European Centre for the Development of Vocational Training

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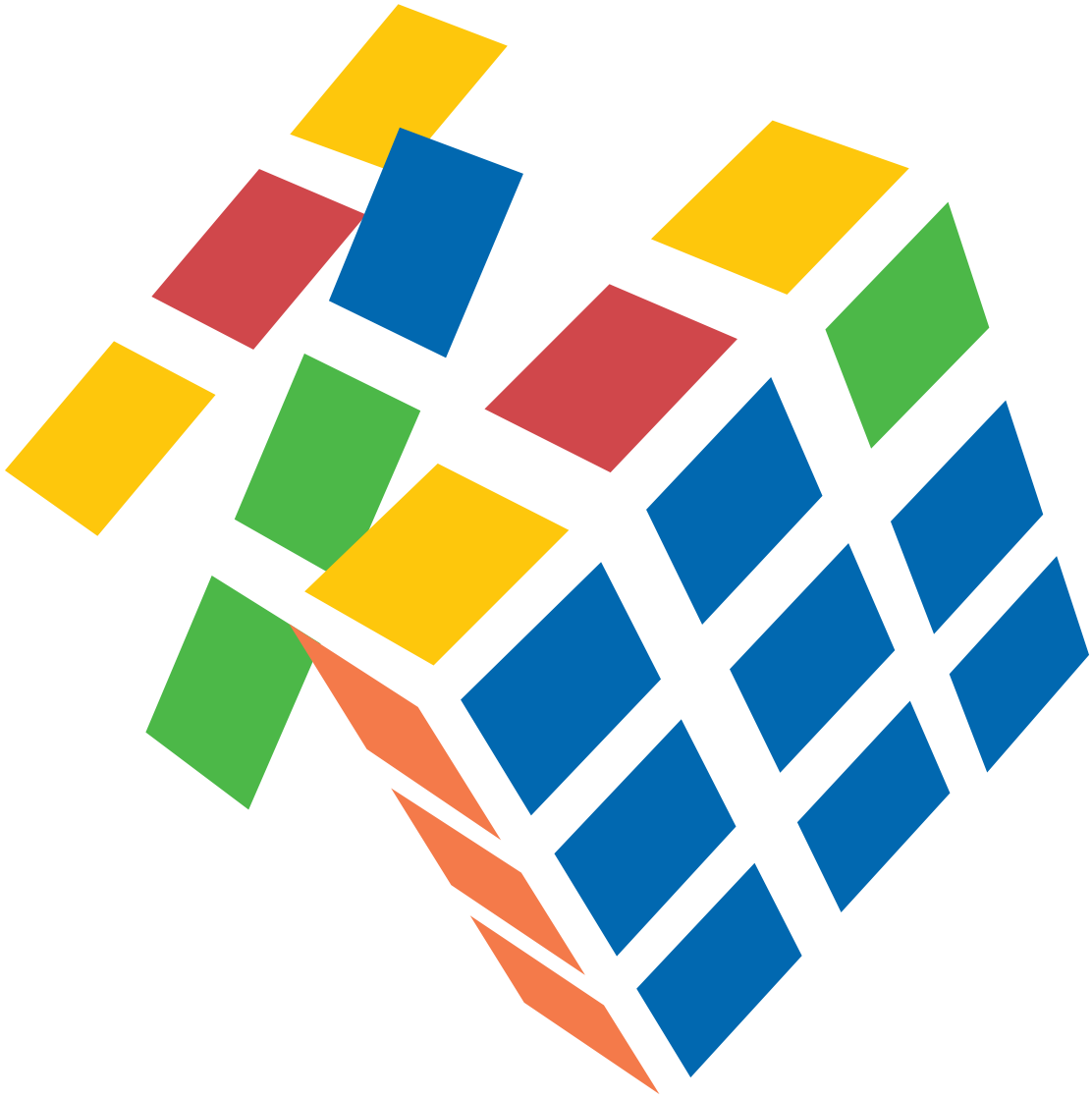


2020 skills forecast

Romania

CEDEFOP SKILLS FORECAST 2020

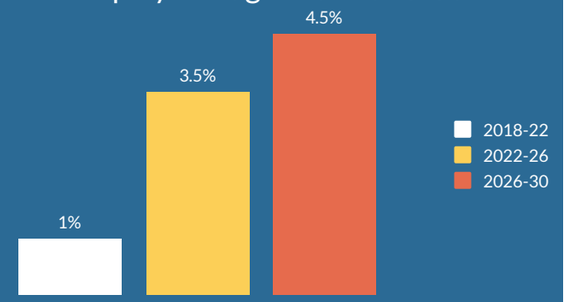
Key facts: Romania

CEDEFOP

9 469 000
Employment in 2030

9%
Increase 2018-30

% Employment growth 2018-30



FASTEST-GROWING SECTORS
Growth per year 2018-30

Distribution & transport 2.9%

Non-marketed services 2.1%

HIGHEST-DEMAND OCCUPATIONS
Total job openings 2018-30

450 000 Market-oriented skilled agricultural workers

408 000 Drivers and mobile plant operators

403 000 Sales workers

4.4%
Increase in employment in 2018-30

EU overview 2030

Fastest-growing sector
Non-marketed services

Highest-demand occupation
Business & administration associate professionals

4 203 000
Total job openings, 2018-30

Replacement needs (80%)
New job openings (20%)

