



Skills Forecast: key EU trends to 2030


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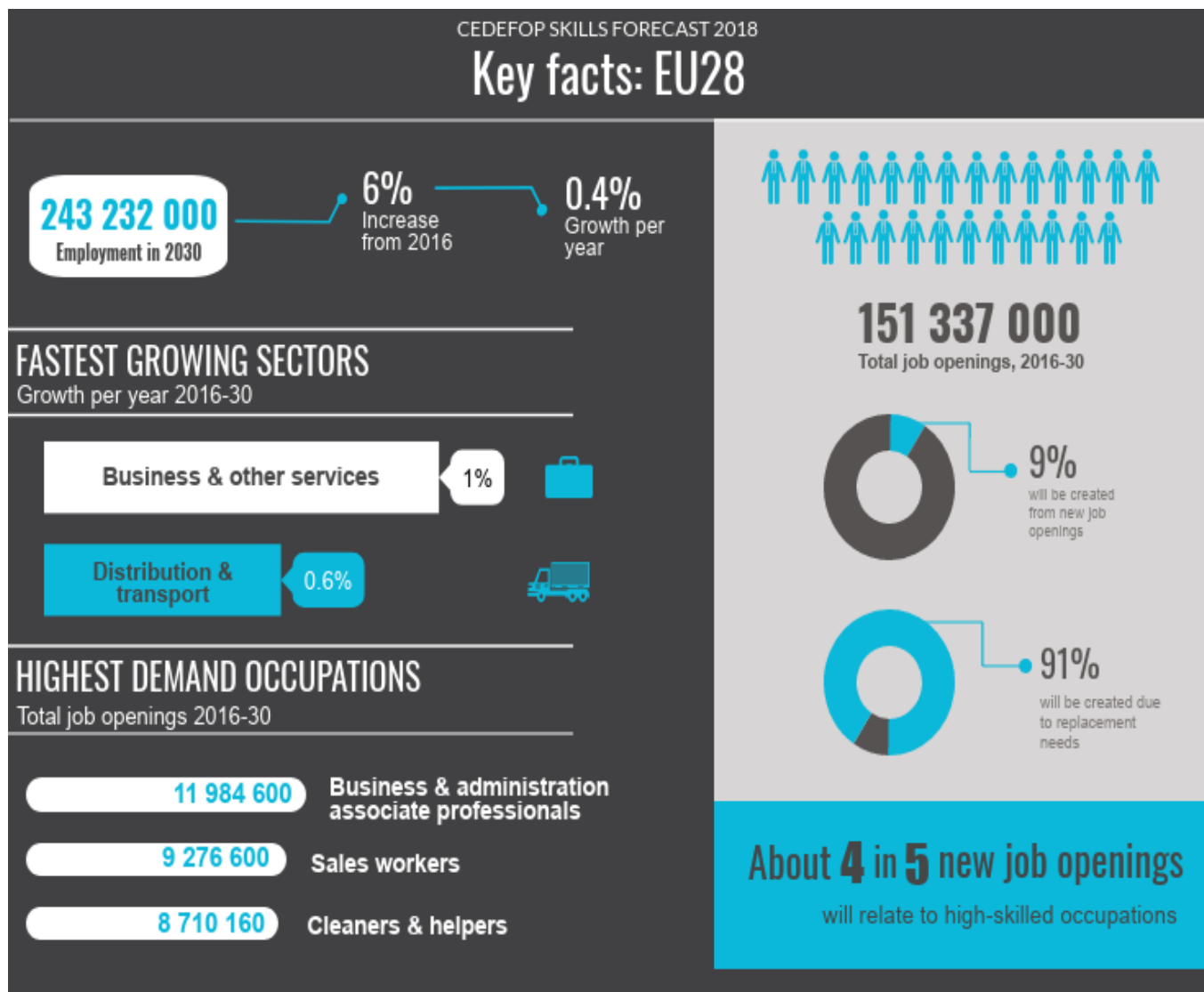
Summary

Cedefop skills forecasts offers quantitative projections of the 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 with the aim to offer cross-country comparisons about employment trends in sectors, occupations and qualifications. The forecasts and the methodologies applied are validated by a group of national experts. Nevertheless, it is not their purpose to substitute national forecasts, which often utilise more detailed methodologies and data, while they also incorporate in-depth knowledge of the labour market of the country.

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) and the short-term macroeconomic forecast produced by DG ECFIN in May 2017.

