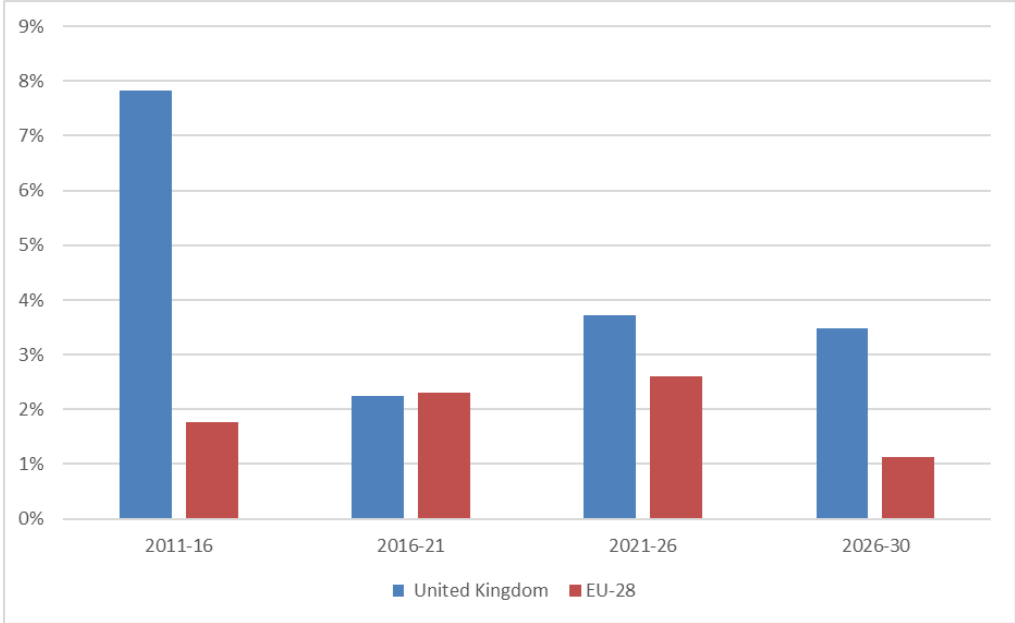


1. Employment outlook

After experiencing strong employment growth in the period 2011-16, employment in the United Kingdom (UK) is expected to increase over the forecast period, as shown in Figure 1. Employment growth rates are expected to be higher in the periods starting from 2021, compared to the initial forecast period 2016-21. Over the whole forecast, UK's employment growth is estimated to be significantly higher (9.7%) than the EU-28 average (6%).

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



Source: Cedefop (2018 Skills Forecast)

2. Labour force overview

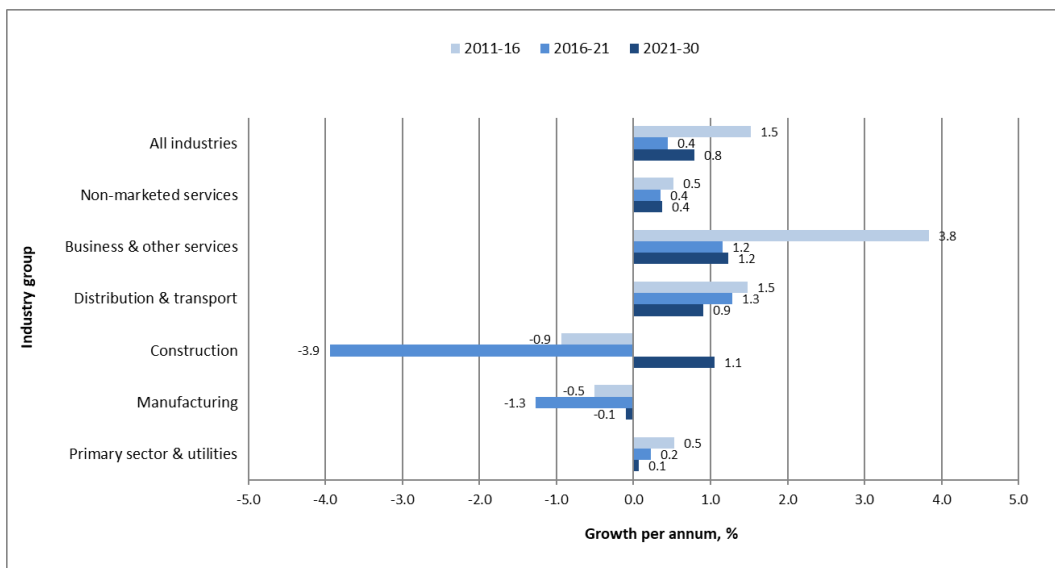
The UK's population is expected to increase by around 10%, leading to an increase in the labour force of about 8% in the period from 2016-30, with an average annual labour force growth rate of 0.5%. Most age groups in the UK have high participation rates (around 86% on average). The main element in the increases of the labour supply comes from increase in the age groups 35-39 and 40-44. On the other hand, the number of workers with traditionally low participation rates (e.g. 60+) is also expected to increase significantly (around

32% in average), which explains the overall increase in the working age population.

