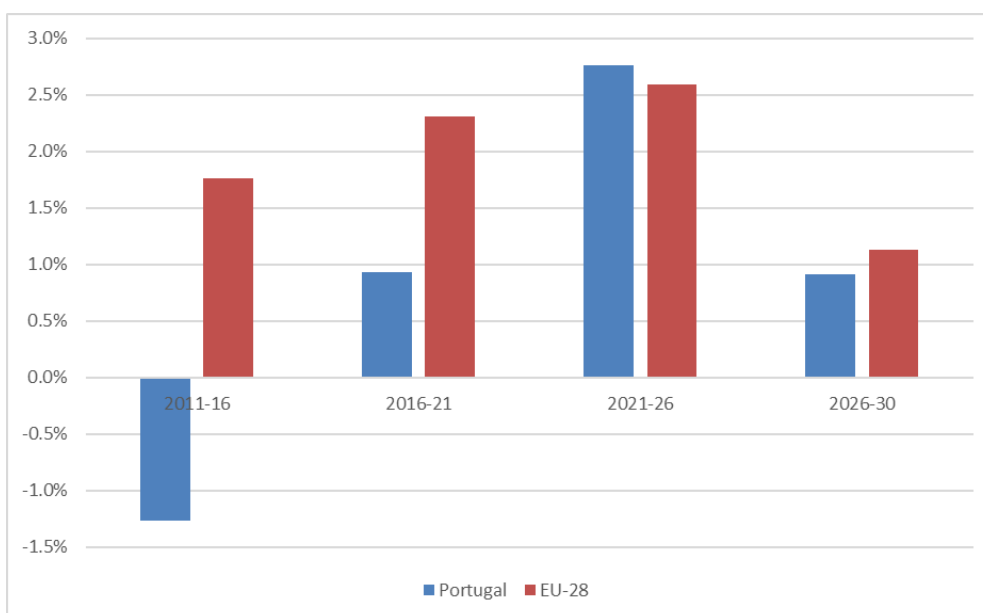


1. Employment outlook

After decreasing in the period 2011-16, employment is expected to grow modestly up to 2030, as shown in Figure 1. Employment growth is expected to be less than half the EU-28 average in the period 2016-21, and similar to the EU-28 average growth rate up to 2030. A total employment growth of 5% is expected over the period 2016-30, a rate similar to Austria and below the EU-28 average (6%).

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



Source: Cedefop (2018 Skills Forecast)

