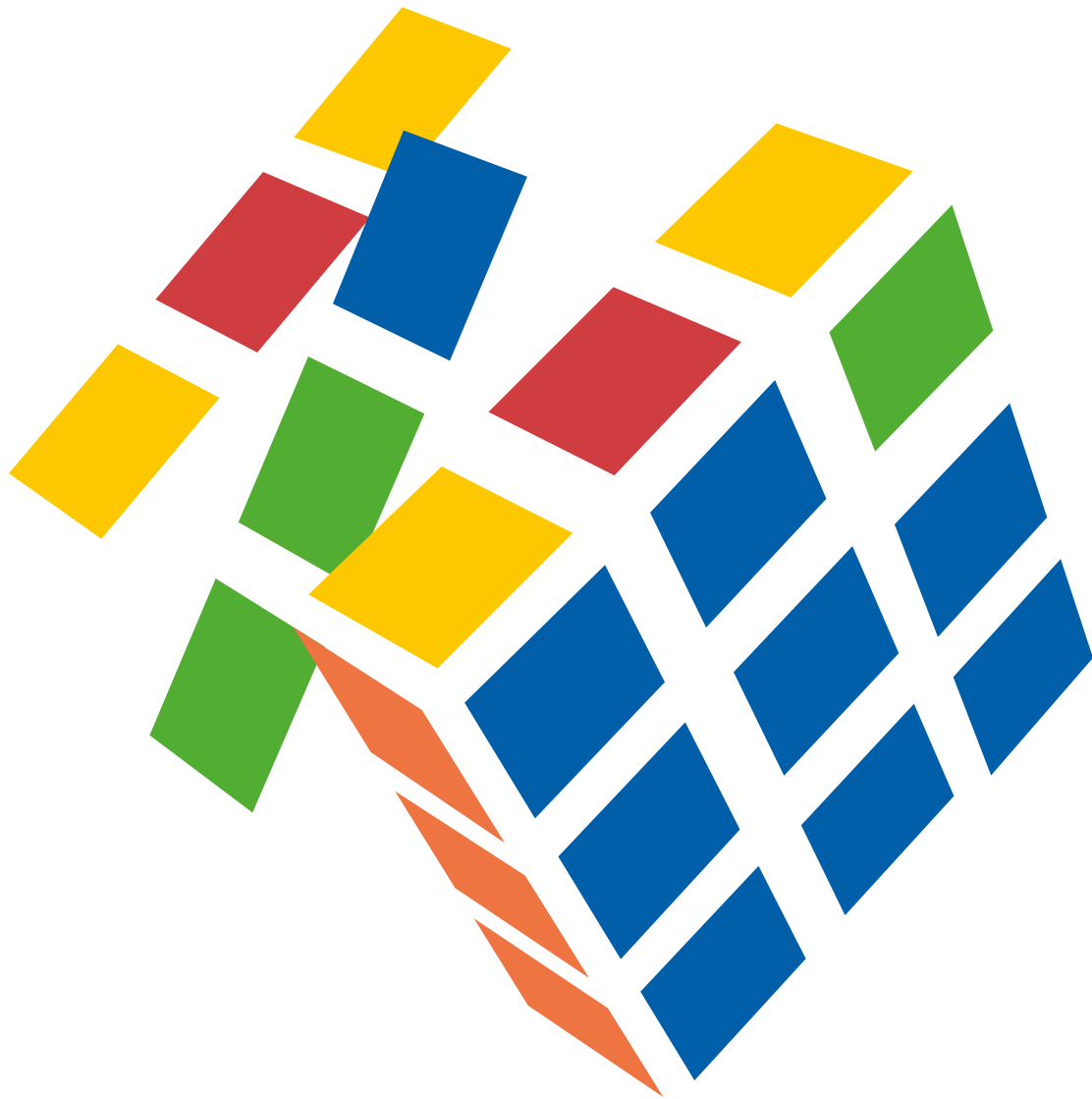




CEDEFOP

European Centre for the Development
of Vocational Training

EN



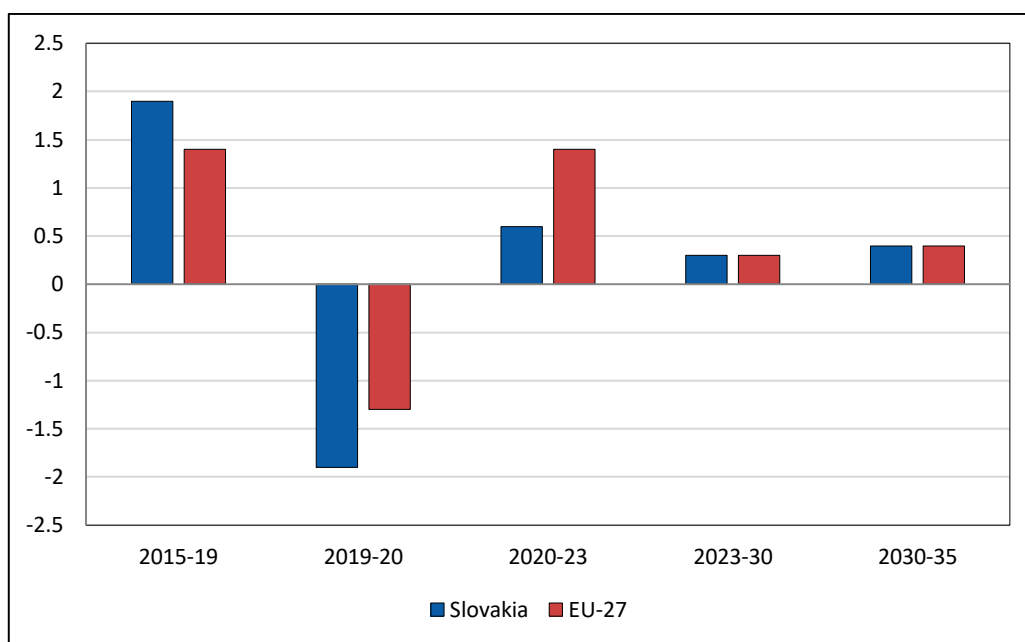
2025 skills forecast Slovakia



1. Employment outlook

Employment in Slovakia is forecast to grow at the same rate as the EU-27 average, albeit at much slower rates than seen over 2015-19. Figure 1 shows that employment in Slovakia grew slightly faster than the EU-27 average over 2015-19 but fell slightly more sharply in 2020 as the Covid-19 pandemic hit. Employment in Slovakia is also