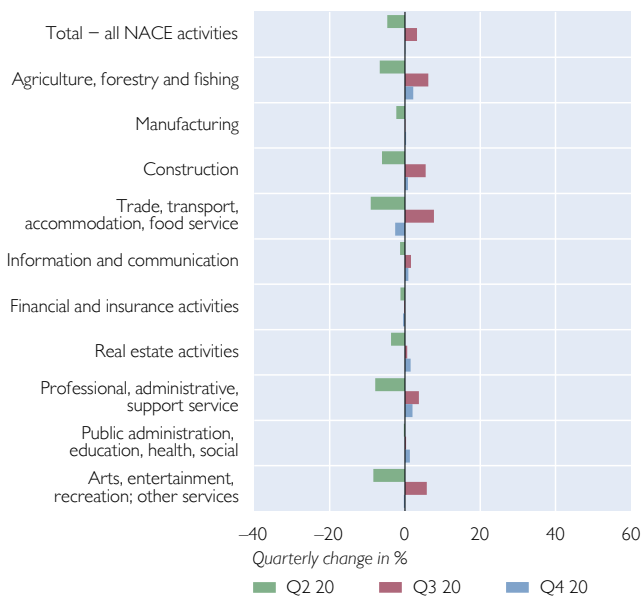


Source: Statistics Austria, National accounts data, seasonally adjusted.

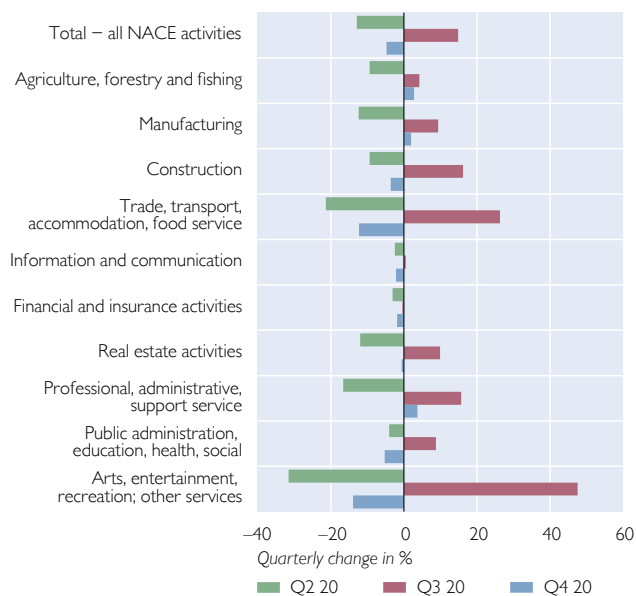
⁶ All growth rates in this section are quarter-on-quarter growth rates of seasonally adjusted variables.

Hours worked are more volatile than headcount employment

Persons



Hours



Source: Euostat, national accounts, seasonally adjusted.

The 1.7% drop in total employment observed in 2020 masks diverging developments in the number of employees (which decreased by 2%) and in the number of the self-employed (which actually increased by 1.5%). This gap is also evident from total hours worked, but less pronounced: Total hours worked fell by 8.7%, at a somewhat lower rate than total hours worked by employees (–9.4%) but at a markedly higher rate than total hours worked by the self-employed (–5.6%).

The cushioning of job losses via reductions in average working hours is also evident from industry data (chart 5), especially for industries particularly affected by lockdowns (e.g. accommodation and food services).

2 Employment effects of the pandemic dampened substantially by short-time work

Short-time work schemes are designed to support businesses in severe crisis periods by enabling them to cut working hours but top up the correspondingly lower wages with government aid. In Austria, a short-time-work scheme was in place even before the pandemic hit, but the take-up remained comparatively limited even during the Great Recession of 2009 (Hofer et al., 2020). A reform of that scheme agreed upon in March 2020 between the government and the social partners gave Austria one of the most generous schemes of the EU (Huemer et al., 2021). The new scheme is above all much more attractive from the perspective of employers, among other factors due to a larger scope (social security contributions are covered by the government in full⁷) and a larger flexibility (e.g. working hours may be reduced to zero in some months). Furthermore, keeping staff on the payroll through the short-time

⁷ In the previous short-time work scheme, employers' social security contributions for their employees had to be covered in full by firms for the first four months.

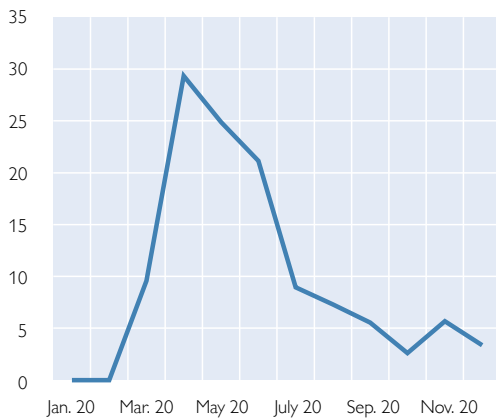
work scheme was one prerequisite for access to certain other COVID-19-related subsidies. As is evident from chart 6, about 30% of employees were on short-time work in April 2020.⁸ This had a tremendous impact on macroeconomic aggregates. Most importantly, it significantly dampened the increase in unemployment. In April 2020, for example, the unemployment rate (national definition; blue bars in chart 6) was about 5 percentage points higher than the rate for April 2019. Taking the extreme case, i.e. assuming that all employees registered for short-time work subsidy would have been laid off immediately, the unemployment rate would have been 30 percentage points higher than in April 2019 (sum of blue, orange and gray bars). The more plausible assumption appears to be an increase by close to 20 percentage

