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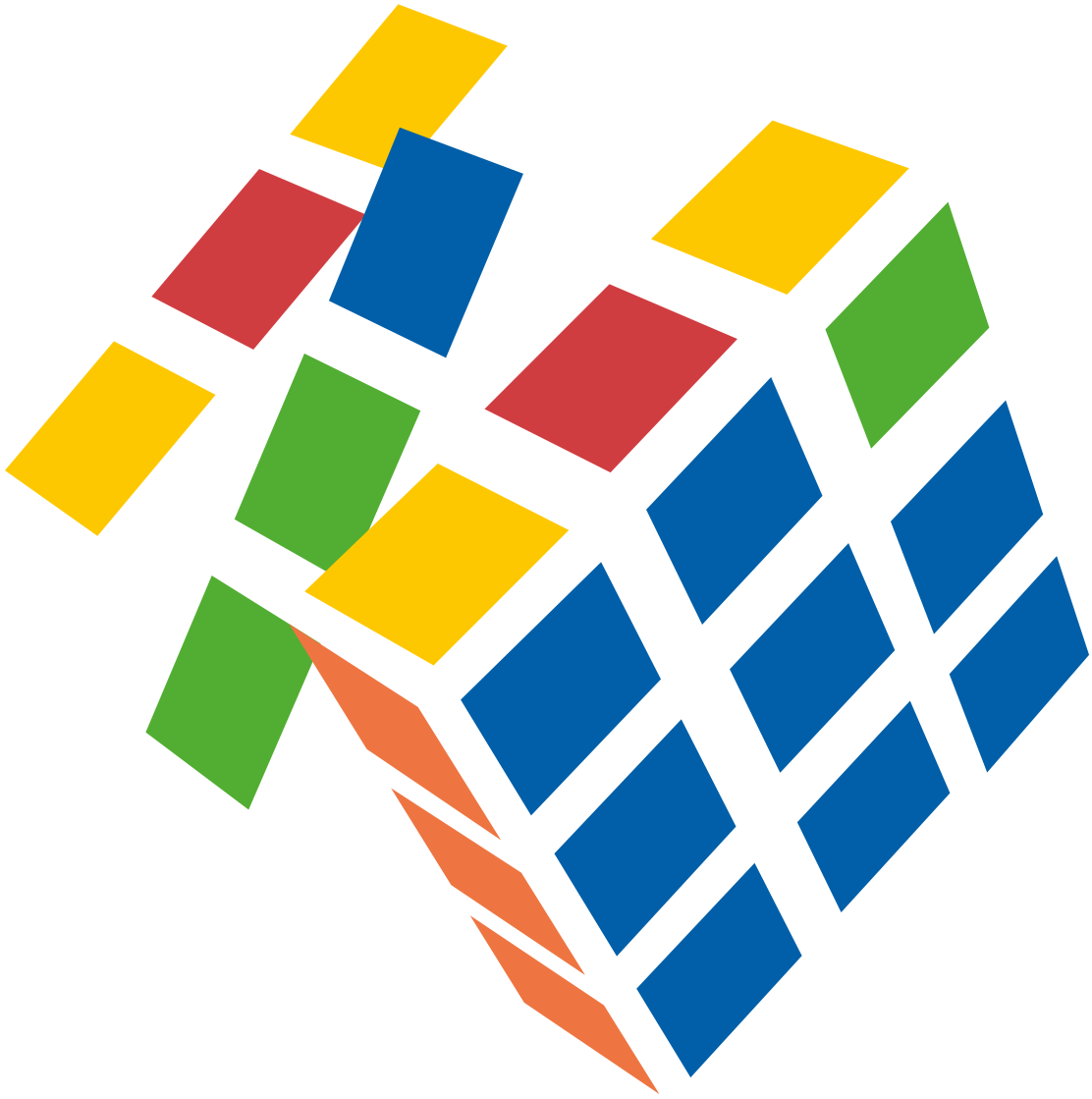


