# 1. Employment outlook

Following an increase in employment in the period 2011-16, employment levels in Poland are expected to stagnate up to 2030, as shown in Figure 1. Some increase in employment levels are expected in the periods 2016-21 and 2021-26. Over the whole forecast period, Poland's employment growth (2%) is estimated to be significantly below the EU-28 average (6%) and similar to Romania.

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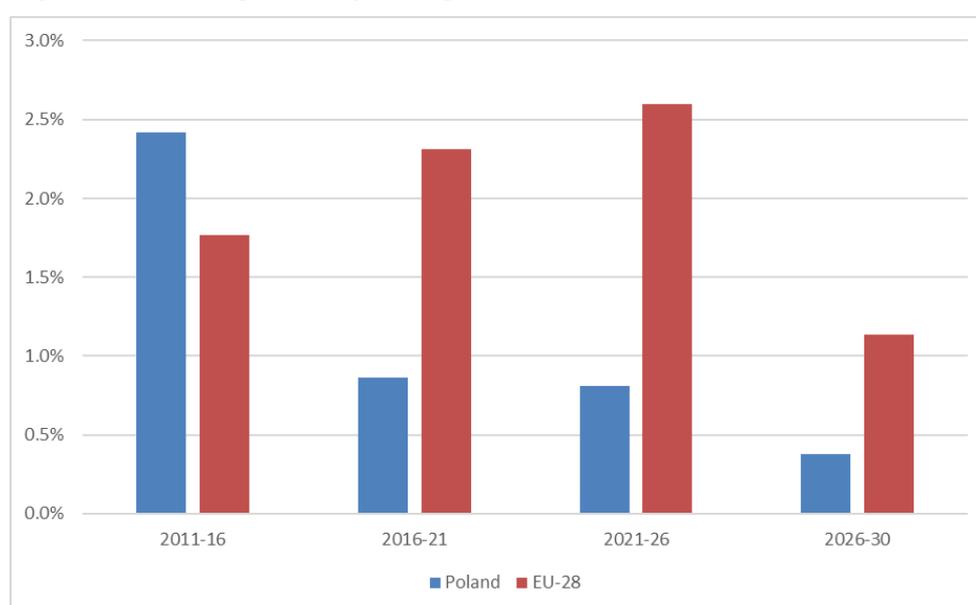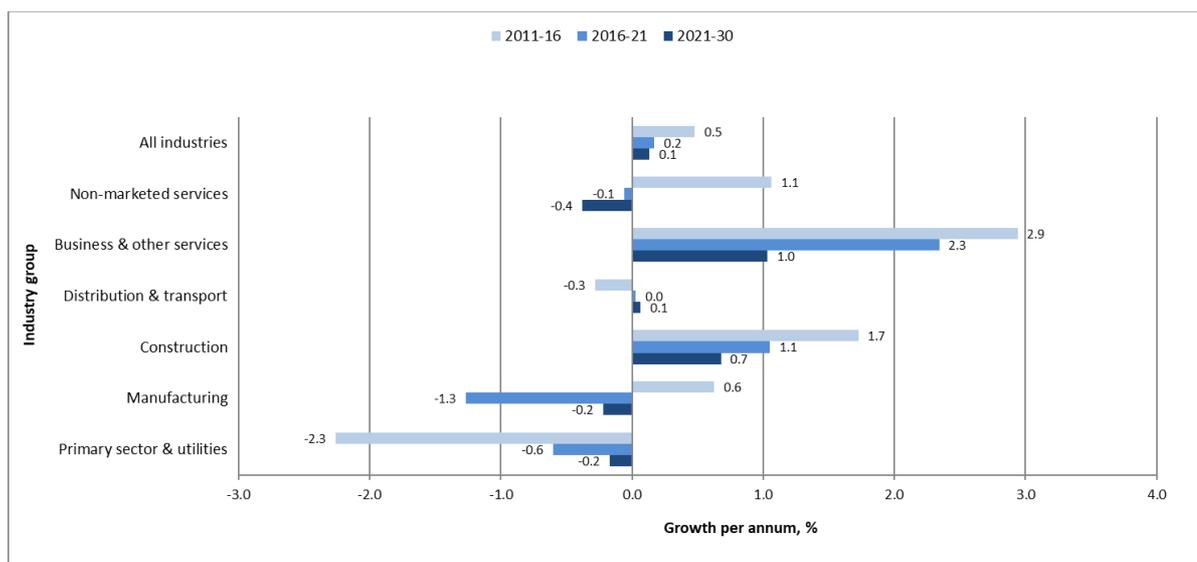

