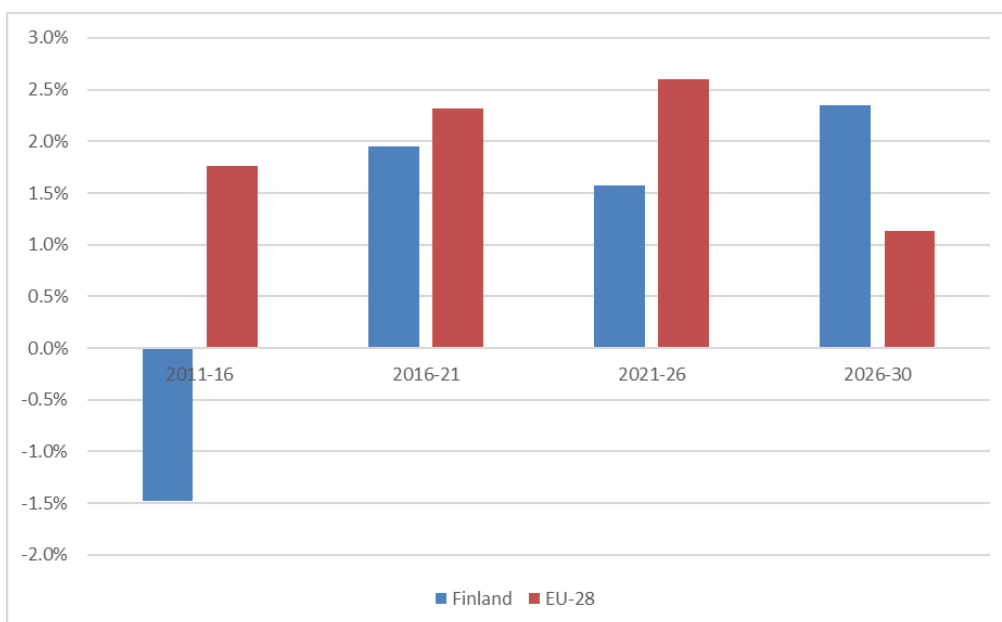


# 1. Employment outlook

After decreases in the period 2011-16, employment levels are expected to show a stable growth up to 2030 in Finland, as shown in Figure 1. Employment is expected to grow below the EU-28 average in 2016-21 and 2021-26. In 2026-30, employment growth rates (2.3%) are expected to pick up speed compared to the initial forecast period 2016-21, reaching around twice the size of the EU-28 average for the same period. A total employment growth of 6% is expected over the period 2016-30, a rate similar to Hungary, and over this entire forecasting period, at the EU-28 average level.

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



Source: Cedefop (2018 Skills Forecast)

# 2. Labour force overview

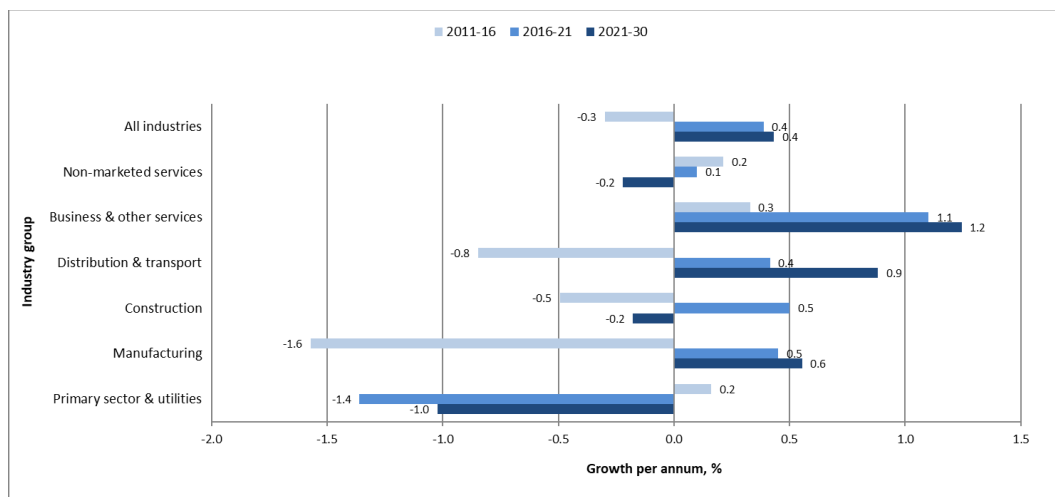
Finland's labour force is expected to increase by 5% over 2016-30, a rate similar to Belgium, driven by a similar increase in the working age population. The cohorts aged 20-34 are expected to decline, which will be compensated by an increase in the cohorts aged 35-49, which have, on average, higher participation rates. Moreover, despite the lower participation rates, the increase within the