Chart 6

Impact of short-time work (STW) on macroeconomic aggregates for employees

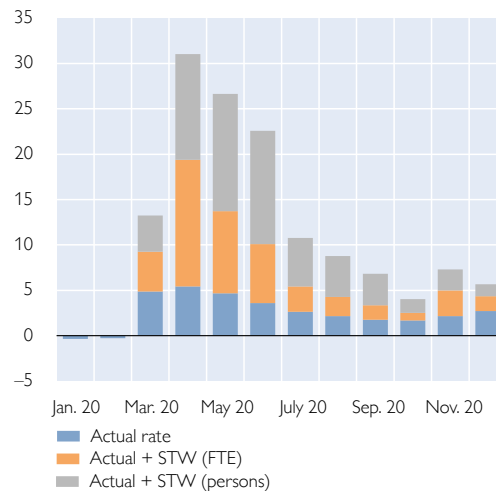
Employees (persons) in short-time work

% of total employees



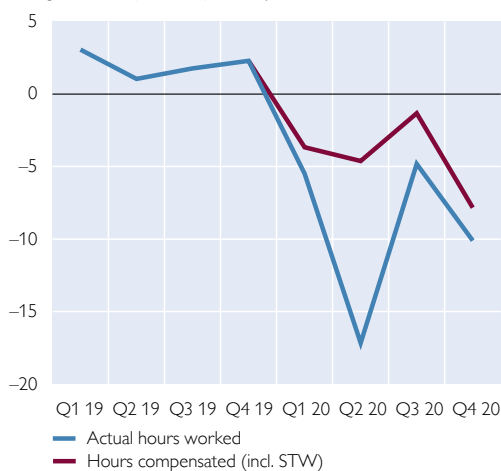
Unemployment rate (national definition)

Monthly change (year on year) in percentage points



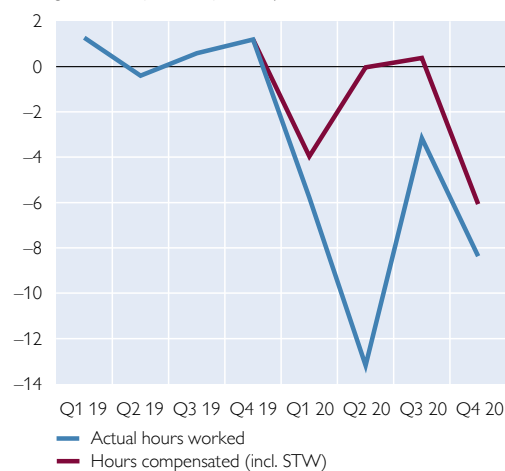
Total hours worked (national accounts)

Change on same quarter of previous year in %



Hours worked per employee (national accounts)

Change on same quarter of previous year in %



Source: Eurostat, AMS, OeNB.

Note: These charts use year-on-year comparisons of monthly resp. quarterly data as the take-up of short-time work cannot be seasonally adjusted.

⁸ We only show data on the actual take-up of short-time work as initial registrations tend to overstate the extent to which these schemes have been used.

points (sum of blue and orange bars) given that, on average, employees on short-time work reduced their working time “only” by about 40% to 50%, in the absence of binding dismissal restrictions (which ties in with the calculations made by Public Employment Service Austria (AMS, 2021).

In terms of hours worked, the impact of short-time work has been strong, too, especially so in the second quarter of 2020 (peak use of short-time work). In that quarter, average hours worked per employee were about 13% lower than in Q2/19, while average hours compensated (i.e. hours worked plus hours compensated via short-time work schemes) were about the same as in Q2/19.

3 Average wages dampened by reduction in working hours

The decline in working hours per employee (chart 6) also dampened wage increases (chart 7). After all, employees in short-time work generally receive less than their full-time wage. Under the new short-time work scheme, they are entitled to a net pay of 80% to 90% of what they would have earned otherwise; this replacement rate decreases with the net wage earned before short-time work and is not linked to the actual reduction of hours worked.⁹ This has contributed to the sizeable negative wage drift observed in 2020 (chart 7), meaning that average wages per employee (blue line) have increased by less than what would have been expected based on increases in agreed wages (red bars). Reductions in overtime have also contributed to this development, much like in 2009, when the take-up of short-time work was much more limited, however.

In the aggregate, employees were partly compensated for these losses via an income tax cut, which led to an increase in average net wages (yellow line) above the one of gross wages. This tax cut had a much smaller effect than the one during the crisis of 2009 or the one implemented in 2016, though.¹⁰ The effect of short-time work schemes on average wages is difficult to quantify as the number of employees would have dropped more sharply without this scheme, possibly accompanied by a smaller reduction in average hours worked by remaining employees. However, the effect on the aggregate compensation of employees and the impact of all COVID-19-related subsidies on the wage share can be quantified (box 3).

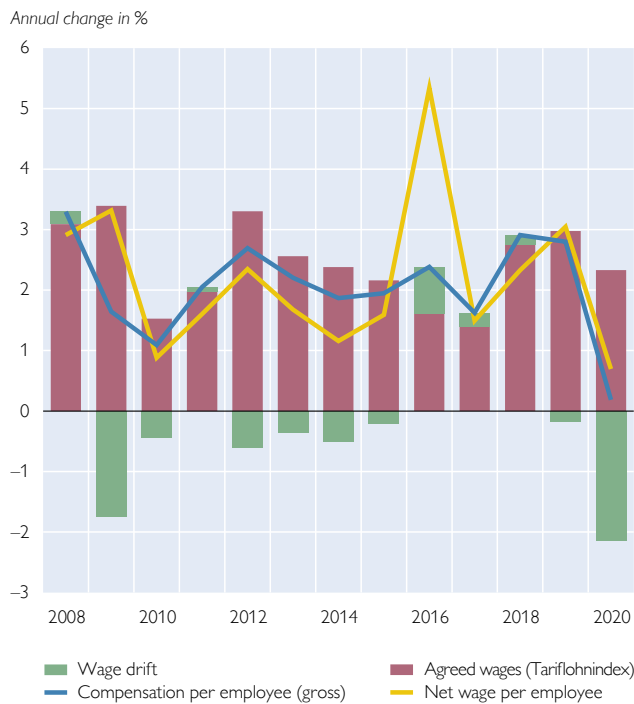
⁹ Under the previous short-time work scheme, employees received the full hourly pay for actual hours worked and a compensation roughly equivalent to pro-rata unemployment benefits for the remainder.

