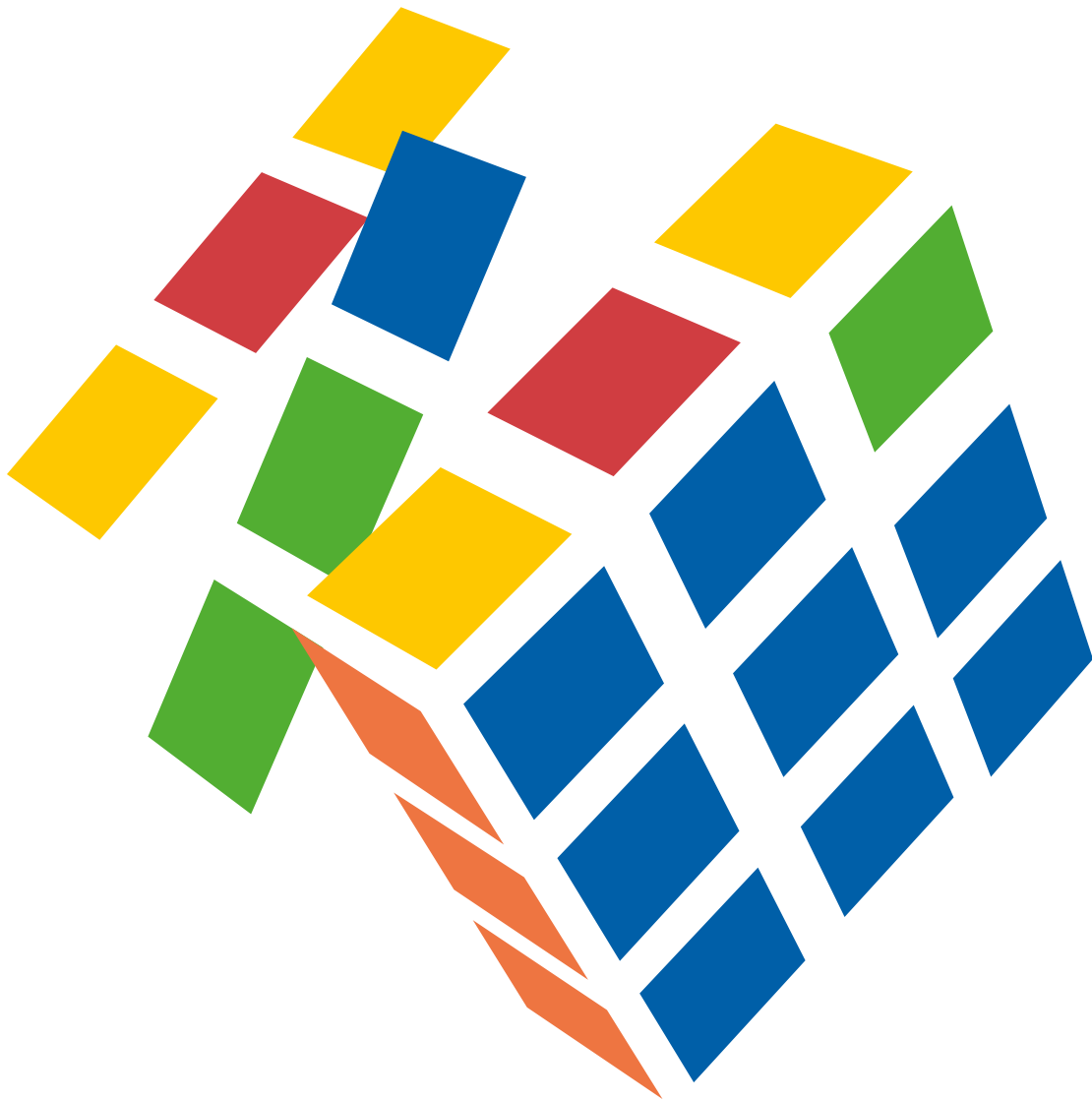




CEDEFOP

European Centre for the Development
of Vocational Training

EN



2023 skills forecast Hungary

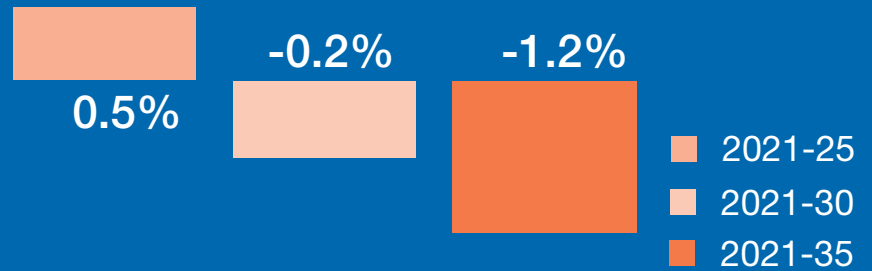




Employment in 2035

4 699 000

% Employment growth 2021-35



Fastest-growing sectors
2021-35% growth

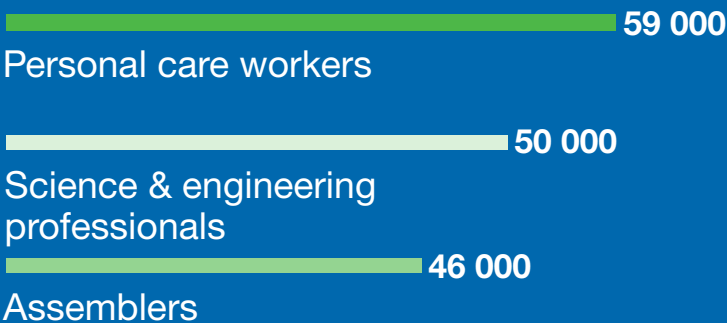


Total job openings, 2021-35

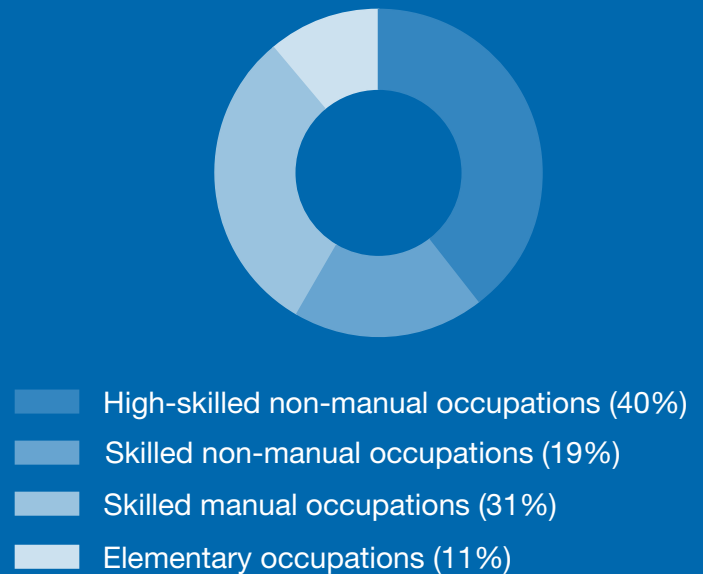
