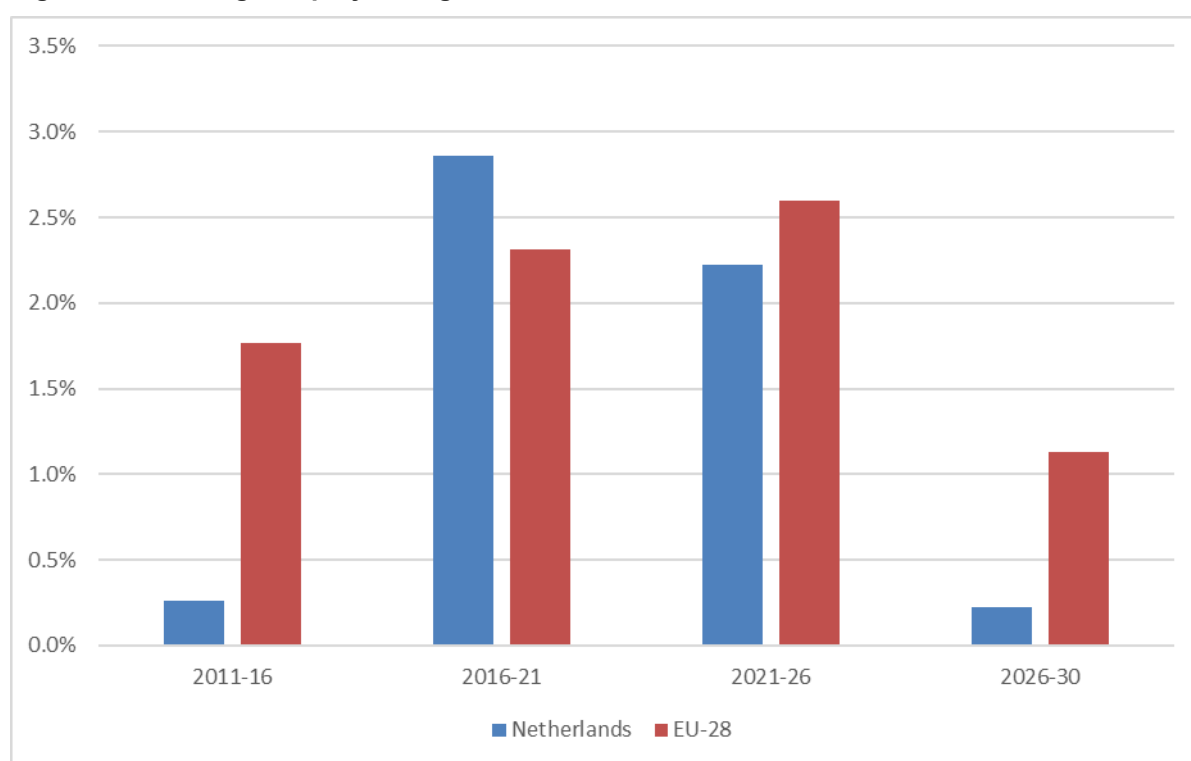


1. Employment outlook

Following a period of stagnant growth in 2011-16, the employment levels in the Netherlands are estimated to grow in the subsequent period up to 2021, as shown in Figure 1. Subsequently, employment growth will slow from 2021-26 to reach its lowest level during the period 2026-30, following the EU-28 trend. The total employment change for 2016-30 will be 5.3%, which is close to growth levels of EU-28 (6%) in the same period.

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



Source: Cedefop (2018 Skills Forecast)