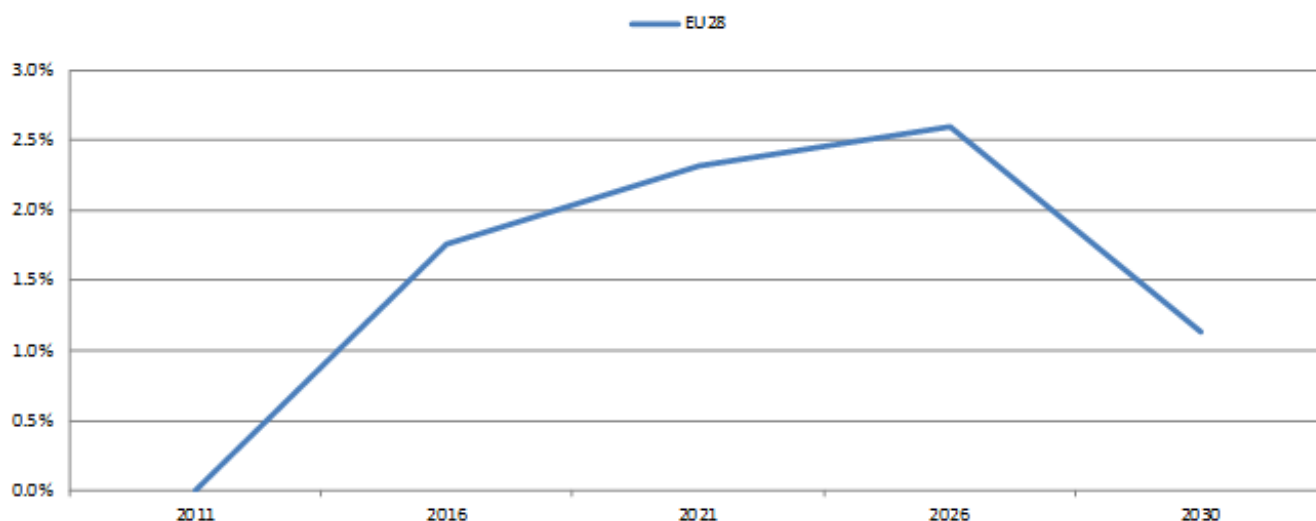
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2030 Employment Outlook

EU28 employment level is projected to increase further from 2016 onwards (see *Figure 1*), with total estimated increase close to 6% during the period up to 2030. During the period 2021 – 2026, the employment growth is estimated to be the highest (2.6%) while a mild slowdown will follow thereafter; mainly reflecting Europe’s declining demographic trends. Some of the Member States expected to experience the highest growth rates, over the forecast period, include Cyprus, Ireland, Luxembourg, Malta and Spain.

Figure 1 EU28: Employment Growth (%), 2011-2030



Labour force overview

Europe's working age population is forecast to increase by 3.5% over the period up to 2030. However, the labour force is only expected to experience a minor increase (0.6 %) over the same period. In more detail, some countries like Luxembourg or Cyprus are estimated to experience an increase over 11%, in the contrary with Bulgaria, Greece, Latvia or Lithuania which are projected to face significant decrease.