estimated to have bounced back less strongly than the EU-27 over 2020-23, due mainly to a shortage of available labour force. Across the forecast period, employment in Slovakia is forecast to grow by 0.3-0.4% pa, the same rate as forecast for the EU-27, constrained mainly by a limited labour supply.

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



Source: Cedefop (2025 Skills Forecast).

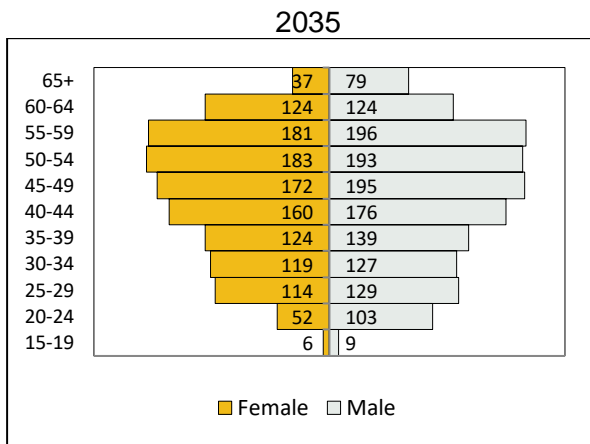
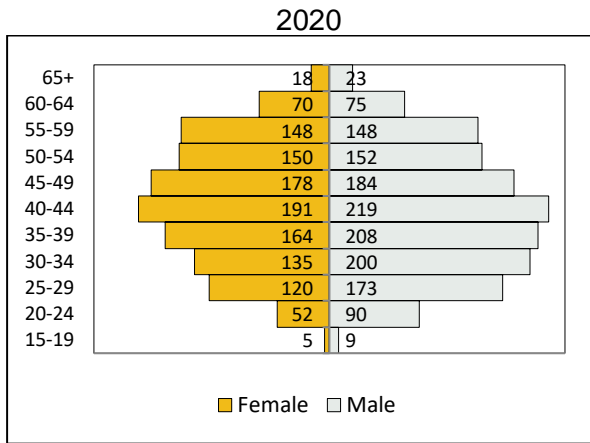
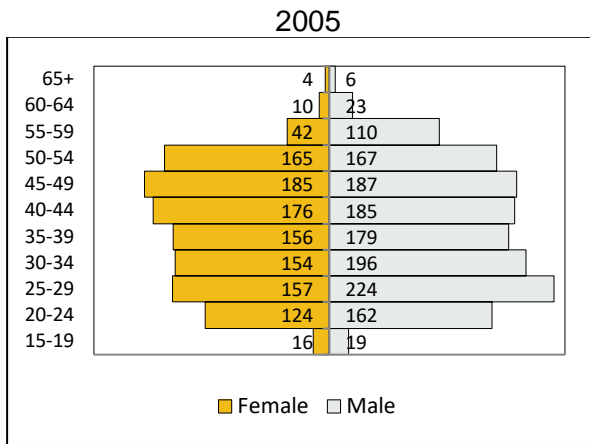
2. Labour force overview