2023 skills forecast

Austria

cedefop

SKILLS FORECAST 2023 AUSTRIA

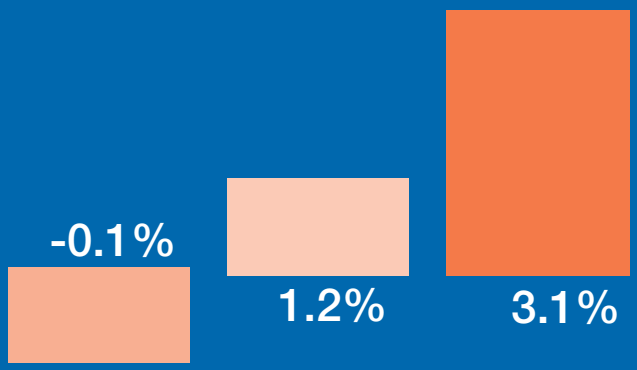
Employment in 2035

4 701 000

3.14%

increase 2021-35

% Employment growth 2021-35



Fastest-growing sectors

2021-35% growth

Accommodation & food service activities

Information & communication

Highest-demand occupations

Largest creation of new jobs, 2021-35

Personal care workers

Health professionals

Legal, social, cultural & related associate professionals

increase in high-skilled labour demand 2021-35

68%

Total job openings, 2021-35

2 541 000

Replacement needs (94%)

New job openings (6%)

Total job openings by skill level 2021-35

High-skilled non-manual occupations (53%)

Skilled non-manual occupations (22%)

Skilled manual occupations (17%)

Elementary occupations (9%)

EU overview 2035

3.4%

employment increase in 2021-35

Fastest growing occupation

Legal, social and cultural professionals

Fastest growing sector

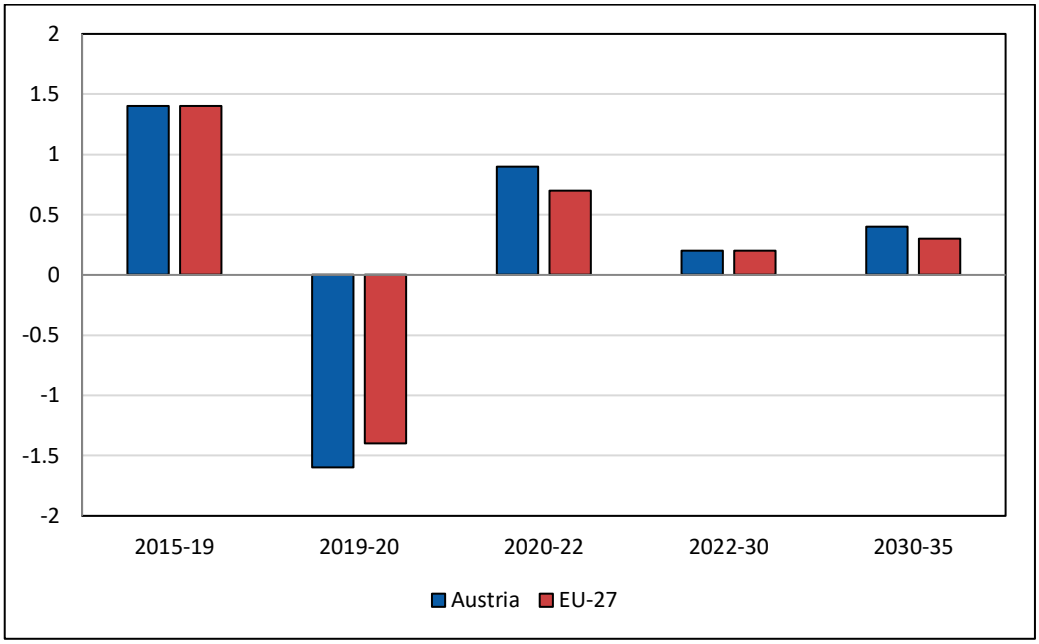
Information and communication

Cedefop skills forecast: Austria

1. Employment outlook

Employment in Austria is forecast to grow at about the same rate as the EU-27 average, at much slower rates than seen over 2015-19. Figure **1** shows that employment in Austria grew at the same rate as the EU-27 average over 2015-19, and fell more sharply in 2020 as the Covid-19 pandemic hit. Employment in Austria is estimated to have then bounced back slightly more strongly than the EU-27 over 2020-22. Across the forecast period, employment in Austria is forecast to grow by 0.2-0.4% pa, similar to the employment forecast for the EU-27 as a whole.

Figure 1. **Annual percentage employment growth in Austria and the EU-27, 2015-35**



Source: Cedefop (2022 Skills Forecast).