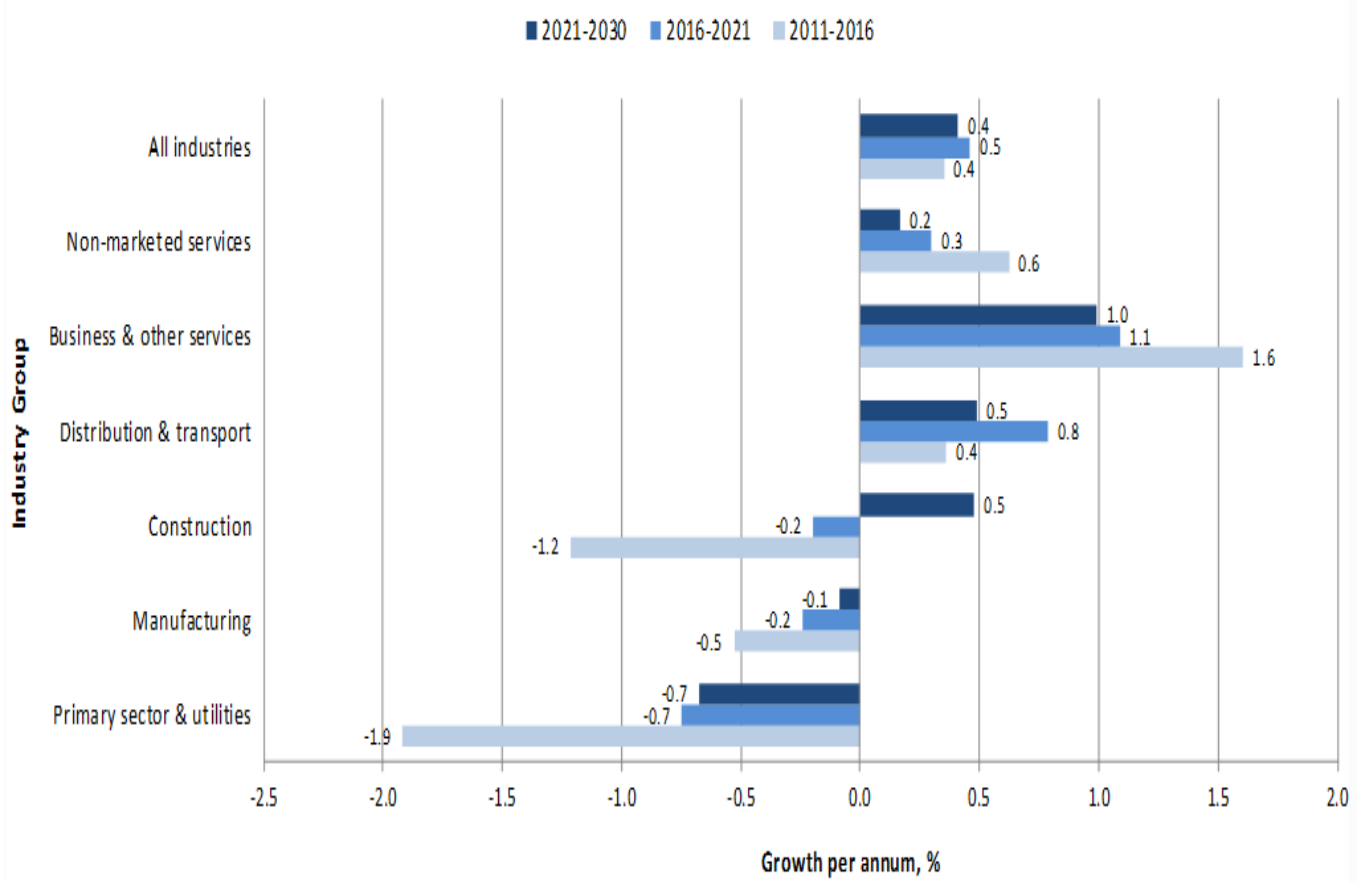
At an EU level, the participation rate is estimated to experience a slight decrease (-1.6 percentage points) with only a few countries, such as Hungary, Denmark, the Netherlands and Finland, expected to have a minor positive change. The falling participation rates may be attributed to the changing composition of the labour force, as younger aged cohorts (aged 25 - 34), with generally very high participation rates for both sexes, are expected to decline in numbers. Substantial decreases are also forecasted for older aged cohorts (aged 45 - 49), which are also highly active in the job market. Especially for Italy and Latvia, the annual growth rate of the labour force for this cohort ages is expected to fall by -1.5%. On the other hand, the number of workers with traditionally low participation rates (e.g. 60+) is expected to increase considerably; and even though the extension of the retirement age in many countries will increase the participation rates of this cohort, such increases are not able to offset the negative impact on the overall participation rate of the whole labour force.

Sectoral employment trends

The declining trends in employment over the period 2011 - 2016 is forecast to moderate for most of the broad sectors of economic activity and inverse for the *construction* sector (see *Figure 2*). Especially, the latter will face a slight rise after 2020 (next to consecutive recessions of - 0.2% in 2016 - 2021 and - 0.5 % in 2021 - 2030). On the contrary, in France and Malta, the *construction* sector is projected to have the highest annual growth (during 2016 - 2030), amongst the broad sectors. The *primary sector & utilities* will continue shrinking, while the decrease will be sharpest for *mining & quarrying* (exceptions are Denmark and Luxembourg, where it will experience the highest annual growth). In more detail, the highest increase *per annum* in employment, for 17 EU Member States, will be observed in *business &*

other services (over both periods 2016 – 2021 and 2021 – 2030).

