



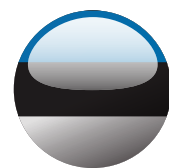
CEDEFOP

European Centre for the Development
of Vocational Training

EN



2020 skills forecast Estonia



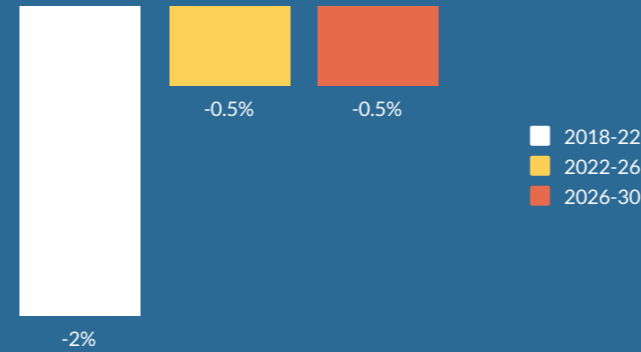


625 000

Employment in 2030

-2.5%
 Increase
 2018-30

% Employment growth 2018-30



329 000

Total job openings, 2018-30



■ Replacement needs (100%)
 ■ New job openings (0%)

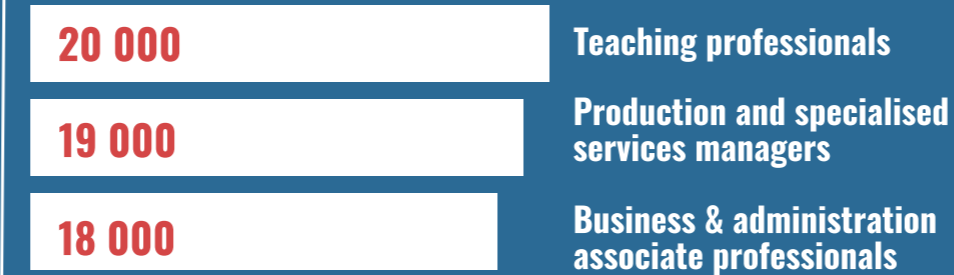
FASTEST-GROWING SECTORS

Growth per year 2018-30

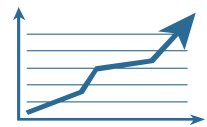


HIGHEST-DEMAND OCCUPATIONS

Total job openings 2018-30



Total job openings by qualification level 2030:



4.4%

Increase
 in employment
 in 2018-30



Fastest-growing sector

Non-marketed services



Highest-demand occupation

Business & administration associate
 professionals

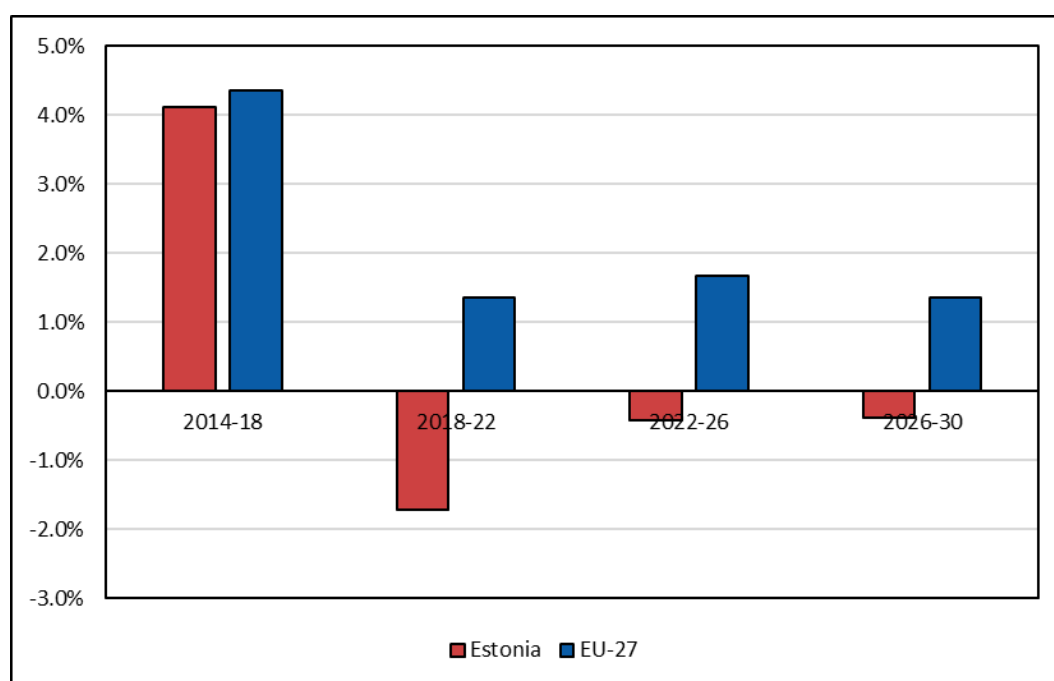
12% Increase in high-skilled
 labour supply 2018-30