2 295 000



Highest-demand occupations
Largest creation of new jobs, 2021-35



Total job openings by skill level
2021-35



increase in high-skilled labour demand 2021-35

16%



3.4%
employment increase in 2021-35



Fastest growing occupation
Legal, social and cultural professionals



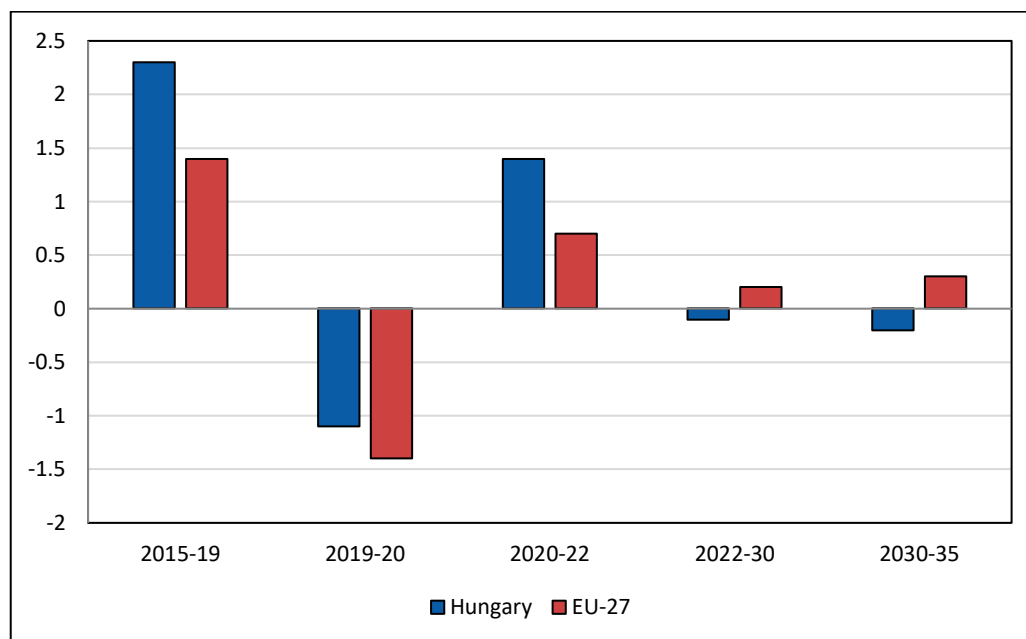
Fastest growing sector
Information and communication

