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European Centre for the Development
of Vocational Training

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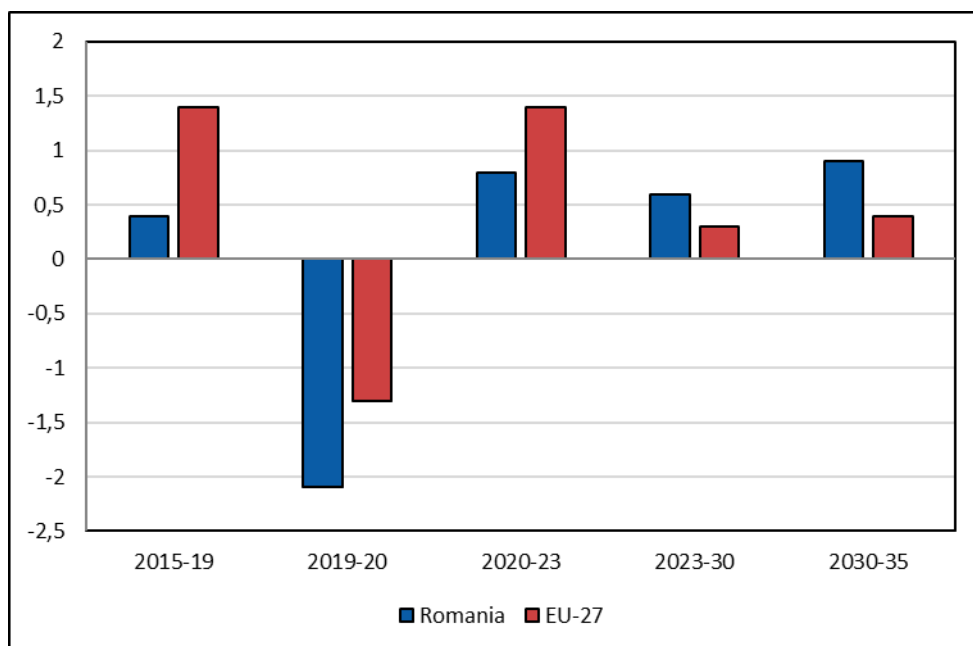
2025 skills forecast Romania



1. Employment outlook

Employment in Romania is forecast to grow faster than the EU-27 average over 2022-35. Figure 1 shows that employment in Romania grew quite slowly over 2015-19, much slower than the EU-27 average, and fell more sharply than the EU-27 in 2020 as the Covid-19 pandemic hit. Employment in Romania is also estimated to have bounced back less strongly than the EU-27 over 2020-23. Across the forecast period, however, employment in Romania is forecast to grow by 0.6-0.9% pa, much faster than the growth of around 0.3-0.4% pa forecast for the EU-27 as a whole.

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



Source: Cedefop (2025 Skills Forecast).