Figure 2 EU28: Employment growth by broad sector of economic activity

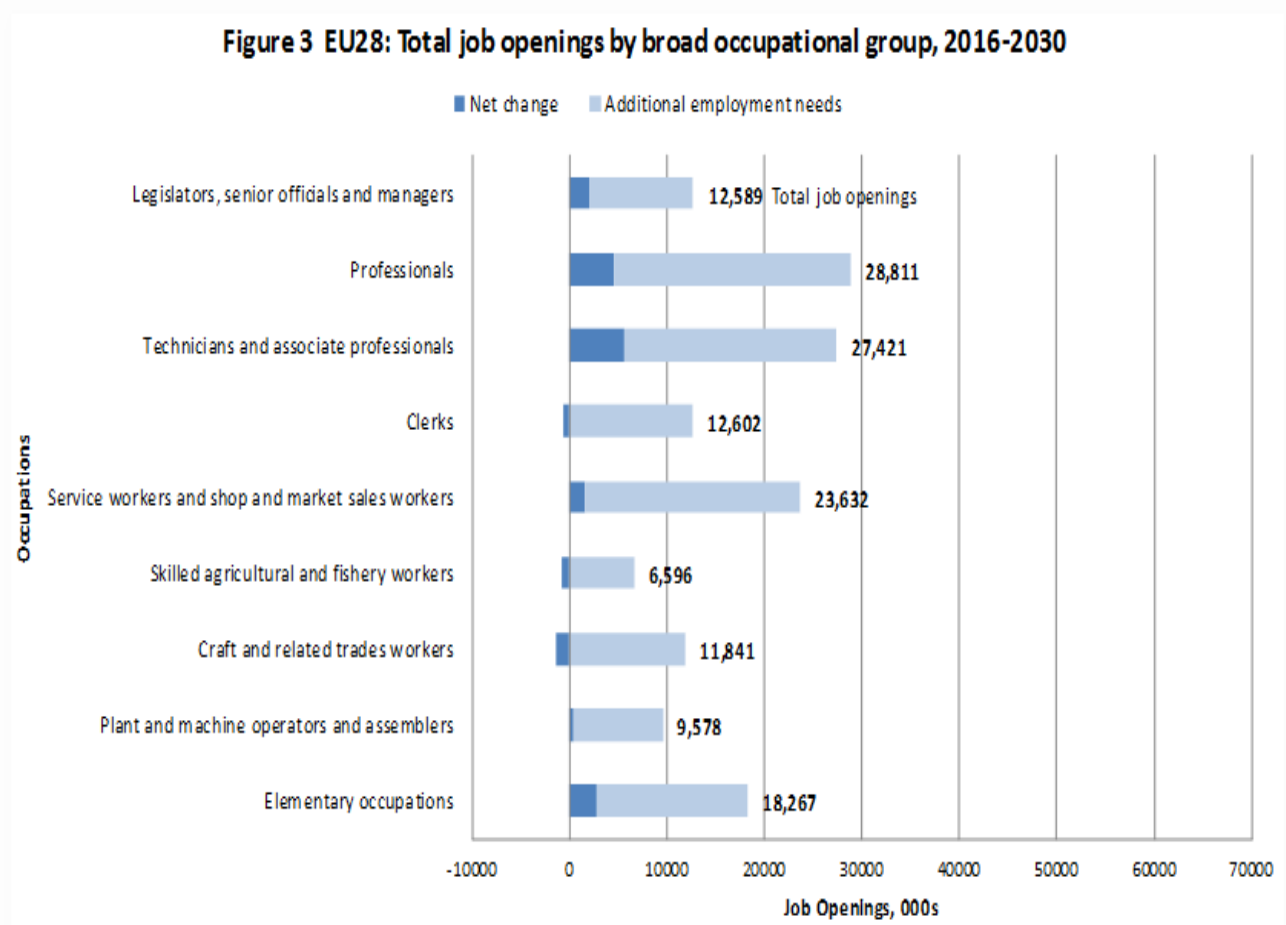


In terms of sub-sectors, *other business services* (i.e. telecommunications, real estate activities, advertising and market research), and *miscellaneous services* (i.e. libraries, archives, museums and other cultural activities, gambling and betting activities) are those where the greatest (annual) increase is expected.