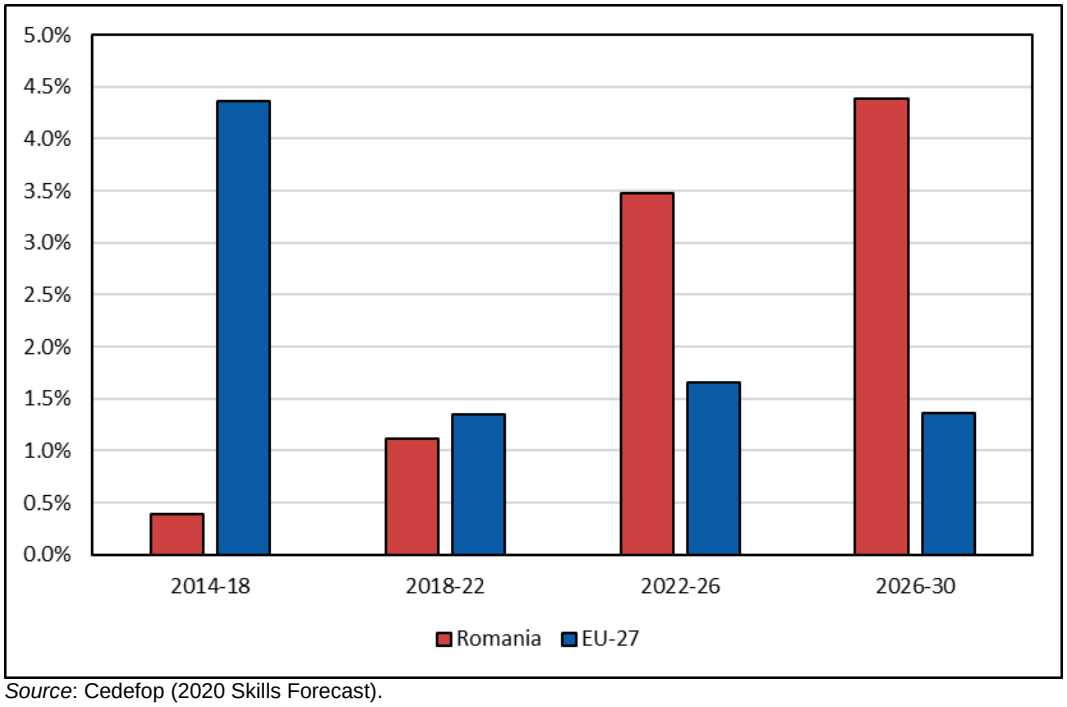
Total job openings by qualification level 2030:

60% Increase in high-skilled labour supply 2018-30

1. Employment outlook

Employment in Romania is forecast to grow at a higher rate than was seen over 2014-18, and in the later part of the forecast period is expected to grow faster than the EU-27 average, as shown in Figure 1. The trend is expected to continue to 2030, with Romania's employment growing by more than 4% over the period 2026-30, which is significantly higher than the EU-27 average (1.4%). However, this trend is likely to be hampered in the aftermath of the Covid-19 crisis. Effects are, for now, hard to discern but at least in the immediate and short term the overall trend may suffer significant disturbances.

Figure 1. Percentage employment growth in Romania and the EU-27, 2014-30



Source: Cedefop (2020 Skills Forecast).

