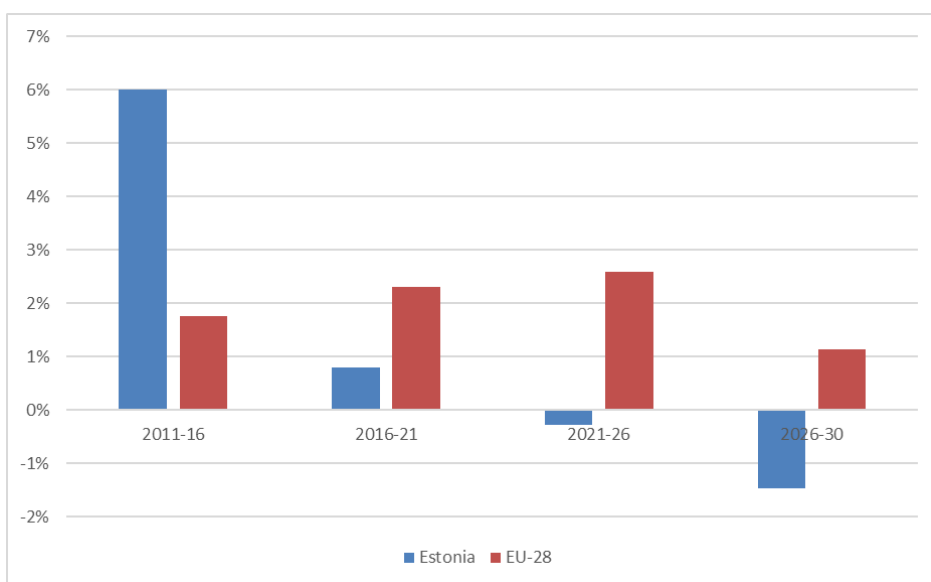


1. Employment outlook

After a strong increase in employment over the period 2011-16, employment growth is expected to stagnate in the period 2016-21 and to decline over the subsequent two periods up to 2030, as shown in Figure 1. Employment growth is expected to be less than half of the EU-28 average in the period 2016-30. The total employment is expected to decrease by 1% over the period 2016-30, a decline similar to Germany.

Figure 1 Percentage employment growth in Estonia and the EU-28, 2011-30



Source: Cedefop (2018 Skills Forecast)

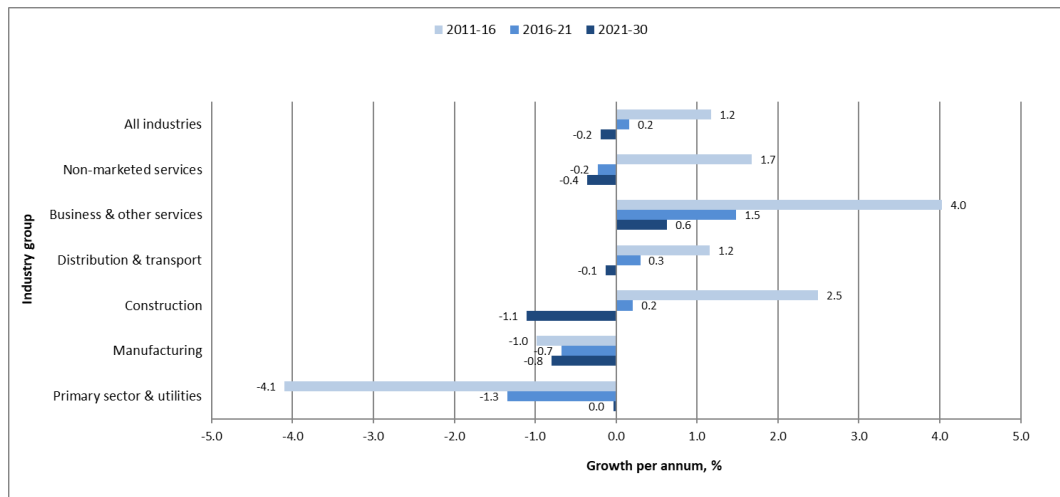
2. Labour force overview

Estonia's labour force is expected to decline by 3% over the period 2016-30. The working age population is expected to remain broadly stable while there are significant changes to its age composition. The decline in the labour force supply is driven by the decline in the young age cohorts, i.e. those aged 25-34 decline by 32% on average, which are characterised by a high participation rate (on average 86%), which can only be partly compensated by the increase in other age cohorts 40-49 (by 12% on average) with high participation rates (94% on average).