¹⁰ Note, however, that while the 2020 income tax cut for employees was overall smaller than in 2009 and 2016, its full impact is not visible in chart 7. It was implemented only in September 2020, and refunds for tax overpayments made from January until August 2020 will become available to some employees only in 2021.

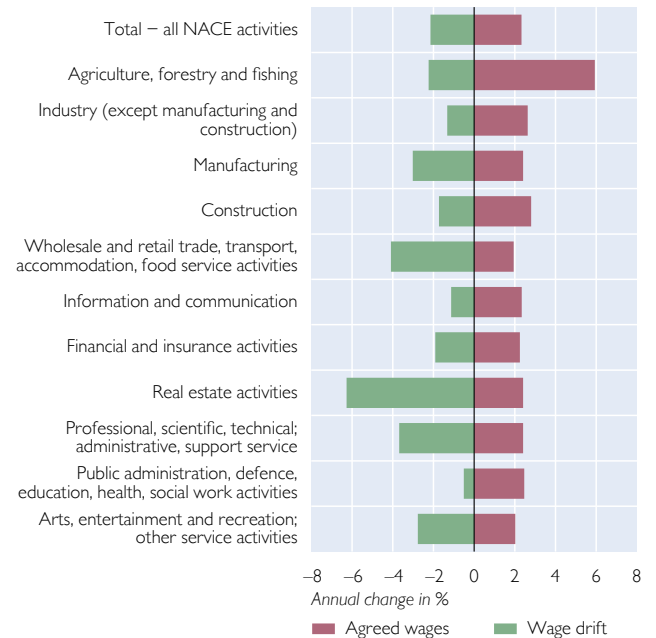
Chart 7

Wage developments

Compensation per employee from 2008 to 2020



Compensation per employee in 2020 per industry



Source: Statistics Austria, Eurostat, OeNB.

The right panel of chart 7 shows that the wage drift has been negative across all industries, with the effect being smallest (in absolute value) in the extended public sector (which includes hospitals) and the effect being particularly large in tourism and trade as well as in professional services and in the real estate sector.

Box 3

Wage share distorted by fiscal COVID-19 measures in 2020

The adjusted wage share is a standard aggregate measure of the functional income distribution between capital and labor income. It is calculated by multiplying the share of aggregate compensation of employees in GDP by the inverted ratio of dependent employment to overall employment (the term “adjusted” refers to the adjustment for self-employed persons). In 2020, both the aggregate compensation of employees and the gross operating surplus of businesses declined by far less than nominal GDP at market prices (which fell by about 5½%), which is especially remarkable for the gross operating surplus (which declined much more in 2009; see chart 8). The pattern observed in 2020 is due to the substantial COVID-19-related subsidies rolled out by the Austrian government in 2020. According to the government’s March 2021 budget notification, subsidies related to short-time work made up EUR 6 billion (about 1½% of 2019 GDP), while other targeted subsidies to enterprises made up EUR 7 billion (about 1¾% of 2019 GDP).¹¹ Assuming that 100% of short-time work subsidies went to employees (as an alternative to pay cuts and redundancies) and 100% of other subsidies went to businesses, we study the counterfactual developments of the functional income distribution without those

¹¹ These large subsidies are also the reason why we plot the wage share in GDP at factor costs.

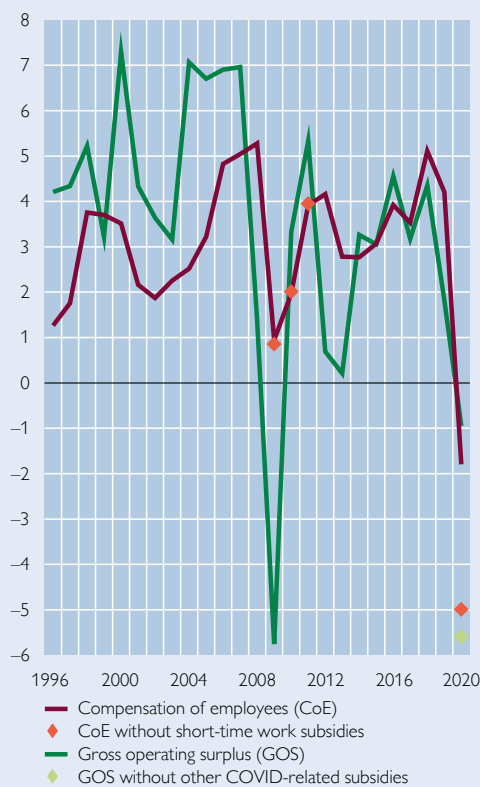
subsidies. The left panel of chart 8 shows that both compensation of employees (red dots) and gross operating surplus (green dots) would have fallen about as much as nominal GDP without those subsidies, while the effect of short-time work during the Great Recession of 2009 was barely visible (when short-time work subsidies amounted to about EUR 0.1 billion, or 0.04% of GDP). Similarly, short-time work schemes had practically no impact on the wage share in 2009/2010, while without these schemes (or when recorded differently in the national accounts),¹² the wage share would have been lower by more than 1 percentage point in 2020 (red dots in right panel of chart 8). However, the wage share would actually have been higher without any COVID-19-related subsidies (actual developments shown with a green dot) as other subsidies were even larger than those for short-time work.

Chart 8

Impact of COVID subsidies on income variables

Compensation of employees and gross operating surplus

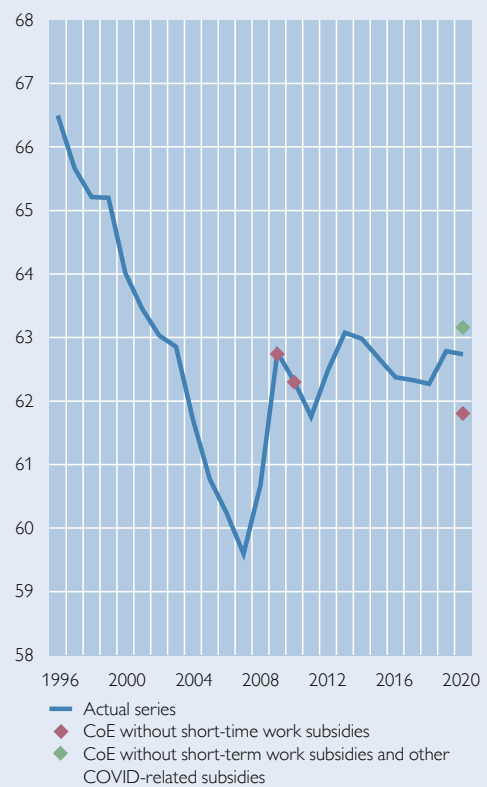
Annual change in %



Source: Statistics Austria, Eurostat, OeNB.