Figure 2 shows Slovakia's labour force by age group in 2005, 2020 and 2035. Changes in the labour force in Slovakia 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 Slovakia is projected to increase by 1% over 2020-35, compared with growth of 2.5% over the previous 15 years. This compares with an expected increase in the labour force of just under 10% over 2020-35 for the EU-27. The total participation rate in Slovakia is forecast to increase by 1 pp over 2020-35, compared with an increase of 4 pp in the total rate for the EU-27. The total population is forecast to remain broadly static over 2020-35, compared with growth of 3% over 2005-20.

The population aged 25-44 in Slovakia is forecast to decline sharply during 2020-35, while the population aged 50-59 and 65 and over is forecast to grow quite strongly, reflecting trends in the relevant younger cohorts in preceding periods.

Although participation rates in some age groups in Slovakia are forecast to grow quite strongly over 2020-35, with the strongest increases projected for the 60-64 age group (28 pp), rates in the 40-54 age groups are forecast to increase by only 0-2 pp over this period. Overall, the total participation rate for males is forecast to fall by 1 pp and for females to increase by 2 pp over 2020-35.

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

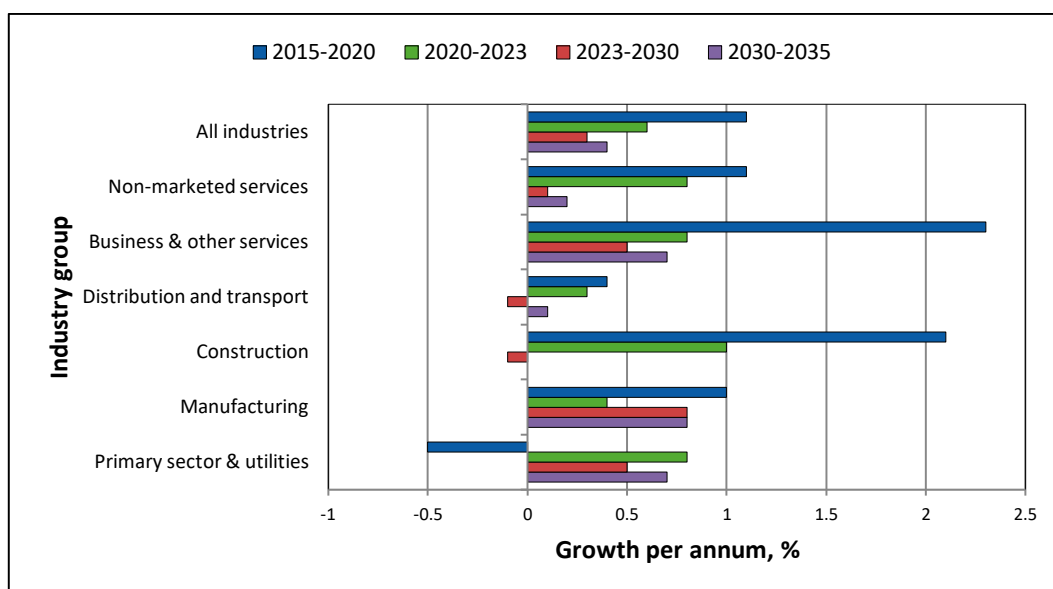


Source: Cedefop (2025 Skills Forecast).