3. Sectoral employment trends

Following a strong increase in the period 2011-16, employment growth in several sectors is expected to slow down or decline up to 2030, as shown in Figure 2. *Business and other services* is the sector that is expected to have the highest employment growth in both periods 2016-21 and 2021-30. A few sectors like *distribution and transport* and *construction* are expected to stagnate in 2016-21 while all sectors except *business and other services* are expected to decline in the period 2021-30. In terms of subsectors, *other business services* and *miscellaneous services* are expected to grow significantly in 2016-30. The subsectors that are expected to decrease the most in 2016-30 are *engineering* and *agriculture*, driving the decline in their respective broad sectors (*manufacturing* and *primary sector and utilities*).

Figure 2 Employment growth by broad sector of economic activity, 2011-30



Source: Cedefop (2018 Skills Forecast)

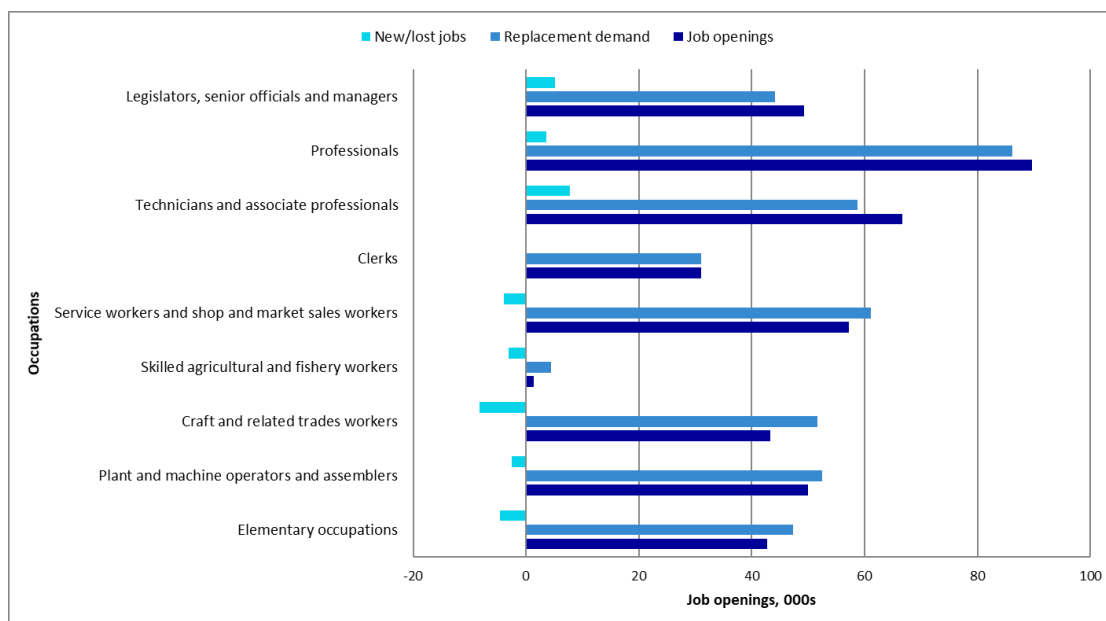
4. Job openings by occupational group

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 3 shows the total job openings by broad occupational group over the period 2016-30. The number of job openings is determined by the amount of jobs lost/newly created and by the amount of jobs that are created following the retirement of old workers. Most jobs will come from this need to replace workers retiring or changing occupations.

The occupation expected to have the highest number of job openings, 96% due to replacement needs, is *professionals*, accounting for 21% of total job openings. Other occupations such as *technicians and associate professionals* and *service workers and shop and market sales workers* are expected to provide a significant number of openings, mostly due to replacement needs. All the occupations except for *legislators, senior officials and managers, professionals* and *technicians and associate professionals* are expected to stagnate or decrease in employment, although the need to replace retiring workers will still provide numerous job openings.