Adjusted wage share

% of GDP at factor costs (= GDP at market prices minus indirect taxes plus subsidies)



¹² Note that in some other EU Member States, government subsidies for short-time work are recorded as direct social benefits to households. For Austria, such an approach would have meant that both subsidies and compensation of employees would have been lower by about EUR 6 billion.

4 Number of unemployed persons and average duration of unemployment substantially on the rise

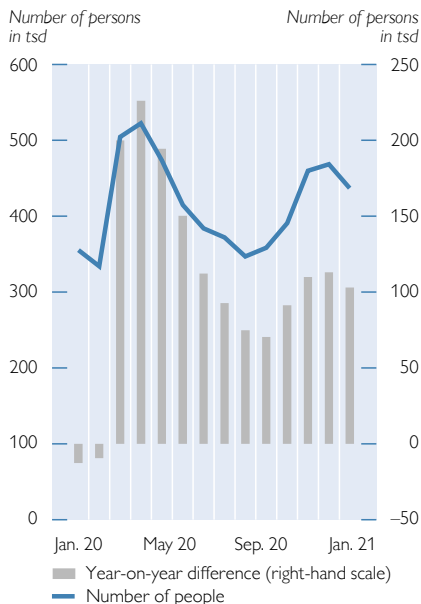
The drop in employment observed in 2020 was accompanied by a strong increase in unemployment. As the international definition of unemployment used in the EU labor force survey does not adequately reflect conditions in Austria (box 4), we rely on the national definition used by Public Employment Service Austria (AMS, short for *Arbeitsmarktservice*).

Chart 9 plots the changes observed in the number of unemployed people, the unemployment rate, and the number of vacancies as measured at a monthly frequency (not seasonally adjusted) since the beginning of 2020. In February 2020, before the outbreak of the crisis, about 330,000 people were registered as unemployed.¹³ With the first lockdown, this measure rose to more than half a million in April. As the lockdown measures were relaxed at the start of the summer season, we witnessed a decline to around 350,000 unemployed people until September 2020. In turn, the figure bounced back to about 470,000 in January 2021 with the third lockdown. The smaller increase compared to the first lockdown was due to the recovery of the export-oriented industry, which in turn contributed to the much lower GDP effect shown in chart 2. The slight improvement in the labor market is also evident from the number of vacancies, although they remain significantly below pre-crisis levels.

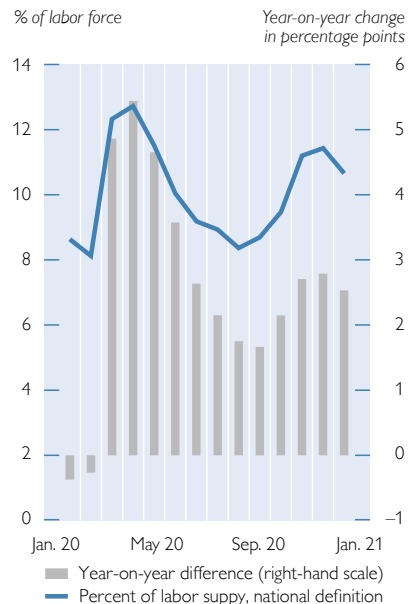
Chart 9

Unemployment, unemployment rate and vacancies

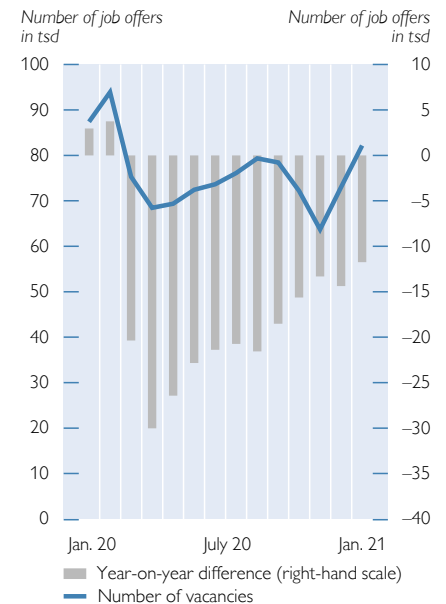
Unemployed persons



Unemployment rate



Vacancies



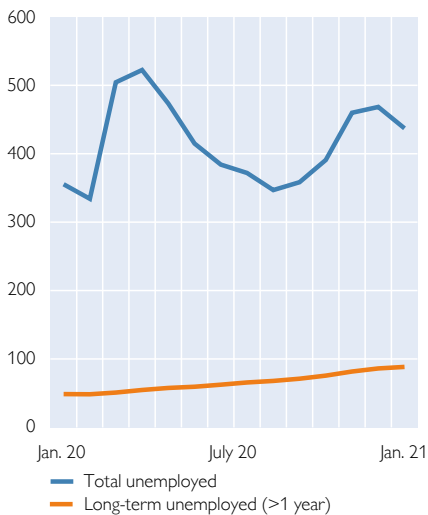
Source: AMS.

¹³ We use the official unemployment figures published by the AMS, which are end-of-month measures. Note that the end-of-month measure for March 2020 was far above the monthly average.