3. Sectoral employment trends

Figure 3 shows the annual average employment growth by broad sector in Slovakia between 2015 and 2035. Although total employment in Slovakia is expected to grow over the forecast period, the picture among the broad sectors is mixed. Employment growth is forecast to be led by *Manufacturing*, with growth of 0.8% pa over 2023-30, followed by *Business & other services* and *Primary sector & utilities* (both at 0.5% pa), and *Non-marketed services* (0.1% pa). Employment in *Construction* and *Distribution & transport* is forecast to fall slightly over the same period.

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



Source: Cedefop (2025 Skills Forecast).

In terms of sub-sectors (i.e. below the level of the six broad sectors discussed above), the pattern of employment growth is even more mixed. Among the larger (accounting for around 2% or more of total employment in Slovakia in 2020) sub-sectors of *Business & other services*, employment in *computer programming & information services* is forecast to increase strongly over 2023-30, *legal, accounting & consultancy services* quite strongly and *administrative & support services* only weakly. Meanwhile, employment in *financial & insurance services* is forecast to fall slightly over the same period. In *distribution & transport*, employment in *accommodation & catering services* and in *warehousing & postal services* is forecast to grow moderately, while employment in the very large sub-sector (16%

of employment in Slovakia) of *wholesale & retail trade* is forecast to decline slightly over the same period. In *non-marketed services*, employment in *health* (6% of employment) is forecast to grow quite strongly, due to increased demand from the ageing population, while employment in *education* (8% of employment) and *public administration & defence* (7% of employment) is forecast to decline. Within *manufacturing*, in which the sub-sectors tend to be smaller, employment in the relatively large (2% or more of employment) sub-sectors of *other machinery & equipment*, *motor vehicles*, *food, drink & tobacco* and *rubber & non-metallic mineral products* is forecast to grow quite strongly, while in *basic metals & metal products* employment is forecast to fall over the same period. Within *primary sector & utilities*, employment in the largest subsector, *agriculture*, is forecast to increase moderately, which is against the trend in most other Member States.

4. Job openings by occupational group

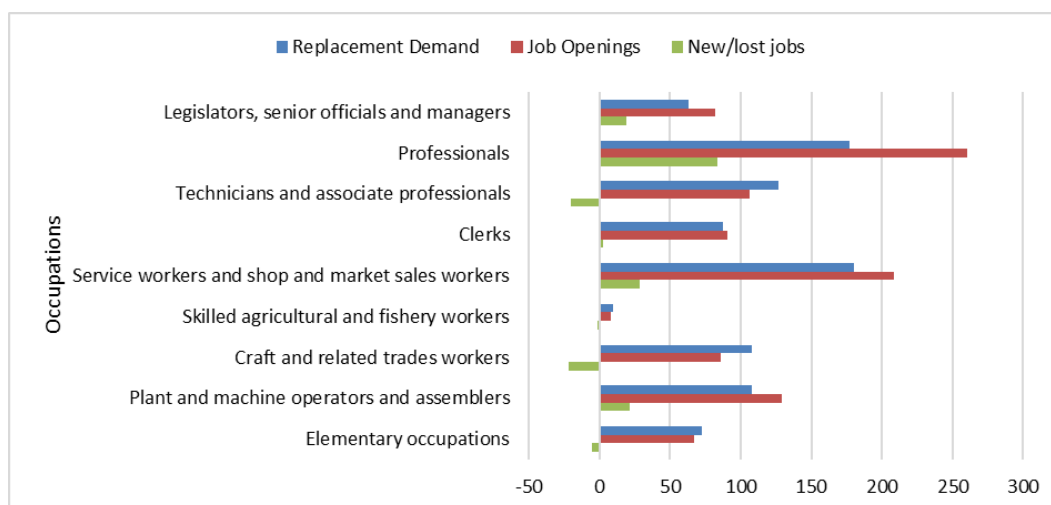
Cedefop skills forecasts estimate the total job openings by occupational group as the sum of net employment change and replacement needs. Net employment change refers to new jobs created or lost due to the expansion or contraction of employment in that sector or occupation. Replacement needs arise as 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 2022-35. 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 need replacement workers. All occupations are expected to experience at least some increase in the total number of jobs, even if some will have lost jobs over the period. There will still be many job openings due to replacement demand. *Professionals* and *service workers & shop & market sales workers* are the two broad occupations expected to generate the largest number of job openings over the forecast period, accounting for 25% and 20% of total job openings, respectively. Overall, the total number of jobs in Slovakia is forecast to increase by 118 000, while replacement demand is forecast to be around 934 000, so there are expected to be more than 1 million job openings over the forecast period.