3. Sectoral employment trends

Although the overall level of employment is expected to grow in the UK, some sectors will experience further decline, as shown in Figure 2. The *manufacturing* sector is expected to continue its long-term decline in employment throughout the forecast period. However, in contrast to the performance of the sector as a whole, the *engineering* subsector is expected to experience a 4% increase in employment in the period 2016-21. Employment in *construction* is expected to decline relatively sharply in 2016-21, before rebounding again in the period 2021-30; but it will experience an overall decline in employment of around 10% in over the period 2016-30. The *business and other services* sector is expected to experience the largest increase in employment over the forecast period (18%), driven by growth in the *other business services* subsector (of 21%).

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



Source: Cedefop (2018 Skills Forecast).

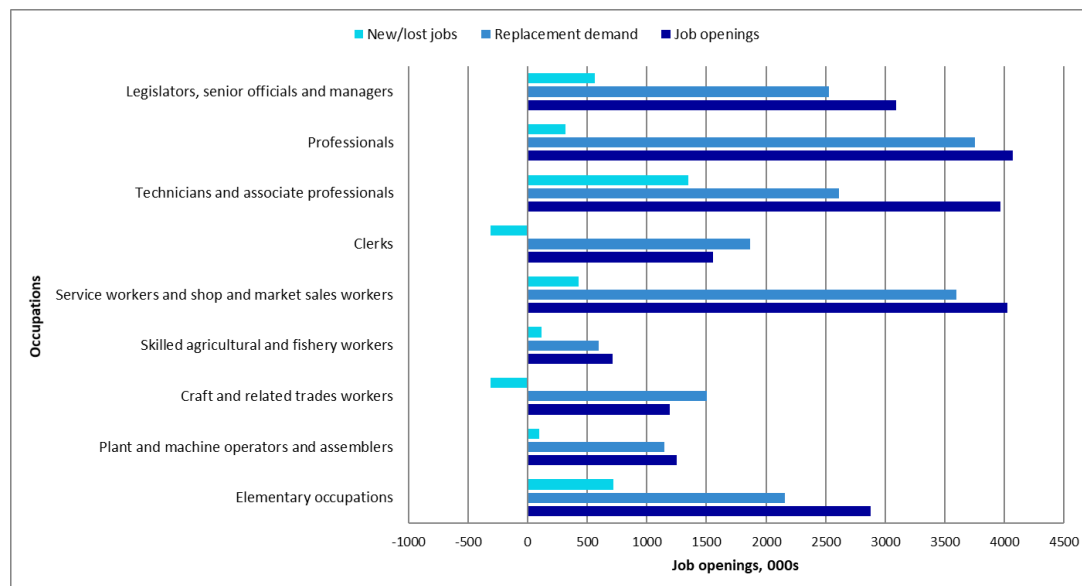
4. Job openings by occupational group

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 or newly created as well as by the amount of jobs that are created following the retirement of older workers.

In the UK, most of the job creation over this period will come from the need to replace existing workers. *Professionals* as well as *service and shop workers* are expected to see the highest number of job openings, with around 9 out of 10 of these being driven by replacement demand in each occupational group.

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



Source: Cedefop (2018 Skills Forecast)

Looking at the occupational groups in more detail shows that *sales workers* are expected to generate the highest number of job openings through replacement demand in the forecast period and the largest number of job

openings overall. *Labourers in mining, construction, manufacturing and transport* is the occupation group expected to generate the second highest number of job openings in total and the highest number of new jobs, with *legal, social, cultural and related associate professionals* and *health associate professionals* expected to create the second and third highest number of new jobs, respectively. *Other clerical support workers* and *numerical and material recording clerks* are expected to experience the largest number of job losses from 2016-30.

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 strong growth in the business and other services sector is expected to drive the growth in employment in legal, cultural and social professionals, and business and administration professionals in particular. Many managerial occupations will also benefit from this change.

Employment is expected to fall in several *clerical occupations*, as the routine nature of the tasks involved makes them increasingly susceptible to automation in the workplace, leading to workers being replaced by technology to some extent.

Overall, it is these *clerical occupations* that are expected experience the largest fall in employment in the period to 2030. *Administrative and commercial managers* are also set to experience a significant decline in employment over this time period, as are *electronic trades workers, handicraft and printing workers* and *metal, machinery and related trades workers*.