1. Employment outlook

Employment in Estonia is forecast to decrease over the period 2018-30, as opposed to the increase in employment seen in the period 2014-18. This is mainly due to demographic changes. Employment in Estonia is expected to decrease significantly in the short term (2018-22) and then decline only slightly in the medium (2022-26) and longer term (2026-30). The decline in employment in Estonia in all sub-periods is in contrast with developments in employment in the EU-27 as a whole, which is expected to increase in all sub-periods.

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



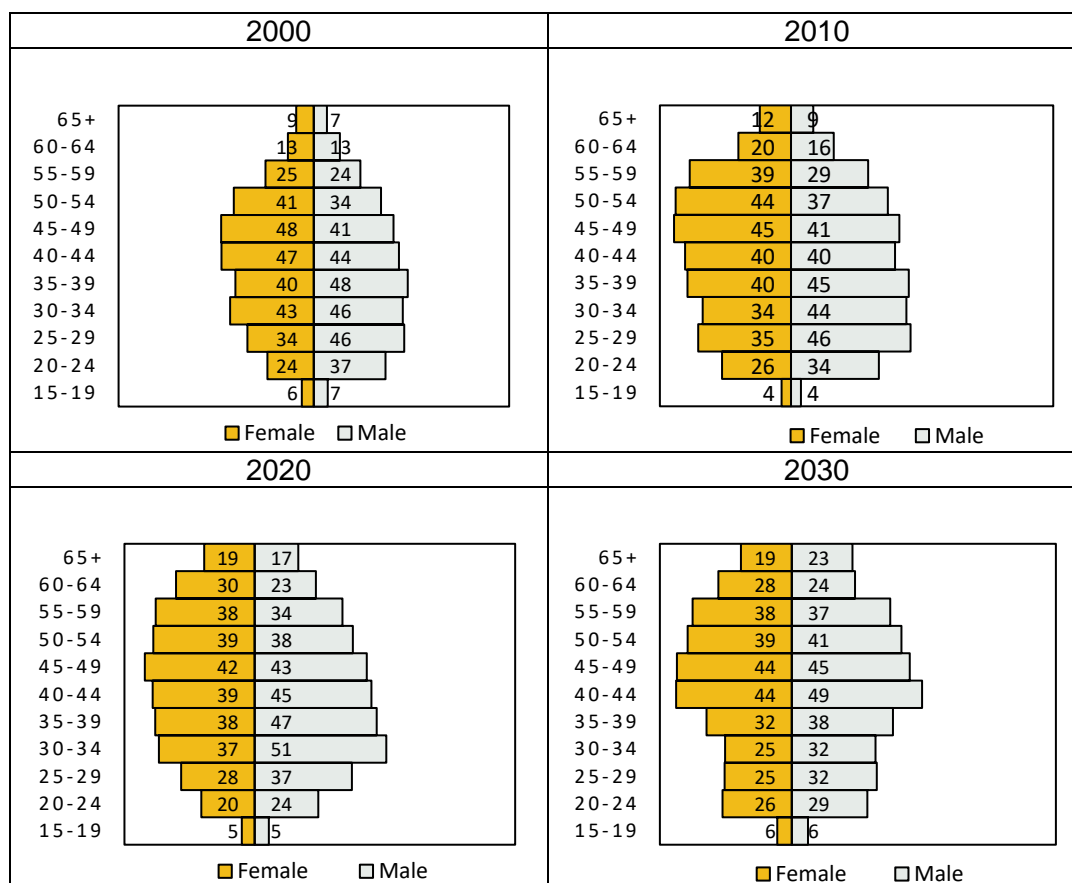
Source: Cedefop (2020 Skills Forecast).