labour force in the cohort aged 60+ is expected to provide a significant number of workers which contribute to the overall increase in the labour force.

### 3. Sectoral employment trends

Employment growth is expected to be uneven among sectors over the forecast period, as shown in Figure 2. *Business and other services* is the sector expected to grow in terms of employment the most in all periods. Following a decline in 2011-16, *distribution and transport* as well as *manufacturing* are expected to increase slowly by 2030. Other sectors, like *non-marketed services* and *construction*, are expected to decrease in the period 2021-30 after a moderate increase in 2016-21, while *primary sector and utilities* is expected to be the sector decreasing the most in both periods 2016-21 and 2021-30. Among subsectors, *food, drink and tobacco* and *other business services* are expected to increase the most in over the period 2016-30, thus driving the increase in *manufacturing* and *business and other services*. The subsectors expected to decrease the most are *agriculture* and *electricity, gas and water*, driving the shrinkage in *primary sector and utilities* sector.

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



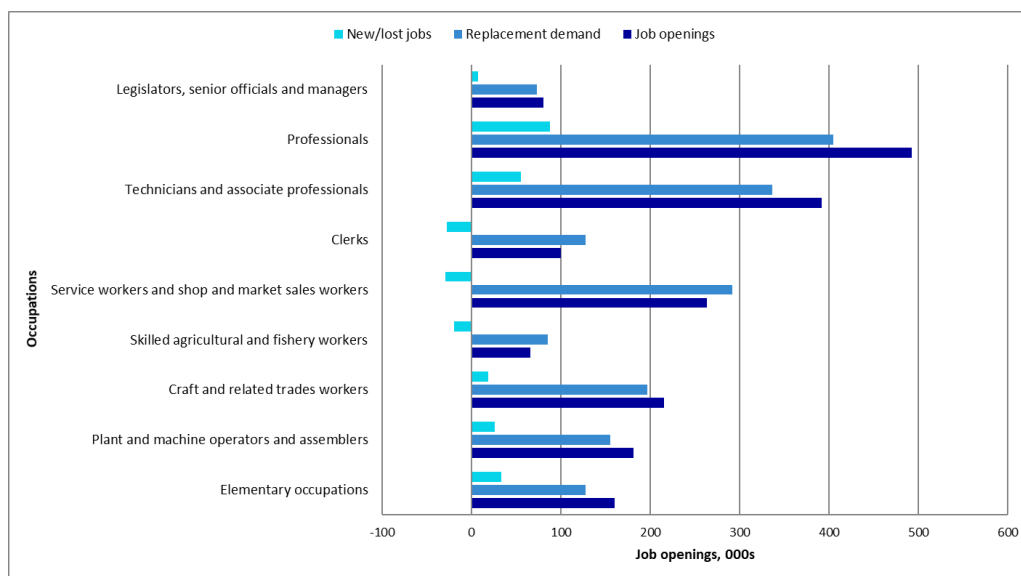
Source: Cedefop (2018 Skills Forecast)

## 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 job openings will come from the need to replace workers retiring or changing occupations. The occupation expected the highest number of job openings, of which 18% of job openings are due to new jobs creation, is *professionals*, accounting for 25% of total job openings in Finland, followed by *technicians and associate professionals*. Other occupations such as *craft and related trades workers, plant, machine operators and assemblers* and *elementary occupations* are expected to provide some new jobs, but the majority of job openings are expected to come from replacement needs. *Clerks, service workers and shop and market sales workers* as well as *skilled agricultural and fishery workers* are occupations expected to shrink by 2030, although the need to replace retiring workers will still provide numerous job openings.