2. Labour force overview

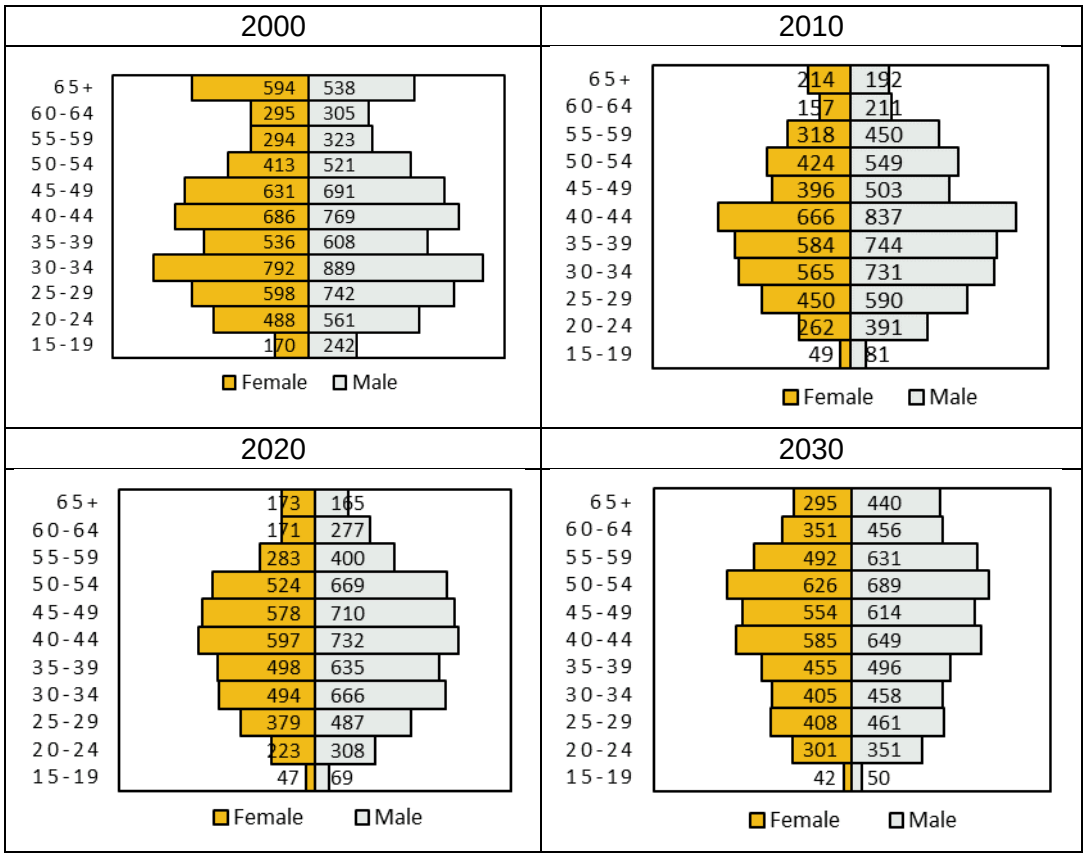
The total labour force is expected to have shrunk by 16% over the three decades from 2000 to 2030, with the changes over each decade slowly reversing from negative to positive by the end of the forecast period (-20% over 2000-10, -3% over 2010-20 and 8% over 2020-30). This increase in the labour force in the forecast period is expected to be driven by an increasing participation among those aged above 55 years old (see Figure 2). Over the entire period (2000-30),

the change in labour force is expected to be greatest among 55-59 years-olds. This is driven by a rapidly increasing participation rate for this age group, from 56% in 2000 to 82% in 2030. On the other hand, a sharp reduction in labour force growth is expected from those aged 15-34, mainly driven by a large decline in the population within this age group.

Over the forecast period, the changes in participation patterns are most apparent among those aged 65+, reflecting changes in retirement age in the country: the labour force aged 65+ in 2030 is forecast to be more than double that in 2020. The change in the participation rate for those aged 65+ is forecast to be positive over 2020-30 (9 percentage points (pp)), from a 26 pp decline over 2000-10 and a 3 pp decline over 2010-20.

Again, these overall trends may suffer from the effects of the Covid-19 crisis. It is likely that effects will be felt by the older age group, as their forecast participation may decline. However, if a vaccine or treatments for the virus are developed it is likely that trends will resume and the end result for 2030 will not differ substantially.

Figure 2. Distribution of the labour force (thousands), 2000-30



Source: Cedefop (2020 Skills Forecast).

The labour force in Romania is also affected by labour migration to the EU-15. There have been successive increases in the minimum salary throughout the last few years, as well as the introduction of a differentiated minimum salary for higher education graduates (implemented in 2019) and an increase in salaries in the public sector, including health and education. In spite of these, migration of the labour force to the EU-15 is expected to continue.

These were the trends previous to the outbreak of the Covid-19 crisis. It is highly unlikely that freedom of movement will be restored to previous standards or at least not in the immediate and short term. Large numbers of migrant workers have made their way home and are most likely to stay in the short run. Thus, their could be a pause in migration for employment abroad in the near term. How much it will resume after the crisis is over remains to be seen, being largely dependent on how much of the former degree of freedom of movement will be restored to the EU market (the primary destination of Romanian migrant workers).