2. Labour force overview

While the labour force is expected to grow by 1% over the three decades from 2000 to 2030, it is expected to decline during the forecast part of that period. The overall small increase in the labour force is driven by the increase in the size of the labour force aged 55 and above (Figure 2), which slightly outweighs the decrease in the size of the labour force aged below 39 years. The size of the labour force aged 60 or more is expected to more than double between 2000 and 2030. Within this age group, the labour market participation is expected to

increase the most for those aged 60-64, from 32% (2000) to 64% (2030), reflecting changes in the retirement age. A decline in the population of those aged below 49 can be observed in the labour force. Although participation rates are expected to increase for these age groups, the decline in the population is expected to lead to a fall in the size of the labour force for those age-groups.

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



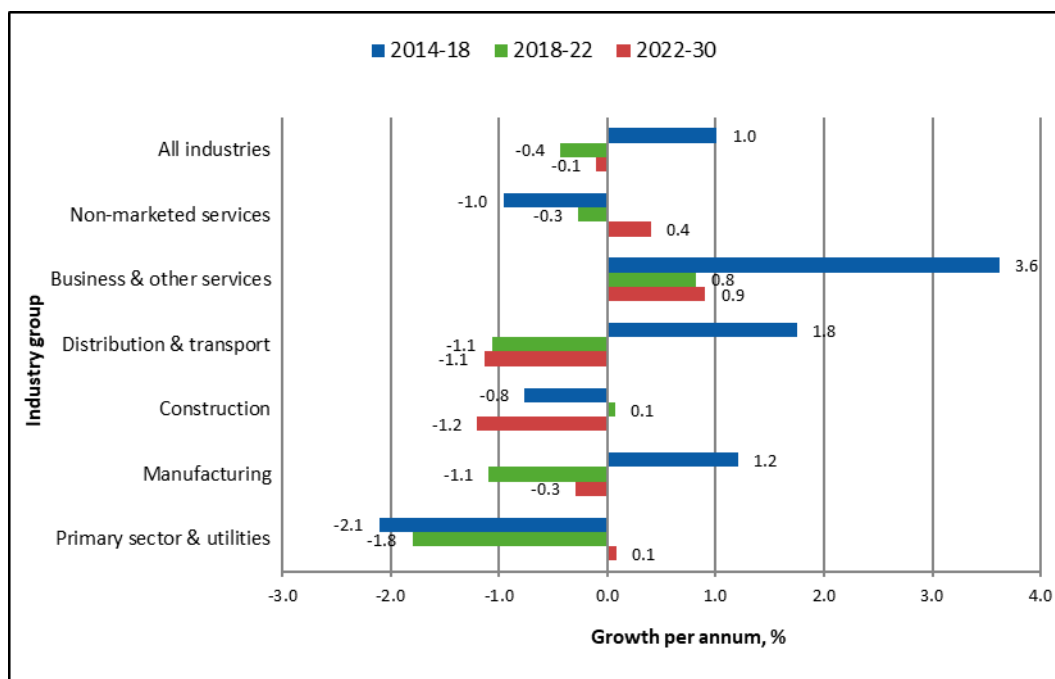
Source: Cedefop (2020 Skills Forecast).

3. Sectoral employment trends

As Figure 3 shows, most the sectors are expected to decline or stagnate during the forecast period. *Business & other services* is the only broad sector expected to increase significantly both in the short term (2018-22) and in the long term (2022-30), and even that growth is much slower than seen over 2014-18. The *non-marketed services* sector is expected to decrease somewhat in the short term and then to see a pick-up in growth over 2022-30, at a pace of 0.4% pa.

Distribution & transport and *manufacturing* are expected to decrease during the forecast period, after growing over 2014-18. Employment in *construction* is expected to remain fairly constant in the short term but to decline again in the long term. After a sizeable decline over 2018-22, *primary sector and utilities* is expected to stagnate over 2022-30.

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



Source: Cedefop (2020 Skills Forecast).