Cedefop skills forecast: Hungary

1. Employment outlook

Employment in Hungary is forecast to shrink slightly up to 2035. Figure 1 shows that employment in Hungary grew slightly faster than the EU-27 average over 2015-19, and fell less sharply in 2020 as the Covid-19 pandemic hit. Employment in Hungary is also estimated to have bounced back more strongly than the EU-27 over 2020-22. However, across the forecast period, employment in Hungary is forecast to decline by 0.1-0.2% pa compared with growth of 0.2-0.3% pa for the EU-27 as a whole.

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



Source: Cedefop (2022 Skills Forecast).

2. Labour force overview

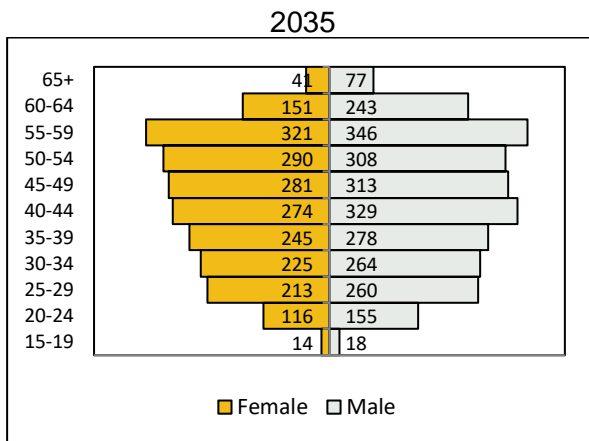
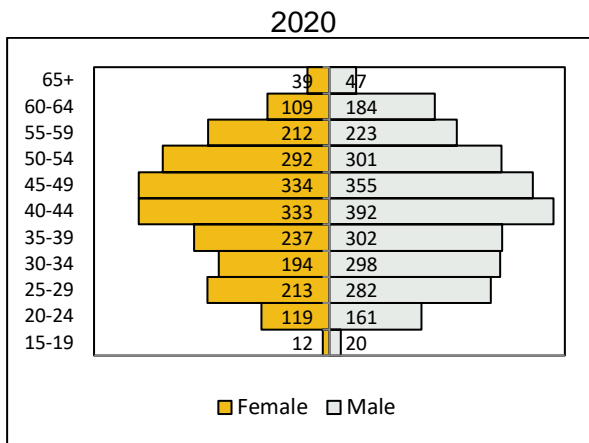
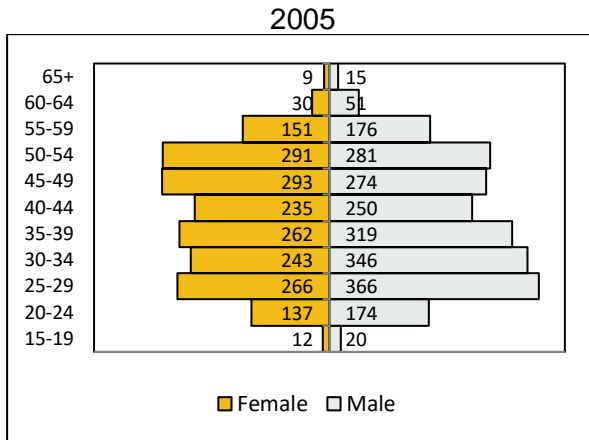
Figure 2 shows Hungary's labour force by age group in 2005, 2020 and 2035. Changes in the labour force in Hungary over the forecast period will continue to be driven by the ageing population and increasing participation rates in most age groups. The total labour force in Hungary is projected to increase by 2% over 2020-35, compared to growth of 11% over the previous 15 years. It compares with an expected increase in the labour force of around 3% over 2020-35 for the EU-27. The total participation rate in Hungary is forecast to increase by 2 pp over 2020-35, compared with an increase of 1 pp in the total rate for the EU-27. Total population is forecast to decline by 2% over 2020-35, similar to the decline seen over 2005-20.