Source: Cedefop (2018 Skills Forecast)

2. Labour force overview

Poland's labour force is expected to decline by 3% over the period 2016-30, a decline similar to that in Estonia. The working age population is expected to decline slightly and the change in its age composition will affect the labour force supply negatively. The decline in age cohorts 25-39 with high participation rates (84% on average) is expected to be slightly compensated by the increase in the labour force aged 45-54 with similar participation rates. The huge increase in the 65+ cohort characterised by the lowest participation rate does not have an impact on the overall labour supply.

3. Sectoral employment trends

Employment growth in Poland is expected to be uneven across the economy, as shown in Figure 2. The fastest growing sectors in the 2011-16 period, *business and other services* as well as *construction* are expected to continue to grow up to 2030. After an increase in 2011-16, the sectors *manufacturing* and *non-marketed services* are expected to decline in the following periods, being the sectors with highest rate of decline in 2016-21 and 2021-30, respectively. *Primary sector and utilities* are expected to continue its declining trend. In terms of subsectors, *other business services* and *banking and insurance* are expected to drive the significant growth of *business and other services* over the period 2016-30. The subsectors expected to decrease the most over the period 2016-30 are *food, drink and tobacco* as well as *mining and quarrying*, driving the decline in the respective broad sectors (*manufacturing* and *primary sector and utilities*).

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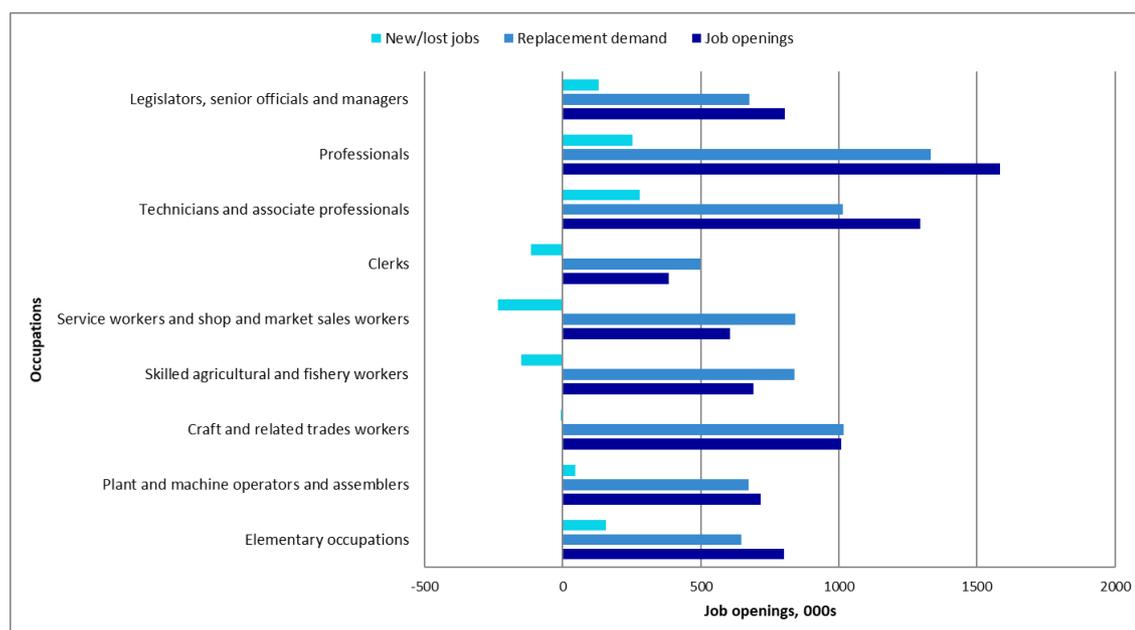