At the more detailed level, most job openings (taking both new/lost jobs and replacement needs together) as a share of all job openings are expected to be in *teaching professionals* (7%), *personal care workers* (6%), and *personal service*

workers (6%). Of the ISCO 2-digit occupations, only *legal, social, cultural & related associate professionals* are expected to see a decline in the number of jobs. *Sales workers* are also expected to provide a large number of job openings (6% of all job openings), driven entirely by replacement demand as the total number of jobs is expected to contract for these occupations. Although most skilled manual and elementary occupations are expected to provide at least some job openings, mainly through replacement demand, the number is much lower than in the more skilled occupations.

Figure 4. **Total job openings, 2022-35**



: Cedefop (2025 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 economic trends (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).

An increasing specialisation in many sectors influences the occupational composition of employment in Slovakia. This is reflected in stronger occupation-specific effects, leading to increasing shares of *Professionals* and *Managers* in the

economy. These changes reflect changes in job organisation in many sectors and, in many cases, an increasing specialisation. Along with these specialisations there is also a move towards managing these new work forms. High-skilled occupations that can benefit from this trend are, for example, *health professionals, administrative and commercial managers* and *teaching professionals*.

Health professionals, and teaching professionals benefit from the increase in the underlying *non-marketed services* sector. Yet, not all of the increases in employment translate into higher employment in these important occupations. An increasing specialisation will also lead to a larger share of other occupations in that sector.

Therefore, the overall effect of occupational change depends on several factors that need to be considered together. Increasing digitalisation and moving towards a more service-oriented economy, including within manufacturing, will lead to a greater use of higher-level occupations. At the other end of the spectrum, more traditional occupations in manufacturing and trades are expected to decrease over time, such as *craft & related trades workers* and *plant and machine operators and assemblers*.

The strength of intermediate occupations, with a strong intermediate qualification level in Slovakia, limits the overall effect on medium-qualified occupations. Whereas *stationary plant and machine operators* and *assemblers* remain somewhat stronger, other industry-based occupations, such as *metal, machinery, & related trade workers* are decreasing in number, most likely due to increases in automation within the sectors. Clerical work is generally expected to see a decrease in its employment share, but *general & keyboard clerks* are expected to maintain their employment share.

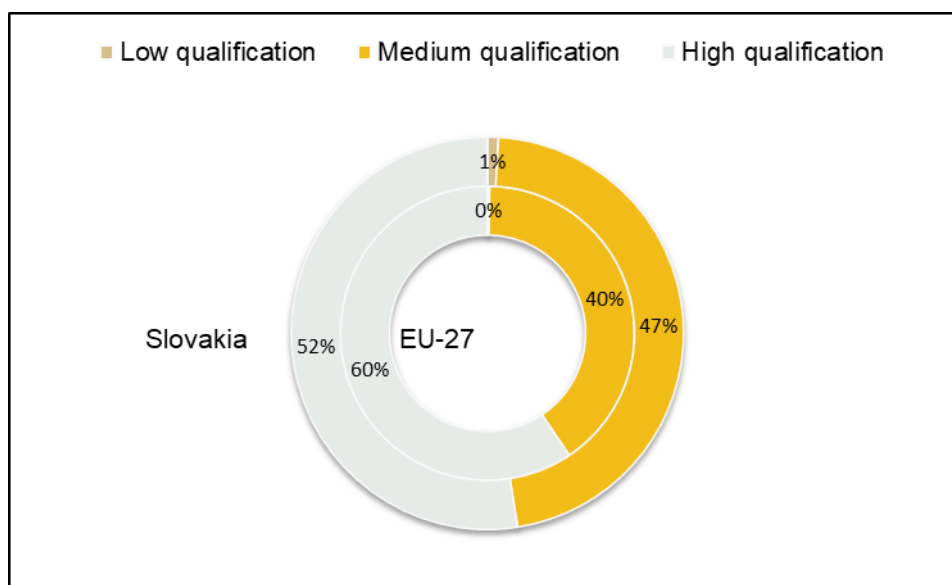
6. Demand for and supply of skills

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

Just over half (52%) of the total job openings that are expected to be created in Slovakia over the period up to 2035 will require high-level qualifications, about 7 pp less than the EU-27 average (see Figure 5). Slightly less than one-half (47%)