2. Labour force overview

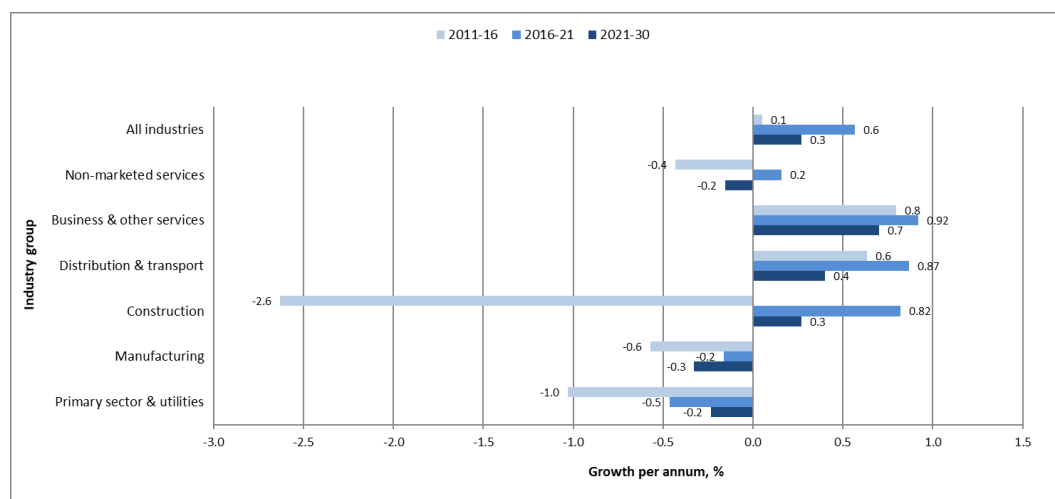
The Netherlands's working age population is forecast to increase by 8.9 % over the period up to 2030, while the labour force will rise with even higher rate (9.2%). The growth of the Dutch labour supply will be amongst the 10 highest in the EU. Only a small part of this increase is due to the increase in participation rate; the Netherlands is projected to experience only a small increase (+0.2%).

Another part of the increase is the result of the changing composition of the labour force. There is an increase among the younger cohorts (up to 1.8%, for those aged 30-39), which have high participation rates for both sexes. However, the number of workers with traditionally low participation rates, i.e., those nearing the retirement age (60+) are expected to increase with a higher annual growth (2%-5%) due to population ageing. Despite the increases in prime working age population, ageing slows down increases in participation rates, while within different age groups participation rates relative to previous age cohorts are increasing.

3. Sectoral employment trends

The decline in employment over the period 2011-16 is forecast to be reversed for the broad sectors of economic activity in *construction* and *non-marketed services*, as shown in Figure 2. The declining employment trend is projected to continue for *manufacturing* and *primary sector and utilities*, while the decrease will be sharpest for *mining and quarrying*. The highest annual employment increase is expected in *business and other services* sector. *Distribution and transportation* sector is also expected to experience a significant annual growth, especially in 2016-21.

Figure 2 Employment growth by broad sector of economic activity, 2016-30



Source: Cedefop (2018 Skills Forecast)

The highest employment growth within sub-sectors is expected in *banking and insurance*, *other business services* (i.e. *telecommunications, real estate activities, advertising and market research*) and *miscellaneous services* (i.e.

libraries, archives, museums and other cultural activities, gambling and betting activities).