Average and long-term unemployment, duration of unemployment and upskilling measures

Unemployment and long-term unemployment (> 1 year)

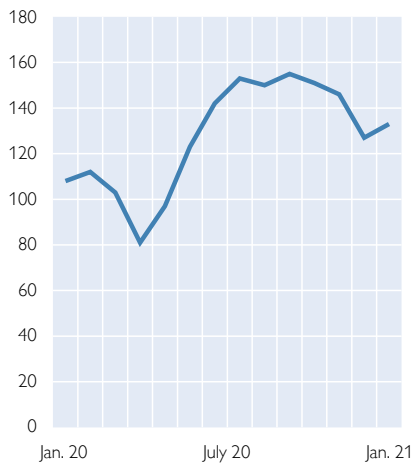
Number of persons in tsd



Source: AMS. Data are seasonally unadjusted.

Average duration of unemployment period

Number of days



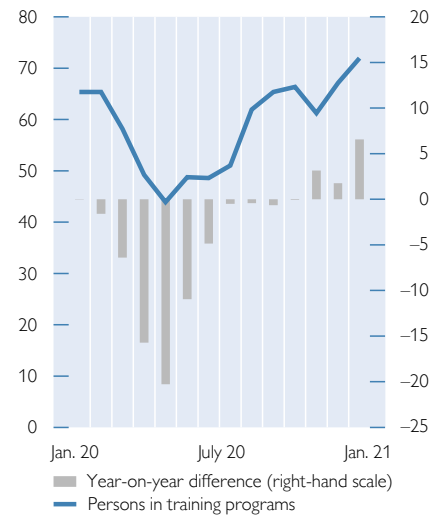
Source: AMS. Data are seasonally unadjusted.

Note: Data refers to the length of unemployment spells ending in this month ("Verweildauer").

Participation in training programs

Number of persons in tsd

year-on-year difference



Source: AMS. Data are seasonally unadjusted.

The left panel of chart 10 highlights a possible long-run problem of the COVID-19 crisis. While average unemployment (measured in persons) followed the pattern of economic development (lockdowns and easing of lockdown measures), the long-term unemployment rate showed a steadily rising trend and an increase to more than twice the pre-crisis measure (+80%). Prolonged periods of unemployment are not only problematic from an individual perspective, they can also have negative effects on economic output in the medium to long term as longer redundancies increase the risk of deskilling, turning cyclical unemployment into structural unemployment.¹⁴ Regarding the average length of unemployment spells measured in days (middle panel of chart 10), many temporarily unemployed people quickly found a job again after the first lockdown; thereafter the duration of unemployment doubled as the year progressed before declining again toward the end of the year (in line with the overall rise in unemployment).

In “normal” economic times, increases in the number of people in training programs mirror increases in unemployment. Yet, at the beginning of the COVID-19 crisis, the increase in unemployment coincided with a drop in training program participation (right panel in chart 10) as a result of pandemic-related constraints for training. Since then, the number of people in training programs has risen steadily, though, thus signaling a partial normalization of labor market conditions.

¹⁴ For a recent empirical analysis of such hysteresis effects in 34 countries see Bluedorn and Leigh (2019).

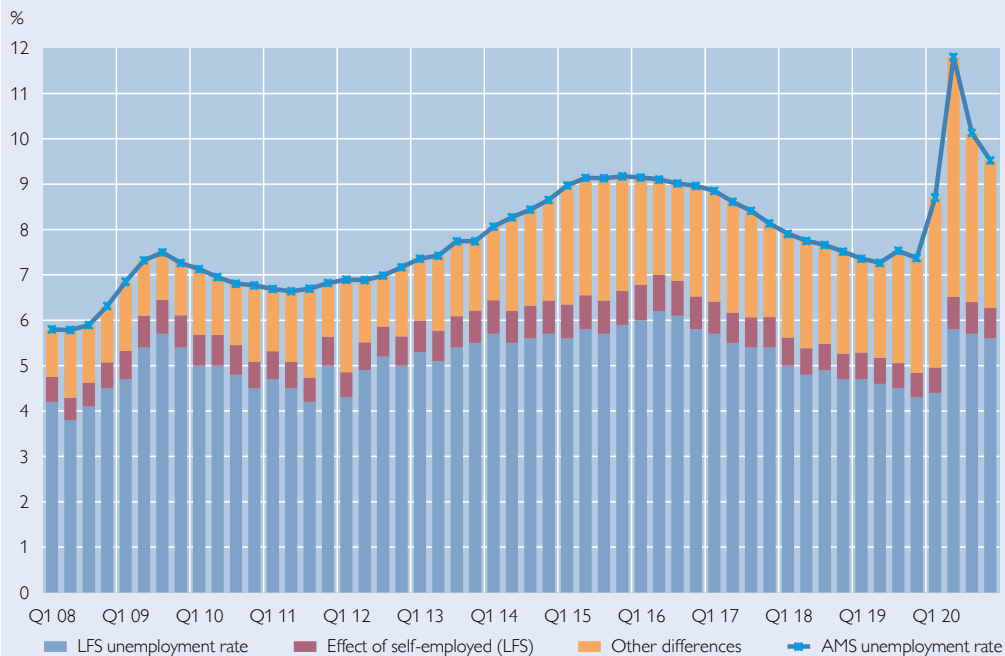
Differences between the national and the international definition of the unemployment rate

In 2020, the unemployment rate that Public Employment Service Austria (AMS) publishes based on the established national definition of unemployment increased far more than the rate published by Eurostat for Austria based on its labor force survey (LFS) (chart 11). While the national rate peaked in Q2/20, the LFS rate actually remained below the peaks registered in the mid-2010s. This raises the question about conceptual¹⁵ differences between these two variables. To begin with, the LFS defines employment¹⁶ more broadly, covering also self-employment (shown by purple bars in chart 11) and dependent employment with wages below the social security income threshold (“Geringfügigkeitsgrenze”).

At the same time, the LFS uses a narrower definition of unemployment. For example, it excludes Austrian residents who receive pay below the social security income threshold and draw unemployment benefits at the same time (which is why they will be registered as unemployed according to the AMS definition). Over time, the number of unemployment beneficiaries in this segment has increased substantially, from about less than 4,000 persons in 2008 to about 48,000 persons in 2017 (thus accounting for more than 1% of the labor force; Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumentenschutz, 2018). Furthermore, the LFS definition of unemployed individuals excludes jobless persons who are willing to work but are not actively searching. Cases in point are individuals who are registered as unemployed during the winter season, but may bank on being rehired by their former employer (“Wiedereinstellungszusage”). This discrepancy in the definition of inactive persons (included in the

Chart 11

Unemployment rate: EU labor force survey definition versus national definition



Source: Eurostat (labor force survey – LFS), AMS, OeNB.