2. Labour force overview

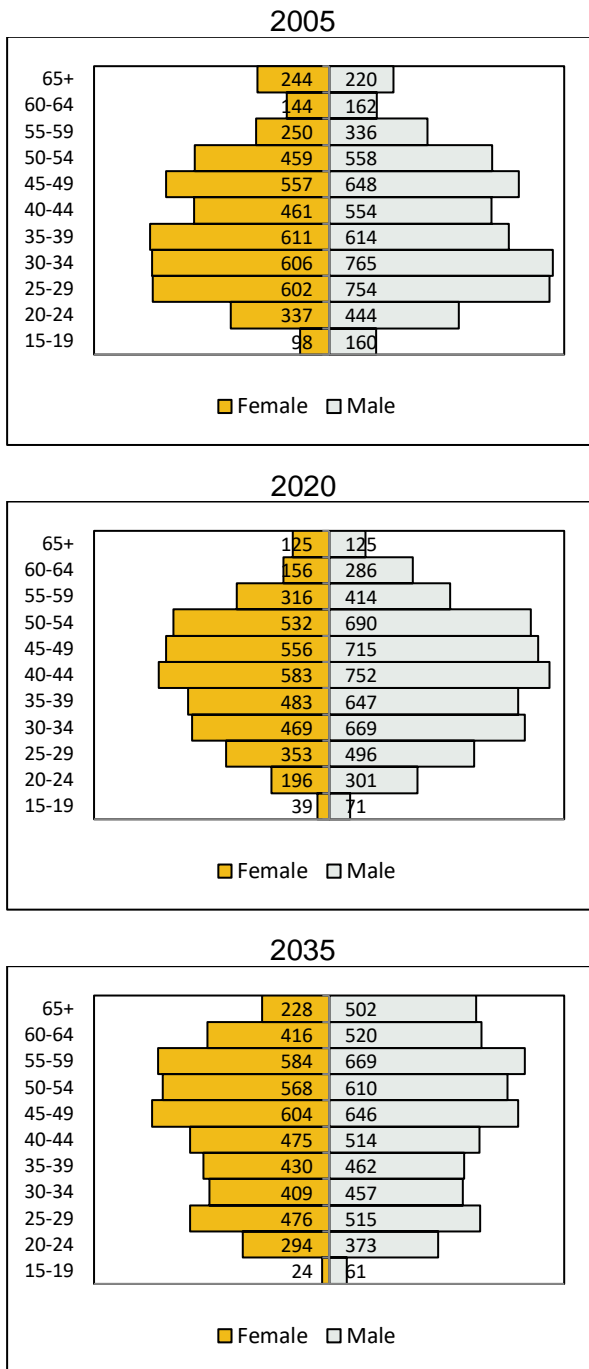
Figure 2 shows the labour force by age group in Romania in 2005, 2020 and 2035. Changes in the labour force in Romania over the forecast period will continue to be driven by the ageing population and increasing participation rates in most age groups. The total labour force in Romania is projected to increase by 10% over 2020-35, compared to a fall of 6% over the previous 15 years. The forecast increase in the labour force over 2020-35 is similar to that forecast for the EU-27. The total participation rate in Romania is forecast to increase by a very large 10 pp over 2020-35, compared with an increase of only 4 pp in the total rate for the EU-27 as a whole. The total population is forecast to fall by 7% over 2020-35, similar to the fall seen over 2005-20.

The population aged 15-54 in Romania is forecast to decline sharply during 2020-35, while the population aged 55-59 and 65 and over is forecast to grow quite strongly, reflecting trends in the relevant younger cohorts in preceding periods.

The participation rates of all age groups above 20 in Romania are projected to increase strongly over 2020-35, with the strongest increase projected for the 60-64 (38 pp), 55-59 (22 pp) and 20-29 (18-19 pp) age groups, and the increase for most age groups expected to be at least in double digits.

Female participation rates in Romania are slightly lower than the EU-27 average, with an overall female participation rate of 45% in 2020 compared with the EU-27 average of 50%. However, as discussed, participation rates in Romania are projected to increase rapidly over 2020-35, so that by the end of the forecast period, most female participation rates by age group in Romania will be higher than their counterparts in the EU-27 as a whole. The overall male participation rate in Romania is already higher than the EU-27 average, and male rates by age group are also projected to grow faster than in the EU-27. Overall, the total participation rate for females is projected to increase by 12 pp and for males to increase by 8 pp over 2020-35.

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

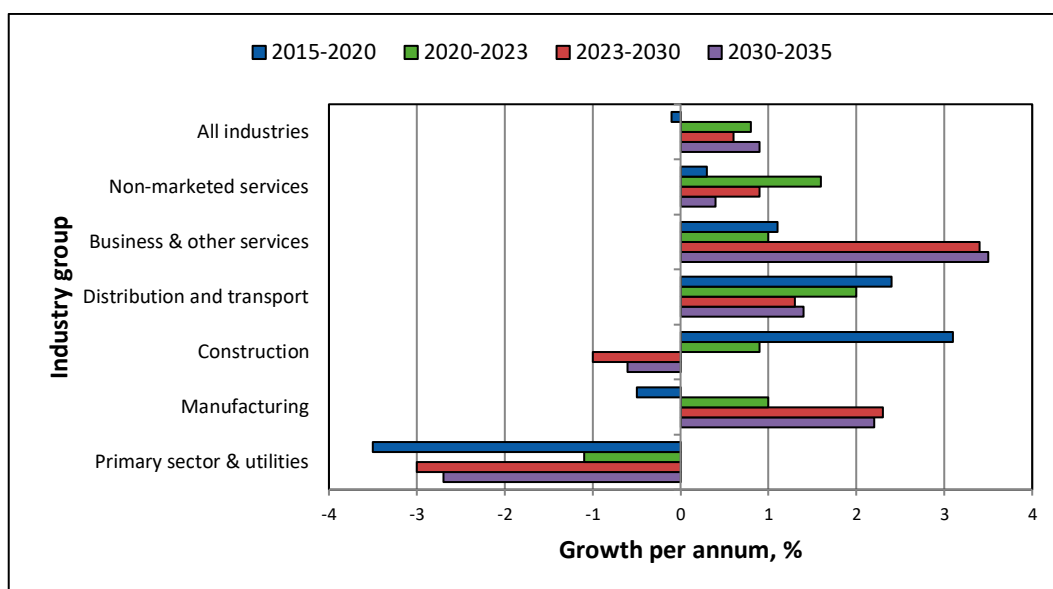


Source: Cedefop (2025 Skills Forecast).