The population aged up to 54 is projected to decline over 2020-35, while the population aged 55 and above is forecast to grow quite strongly, reflecting trends in the relevant younger cohorts in preceding periods.

Hungary's participation rates of all age groups between 20 and 64 are forecast to grow quite strongly over 2020-35, with the strongest increases projected for the 60-64 (13 pp) and 30-34 (12 pp) age groups.

As elsewhere, and due to the lower starting point, female participation rates in Hungary are generally forecast to increase more than male rate, especially for 30-39 year olds. Overall, the total participation rate for females is projected to increase by 4 pp and the rate for males to increase by 1 pp over 2020-35.

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

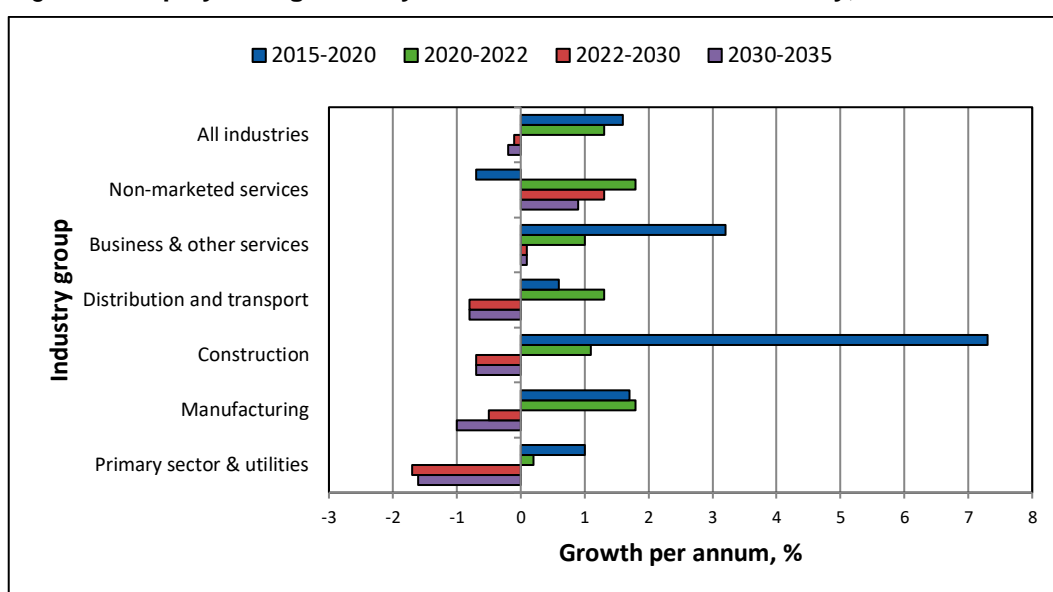


Source: Cedefop (2022 Skills Forecast).

3. Sectoral employment trends

Figure 3 shows annual average employment growth by broad sector in Hungary between 2015 and 2035. Only *Non-marketed services* is forecast to see relatively strong employment growth (1.3% pa) over 2022-30, and *Business & other services* is the only other broad sector forecast to see positive, albeit very weak, employment growth, at 0.1% pa. *Primary sector & utilities* is forecast to see the greatest decline in employment over this period, at 1.7% pa.