¹⁵ Data collection differs as well: the LFS rate is survey-based, while the AMS rate is based on administrative data.

¹⁶ Note, however, that the LFS definition of employment covers Austrian residents, while the AMS definition covers employment in Austria. In recent years, there have been more nonresidents (i.e. persons living abroad) working in Austria than Austrian residents working abroad.

yellow bars in chart 11) is also the key reason for the increase in the gap between the AMS and the LFS rate in 2020, leading to an implausibly small increase in the unemployment rate and a drop in the participation rate as measured by the LFS. The difference was particularly severe in Q2/2020, such that the LFS unemployment rate barely dropped in the second half of 2020, while the AMS data pointed to a substantial decline. In view of these discrepancies, we only use unemployment data based on national definitions in the remainder of this article (and employment data either based on national definitions or derived from the national accounts).

5 Increase in unemployment uneven across industries, regions and personal characteristics

Employees in tourism and personal services affected the most

The introduction and temporary lifting of measures to contain the different waves of the COVID-19 pandemic was felt above all by the accommodation and food services and the personal service sector. For the tourism sector, the full-fledged lockdowns brought an almost complete loss of activity and income (see Fenz, Stix and Vondra, 2021, for details).¹⁷ As the accommodation and food services industry is also a relatively large employer, it contributed the most to the sharp increase in unemployment in 2020 (chart 12). The varying degree of containment measures led to very large increases in unemployment in spring 2020 and early 2021, while the crisis impact was much smaller in summer and early autumn 2020.

The “administrative and support services” sector, which includes business cycle-sensitive temporary recruitment (“Leiharbeit”), also exhibited a strong increase in redundancies. At the same time, other industries like construction or professional services were much less affected by the containment measures.

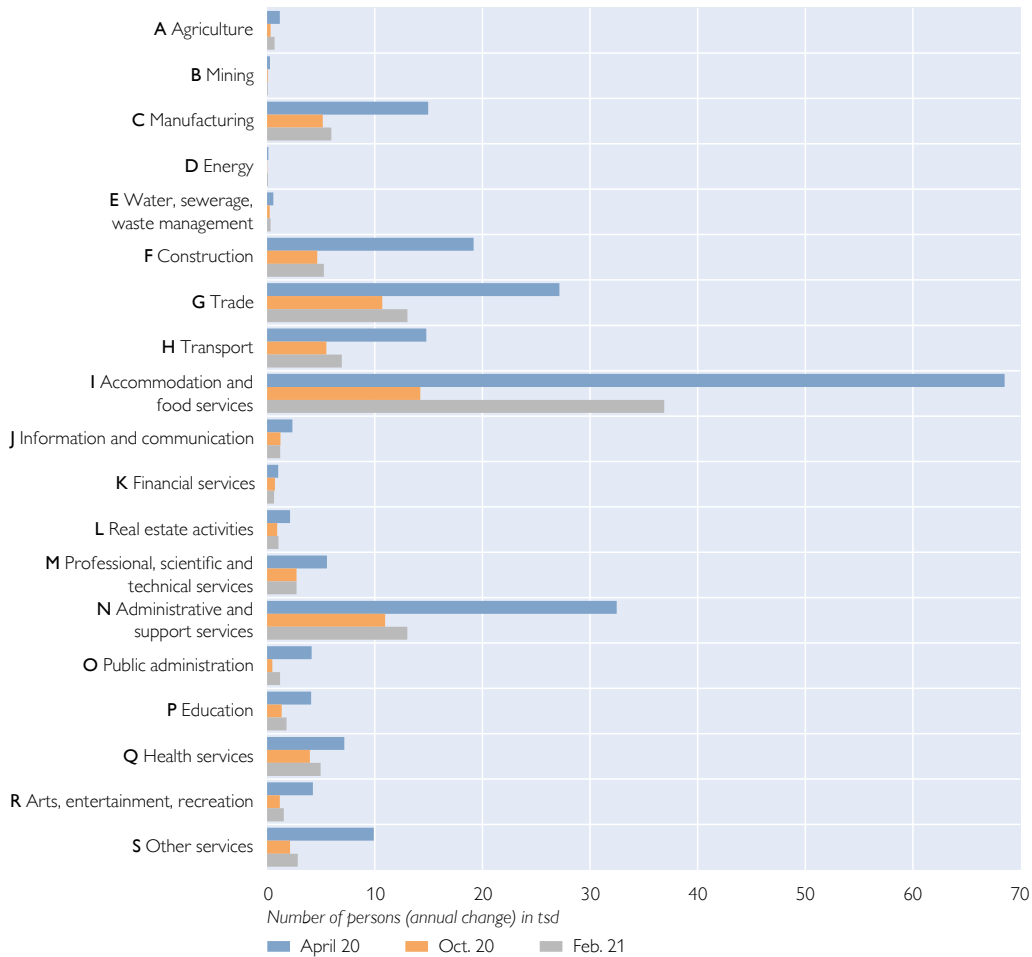
Heterogenous regional impact of the crisis

In Austria, the importance of the severely hit accommodation and food services industry varies significantly from region to region. The provinces with the highest pre-crisis shares of this industry in overall employment and value added are Tyrol and Salzburg. Therefore, it comes without surprise that the increase in unemployment was particularly strong in Salzburg and Tyrol, the two provinces with the lowest unemployment rates in the years before in Austria (chart 13). However, the relatively strong increase in unemployment in Vienna cannot be explained by its industrial structure, as employment dropped stronger within the same industries compared to the Austrian average.

¹⁷ Furthermore, Bock-Schappelwein et al. (2020) specifically discuss developments in the tourism sector during the summer of 2020.