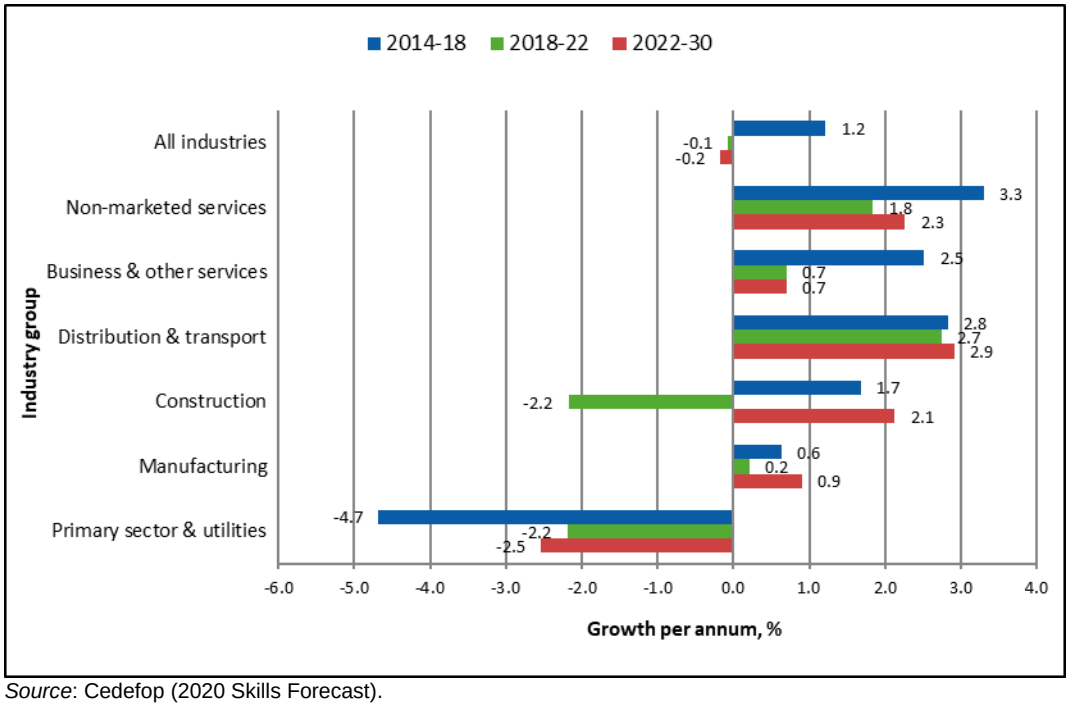
3. Sectoral employment trends

As Figure 3 shows, employment growth in most sectors is expected to slow in the short term (2018-22) and pick up again in the longer term (over 2022-30), although remaining at lower rates than were seen over 2014-18.

Growth in employment is expected to continue to be driven by *non-marketed services*, *distribution and transport*, and, to a lesser extent, *business and other services*, reflecting the gradual shift towards a more service-oriented economy. *Distribution and transport*, in particular, is expected to see continued growth in employment of around 2.7-2.9% pa over the whole of the forecast period.

Employment in *construction* is expected to decline in the short term (2018-22), but to grow relatively strongly over the longer term (2022-30). Employment in *agriculture* is expected to continue to shrink, while *manufacturing* will be stable in the short term, with somewhat stronger growth over 2022-30.

Figure 3. Employment growth by broad sector of economic activity, 2018-30



Source: Cedefop (2020 Skills Forecast).

Within the *manufacturing* broad sector, employment growth over 2018-30 is expected to be driven largely by increases in employment in *food, drink and tobacco* and *engineering*. In other broad sectors, sub-sectors such as *wholesale and retail trade*, *accommodation and catering* and *transport* are also expected to grow over the forecast period. *Transportation, logistics* and *manufacturing,* with its important sub-sector of *motor vehicles*, are expected to be the most affected by robotisation and automation.

Among the service sectors, *legal, accounting and consulting* and *telecommunications* are expected to be the top performers over 2018-30, and *administrative and support services* is expected to see the worst performance given the increased digitalisation of the services they offer.

These developments have to be watched however against the different background shaped by the COVID 19 crisis. Labour intensive services which were highly dependent on the free and un-impeded movement and socialising of individuals are likely to hve been badly hurt. How much they will resume their activity and to what extent they will be still able to employ at rates previous to the crisis is unknown. However it is highly likely that for a while they will see their employment generation capacity affected. This particularly refers to the HORECA sector, to distribution and transport and even to construction as for sure a recession will follow the COVID 19 crisis and this will be reflected in evolutions of pro-cycle sectors such as construction.