Underlying the developments of the broad sectors above are the developments within sub-sectors: *research & development* (5% pa over the period 2022-30) and *computer programming & information services* (4.5% pa over the same period) are the sectors that are expected to experience the greatest increase growth, and hence drive the high expected growth in *business & other services*, as discussed earlier. These trends reflect the increasing importance of high-tech and knowledge-intensive service sectors in the Estonian economy.

The *health sector* is also expected to increase by 1.2% pa over 2022-30, thus driving the increase in *non-marketed services*. The development in the *health sector* is linked to the ageing structure of the Estonian population, with the share of people aged 65+ over the population aged 15 or more expected to increase by 4 percentage points (pp) over 2018-30.

4. Job openings by occupational group

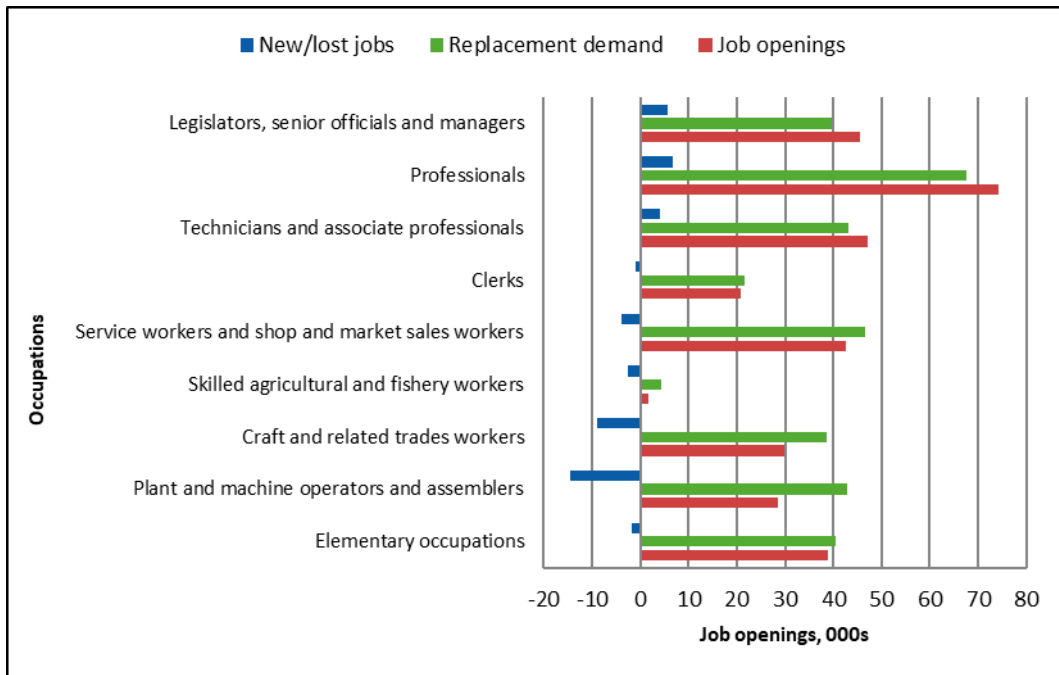
Cedefop skills forecasts estimate the total job openings by occupational group as the sum of net employment change and replacement needs. Net employment change refers to new jobs created due to the expansion of the employment in that sector or occupation. Replacement needs arise as the workforce leaves 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 are expected to experience a decrease in the number of jobs, with *plant and machine operator and assembler* being the occupation losing the most. *Legislators, senior officials and managers, professionals* and *technician* and *craft and related trade workers* are the occupations that are expected to generate the largest number of job openings over the forecast period, accounting for 14%, 23% and 14% of total job openings respectively. However, net job creation for the whole economy is negative, meaning that the main contribution to job openings will come from replacement demand.

At the more detailed level, the most job openings (taking both new/lost jobs and replacement needs together) are expected to be in *highly skilled non-manual occupations* for all qualifications, such as *teaching professionals, production and specialised service manager* and *science and engineering professionals*. Also, some *skilled non-manual occupations* such as *personal service workers* and *personal care workers* are going to provide significant job openings. On the other hand, many occupations with low qualification requirements, including skilled manual jobs such as *drivers and mobile plant operators*, and skilled non-manual jobs such as *numerical and material recording clerks* are expected to shrink.