2. Labour force overview

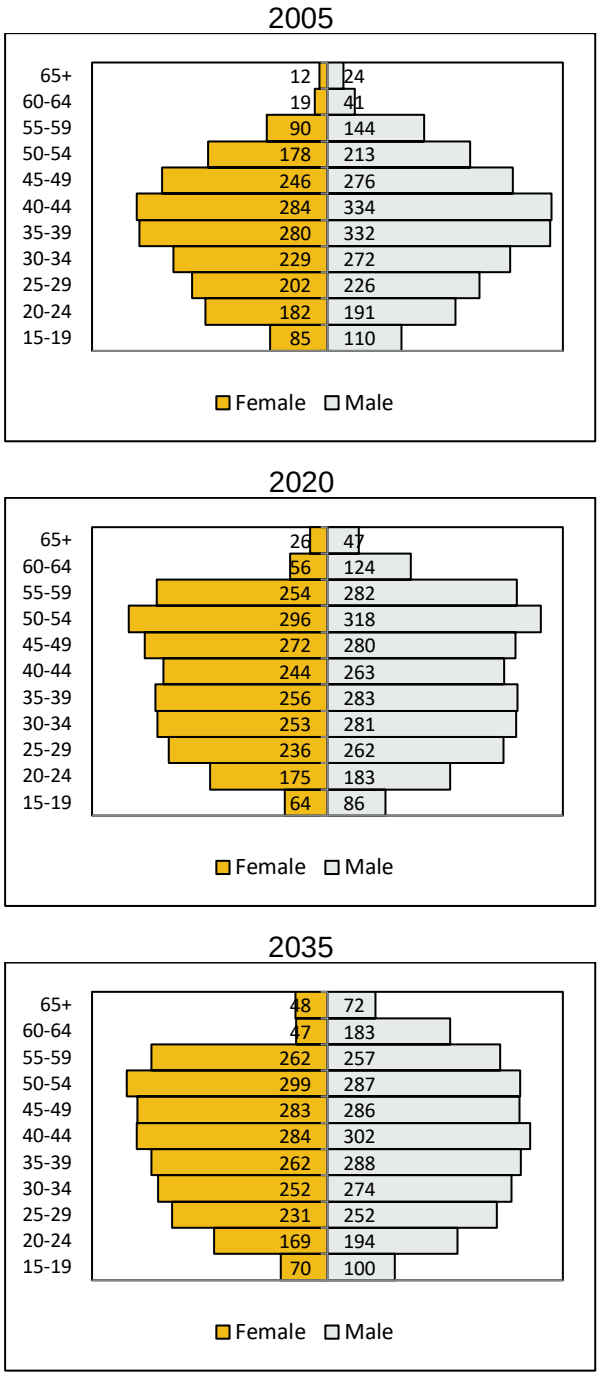
Figure **2** shows Austria's labour force by age group in 2005, 2020 and 2035. Changes in the labour force in Austria over the forecast period will continue to be driven by the ageing population and increasing participation rates in most age groups. The total labour force in Austria is projected to increase by 3.5% over 2020-35, compared to growth of 14% over the previous 15 years. This compares with an expected increase in the labour force of just under 3% over 2020-35 for the EU-27 as a whole. The total participation rate in Austria is forecast to decline by 1 pp over 2020-35, compared with an increase of 1 pp in the total rate for the EU-27. Total population is forecast to grow by 5% over 2020-35, compared with growth of 11% over 2005-20.

The population aged 20-39 and 45-59 in Austria is forecast to decline during 2020-35, while the population aged 65 and over, in particular, as well as aged 40-44 and 60-64, is forecast to grow quite strongly, reflecting trends in the relevant younger cohorts in preceding periods.

The participation rates of all age groups in Austria are forecast to increase strongly over 2020-35, with the strongest increase projected for those aged 55-59 (14pp). However, those increases will only partially counter the negative impact of the ageing population on the total participation rate.

As elsewhere, female participation rates in Austria are generally lower than male rates. Like the EU-27 average, female participation rates in Austria are generally forecast to increase more than male rates. Overall, the total participation rate for females is projected to remain static, and the total male rate is forecast to decrease by 1 pp, over 2020-35.