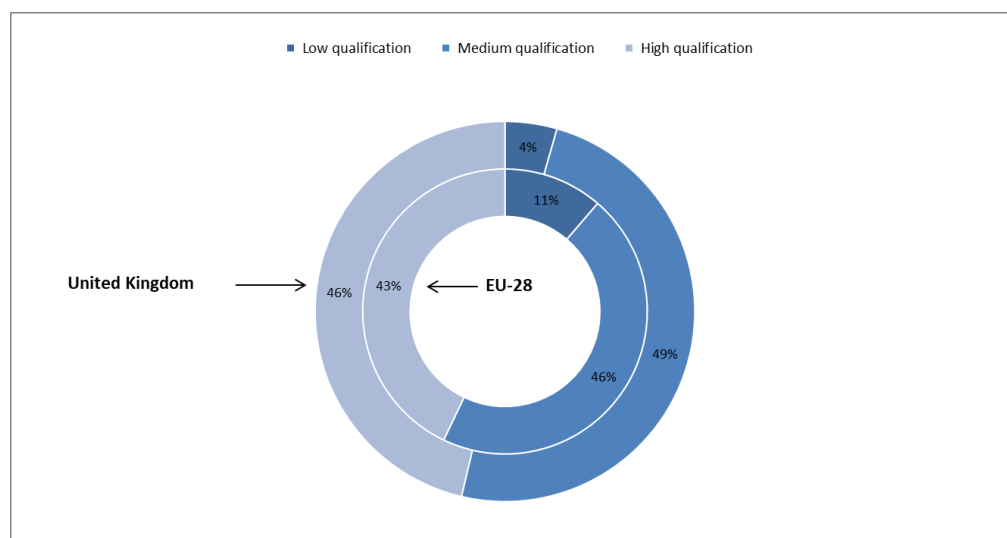
However, health associate professional occupations are expected to experience strong growth in the next decade, as are labourers in mining, construction, manufacturing and transport; the latter reflecting the growth in the distribution and transport sector and the construction industry.

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 level of education required, in the period 2016-30. In general, Figure 4 shows that the UK require more high-skilled labour force than the EU-28 average, by 3pp. Only a small proportion of job openings will require low level of qualifications in the UK, at 4% compared to the EU 28 average of 11%. The proportion of job openings requiring medium level of qualifications are higher than the EU average, at 49% and 46% respectively.

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



Source: Cedefop (2018 Skills Forecast)

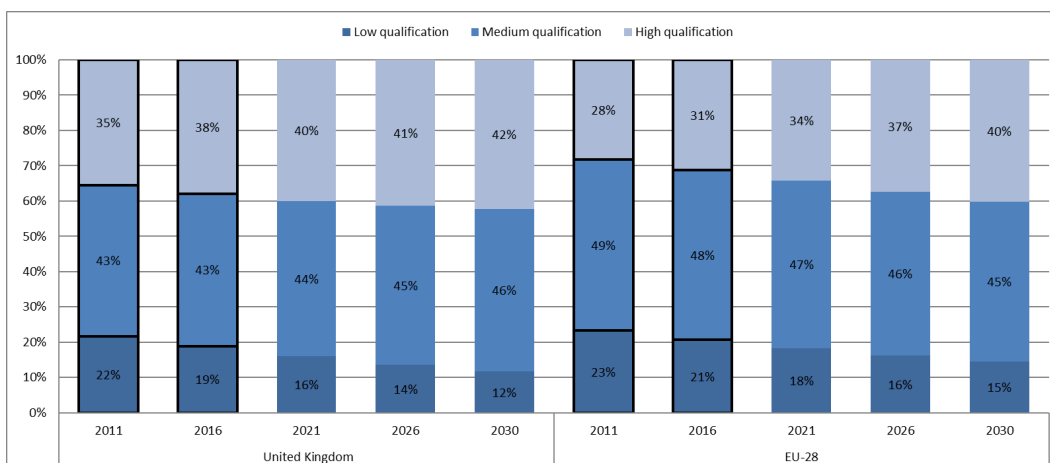
Business and administration professional and associate professional occupations are among those expected to generate the largest number of job openings requiring high qualification levels. However, many highly skilled jobs

are also expected to be created in *personal care occupations*, which are not usually associated with high level of qualifications.

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 shown in **Figure 5**, the share of the labour force with high and medium level qualifications is expected to increase in the period up to 2030, whilst the proportion with a low level of qualifications is expected to decline. The proportion of the UK labour force holding high level qualifications is consistently higher than the EU-28 average, but the latter is expected to grow faster throughout the forecast period.

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



Source: Cedefop (2018 Skills Forecast)

The demand for highly- and medium- qualified workers is expected to exceed their supply, while low-qualified workers will be in surplus, a situation which could give rise to significant skills mismatches.

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:

[/www.cedefop.europa.eu/el/events-and-projects/projects/forecasting-skill-demand-and-supply](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