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), the pattern of growth is more mixed. The growth in employment in *Non-marketed services* is forecast to be driven by growth in *public administration & defence*. Within *Business & other services*, employment growth is forecast to be strong in *research & development, market research & other professional services* and *financial & insurance services*. However, growth in some of the larger sub-sectors, such as *legal, accounting & consultancy services* is forecast to be weaker or, as is the case for *other service activities, computer programming & information services* and *administrative & support services*, negative. Within *Distribution & transport*, all the larger sub-sectors are forecast to see declining employment. Within *Manufacturing*, where the sub-sectors tend to be smaller, only *optical & electronic equipment* is forecast to see relatively strong employment growth, and the larger sub-sectors of *food, drink & tobacco, basic metals & metal products* and

motor vehicles are all forecast to see employment decline. The fall in employment in *Primary sector & utilities* is expected to be driven by a fall in employment in the *agriculture* sub-sector.

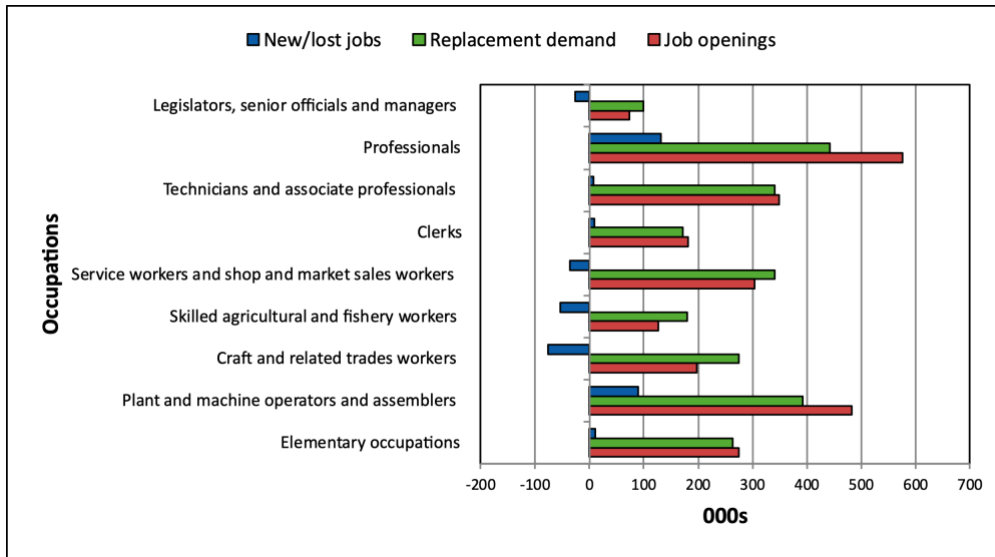
4. Job openings by occupational group

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 total job openings by broad occupational group over 2020-35. The number of job openings indicates the number of jobs required to be filled due to lost/newly created jobs and those needing replacement workers. *Professionals* is expected to provide the highest number of job openings (accounting for 22% of all job openings) and the highest number of new jobs (more than 130,000) by a large margin. Only *Plant & machine operators & assemblers* are also expected to provide a substantial number of new jobs and the second-largest number of openings. Although no other occupations are expected to provide a sizeable number of new jobs (and some are forecast to see a contraction), replacement demand will still mean that there will be a fairly large number of job openings in all broad occupations. The number of jobs is forecast to increase by 35,000, while replacement demand is projected to be 2.5 million jobs.

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 teaching professionals, *business & administration associate professionals*, and *science & engineering professionals*. Even so, the skilled manual occupation of drivers & mobile plant operators is expected to provide the most job openings, while *stationary plant & machine operators, assemblers* and *metal, machinery & related trades workers* are also expected to see a large number of job openings, the last of which is despite a large fall in the total number of jobs. The low skilled elementary occupation of *cleaners & helpers* is also expected to provide a relatively large number of job openings, due entirely to replacement demand.

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



Source: Cedefop (2022 Skills Forecast).

5. 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 Hungary is characterised by changes in the level of specialisation within occupations and by changes in industry size. Stronger occupation-specific and industry effects will lead to an increasing share of *professionals*, especially to the benefit of *science and engineering professionals, business and other professionals*. Despite the evident and positive impact of industry size effect, several high-skilled occupations will decrease due to the strong and negative occupations-specific effect. Among the occupations that will suffer the most are *managers and senior officials, science and engineering associate professionals*.