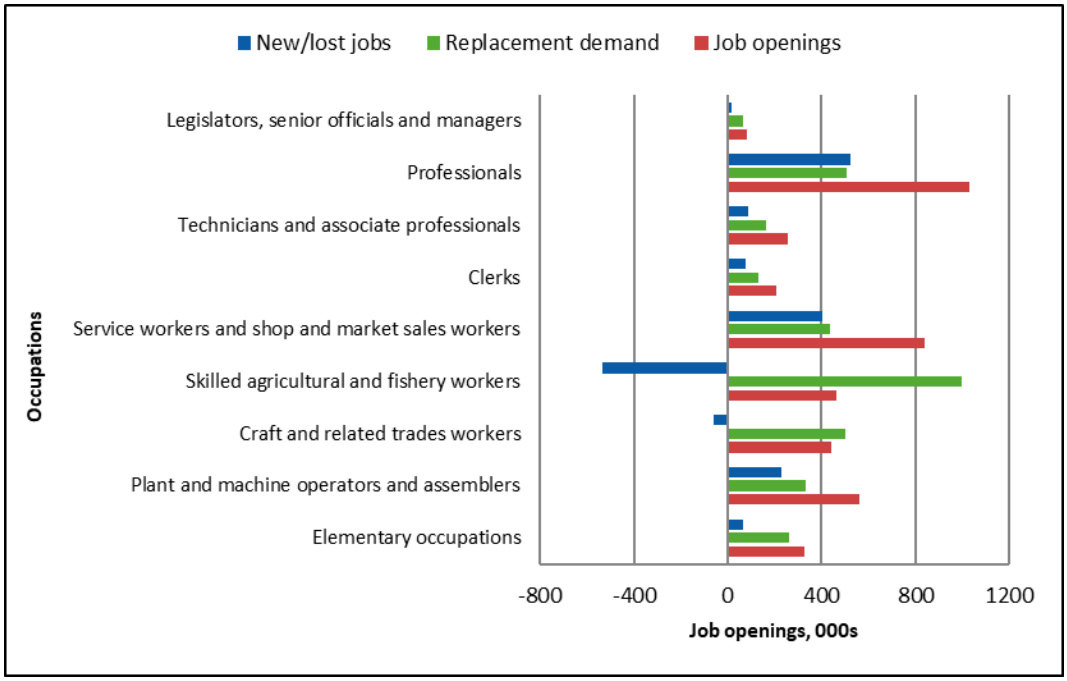
4. Job openings by occupational group

The Cedefop skills forecast estimates 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 due to the expansion 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 2018-30. 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. Most occupations, except for *craft and related trades workers* and *skilled agricultural and fishery workers,* which are shrinking, are expected to experience an increase in the number of jobs. The negative 'new/lost jobs' for the latter (*skilled agricultural and fishery workers)* is due to poor prospects for total employment in that particular occupation, due to sectoral requirements. However, there are forecast to be substantial 'replacement needs' (approximately one million) over 2018-30, as a large number of workers are expected to leave the occupation due to retirement or career changes. Overall, therefore, there is still expected to be a relatively strong demand for workers in this occupation over the forecast period. *Professionals* is expected to generate the largest number of job openings over the forecast period (over one million), accounting for 25% of total job openings.

At the more detailed level, the most job openings (taking both new/lost jobs and replacement needs together) are expected to be in *skilled manual occupations* for all qualifications (approximately 1.5 million). Among these occupations, *drivers and mobile plant operators* and *building and related trades workers, excluding electricians* are expected to have the highest job openings (408 000 and 175 000 respectively). The dual VET education established recently will help to provide the workers needed for these occupations. Job creation is mostly concentrated in *high-skilled non-manual occupations* (highest number in *legal, social and cultural professionals*) and *skilled non-manual occupations* (highest number in *general office clerks*) driven by the expansion in non-marketed services. The lowest number of job opportunities are expected for *elementary occupations*.

Figure 4. Job openings by broad occupational group, 2018-30



Source: Cedefop (2020 Skills Forecast).

As it has been said previously while these trends may hold for the end of the decade this general trend may be put into doubt by the severity of the COVID 19 crisis. It is highly unlikely that the massive shock applied on both the demand and the supply side of output generating processes will not be reflected into a lesser job generation especially in an emerging market environment where such bouts will exacerbate innate sentiments of insecurity and unpredictability. Therefore most of the figures will have to be necessarily lower than expected. By how much, it is nevertheless hard to say. It is also doubtful that the massive replacement of agricultural workers will actually ever occur given the circumstances. Therefore, all figures will have to be weighed against this entirely un-expected and violent shock, at least for the near future!

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).