Source: Cedefop (2018 Skills Forecast)

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 the need to replace workers retiring or changing occupations. The occupation expected to have the highest number of job openings, of which 16% from new jobs creation, is *professionals*. This occupation also accounts for 20% of total job openings. *Technicians and associate professionals* is the second growing occupation in terms of total job openings, with the most newly created jobs. *Clerks*, *service workers* as well as *shop and market sales worker* and *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, 2016-30

Source: Cedefop (2018 Skills Forecast)

When occupational groups are analysed in more detail, most of the **new jobs** are expected to be created in *building and related trades workers* as well as *legal, social, cultural and related associate professionals*. The highest number of **total job openings** among detailed occupational groups are expected among the

building and related trades workers and the *business and administration associate professionals*.

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 towards *business and other services* and *construction* is expected to create demand for occupations such as *protective service workers*, *cleaners and helpers* and *building and related trades workers*. On the other hand, the shrinking in *manufacturing* and *non-marketed services* is expected to decrease employment in *food processing, wood working, garment and other crafts and related trades*, *stationary plant and machine operators* and *teaching professionals*.

Developments in technology will significantly shrink employment in occupations such as *food preparation assistants*, *other clerical support workers* and *electrical and electronic trade workers* because of advances in automation and the routine content of their jobs.

Taking into account both occupation and sector effect, the occupations which are expected to show the highest increase in employment are *legal, social, cultural and related associate professionals*, *administrative and commercial managers* and *building and related trades workers*. On the other hand, among *health professionals* there will be both negative (sectoral change) and positive effects (within occupation shifts); in the case of this occupation the positive effects are expected to outweigh the 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 61%, 18 pp above the EU-28 average, while 32% of job openings is expected to require medium-level qualifications, 14 pp below 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**
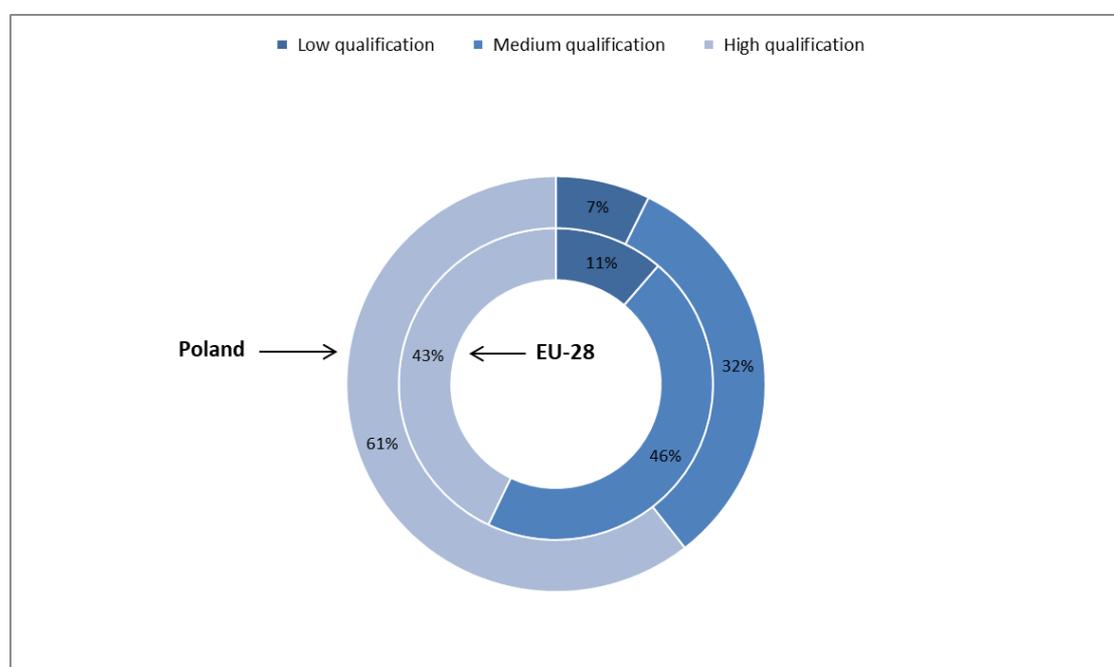
Source: Cedefop (2018 Skills Forecast)