Chart 12

Unemployment highest in the accommodation and food services sector



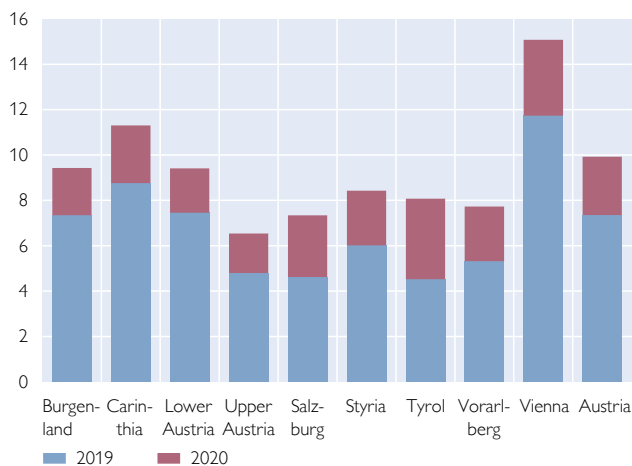
Source: AMS. The data are end-of-month measures.

Chart 13

Unemployment across Austria

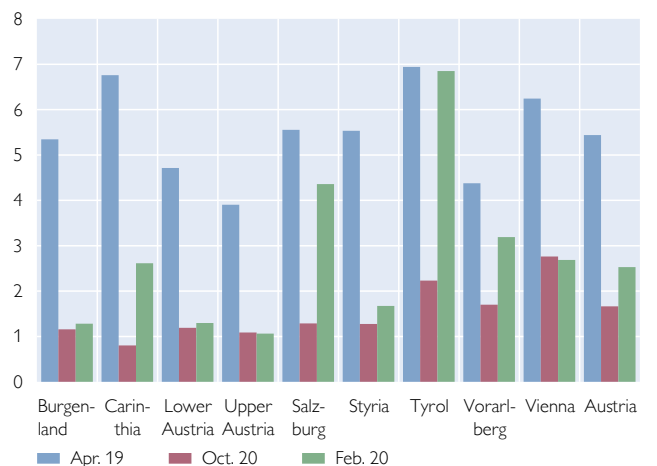
Unemployment rate

% of labor force



Change in unemployment rate

Year-on-year change in percentage points

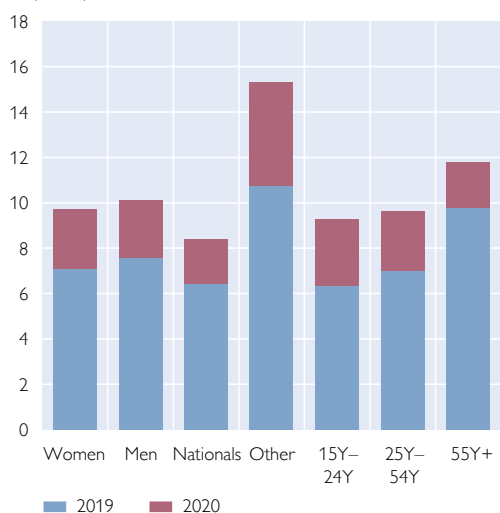


Source: AMS.

Unemployment by sex, citizenship and age

Unemployment rate

% of labor force



Change in unemployment rate

Annual change in percentage points



Source: AMS.

Women and younger employees affected somewhat more; relative effect significantly stronger for foreigners

Chart 14 shows the increase in unemployment rates by sex, nationality and age. Starting from higher levels of male unemployment in 2019, the percentage point increase of female unemployment during 2020 somewhat exceeded the increase for men (see Bock-Schappelwein and Hyll, 2020, for the specific situation of women on the labor market).¹⁸ The relative employment of women was negatively affected by their high share in the heavily hit accommodation and food services industry. At the same time, however, this was broadly compensated by the increase in employment in the public sector, where women are overrepresented.

Employees without Austrian citizenship already had a much higher unemployment rate than nationals before the crisis, and the increase in their group-specific unemployment rate was also about 2½ percentage points higher. They were more affected than Austrian nationals at all stages of the current crisis as they are more likely to work in industries more affected by the crisis (like accommodation and food services). When the crisis first hit, younger employees were relatively more affected by the unemployment spike, but this effect has reversed more recently.

¹⁸ When comparing unemployment rates in spring 2020 with February 2020 (the last pre-crisis month), we find a much stronger increase for women than for men, though. For example, the unemployment rate of women increased by about 6 percentage points from February 2020 to April 2020, while the increase was “only” 3½ percentage points for men. However, this difference is to a large extent driven by seasonal effects like the decline in unemployment in construction between winter and spring.

Chart 15

Unemployment by level of education

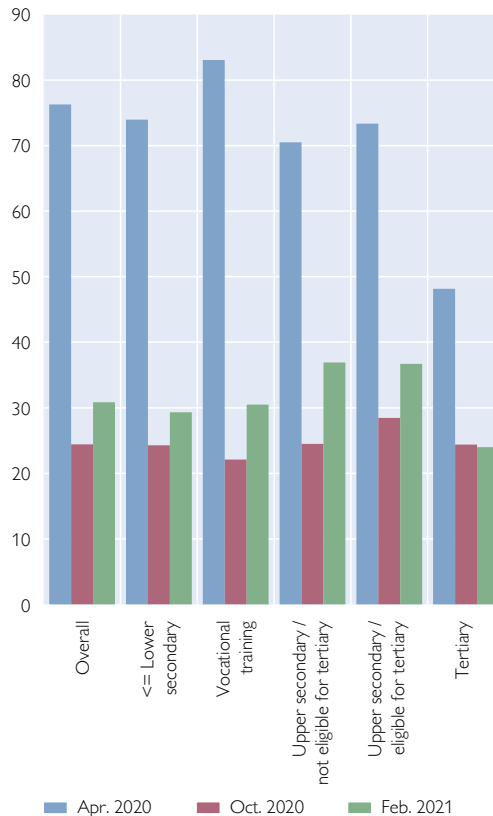
Unemployment rate (EU labor force survey)

Share of labor force in %



Change in unemployment (national definition)

Annual change in %



Source: Statistics Austria, AMS.