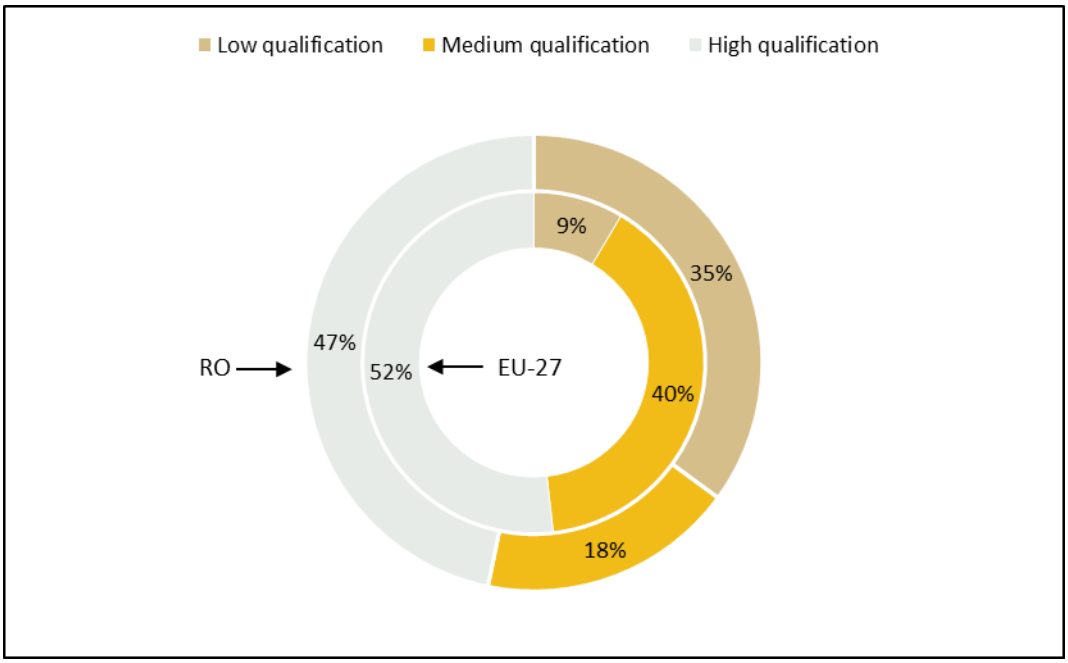
The Romanian labour market is changing both within and across sectors in the development of occupations. There are strong increases among *professionals,* in which all underlying occupations are increasing their importance in the sectors while they also are mainly employed in growing sectors. Partly, this is at the cost of *technicians and associate professionals* who are employed in similar sectors, thus enjoying growth through the development of those sectors, while being to some degree pushed out by higher levels of education (i.e. *professionals*). Only the underlying occupations of *business and administration associate professionals* along with the *legal, social, cultural and other associate professionals* tend to increase their importance in the sectors they are employed in. The small but important group of *legislators, senior officials and managers* are growing through the sector effect (i.e. they are employed in growing sectors) but the occupation-specific effects are mixed. A similar picture emerges among the medium level occupation of *clerks*. Here the subgroup of *general and keyboard clerks,* along with *customer service clerks,* are increasing due to their growing share within sectors, while clerks in general are employed in growing sectors of the economy. *Skilled agricultural and fishery workers* are decreasing in their share of the sectors employed, mainly agriculture, while the sector itself is also decreasing. This points towards a greater specialisation in the sector that increases non-agricultural professions along with low educated agricultural workers at the cost of the medium level occupations. A similar development can be found among the *craft and related trades workers. Plant and machine operators and assemblers* show a divergent development where *stationary plant and machine operators* are decreasing in importance, most likely through increased digitisation and robotisation, while *assemblers* as well as *drivers and mobile plant operators* seem to be spared from the effect of digitisation and robotisation.

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 shows the shares of total job openings by qualification level for Romania and the EU-27 over 2018-30. In Romania, around half of all job openings over this period are expected to require a high qualification, around 5 percentage points (PP) lower than the EU-27 average. Compared to the EU-27 average, a much lower share of job openings are expected to require a medium qualification, and a much higher share are expected to require low qualifications.