These findings are consistent with the general trend of skills upgrading within the occupational distribution seen recently in Estonia. Digitalisation so far has mostly displaced clerical occupations, as mentioned. However, efforts are being made in Estonia to convince more companies to adopt digital solutions, including in manufacturing, although no specific policy is in place to mitigate the possible losses in employment due to automation. Therefore, various types of machine operators are expected to shrink.

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



Source: Cedefop (2020 Skills Forecast).

5. Drivers of occupational change

Within the Cedefop skills forecasts, 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/ others).

Strong negative occupation-specific effects in many sectors will influence the occupational composition of employment in Estonia. However, for some occupations they are compensated by increases in the sector size. Overall, the increases in the sector size and the qualification effect are expected to lead to increased shares of *corporate managers* and *technicians and associate professionals*. These changes reflect, in many cases, changes in job organisation in many sectors. High-skilled occupations that can benefit from this trend are, for example, especially in *legal, social, cultural and related associate professionals*

and in *information and communications technology professionals* and with an exception for *health professionals*.

The overall effect of occupational change therefore depends on a number of factors that need to be considered together. Increasing digitisation and moves toward a service-oriented economy, including within manufacturing, will lead to a greater use of higher-level occupations.

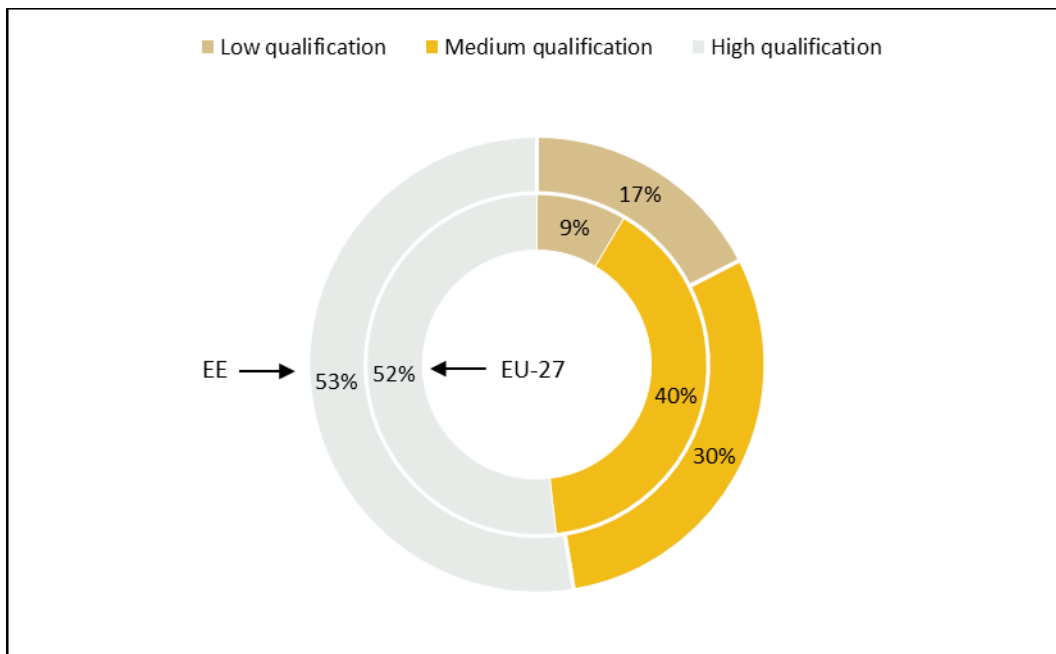
The low strength of intermediate qualification level occupations in Estonia does not limit the overall effect on the medium qualified occupations. Whereas *corporate managers* remain somewhat stronger as well as *clerical workers* and *building and related trades workers*, excluding electricians and *metal, machinery and related trade workers*, those working in these last industry-occupations are decreasing in number, most likely through increases in automation within the sectors.

6. Demand for and supply of skills

Within the Cedefop skills forecasts, 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, 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.

More than half (53%) of the total job openings that are expected to be created in Estonia over 2018-30 are expected to require high level qualifications, similar to the EU-27 average. Around one third of total job openings will require medium level qualifications and 17% will require low level qualifications. The share of employment with low qualifications is decreasing but the replacement demand is relatively high.