**Figure 3 Job openings by broad occupational group, 2016-2030**



Source: Cedefop (2018 Skills Forecast)

The more detailed analysis of occupational groups shows that most of the **new jobs** are expected to be created in *legal, social, cultural and related associate professionals, business and administration professionals and science and engineering professionals*. The highest number of **total job openings** among detailed occupational groups is expected for *business and administration associates and professionals, legal, social, cultural and related associate professionals and personal care workers*.

## 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 sectorial shift toward *business and other services, distribution and transport and manufacturing* is expected to create demand for occupations such as *stationary plant and machine operators, information and communication technology professionals and technicians and sales workers*. On the other hand, the shrinking in *primary sector and utilities and non-marketed services* is expected to decrease employment in *market-oriented skilled forestry, fishery and*

*hunting workers, agricultural, forestry and fishery labourers and personal care workers.*

Developments in technology will shrink employment in occupations such as *general and keyboard clerks, numerical and material recording clerks*, because of the routine content of their job, as well as in *health associate professionals* because of new ways of providing healthcare and the demand for higher skills which lead to the increase in *health professionals*.

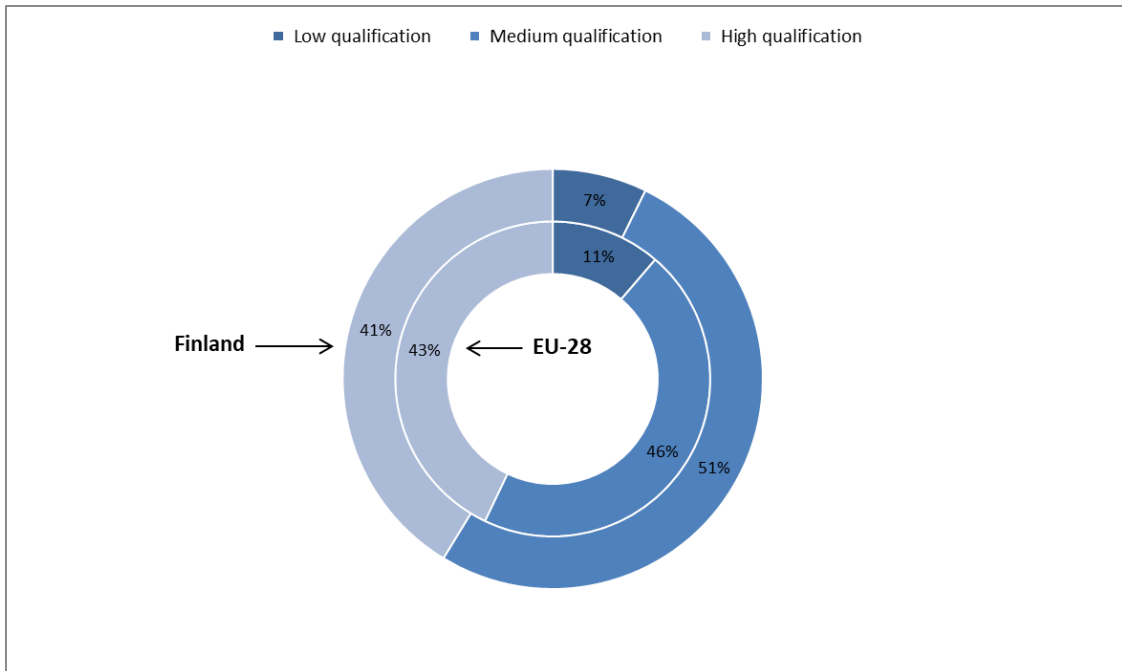
Taking into accounts both occupation and sector effects, the occupations which are expected to show the highest increase in employment are *legal, social, cultural and related associate professionals, assemblers, food preparation assistants*. On the other hand, among *teaching professionals* there will be both negative (sectorial change) and positive effects (within occupation shifts); in the case of this occupation, the positive effects are expected to outweigh 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 share of **total job openings** by qualification needs. The share of job openings requiring high-level qualifications is expected to be 41%, 2 pp below the EU-28 average, while 51% of job openings is expected to require medium-level qualifications, 5 pp above the EU-28 average. Only 7% of job openings are expected to require low-level qualifications, 4 pp below the EU-28 average.