Figure 5. Shares of total job openings by level of qualification, 2018-30



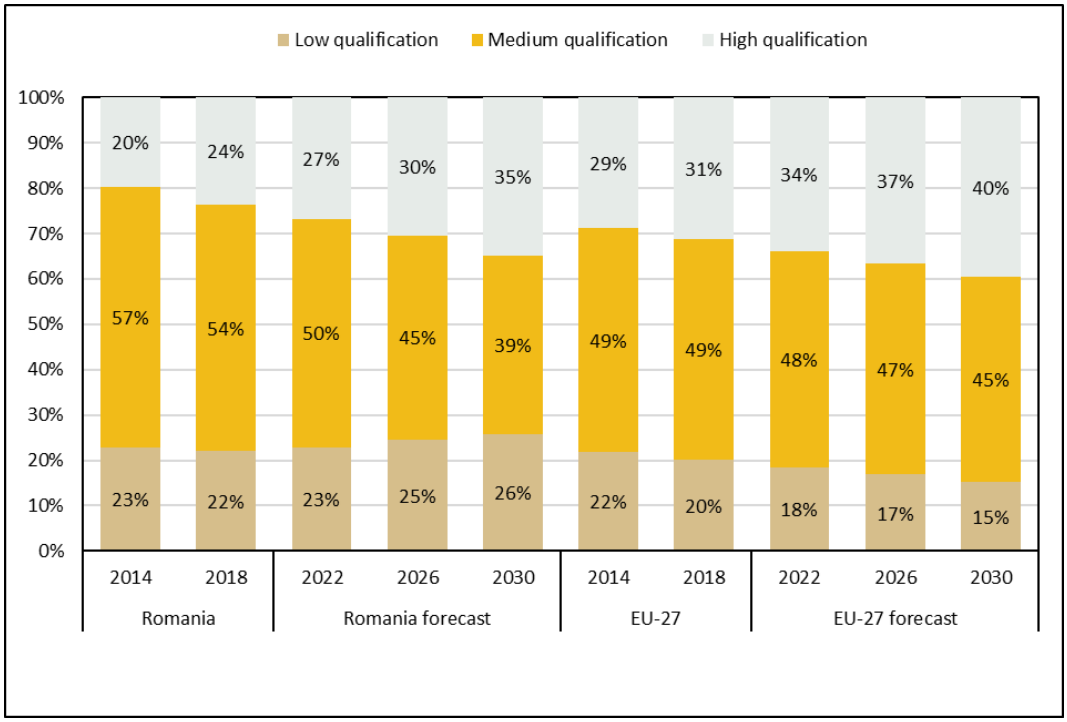
Source: Cedefop (2020 Skills Forecast).

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 depicts the development of qualification shares in the labour force in Romania and the EU-27. Romania is rapidly increasing the share of higher qualified on the labour market. While the share was at 20% in 2014, it is expected to increase to just over one third of the labour force by 2030.

In the past, the increase in the share of high qualified labour force was predominantly at the cost of older, low qualified workers. However, it is expected to come out of the share of medium qualified workers in the future, who are expected to see a decrease in their share from 57% in 2018 to 39% in 2030. The trend is similar to that of the EU-27, albeit that Romania has had lower levels of higher qualified and high levels of medium and low qualified. Relative to the EU-27 averages, Romania is expected to catch-up somewhat in aligning their qualification mix, although the share of low qualified workers is actually forecast to increase slightly.

Figure 6. Labour force share by level of qualification, 2014-30



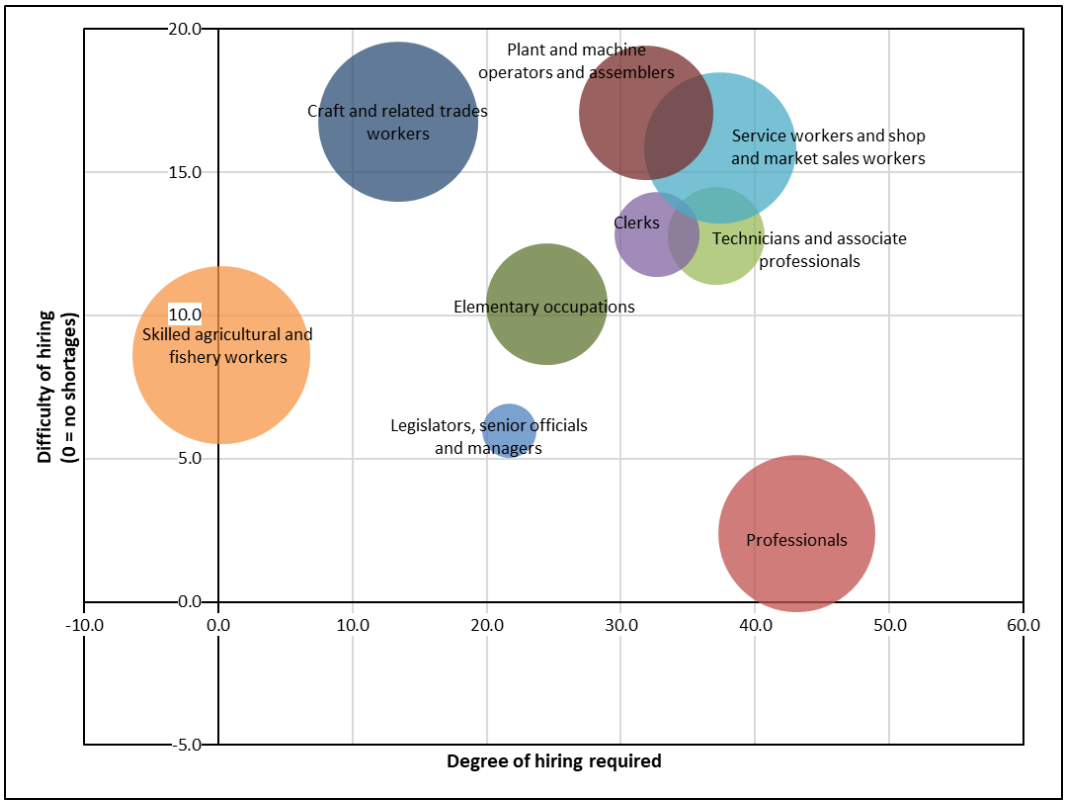
Source: Cedefop (2020 Skills Forecast).