Therefore, the overall effect of occupational change depends on several factors that need to be considered together. Increasing automation and digitisation, and moving toward a service-oriented economy, including within manufacturing, are some factors that impact the occupational change in the country. High-skilled

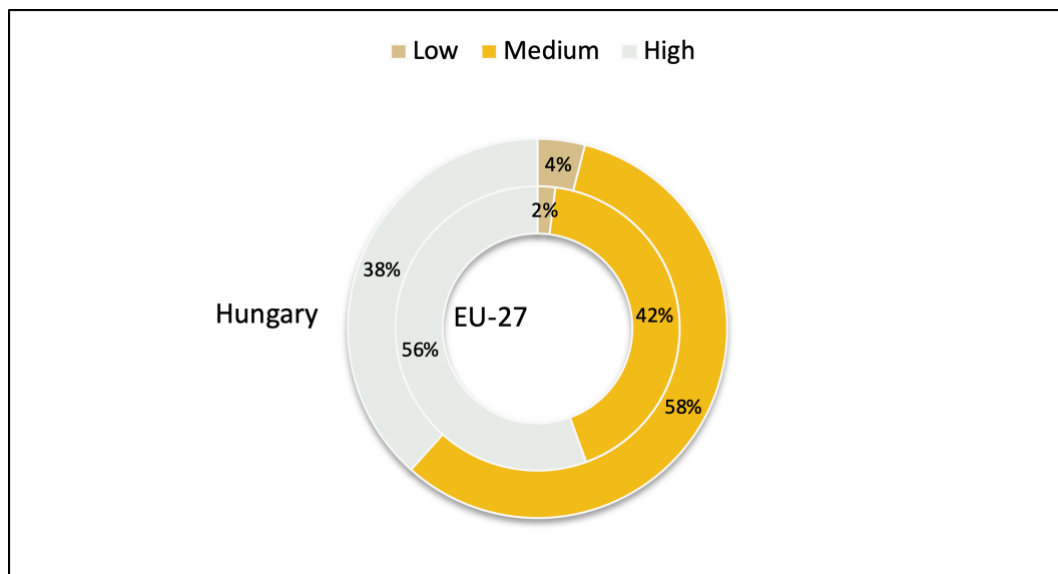
occupations will experience a slight overall decrease, but the negative employment change is more evident for intermediate occupations. Only a few medium-qualified occupations, such as *assemblers, personal, care, protective service*, are expected to grow.

Lower-level occupations will experience an overall increase thanks to the noticeable growth in *agricultural, forestry and fishery labourers*, which is strong enough to outweigh the decrease in the other low-skilled occupations.

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



Source: Cedefop (2022 Skills Forecast).

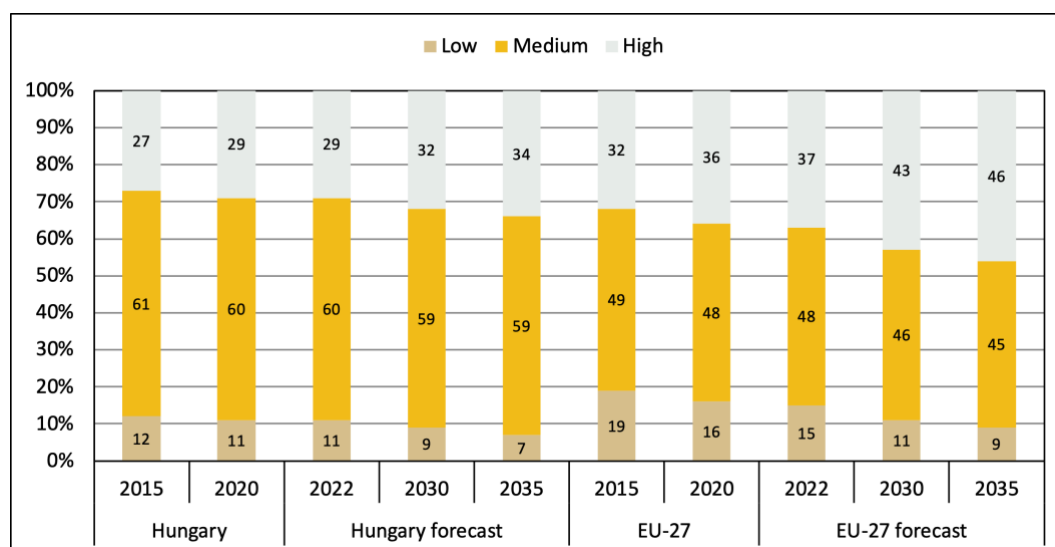
Figure 5 shows the shares of total job openings by qualification level for Hungary and the EU-27 over 2022-35. In Hungary, most (58%) job openings are expected to require a medium qualification. Compared to the EU-27, a much higher share of

job openings is expected to require medium qualifications, while a lower share of job openings is expected to require high (38%) qualifications.