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



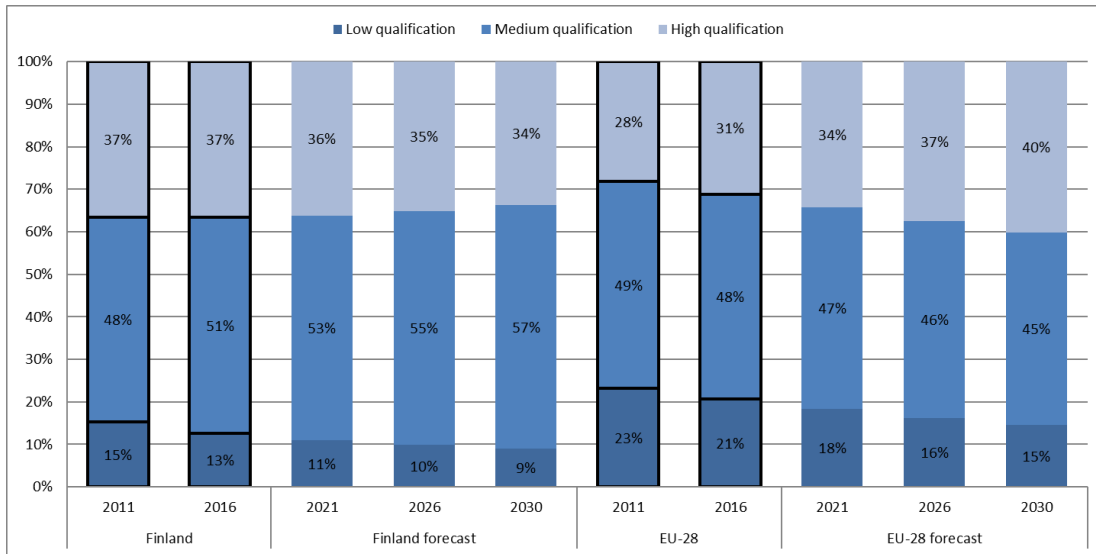
Source: Cedefop (2018 Skills Forecast)

The number of jobs requiring a high-level qualification is expected to increase within occupations such as *teaching professionals, business and administration professionals* and some occupations traditionally requiring more medium-level qualifications such as *business and administration associate professionals* and *legal, social, cultural and related associate professionals*.

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 slightly decrease to 34% in 2030, 6 pp below the EU-28 average. The share of medium-qualified workers is expected to increase to 57% in 2030, 12 pp above the EU-28 average. The share of low-qualified workers is expected to decrease to 9% in 2030, 6 pp below the EU-28 average.

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



Source: Cedefop (2018 Skills Forecast)

The demand for high-qualified workers is expected to exceed the supply, while the demand for medium-qualified workers is expected to be lower than the supply, potentially causing skills mismatch.

## 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) <sup>(1)</sup> and the short-term macroeconomic forecast produced by DG ECFIN in May 2017 <sup>(2)</sup>.

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>



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

<sup>(2)</sup> [https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2017-economic-forecast\\_it](https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2017-economic-forecast_it)



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