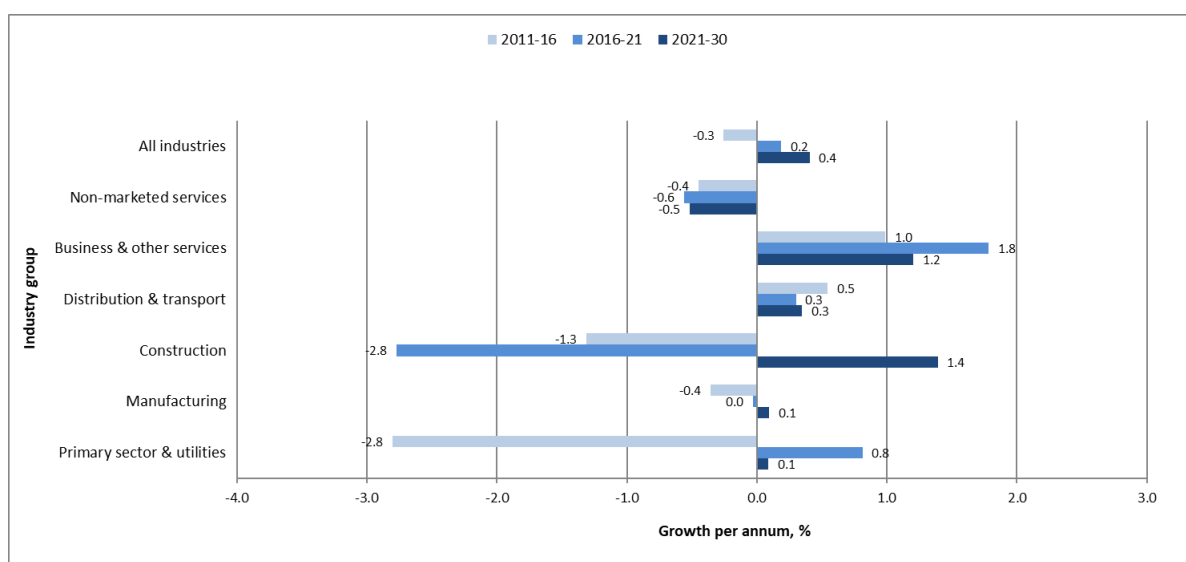
2. Labour force overview

Portugal's labour force is expected to decline by 6% over the period up to 2030, a rate similar to Spain, driven by changes in the composition of the working age population. Within the population, cohorts aged 30-49 with high participation rates (more than 90% on average) are expected to decline, while cohorts aged 60+ with low participation rates (less than 30% on average) are expected to increase. Therefore, the decline in size of the labour force is expected to be driven by the decline in the 30-49 age cohort.

3. Sectoral employment trends

Employment growth is expected to be distributed unevenly across sectors, as shown in Figure 2. *Business and other services* is expected to be the fastest growing sector in the period 2016-21, while *construction* is expected to be the fastest growing sector in 2021-30, a sector which until 2021 was shrinking. *Distribution and transport* and *manufacturing* are expected to stagnate up to 2030. The *non-marketed services* sector is expected to decline in all periods and to be the only declining sector in the period 2021-30. In terms of subsectors, *other business services* and *hotels and catering* are expected to have the highest increase in employment over 2016-30. The subsectors that are expected to decrease the most in 2016-30 are *public administration and defence* and *education*, which drive the decline in *non-marketed services*.

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



Source: Cedefop (2018 Skills Forecast)