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 economy. Replacement needs arise as the workforce that 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 that are otherwise 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 – 2030. The first part (dark blue) of each bar presents the net change that can be either positive or negative. The second part (light blue) presents the additional employment needs that add to the total job openings once the net change has been considered. [1] Figure 3 clearly demonstrates that most jobs expected to be created in EU28 will be due to the need to replace workers leaving particular occupations. Therefore, numerous job opportunities will arise for *Professionals*, contributing close to 19% in the whole economy, with almost 29 million job openings (more than 80% of them due to replacement demand). *Craft and related trades workers* even though will experience a decline in size of employment (i.e. as shown by the negative expansion demand); the need to replace existing workers will create a significant number of new jobs.



The majority of **new jobs** will be created for *legal, social, cultural and business & administration associate professionals*, with 4 out of 5 new jobs referring to high-skilled occupations. Regarding **total job openings** (openings due to both net change and replacement needs), the occupations that will contribute the highest numbers in the European economy over the period up to 2030 are *business & administration associate professionals*. However, a substantial number of job openings will be created for occupations that are traditionally considered as medium skilled, such as *sales workers, cleaners and helpers*. In particular, in seven countries these two occupations are estimated to have the greatest demand over the period 2016 – 2030 (e.g. in Cyprus, France, Malta).

Drivers of occupational change

Within the Cedefop Skills Forecasts, future employment growth (or decline) of occupations is further decomposed by separating national economic components from regional industrial and economic effects, helping to interpret what is driving the change. In particular, it considers that employment growth can be explained by three possible drivers: a) trends of the economy (i.e. growth or decline), b) shifts of employment between sectors (i.e. some sectors gaining importance in total employment while others losing) and c) changes in the occupational structure within sectors (i.e. factors making some occupations more important/demanded than others across all sectors, e.g. education, immigration, technological change etc.).

The sectoral changes of the EU28 economy and the shift towards *business services* will benefit, and create new demand for, a number of typically high-skilled occupations such as *legal, social and cultural professionals, business and administration professionals, hospitality, retail and other services managers*. However, some medium and low skilled occupations, such as *customer services clerks and cleaners and helpers* will also benefit from these sectoral shifts. On the other hand, low skilled occupations related to *primary sector and utilities* and manufacturing, like *subsistence farmers, fishers, hunters and gatherers or assemblers*, is estimated to suffer from the negative sectoral shifts.

The advances of technology and especially of ICT, which now become easier for everyone to use irrespective of specialisation, will have a negative impact on the structure of a number of low skilled occupational groups, including *numerical and material recording clerks and general and keyboard clerks* (especially in Denmark, Spain, France or Latvia). Other low skilled occupations, though, such as *assemblers* will benefit from these advances of technology, making their role more valuable.

Therefore, the final effect on occupational change depends on a number of factors that all need to be considered together. For instance, as described above, for *assemblers* there will be both positive and negative effects; however the positive are expected to outweigh negatives resulting in an increasing demand over the period up to 2030 (except of Netherlands and Slovenia).

Demand for and supply of skills

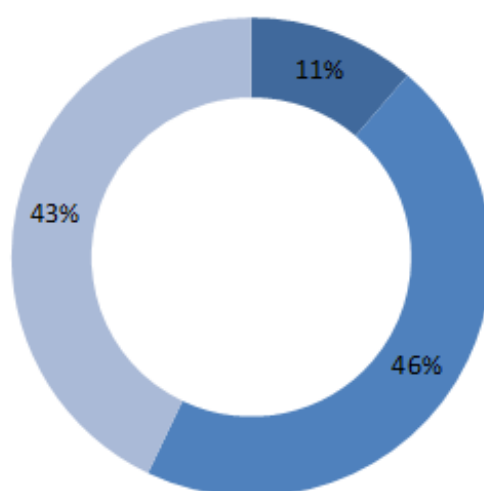
Within the Cedefop Skills Forecasts, skills are proxied by the highest level of qualification held by individuals in the labour force and employment. Three levels are distinguished, namely high, medium,

and low, which correspond to the official ISCED classification. However, 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. Therefore, occupational groups are also linked to a skill level.

Figure 4 shows the shares of **total job openings** for qualifications needs. Most jobs, forecasted to be created over the period up to 2030, will require medium level of education, while about 43% of jobs will require high. The countries with the lowest percentages estimated of total job opening requiring a high qualification, through this period, are Portugal, Germany, Austria and Romania. While inverse will be the case for Poland, Ireland and Cyprus, with more than 50% of job openings demand high qualifications. On the other hand, close to 11% of total job openings will require low level of qualifications (Portugal, Denmark and Romania will have the highest shares).