Figure 3 Job openings by broad occupational group, 2016-30



Source: Cedefop (2018 Skills Forecast)

When occupational groups are analysed in more detail, most of the **new jobs** are expected to be created in *legal, social, cultural and related associate professionals* and *information and communications technology professionals*. The occupations expected to provide the highest number of **total job openings** are *teaching professionals, drivers and mobile plant operators* and *business and administration associate professionals*, because of the need to replace workers retiring from those occupations rather than through the creation of new jobs.

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).

The sectoral shift toward *business and other services* is expected to create demand for some high-skill occupations such as *information and communications technicians* and *professionals* and *legal, social cultural and related associate professionals* but also for medium-skill occupations such as *personal service*

workers. On the other hand, the decrease in *manufacturing and primary sector and utilities* is expected to decrease the demand for *assemblers, agricultural, forestry and fishery labourers and stationary plant and machine operators*.

Developments in technology will shrink employment in occupations such as *agricultural, forestry and fishery labourers* as well as *food processing, wood working garment and other crafts and related trades*, because of automation, and such as *sales workers*, because of new ways of delivering the service remotely.

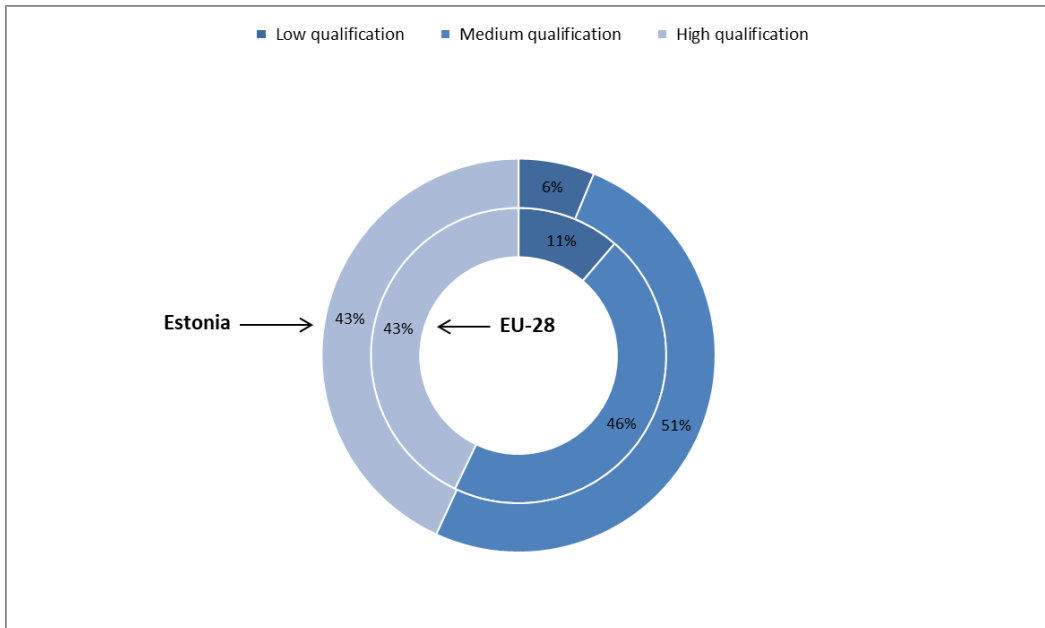
Taking into accounts both occupation and sector effects, the occupation with the highest increase in employment is *legal, social, cultural and related associate professionals*. Among *chief executives, senior officials and legislators* there will be both negative (sectoral change) and positive effects (within occupation shifts); however, in the case of this occupation, the positive effects are expected to outweigh by far negative effects over the period up to 2030.

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.

Figure 4 shows the shares of **total job openings** for qualifications needs. The share of job openings requiring high-level qualifications is expected to match the EU-28 average at 43%, while the share of job openings requiring medium-level qualifications is expected to be 5 pp above the EU-28 average, at 51%. Only 6% of job openings are expected to require low-level qualifications, 5 pp below the EU-28 average.