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

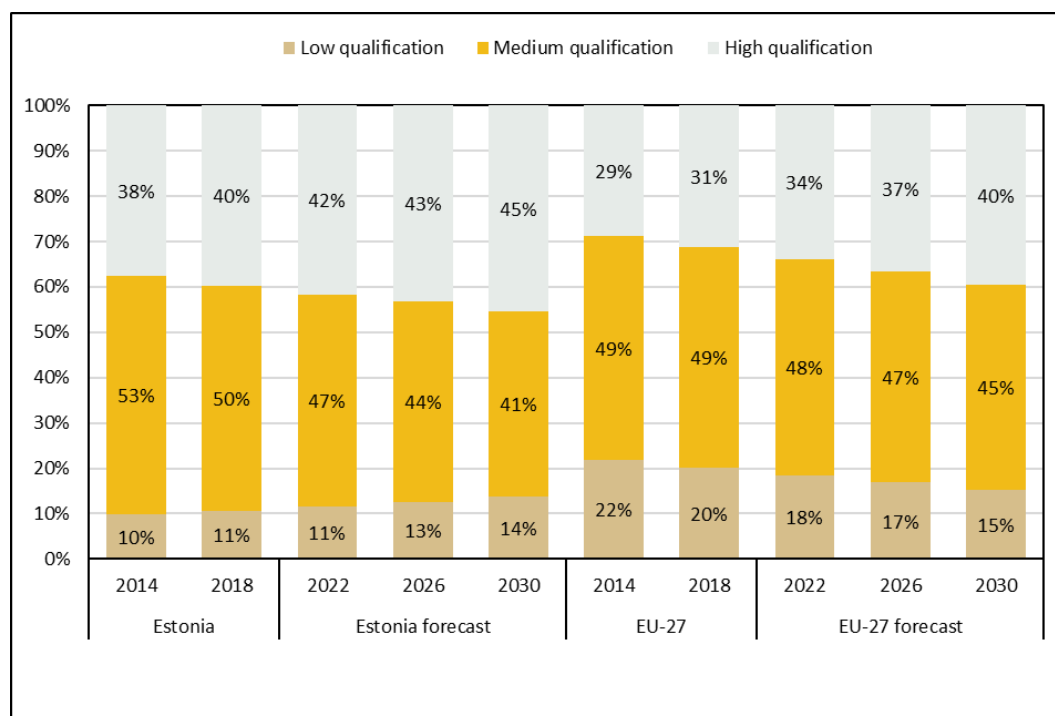


Source: Cedefop (2020 Skills Forecast).

Total job openings are highest among *chief executives, senior officials and legislators* followed by *legal, social, cultural and related associate professionals*, and *health professionals*. Among the higher-level occupations, *legal, social, cultural and related associate professionals* along with *chief executives, senior officials and legislators* are expected to see the highest total job openings.

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

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



Source: Cedefop (2020 Skills Forecast).

Figure 6 shows the expected changes in the shares of qualifications in the workforce in Estonia and the EU-27 over 2014-30. The share of people with high level qualifications in Estonia is expected to increase over the period, to reach 45% in 2030 and become the largest occupation group. The level of medium qualified labour force is expected to decrease accordingly, towards 41% in 2030. Those with low levels of qualification are expected to increase slightly in Estonia, from 11% in 2018 to 14% in 2030. Estonia thus follows the general EU-27 movement of increasing high qualified at the cost of medium qualified. Different to the EU average, they are expected, however, to see an increase in the share of low qualified. This is due to the immigration, as the growth comes mostly from people aged 25 and above.