Figure 2. **Distribution of the labour force (thousands), 2005-35**

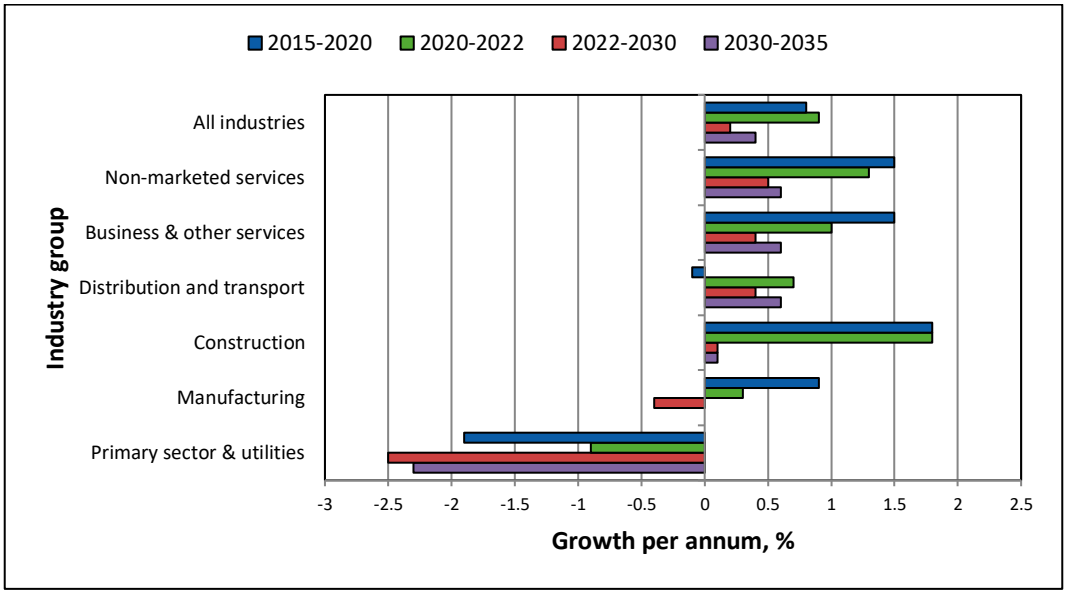


Source: Cedefop (2022 Skills Forecast).

3. Sectoral employment trends

Figure **3** shows annual average employment growth by broad sector in Austria between 2015 and 2035. The three broad service sectors of *Distribution & transport*, *Business & other services* and *Non-marketed services* are all forecast to see positive employment growth of around 0.5% pa over 2022-30. The remaining three broad sectors are all forecast to see very slow growth or falling employment, with the smallest broad sector of *Primary sector & utilities* forecast to see the greatest decline, of around 2.5% pa over 2022-30.

Figure 3**. Employment growth by broad sector of economic activity, 2015-35**



Source: Cedefop (2022 Skills Forecast).

In terms of sub-sectors (i.e. below the level of the six broad sectors discussed above), growth in *Business & other services* is forecast to be driven by *research & development, market research & other professional services, architectural & engineering services, telecommunications, computer programming & information services*, *other service activities* and *media*, which are all forecast to see employment growth of 1% pa or more over 2022-30. On the other hand, employment in some of the larger sub-sectors, such as *administrative & support services* (5.6% of employment in Austria) and *legal, accounting & consultancy services* (3.4% of employment), is forecast to be weak over this period. Within *Distribution & transport*, the large sub-sector of *accommodation & catering services* (6% of employment) is forecast to see strong employment growth over 2022-30, while wholesale & retail trade (15% of employment) is forecast to see weak growth

in employment over the same period. Within *Non-marketed services*, the *health* sub-sector (11% of employment) is forecast to grow strongly over 2022-30, but *education* and *public administration & health* are only forecast to grow marginally over this period. In *Manufacturing*, where the sub-sectors tend to be relatively small, the larger sub-sectors of *basic metals & metal products*, *rubber & non-metallic mineral products*, *wood, paper, printing & publishing*, *food, drink & tobacco* and *other manufacturing* (each accounting for around 1.5-2.5% of employment) are forecast to see a decline in employment over the whole forecast period. In *Primary sector & utilities*, the fall in employment is forecast to be driven by a strong fall in employment in the agriculture (3.4% of total employment) sub-sector.