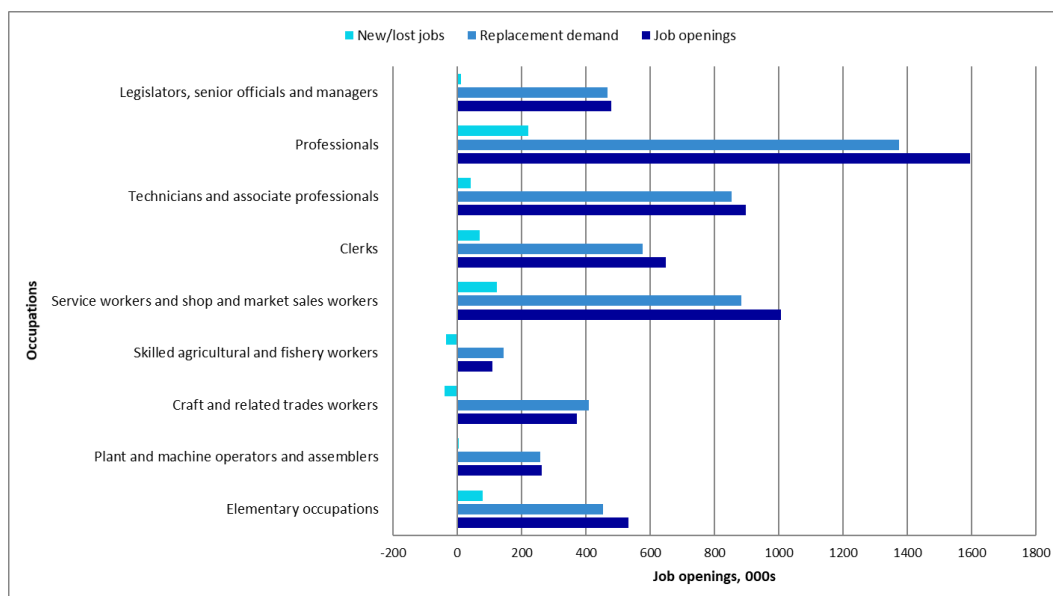
4. Job openings by occupational group

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 in need of replacement workers following e.g. the retirement of older workers.

Most newly created jobs in the Netherlands are due to this replacement demand, i.e., workers leaving particular occupations. Therefore, numerous job opportunities will arise for within the occupation group of *professionals*, contributing more than a quarter of the total job openings (27% in the Netherlands compared to 19% for EU-28 average) with almost 1.5 million job openings (86% of them due to replacement demand). *Skilled agricultural and fishery workers* as well as *craft and related trades workers* will experience similar declines in employment (i.e. as shown by the negative job created/lost rate), however the need to replace existing workers will still create a number of job openings in these occupations.

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



Source: Cedefop (2018 Skills Forecast)

Within detailed occupational groups the highest rate of employment growth, i.e., the highest rate of newly created jobs, will be found in *business and administration professionals*; and within *legal, social and cultural professionals*. However, significant amount of new jobs will also be created within occupations that are medium-skilled, such as *sale workers*. This occupation, along with *business and administration associate professionals* these occupations will contribute most, in total numbers, to the **total job openings** (openings due to both new/lost jobs and replacement needs) up to 2030.

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 changes of the Netherlands's economy and the shift towards *business services* and *distribution* sector will benefit also a number of typically

low- and medium-skilled occupations such as *handicraft and printing workers, refuse workers and other elementary workers and street and related sales and service workers*. Among the high-skilled occupations benefitting these shifts are the *information and communications technicians*.

On the other hand, within sectors, occupations are changing, the advances of technology and especially of ICT are changing the skills profile and shift the importance of occupations. This has a negative impact on the structure of a number of occupational groups, among these are high- and medium- skilled occupations including *administrative and commercial managers or handicraft and printing workers*.

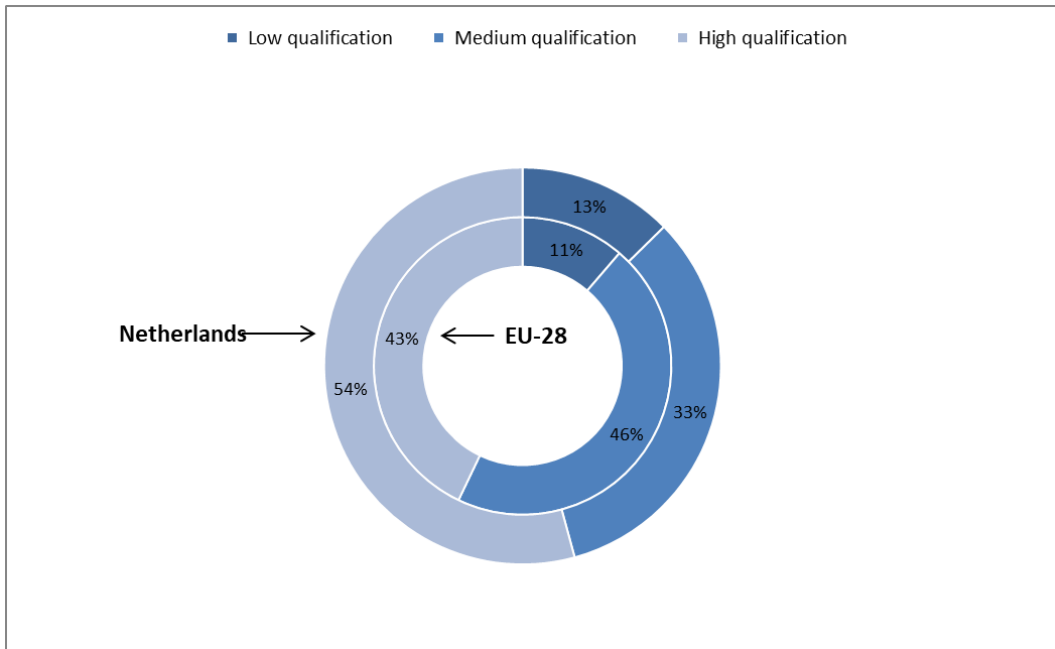
Overall, occupational change depends on several factors combined. For instance, *production and specialised services managers* experience positive and negative impacts. Negative impacts are the shrinking primary and manufacturing sector, while at the same time the shifts within the sectors benefit these occupations. Overall the positive effects are expected to outweigh negative effects resulting in an increasing demand 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. More than half of the forecast total job openings require a high level of qualification, about 10 pp more than the EU-28 average. One third of the jobs will require medium level of qualifications and only close to 13% will require low level of qualifications.