Overall, the forecast implies an increasing shortage, especially among the medium qualified. While the supply of higher educated is forecast to sufficiently fill the demand within higher level occupations, there are shortages to be expected at the lower end. Demand and supply are decoupled as the growing number of higher education graduates will confront a labour market whereby opportunities for employment will not match their training.

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, 2018-30



N.B: Indicators were calculated at the level of the underlying two-digit occupation groups. Aggregation was based on the employment weights within each one-digit occupation group.

Source: Cedefop (2020 Skills Forecast).

The increasing supply of higher educated workers implies that there could be shortages among the medium qualified. These shortages can thus imply that higher educated workers might have to be employed within occupations at a lower level than they have qualifications for, or it will result in hiring difficulties. It is thus of no surprise that medium level occupations in the *crafts, the plant and machine operators and assemblers*, as well as the *service workers and shop and market sales workers* are expected to show higher levels of hiring difficulties in the forecast (Figure 7). These hiring difficulties are expected to occur alongside high levels of hiring within these occupations. While *professionals* are implied to have less hiring difficulties, as they usually hire from the supply of higher qualified, they also show a high level of hiring in the forecast period. A low degree of hiring required along with modest hiring difficulties can be found among the *skilled agricultural and fishery workers.*

Hiring difficulties among *professionals* are very low across the underlying occupations, with the exception of *health professionals* (8) which show some difficulties of hiring. At the same time, the degree hiring required in this occupation (83) is expected to be much higher than the average for *professionals* as a whole (43) indicating greater imbalances. *Science and engineering professionals* (21) and *teaching professionals* (31) show a degree of hiring required which is well below the average.

All of these imbalances are likely to get tougher as the Covid-19 crisis unwinds itself into a recession. As job generation will be affected exactly in those sectors where the demand was previously considered to be higher and where the higher educated would have replaced the medium educated, this will result in even higher unemployment for the higher educated. In turn this will point even more to the significant decoupling that occurred between supply and demand during the past decades or so. Downturns in the cycle, no matter how they are generated and where they stem from, tend to highlight such imbalances. Accordingly, there will be a greater need to reform education and emphasise the vocational training route.

Cedefop methodology and scenarios

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 2030. The forecast takes account of global economic developments up to May 2019. The European economy is continued to expand for the seventh year in a row in 2019, with real GDP growing in all EU Member States. As global uncertainties continue to weigh, domestic dynamics are set to support the European economy. The key assumptions of the baseline scenario incorporate the Eurostat population forecast available in May 2019 (Europop 2015) ([2]) and the short-term macroeconomic forecast produced by DG ECFIN in May 2019 ([3]).

The Cedefop Skills forecast was developed before the global Covid-19 pandemic had begun. The short-term economic impacts of the pandemic and subsequent lockdowns in many countries are very uncertain, and therefore the current short-term forecast is likely to be over-optimistic. However, the key long-term factors (such as the ageing population, increasing use of automation/artificial intelligence, globalisation, resource scarcity and moves towards a carbon neutral economy) will still hold as the EU Member States put plans in place to deal with the virus and their economies move forwards. The trends in the longer-term forecast are therefore still likely to hold.

For the latest update and access to more detailed Cedefop skills forecast data please visit:
http://www.cedefop.europa.eu/el/events-and-projects/projects/forecasting-skill-demand-and-supply

([2]) https://ec.europa.eu/eurostat/web/population-demography-migration-projections/population-projections-data

([3]) https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2019-economic-forecast-growth-continues-more-moderate-pace_en

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

The country fiche for Romania has been developed in collaboration with Catalin Corneliu Ghinararu, scientific secretary at the National Labour Research Institute/INCSMPS, Romania.

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