Job openings by occupational group

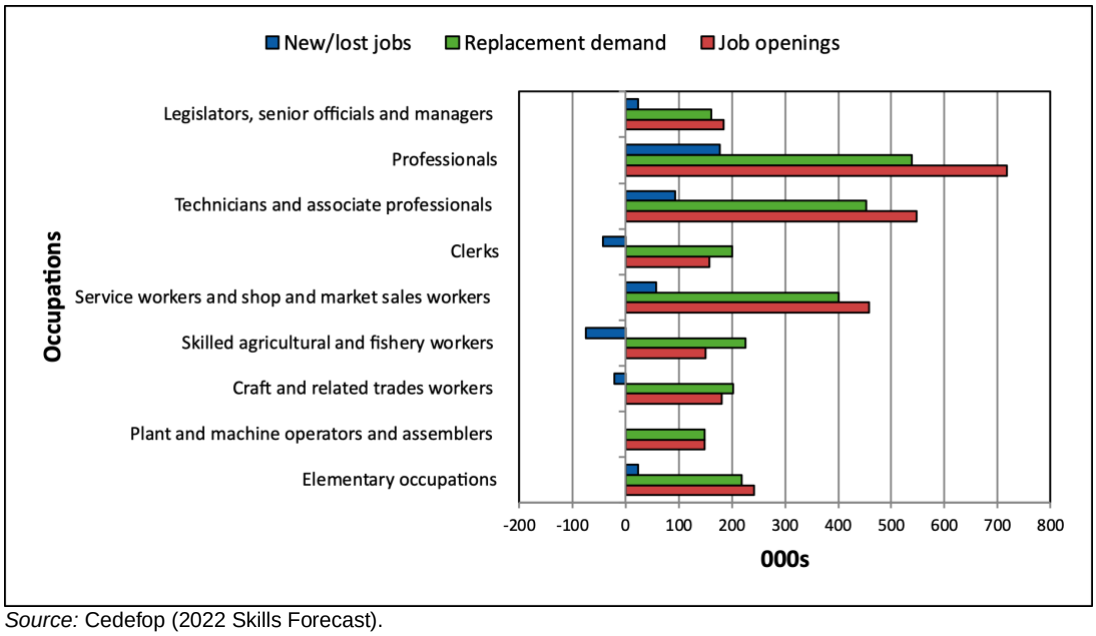
Cedefop skills forecasts estimate the total job openings by occupational group as the sum of net employment change and replacement needs. Net employment change refers to new jobs created or jobs lost due to the expansion or contraction of employment in that sector or occupation. Replacement needs arise as the workforce leaves the occupation due to retirement or career changes. Replacement needs, generally, provide more job opportunities than new jobs, meaning that significant job opportunities arise even in occupations declining in size (i.e. agricultural workers are a typical example, as ageing workers employed in the sector will need to be replaced).

Figure **4** shows the total job openings by broad occupational group over 2020-35. The number of job openings indicates the number of jobs that are required to be filled due to lost/newly created jobs and those that are in need of replacement workers. *Professionals* and *Technicians & associate professionals* are forecast to see the largest increases in both jobs and replacement demand, and so are expected to see the greatest number of job openings. Due to replacement demand, even broad occupations that are forecast to see a decline in total jobs, such as *Skilled agricultural workers* and *Clerks*, are expected to see a relatively large number of job openings. Overall, the number of jobs is forecast to increase by 235,000, while replacement demand is projected to be more than 2.5 million, so the number of job openings over 2020-35 is expected to be around 2.8 million.

At the more detailed level, most job openings (taking both new/lost jobs and replacement needs together) are expected to be in high skilled occupations such as *business & administration associate professionals*, *health professionals*, *teaching professionals and science & engineering associate professionals*. Skilled non-manual occupations such as *personal care workers* and *sales workers* are

also expected to provide a substantial number of job openings, with the latter despite a fall in the number of jobs available. Among skilled manual occupations, most are forecast to see a decline in total jobs, but some, such as *metal, machinery & related trades workers*, *drivers & mobile plant operators* and *building & related trades workers* are expected still to provide a large number of job openings through replacement demand. Among elementary occupations, *labourers in mining, construction, manufacturing & transport* are forecast to provide a fairly large number of job openings through large increases in both jobs and replacement demand, while *cleaners & helpers* are expected to see a large number of job openings due to replacement demand.

Figure 4**. Job openings by broad occupational group, 2020-35**



Source: Cedefop (2022 Skills Forecast).

4. Drivers of occupational change

Within the Cedefop skills forecast, future employment growth (or decline) of occupations is further broken down by separating national economic components from regional industrial and economic effects, helping to interpret what is driving the change. From this perspective, employment growth can be explained by three possible drivers: (a) overall trends of the economy (i.e. growth or decline), (b) shifts of employment between sectors and (c) changes in the occupational structure within sectors (i.e. factors making some occupations more important than others).