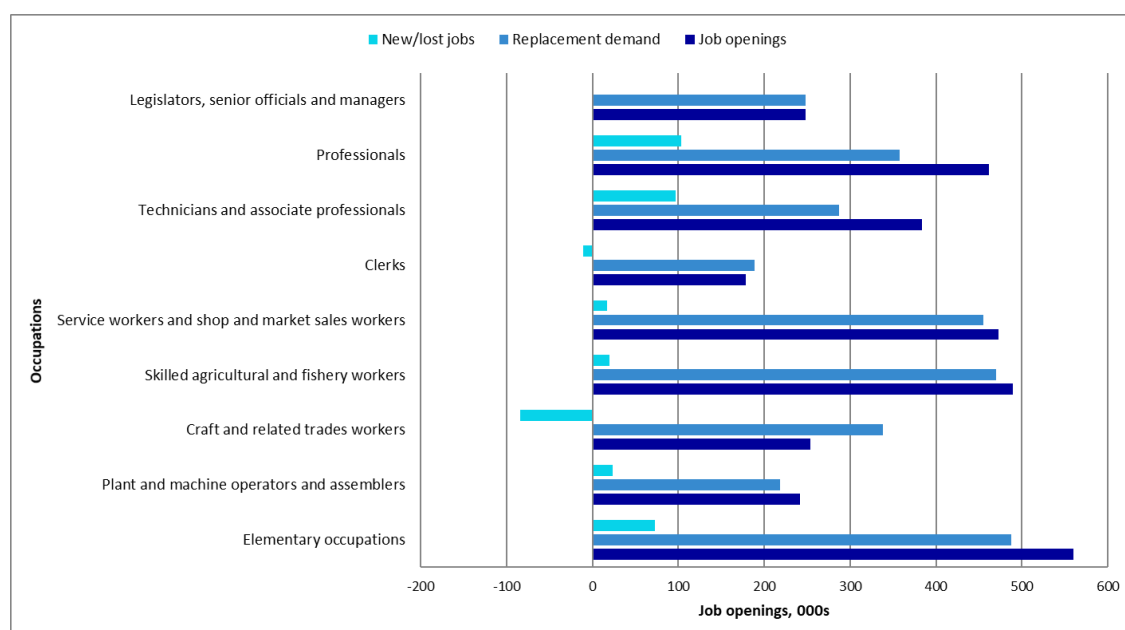
4. Job openings by occupational group

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, 13% of which are due to new jobs, is *elementary occupations*, which accounts for 17% of total job openings in Portugal, followed by *skilled agricultural and fishery workers* and *service workers* as well as *shop and market sales workers*, which are expected provide only few new jobs. The occupation expected to have the highest share of new jobs is *technicians and associate professionals*, followed by *professionals*. *Clerks* and *craft and related trades 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)

The more detailed analysis of occupational groups shows that most of the **new jobs** are expected to be created for *market-oriented skilled agricultural workers*, *science and engineering professionals* and *business and administration associate professionals*. The highest number of **total job openings** among detailed occupational groups is expected for occupations such as *market-*

oriented skilled agricultural workers, business and administration associate professionals and sales 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 sectoral shift toward *business and other services* and *distribution and transport* is expected to create demand for occupations such as *information and communication technology professionals, customer service clerks, personal service workers* and *food preparation assistants*. On the other hand, the decline in *non-marketed services* and the stagnation in *manufacturing* is expected to decrease employment in *teaching professionals, stationary plant and machine operators* and *food processing, wood working, garment and other craft and related trades*.

Developments in technology are expected to decrease employment in occupation such as *other clerical support workers* and *handicraft and printing workers* for the routine content of their job, as well in *hospitality, retail and other service managers* because of new ways of delivering the service.

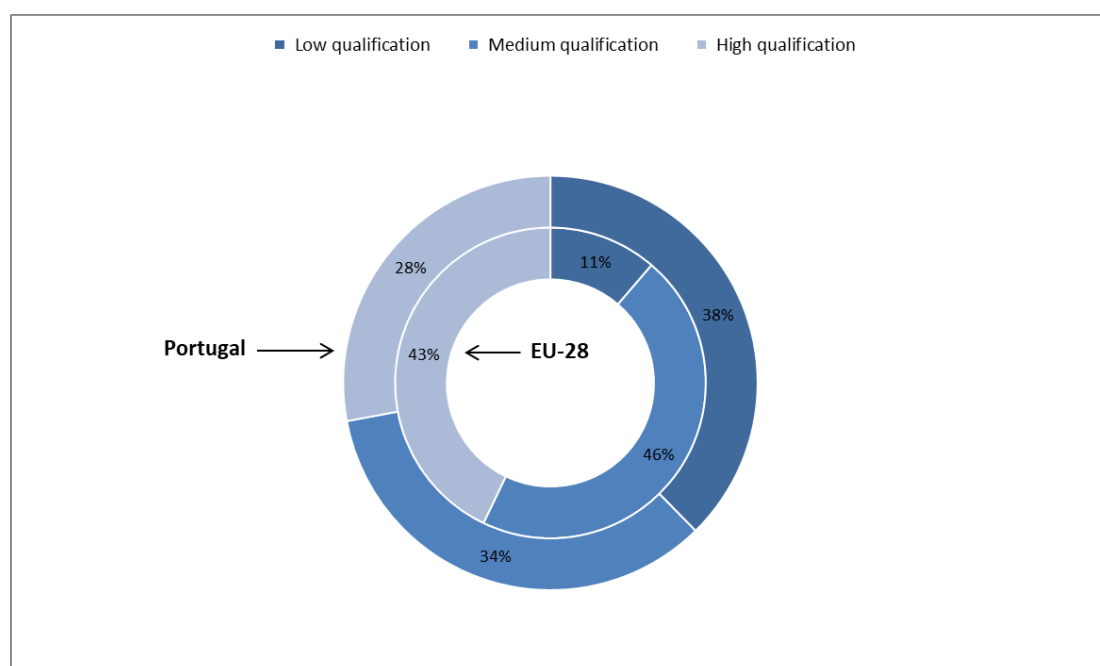
Taking into accounts the both occupation and sector effects, the occupations which are expected to show the highest increase in employment are *information and communication technology professionals, legal, social, cultural and related associate professionals* and *business and administration professionals*. On the other hand, among *health associate 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 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 28%, 15 pp below the EU-28 average, while 34% of job openings are expected to require medium-level qualifications, 12 pp below the EU-28 average. The share of job openings expected to require low-level qualifications is 38%, the highest share among all Member States, 27 pp above the EU-28 average.