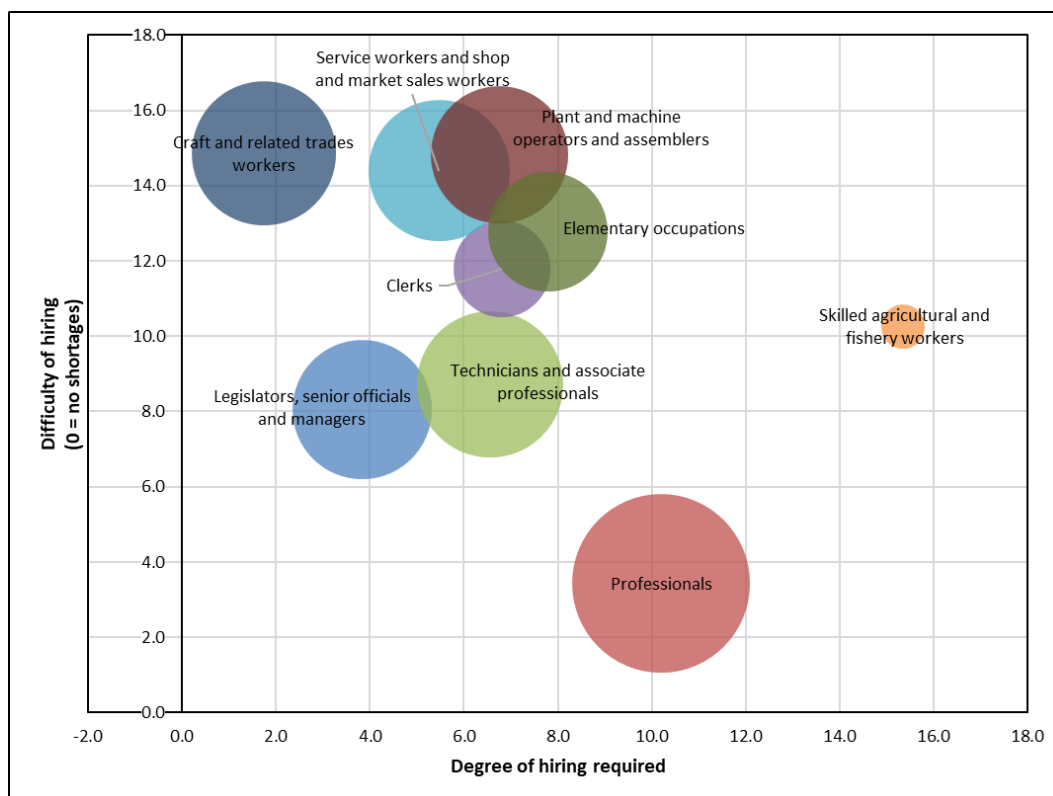
The Estonian labour market is expected to continue to increase the supply of the higher qualified while decreasing the intermediate qualified. Estonia already has a strong tradition in highly educated supply of labour, following this EU trend

but at a higher level. The increase, at the cost of intermediate qualification can, however, lead to mismatches within occupations that still require intermediate qualification levels or skills embedded therein. How these mismatches will be solved is unclear as both underqualification, using supply from the lower qualified as well as overqualification, employing the high qualified in intermediate level occupations, can result.

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).

Figure 7 shows that occupations within *skilled agricultural and fishery workers* and *professionals* are forecast to experience a lot of changes as both

categories will require a large share of new hiring. It is expected that there will be medium hiring difficulties for the first group, mainly from lower and intermediate qualified personnel, while there is only limited supply. *Professionals* are expected to pose low hiring difficulties as projections are showing no shortages of workers with high qualifications. *Elementary occupations* are hit by the shortage of low qualified workers similar to *plant and machine operators and assemblers*. The projected hiring difficulties will depend on the willingness of qualified workers to be employed for the typical work conditions and salaries of these occupations.

Hiring difficulties among *professionals* are expected to be fairly low across the underlying occupations, e.g. *science and engineering professionals* (5) and *information and communications technology professionals* (7). However, the latter group also shows a high degree of necessary hiring (35) which is much higher than the average across *professionals* as a whole (7). *Teaching professionals* and *health professionals* show very low values of degree of hiring required.

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 Estonia has been developed in collaboration with Mario Lambing, Chief analyst at the Ministry of Economic Affairs and Communications, Estonia.

Please cite this publication as:

Cedefop (2020). *Skills forecast 2020: Estonia*. Cedefop skills forecast.

<https://www.cedefop.europa.eu/en/publications-and-resources/country-reports/estonia-2020-skills-forecast>

© European Centre for the Development of Vocational Training (Cedefop), 2020.
Creative Commons Attribution 4.0 International.