The occupational composition of employment in Austria is mainly characterized both by changes in the level of specialization within occupations, and, in some cases, by changes in industry size. Stronger occupation-specific and industry effects will lead to an increasing share of p*rofessionals and managers, other associate* and *workers in personal, care, protective service.* High-skilled occupations that can benefit the most from these trends are, for example, *, science and engineering professionals, health professionals, administrative and commercial managers*, and, in particular, *legal, social, cultural and related associate professionals.*. For some occupations, despite the negative impact of the industry effect, the employment-specific effect is the opposite and predominant. Thanks to this it will increase the share of *senior officials and legislators, assemblers, labourers in agriculture, forestry, fishery, mining, construction, manufacturing and transport.*

The overall effect of occupational change depends on several factors that need to be considered together. Increasing digitisation and moves towards a service-oriented economy, including within manufacturing, will lead to greater use of higher-level occupations at the expense of some medium and low-level occupations. Intermediate-level occupations are expected to decline, while lower-level occupations are expected to increase slightly overall. The only medium-qualified occupations with an overall positive increase are assemblers and workers in personal care and protective service. Labourers in agriculture, forestry and fishing represent the occupation with the highest increase among the category of lower-qualified occupations. Among the high-level occupations, the highest increase will be in legal, social cultural and related professionals. Austria is expected to experience an overall increase in the total number of occupations.

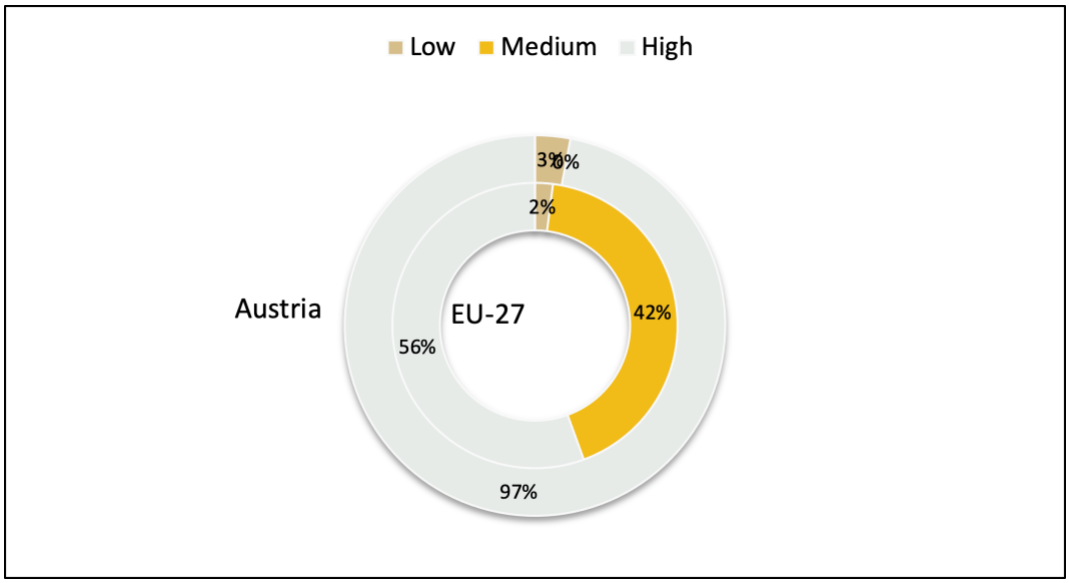
5. Demand for and supply of skills

Within the Cedefop skills forecast, skills are proxied by the highest level of qualification held by individuals in the labour force and in employment. Three levels are distinguished, high, medium, and low, which correspond to the official ISCED classification. The occupational group also offers an indication of the skill level required, as some occupations (e.g., professionals) typically require high-level skills, while some others (e.g. elementary) typically require only basic ones. Therefore, occupational groups are also linked to a skill level.

Figure 5 shows the shares of total job openings by qualification level for Austria and the EU-27 over 2022-35. Based on past trends, the forecast assumes a continued increase in the qualification level in Austria. The increasing importance

of higher educated at the cost of intermediate qualification might be an exaggeration given the prominent position of the intermediate VET-trained workforce and its integration into the Austrian labour market. In Austria, the forecast suggests that all job openings are among the higher educated.