Employees with tertiary education were relatively less affected

Unemployment rates also increased across all educational groups (chart 15)¹⁹ in 2020, but the redundancy effect was much smaller for employees with a tertiary degree. While the number of unemployed persons with no more than lower compulsory schooling or less actually increased at a rate similar to the national average and to employees with higher secondary education (right panel of chart 15), they started from a much higher unemployment rate (left part of chart 15), implying that their group-specific unemployment rate also increased comparatively faster. This pattern across different levels of educational attainment is also consistent with results from a survey conducted after the start of the pandemic (Pichler et al., 2020).

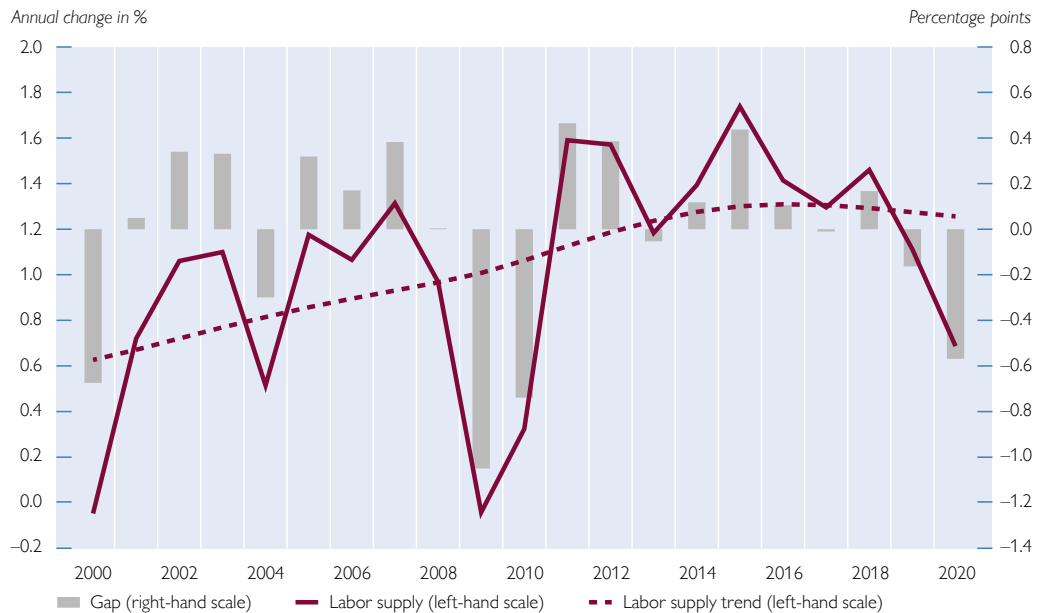
6 How strong was the impact on labor supply?

Labor supply is mainly driven by demographic developments (including net migration) and the participation rate. In Austria, the participation rate exhibits an increasing trend, and net migration has been significantly positive ever since the Austrian

¹⁹ As there are no administrative data on employment by education, we cannot compute administrative unemployment rates for these groups. Therefore, we rely on LFS data for unemployment rates (left panel of chart 15) and on changes in the number of unemployed (right panel of chart 15).

Chart 16

Labor supply and “labor supply gap”



Source: AMS, authors' calculations.

labor market was opened to foreign workers from the newer EU member states (EU accession in or after 2004; see Stiglbauer, 2020; Prettnner and Stiglbauer, 2007; Stiglbauer, 2005). However, both the participation rate and migration also react to the cyclical position of the economy. Moreover, for a more comprehensive view of the labor supply, it may make sense to go beyond the traditional measures of unemployment (see for instance ECB, 2012). Such wider definitions of unemployment may include unemployed people who have given up looking for a job or part-timers who want to work more hours (“underemployment”). In the context of the COVID-19 crisis, the available data are inadequate for exploring hardly any of these arguments because of the shortness of the observation period and due to data constraints (e.g. the current conceptual issues with the LFS unemployment rate described in box 4). Therefore, we define the labor force as the sum of employees and of registered unemployed persons (based on AMS data), and due to the former issue we look only at the development of labor supply in 2020.

Chart 16 shows the yearly development of the labor force. After an increase of 1.1% in 2019, growth lost momentum in the year 2020 (+0.7%) but the labor force did not shrink. When we compare this pattern with the trend development, we see that the “labor supply gap” was much smaller in 2021 than during the Great Financial Crisis of 2009, when labor supply stagnated.

At this point in time, the long-run effects of the crisis on the supply of labor are still unclear. A longer duration of unemployment could lead to hysteresis effects and drive up structural unemployment (section 4). Moreover, unemployment spawned by the crisis may produce scarring effects given the probability of delayed labor force entry or re-entry, as discussed for instance by Kawaguchi and Murao (2014) or Fuentes and Moder (2020).

7 Conclusions

The 2020 recession induced by the COVID-19 pandemic had huge effects on the Austrian labor market. The drop in employment was much sharper than during the Great Recession of 2009. Compared with developments in the euro area, the decline in employment was broadly average, while the increase in unemployment was somewhat above average as measured by the EU labor force survey, which uses a narrower definition of unemployment, however. At industry levels, the tourism industry was affected more heavily by the crisis than manufacturing or construction, contributing to a stronger increase in unemployment in provinces where tourism accounts for relatively higher shares of GDP. On the positive side, the impact on aggregate labor supply has been comparatively weak so far.

The generous short-time work scheme prevented even worse developments, and thereby also dampened the decrease in aggregate compensation of employees. However, in early 2021, even with the short-time work scheme still in place and a diminished GDP effect of lockdowns, unemployment is still far above pre-crisis levels, in particular for persons without an upper secondary degree and foreign workers. Therefore, the exit from the short-time work schemes should be designed in a way to prevent dismissals in industries which have an intact medium-term growth outlook but are recovering at a relatively slower pace. Furthermore, active labor market policy will be of outmost importance once the pandemic has ended to prevent hysteresis effects from long-term unemployment and scarring effects on labor market participation.

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