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



Source: Cedefop (2018 Skills Forecast)

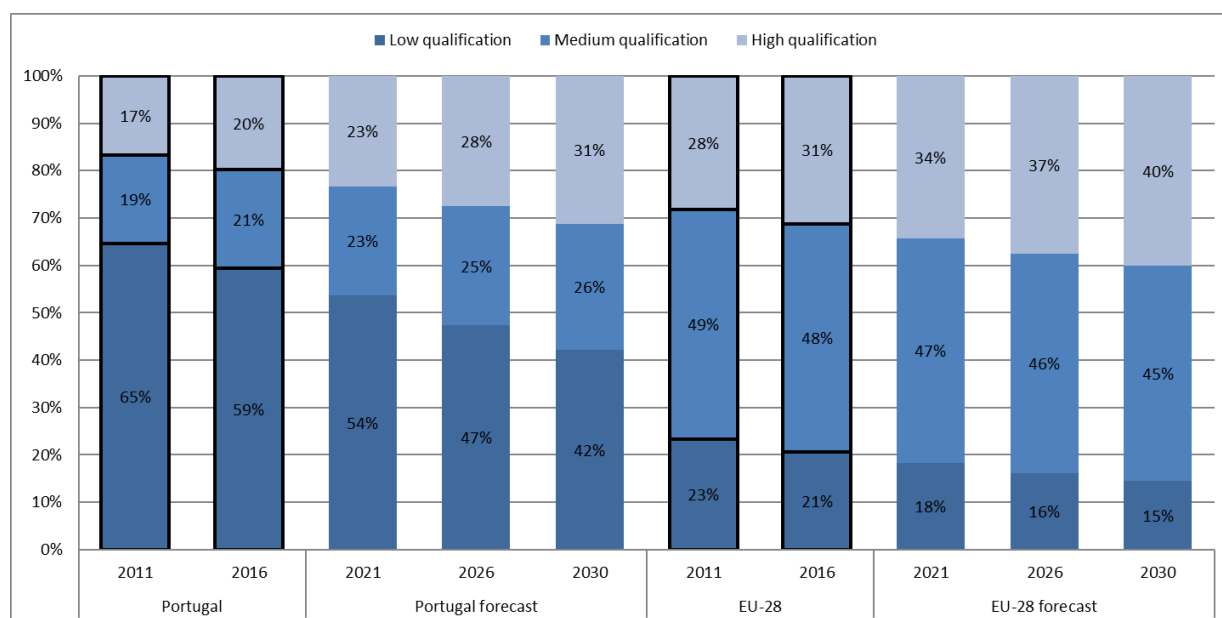
The number of job openings requiring high-level qualifications is expected to increase for traditionally high-skills occupations such as *health professionals, business and administration associate professionals and legal, social and cultural*

professionals but also for medium-skills occupations such as *customer service clerks*.

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 to 31% in 2030, 9 pp below the EU-28 average. The share of medium-qualified workers is expected to increase to 26% in 2030, 19 pp below the EU-28 average. The share of low-qualified workers is expected to decrease from a very high starting point to 42% in 2030, 27 pp above the EU-28 average.

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



Source: Cedefop (2018 Skills Forecast)

The demand for medium-qualified workers as well as the demand for low-qualified workers are expected to be below their supply. Given these trends, skills mismatch might arise.

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