Figure 4 Share of total job opening by level of qualifications, 2016-30



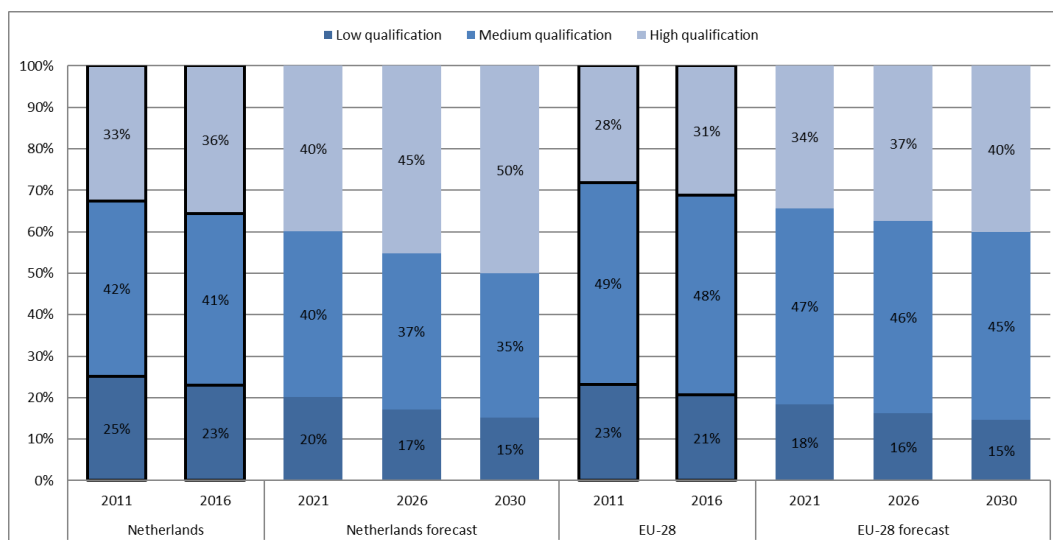
Source: Cedefop (2018 Skills Forecast)

Looking into future employment opportunities (total job openings) for high qualifications, the largest demand is expected for *business and administration professionals* and *associate professionals*, along with *legal, social and cultural professionals*. Also increasing for high qualifications, albeit on a smaller scale, are expected among *sales workers* as well.

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.

The increasing share of people with high level qualifications is expected to continue increasing over the period as can be seen in Figure 5. The share of high-qualified in the labour force will top EU levels by 10 pp towards 2030. At the same time, the shares of medium and low levels of qualifications are expected decrease. The levels of low-qualified labour force are expected to reach the average EU-28 level in 2030 (15%).

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



Source: Cedefop (2018 Skills Forecast)

Taking demand for and supply of qualifications together, the growing supply of highly-qualified workers will only barely keep abreast of the increasing demand for this qualification level. The supply of low- and medium- qualified workers is expected to slightly exceed 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