3. Sectoral employment trends

Figure 3 shows the annual average employment growth by broad sector in Romania between 2015 and 2035. Although total employment in Romania is expected to continue to grow relatively strongly over the forecast period, the picture among the broad sectors is mixed. Employment growth is forecast to be by far the strongest in *Business & other services*, at around 3.5% pa over 2023-30, followed by *Manufacturing*, with growth of 2.3% pa over the same period. On the other hand, employment in *Primary sector & utilities*, which accounts for around one quarter of employment in Romania, mainly through *agriculture*, is forecast to fall by 3% pa 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 growth is much more mixed. Within *Business & other services*, all sub-sectors are forecast to see an increase in employment, with *computer programming & information services* forecast to see by far the fastest growth, with double-digit growth over 2023-30. The sub-sectors within *Manufacturing* tend to be smaller, but within the larger ones (2% of total employment or more), employment in *motor vehicles* and *food, drink & tobacco* is forecast to grow strongly over 2023-30, while employment in *textiles & leathers* is forecast to see only weak growth over the same period. In *Distribution & transport*, employment in the large sub-sectors of *accommodation & catering* (2.4% of

employment) and *land transport* (4.8% of employment) is forecast to grow strongly over 2023-30, while employment in *wholesale & retail trade* (15% of employment), is also forecast to grow quite strongly over the same period. Within *Non-marketed services*, employment in *health* is forecast to grow strongly over 2023-30, reflecting increased demand due to the ageing population, while *public administration & defence* is forecast to see rather weaker growth, and employment in *education* is forecast to decline. Each of these three sub-sectors accounted for 4-5% of total employment in Romania in 2020. Employment in *Primary sector & utilities* in Romania is dominated by *agriculture*, which is forecast to fall very strongly over 2023-35.

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).

4. Job openings by occupational group

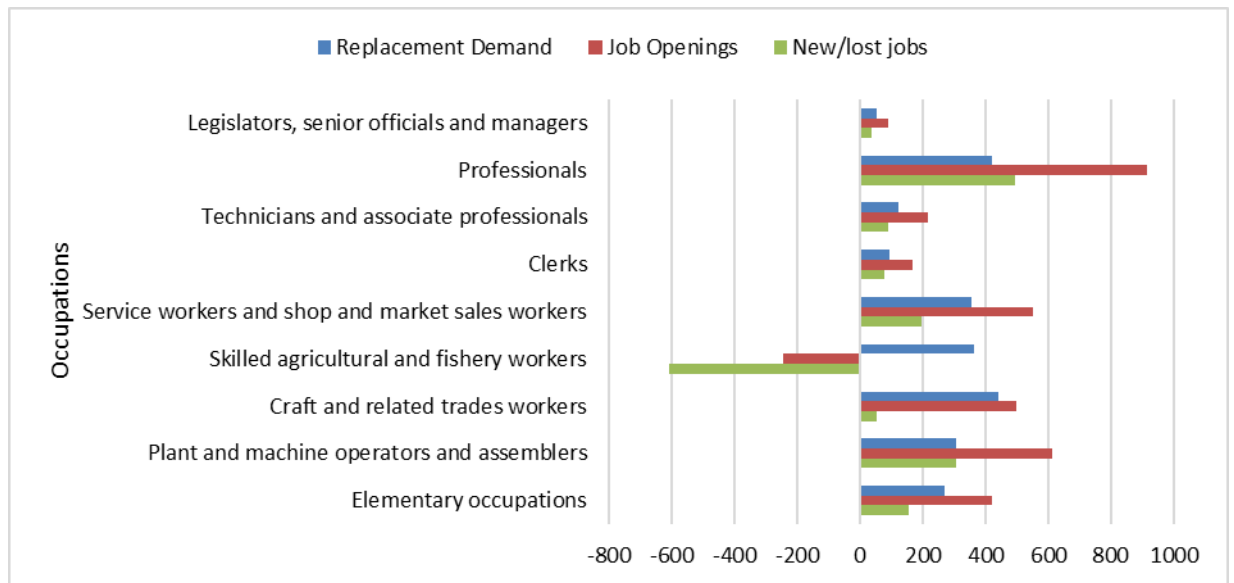
Figure 4 shows the total job openings by broad occupational group over 2022-35. The number of job openings indicates the number of jobs required to be filled due to lost/newly created jobs and those that need replacement workers. All broad occupations except for *Skilled agricultural & fishery workers* are expected to experience an increase in the number of jobs over this period, reflecting the forecast by sector. The strong decline in jobs for *Skilled agricultural and fishery workers* is due to the poor prospects for total employment in that particular occupation due to sectoral requirements. In addition, subsistence workers are no longer considered employed, contributing to this decline. For these workers, the number of job losses is forecast to be greater than replacement demand, and so the total number of job openings is expected to be negative.