Figure 5. **Shares of total job openings by level of qualification, 2020-35**



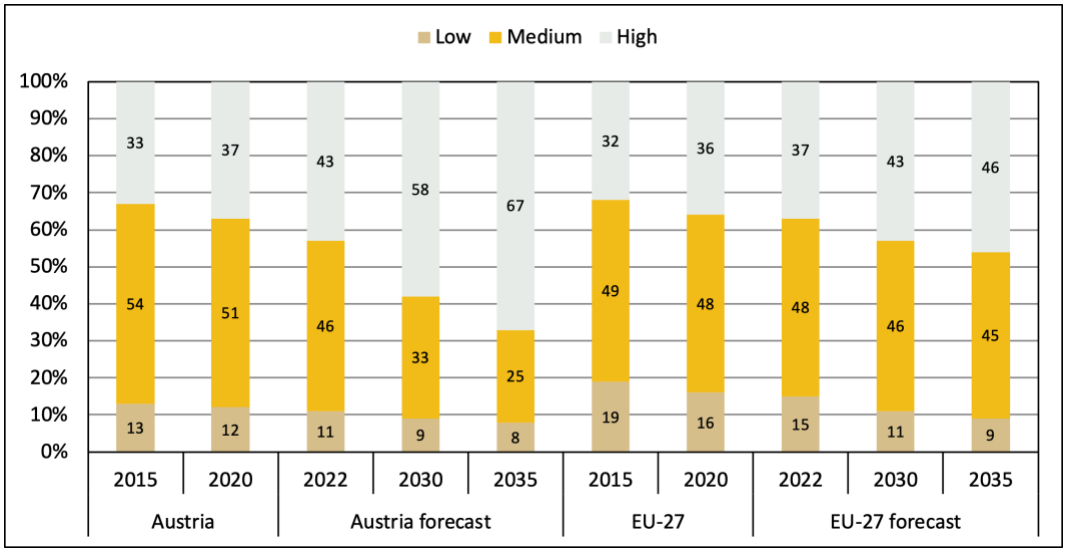
Source: Cedefop (2022 Skills Forecast).

Future labour supply trends depend on the size of the working age population (defined as aged 15 or older), the labour market participation rates, and the extent to which people acquire formal qualifications.

Figure **6** shows the development of qualification shares in the labour force in Austria and the EU-27. According to the most recent forecast, Austria is suggested to strongly increase the share of higher qualified people in the labour market. While the share was at 43% in 2022, it is expected to increase to 67% by 2035.

The share of medium qualified workers is expected to broadly half its share, while the share of low qualified workers is expected to decrease from 11% to 7%. Relative to the EU-27 averages, Austria is expected to have overtaken the EU-27 averages from a country with lower shares of higher qualified to one with much higher levels.

Figure 6. **Labour force share by level of qualification, 2015-35**



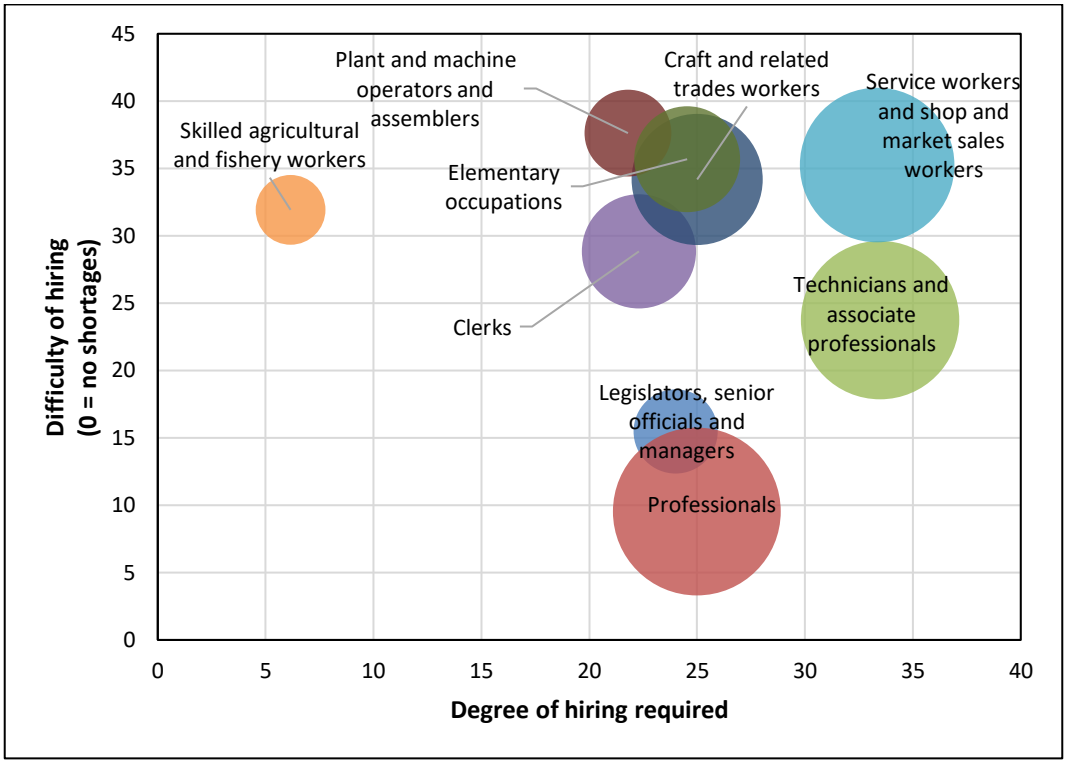
Source: Cedefop (2022 Skills Forecast).