Figure 4 EU28: Share of total job openings by level of education, 2016-2030

■ Low qualification ■ Medium qualification ■ High qualification

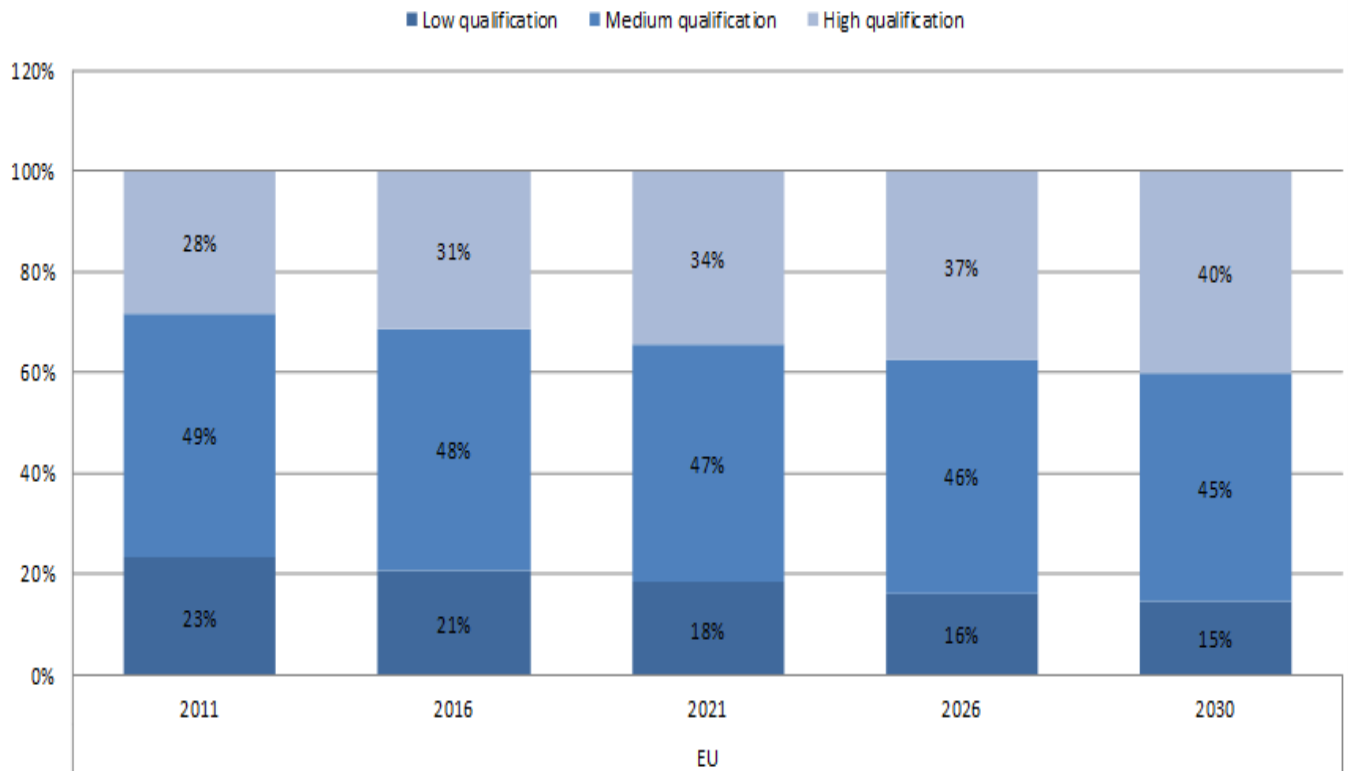


Looking into future employment opportunities (**total job openings**) for **high qualifications**, the largest numbers are expected to occur within *business and administration associate professionals, teaching professionals, and legal, social and cultural professionals*. However, an uprising demand is expected for job opportunities with high qualifications for *sales workers* as well

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

As can be seen from *Figure 5*, the percentages of people with high level qualifications are expected to continue increasing over the period up to 2030 while those for medium and low levels of education are expected to experience a slight decrease.

Figure 5 EU28: Labour force share by level of qualification, 2011-2030



When demand and supply are looked together, it is expected that the growing demand for high level qualifications will outpace the supply in the decade to come. On the other hand, the declining numbers in the supply of low level qualifications, which are currently higher than demand, will eventually come into balance with the demand.

[1] The additional employment needs equal replacement demand when net change is positive. However, in cases that the net change is negative, they equal replacement demand plus the absolute value of net change.

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