Professionals are expected to generate the largest number of job openings, accounting for 28%. Overall, there are forecast to be 496 000 more jobs and a replacement demand of 421 000 jobs, leading to 917 000 job openings in total for this occupation over 2022-35.

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 *drivers and mobile plant operators* (10.4%), *business and administration professionals* (9.1%), and *sales workers* (8.3%). *Drivers and mobile plant operators* and *sales workers* are expected to see a substantial number of new jobs, but greater replacement demand, while *business and administration professionals* are also expected to see substantial replacement demand but a greater number of new jobs.

Only *market-oriented skilled agricultural workers*, and, to a lesser extent, *customer services clerks* and market-oriented skilled forestry, hunters, and gatherers are expected to see a decline in the number of jobs. The decline in the number of jobs for *market-oriented skilled agricultural workers* is forecast to far outstrip replacement demand.

Figure 4. **Total job openings, 2015-35**



Source: 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).

The labour market in Romania is changing within and across sectors in developing occupations. Changes in industry size mainly characterise the occupational composition of employment in the country and, in fewer cases, changes in the level of specialisation within occupations. Growing sectors requiring high-skilled workers are expected to lead to an increasing demand for high-skilled occupations such as *health professionals*, *Information and communications technology professionals*, *administrative and commercial managers*, and especially *business and other professionals*.

Health professionals will benefit from growth forecast in the underlying health sector, yet not all of the increases in employment translate into higher employment in these important health occupations. The country's high investments in digital infrastructure can explain the demand for *ICT professionals*. Similar effects are present for *sales workers* and *personal care workers*. These occupations are increasingly important and are mainly employed in growing sectors. The strong increases among professionals are partly at the cost of technicians, except for *information and communication technicians* and *associate professionals* who are employed in similar sectors, thus enjoying growth through the development of those sectors while being somewhat pushed out by higher levels of education (i.e., professionals). Furthermore, it is evident that the industry size effect favours the highly skilled occupations, and for this level of occupations, its impact is much stronger than the occupation-specific effect

Despite the growing industry size characterising all high-skilled occupations, *Teaching professionals* face both negative occupation and industry size effects due to the lack of youth in Romania.

Several medium-level occupations are decreasing due to a larger industry size effect than occupation effects, such as *teaching professionals* and *business and administration professionals*. Similar effects, but with a stronger impact, are

present in *service workers* and *shop and market sales workers*, *skilled agricultural and fishery workers*, *craft and related trades workers*, and especially *market-oriented skilled agricultural workers*, *metal, machinery, and related trades workers*. An exception are the *personal service workers*, who experience positive effects.

Lower-level occupations are expected to decrease, especially for *market-oriented skilled agricultural workers* where the sector is strongly declining. Despite the presence of specialisation in this occupation and for labourers in agricultural, forestry, and fishery, thanks to positive occupation-specific effects, there is evidence of a strong decline in the sector, especially for agricultural workers (both skilled and unskilled).

Along with these specialisations there is also a move towards managing these new work forms. High-skilled occupations can benefit from this trend. An increasing specialisation will also lead to a larger share of other occupations.

Therefore, the overall effect of occupational change depends on several factors that must 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, lower-level occupations supporting production and the service sector are increasing at the cost of intermediate occupations.