The number of jobs requiring a high-level qualification is expected to increase within traditionally high-skills occupations such as *business and administration associates* and *professionals* and *science and engineering professionals.* Given the high level of qualification of the supply, there will also be a demand for high qualifications within traditionally medium-skills occupations such as *sales workers* and *market-oriented skilled agricultural workers*.

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 markedly to 60% in 2030, 20 pp above the EU-28 average, while the share of workers with medium-level qualifications is expected to decline significantly reaching 36% in 2030, 9 pp below the EU-28 average. The share of workers with low-level qualifications is expected to slightly decline, reaching 4% in 2030, 11 pp below the EU-28 average.

Figure 5 Labour force share by level of qualification, 2011-30
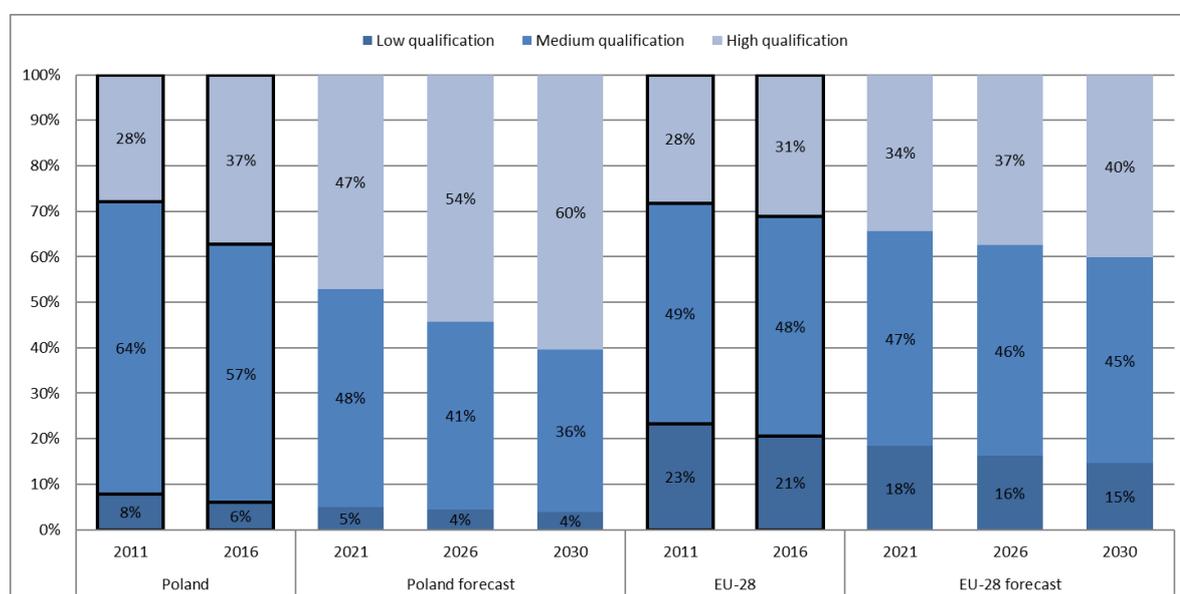
Source: Cedefop (2018 Skills Forecast)

The supply of highly-qualified workers are expected to broadly match their demand by 2030. This includes, however, the increased demand for highly-qualified workers within occupations that traditionally were filled with medium-qualified workers. While there might be a slight oversupply of medium-qualified workers, the demand for low-qualified workers is expected to slightly exceed their supply, potentially leading to 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) ([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