Figure 6 depicts the development of the qualification shares of the labour force in Hungary and the EU-27. Hungary is steadily increasing the share of higher qualified in the labour market. While the share was at 29% in 2022, it is expected to increase to 34% by 2035.

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



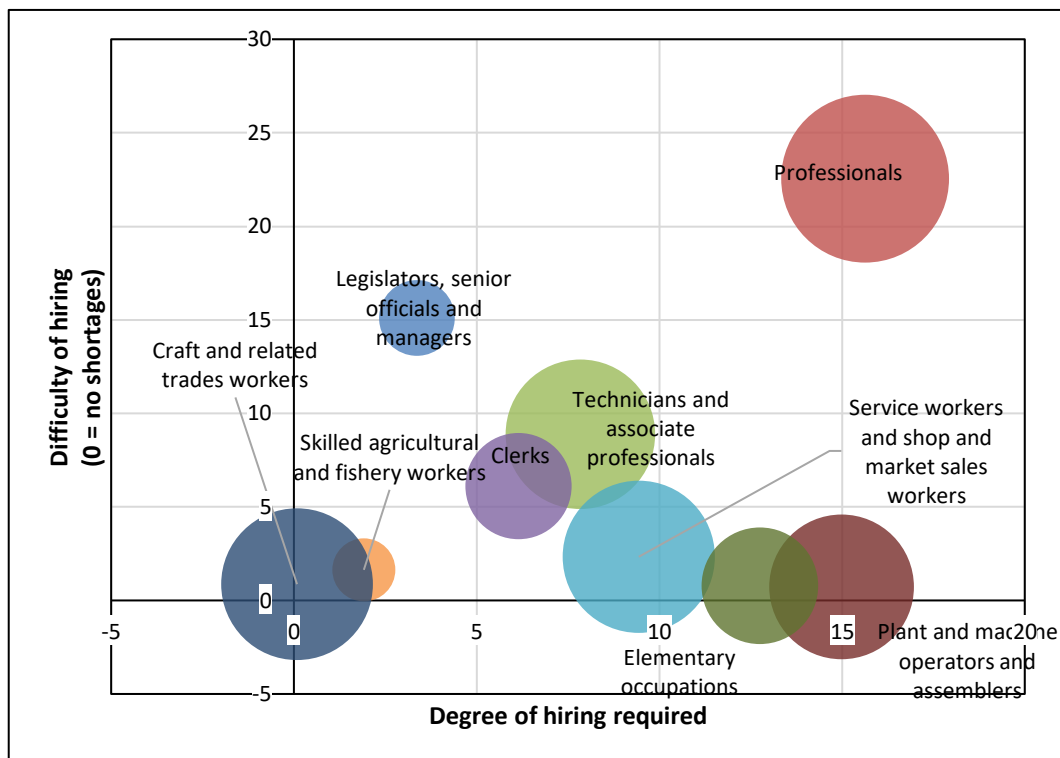
Source: Cedefop (2022 Skills Forecast).

The share of medium qualified workers is expected to stagnate, from 60% in 2022 to 59% in 2035. The trend is similar to that of the EU-27, albeit much slower in Hungary.

The forecast implies an increasing shortage, especially among the highly qualified. While the supply of the higher educated is forecast to fill the demand within medium and lower level occupations sufficiently.

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 to fulfil 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, 2022-35



Source: Cedefop (2022 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.

The low supply of higher educated workers suggests that there could be shortages, especially among the higher level occupations.

Professionals are expected to have stronger hiring difficulties, as they usually hire from the supply of higher qualified, and they also show a high degree of hiring

required in the forecast period. A similar situation can be found among the technicians and associate professionals, albeit at a much lower level.

A low degree of hiring required and low hiring difficulties can be found among the *craft and related trade workers*.

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