The strength of intermediate occupations, with a strong intermediate qualification level in Romania, limits the overall effect on medium-qualified occupations. Whereas building and related trade workers remain somewhat stronger, the number of industry-based metal, machinery, and related trade workers is decreasing, most likely due to increases in automation within the sectors. Clerical work is expected to see a decrease in its employment share in all but *customer service clerks*.

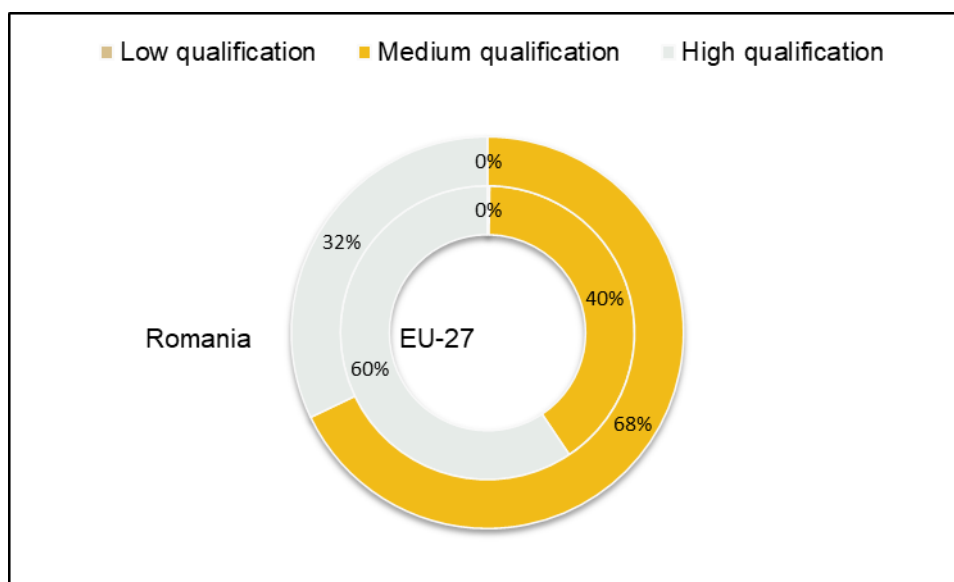
6. Demand for and supply of skills

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.

At the aggregate level, well over half (68%) of the total job openings expected to be created in Romania over the period up to 2035 will require medium-level

qualifications, about 28 pp more than the EU-27 average (see Figure 5). Slightly more than one-third (32%) of total job openings will require high-level qualifications, and no job openings will require low-level qualifications.

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

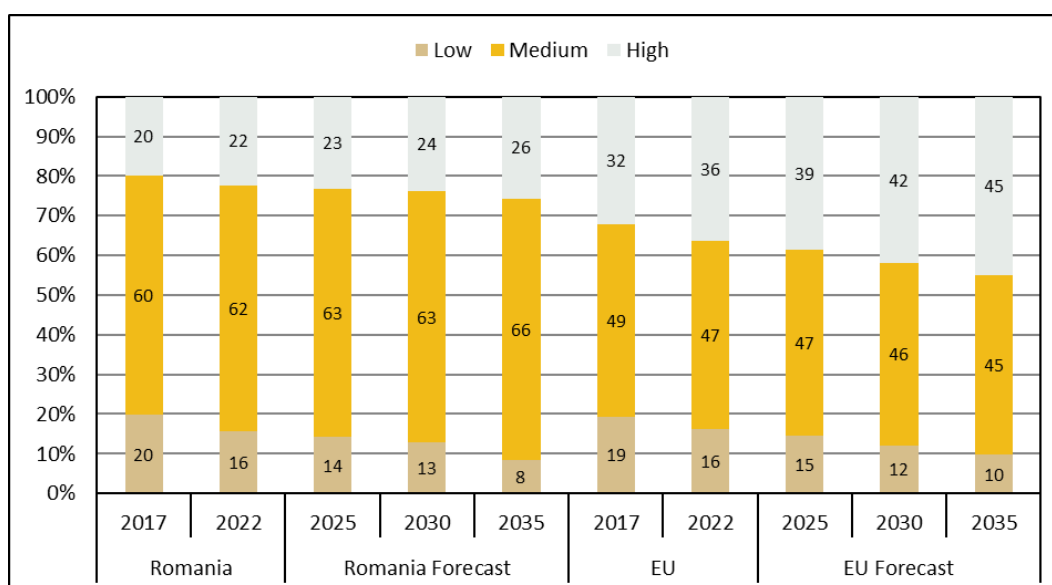


Source: Cedefop (2025 Skills Forecast).