Figure 4 Share of total job openings by level of qualification, 2016-30



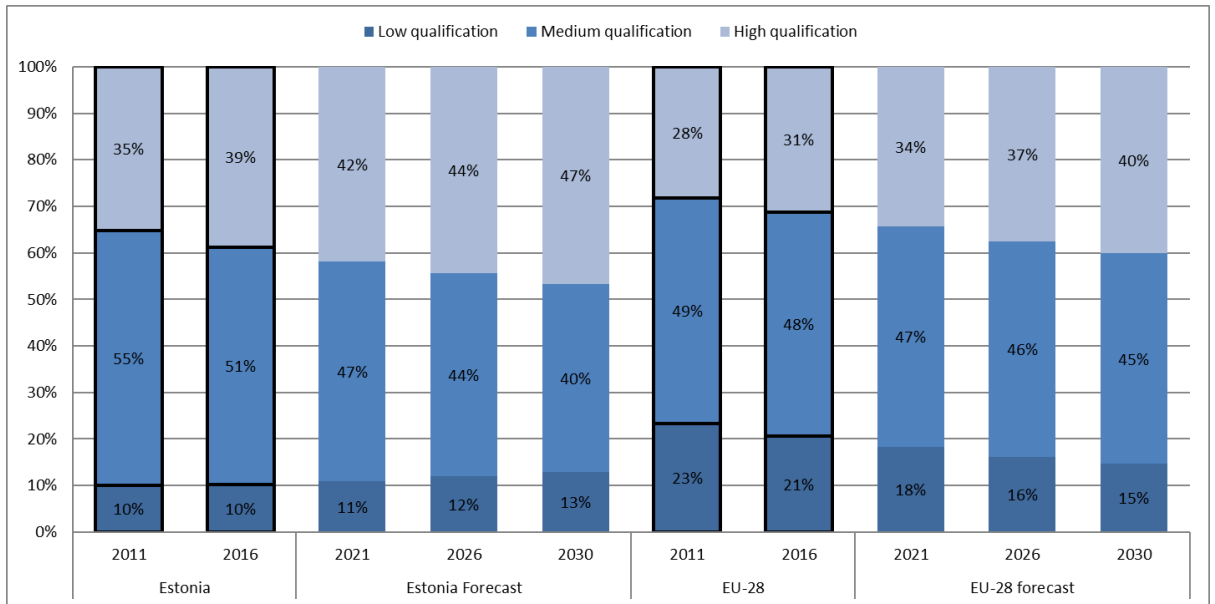
Source: Cedefop (2018 Skills Forecast)

The number of job openings requiring high-level qualifications is expected to increase within occupations such as *teaching professionals, business and administration associate and professionals and production and specialised services managers*.

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.

As seen in Figure 5, the share of workers with high-level qualifications is expected to increase to 47% in 2030, 7 pp above the EU-28 average. The share of medium-qualified workers is expected to decrease significantly up to 2030, starting from being above the EU-28 average to 5 pp below the EU-28 average. The share of low-qualified workers is expected to increase to 13% in 2030, 2 pp below the EU-28 average.

Figure 5 Labour force share by level of qualification, 2011-30



Source: Cedefop (2018 Skills Forecast)

By 2030, the supply of high-qualified workers is expected to slightly exceed the demand, while there might be a shortage of medium-qualified workers. The supply of low-qualified workers might be in surplus of the demand.

Cedefop methodology and scenarios

Cedefop skills forecasts offer quantitative projections of future trends in employment by sector of economic activity and occupational group. Future trends on the level of education of the population and the labour force are also estimated. Cedefop's forecasts use harmonised international data and a common methodological approach allowing cross-country comparisons about employment trends in sectors, occupations and qualifications. The forecasts and methodologies applied are validated by a group of national experts. These forecasts do 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 forecasts covers the period up to 2030. The forecasts take account of global economic developments up to May 2017. Despite cross-country differences, the EU economy as a whole is expected to show modest growth, after a better-than-expected performance in 2017. Over 2018 and 2019, the EU economy as a whole is expected to grow, albeit at a slower pace compared to 2017, supported by increased household expenditure and falling unemployment, although wage growth remains muted. Investment is also expected to pick up given favourable financing conditions and an improved economic outlook. The key assumptions of the baseline scenario incorporate the Eurostat population forecast available in 2017 (Europop 2015) ⁽¹⁾ and the short-term macroeconomic forecast produced by DG ECFIN in May 2017 ⁽²⁾.

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>



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

⁽²⁾ https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2017-economic-forecast_it