of total job openings will require medium-level qualifications and just 1% will require low-level qualifications.

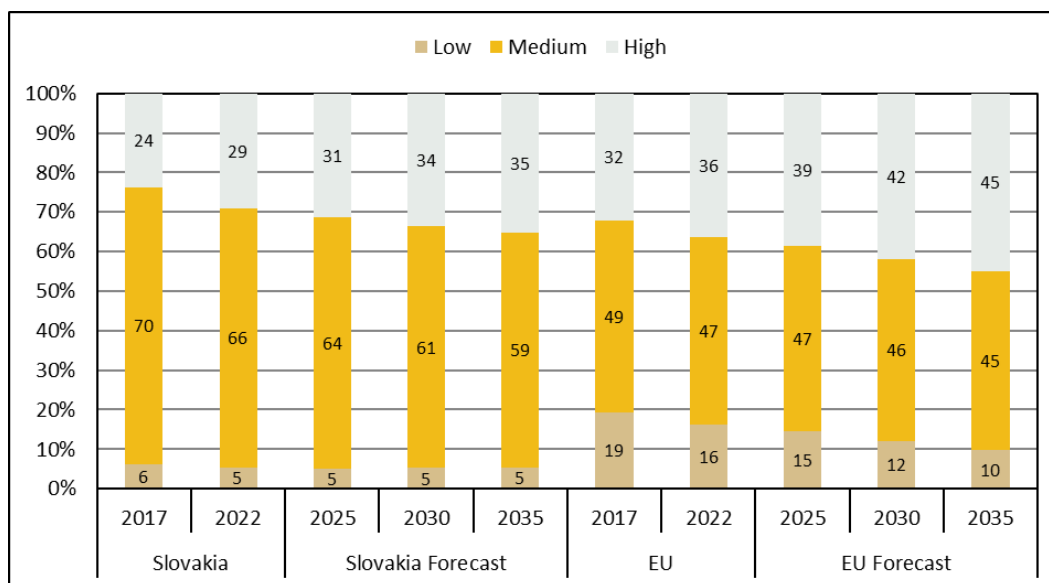
Figure 5. **Shares of total job openings by level of qualification, 2022-35**



Source: Cedefop (2025 Skills Forecast).

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

Figure 6. Labour force by qualification level



Source: Cedefop (2025 Skills Forecast).

Slovakia is expected to experience changes over 2022-35 in shares of qualifications in the labour force, as seen in Figure 6. Slovakia's share of people with high-level qualifications is expected to increase to 35% of the labour force by 2035 (from 29% in 2022). The share of medium qualified labour force is expected to reduce but remain the largest qualification group in Slovakia (59%, in 2035). Those with low levels of qualification are expected to remain at 2022 shares (5%) in 2035. In Slovakia, the proportion of the labour force in 2035 with at least medium-level qualifications (95%) is expected to be slightly higher than the EU-27 average (90%).