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.

Romania is expected to experience little change over 2022-35 in terms of the shares of qualifications in the labour force, as shown in Figure 6. The share of people with high-level qualifications in Romania is expected to increase somewhat to 26% by 2035. The medium-qualified labour force share is expected to increase slightly. It is expected to remain the predominant group in Romania (reaching 66% in 2035). Those with low levels of qualification are expected to decrease to 8%. In Romania, the proportion of the labour force with medium-level qualifications remains significantly higher than the EU-27 average.

Figure 6. Labour force by qualification level



Source: Cedefop (2025 Skills Forecast).

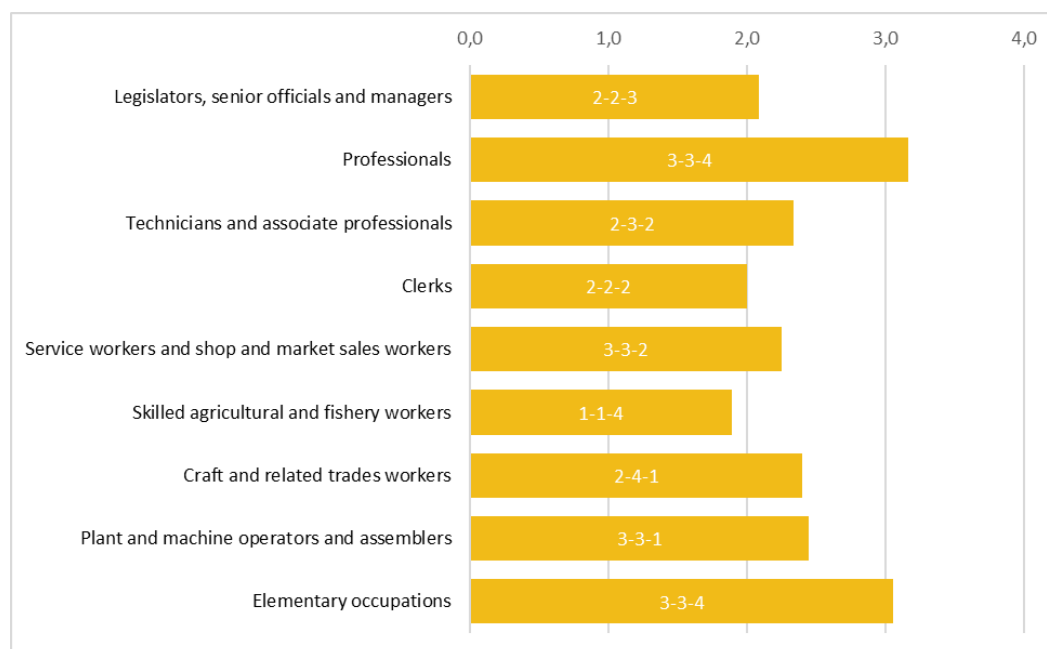
The **labour shortage index** is a method to summarise three elements of potential labour shortage: (1) employment growth, (2) replacement demand, and (3) Supply/Demand imbalance (IFIOD). The outcomes at the occupation level are grouped into four quartiles: those with a low indication of shortage get 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.

In Romania, the supply of low- and high-qualified workers is expected to be below what is required by demand by 2035, while the supply of medium-skilled workers is expected to meet the demand for those qualifications broadly. The labour shortage index is calculated at the ISCO 2-digit level and then aggregated to the ISCO 1-digit level.

The highest value of the labour shortage index can be found among *Professionals (3-3-4)*. This is driven by the growth of the underlying occupations, their high replacement needs, and strong imbalances due to the shortages of higher qualified.

Among the high-skilled occupations, *Information and communications technology professionals (4-4-4)* and *Science and engineering professionals (3-4-4)* indicate significant future shortages. Among the skilled manual occupations, the highest shortages are expected among *handicraft and printing workers (4-4-1)* due to strong growth and high replacement needs, followed by *assemblers (4-2-4)*, based on high employment growth and strong imbalances. Among the skilled non-manual occupations, the highest shortage is expected among *personal service workers (3-4-3)*. This is driven by being among the highest group for replacement demand, and second highest in employment growth and imbalances.

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

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For more details, please contact Cedefop's Skills Forecast team at:

Skills-Forecast@cedefop.europa.eu