Overall, the forecast implies a strong shift towards higher qualified, leading in some cases to shortages among low and intermediate qualified as some occupations and sectors that have previously relied more on these qualification levels.

Figure **7** shows an indicator, *difficulty of hiring*, whose aim is to approximate shortages of supply by qualifications and its impact on occupations. This measure, shown along the vertical axis, indicates increasing difficulties in fulfilling demand given the available supply of qualifications used in the occupation. Along the horizontal axis, the *degree of hiring required* in the occupation is depicted. Higher values indicate that to reach the forecast result that occupation will need to adjust more (in terms of workers with particular qualifications) relative to the base year (2018) levels. These changes (degree of hiring required) can be due to a change in the qualifications required or increases in the number employed. The size of the bubble indicates the *overall employment level*, bigger bubbles indicate more employment while smaller bubbles less employment.

Occupations with both a high *degree of hiring required* and a high *difficulty of hiring* (i.e. towards the top right of the figure) are likely to have the most difficulties in achieving a suitable workforce

Figure 7**. Indicators of future hiring difficulties, 2018-30**



Source: Cedefop (2020 Skills Forecast).

Note: Indicators were calculated at the level of the underlying 2-digit occupation groups. Aggregation was based on the employment weights within each 1-digit occupation group.

Figure 7 indicates that there is expected to be a high difficulty of hiring among *Plant and machine operators and assemblers, Service workers and shop and market sales workers, Elementary occupations, Craft and related trades workers,* as well as *Skilled agricultural and fishery workers*. However, the last group of skilled agricultural workers exhibit only a low degree of hiring.

The degree of hiring is highest among T*echnicians and associate professionals* and *Service workers and shop and market sales workers* in which both rising employment and changes in the qualification mix lead to increased hiring. Also relatively high levels can be found among all other occupation groups except the skilled agricultural occupations which reflect the forecasted shift towards higher qualifications.

Cedefop methodology

The Cedefop Skills Forecast offers quantitative projections of future trends in employment, by sector of economic activity and occupational group. Future trends in the level of education of the population and the labour force are also estimated. Cedefop's forecast uses harmonised international data and a common methodological approach allowing cross-country comparisons between employment trends in sectors, occupations and qualifications. The forecast and methodology is validated by a group of national experts. The forecast does not substitute national forecasts, which often use more detailed methodologies and data, while they also incorporate in-depth knowledge of a country's labour market.

The latest round of the forecast covers the period up to 2035. The forecast takes account of global economic developments up to May 2022. The European Economy experienced a sharp downturn in 2020 due to the global pandemic, and partially bounced back in 2021. However, the strength of the recovery in the short term is threatened by global factors such as supply chain disruptions, the consequences of the war in Ukraine and high inflation.

The key assumptions of the baseline scenario incorporate the Eurostat population forecast available in May 2022 (Europop 2019) ([1]), and the short-term macroeconomic forecast produced by DG ECFIN in May 2022 ([2]). Several revisions to the data affect the Cedefop Skills forecast 2022, when compared to the 2019 update. For example, the population projections used in the 2022 update are generally more pessimistic than those used in the 2019 update (i.e. Europop 2015), with a corresponding impact on labour force figures. The source of historical labour force data is the European Labour Force Survey, which in 2021 underwent important methodological changes causing a break in the time series for several variables, including labour force. As a consequence, in many Member States the participation rates in 2021 are noticeably above/below historical trends, which causes the Cedefop Skills forecast 2022 to be revised in the same direction, compared to the 2019 update. Moreover, some Member States experienced significant revisions in the historical data series for sectoral employment from the National Accounts.

The Cedefop Skills forecast 2022 is made consistent with the objectives set by the European Green Deal by incorporating suitable assumptions in terms of additional investment, power sector technologies, energy balances and carbon pricing.

Energy and commodity price forecasts from the World Bank and the IEA are used as inputs to the Cedefop Skills forecast, which therefore incorporate the recent surge in prices.

([1]) https://ec.europa.eu/eurostat/web/population-demography/population-projections/database

([2]) https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2022-economic-forecast_en

For the latest update and access to more detailed Cedefop skills forecast data visit our Skills forecast project page.

For more details, please contact Cedefop's Skills Forecast team at: Skills-Forecast@cedefop.europa.eu