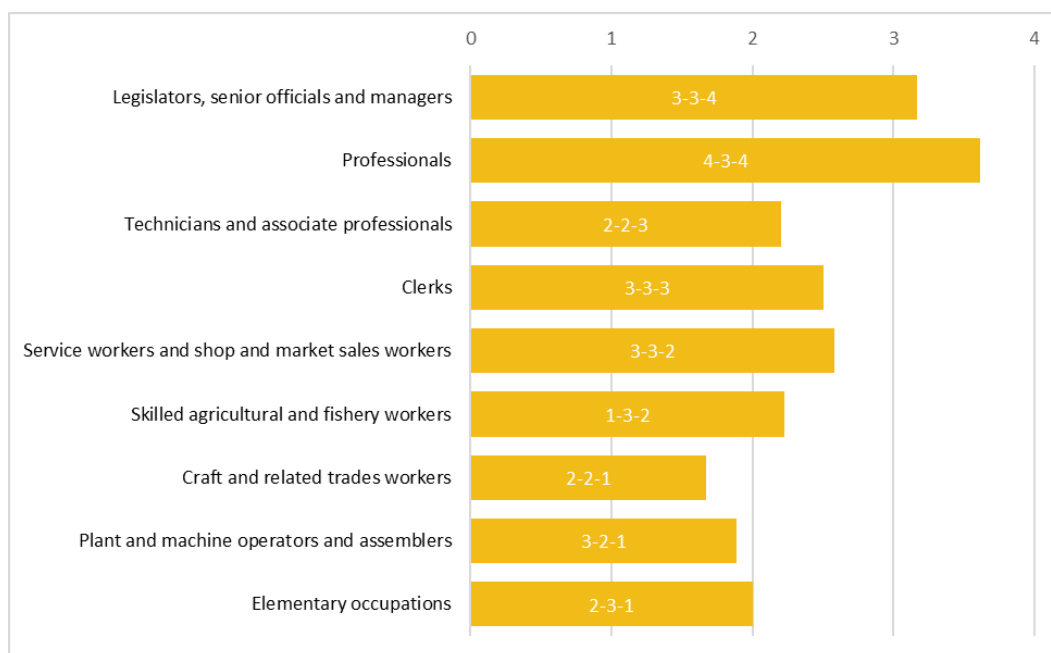
In Slovakia, the supply of low- and medium-skill workers is expected to be above what is required by demand by 2035, while the supply of high-skill workers is expected to be below the demand for those qualifications broadly.

The **labour shortage index** is a method to summarise three elements of potential labour shortage: (1) employment growth, (2) replacement demand, and (3) Supply/Demand imbalance (IFIOD). The outcomes at the occupation level are grouped into four quartiles: those with a low indication of shortage get the value 1, and those with the highest indication of shortage will get the value 4. The total outcome of the individual elements is a simple average of the elements. In Figure 6, the length of the bar gives the overall outcome, where higher levels indicate more shortage. The outcomes of the three elements are also given to quickly evaluate the influence of employment growth - replacement demand, and - supply-demand imbalances.

The labour shortage index is calculated at the ISCO 2-digit level and then aggregated to the ISCO 1-digit level (see Figure 7). The highest value of the labour shortage index at the broad, 1-digit, level, can be found among *Professionals (4-3-4)*, this is driven by the growth of the underlying occupations along with their high replacement needs. This occupational group also has the highest employment supply/demand imbalance.

Another occupational group with a high labour shortage index value is *Legislators, senior officials & managers (3-3-4)*, due to employment growth and high supply/demand imbalance. The occupational groups with the lowest labour shortage index values are *Craft & related trades workers (2-2-1)* and *Plant & machine operators & assemblers (3-2-1)*, both with relatively low levels of supply/demand imbalance expected.

Figure 7. **Labour shortage index, 2022-35**



Source: Cedefop (2025 Skills Forecast).

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 November 2023. The European Economy is expected to grow despite monetary tightening on phasing out of fiscal support.

The key assumptions of the baseline scenario incorporate the Eurostat population forecast available in June 2023 (Europop 2023) ⁽¹⁾, and the short-term macroeconomic forecast produced by DG ECFIN in November 2023 ⁽²⁾. The source of historical labour force data is the European Labour Force Survey, which in 2022 underwent important methodological changes, causing a break in the time series for several variables, including the labour force. Consequently, in many Member States, the participation rates in 2021 are noticeably above/below historical trends. Moreover, some Member States experienced significant revisions in the historical data series for sectoral employment from the National Accounts.

The Cedefop Skills forecast 2025 is consistent with the objectives set by the European Green Deal by incorporating suitable assumptions about 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.

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

(2) https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/economic-forecasts/autumn-2023-economic-forecast-modest-recovery-ahead-after-challenging-year_en

For the latest update and access to more detailed Cedefop skills forecast data please visit:

www.cedefop.europa.eu/el/events-and-projects/projects/forecasting-skill-demand-and-supply

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

