CEDEFOP | European Centre for the Development of Vocational Training

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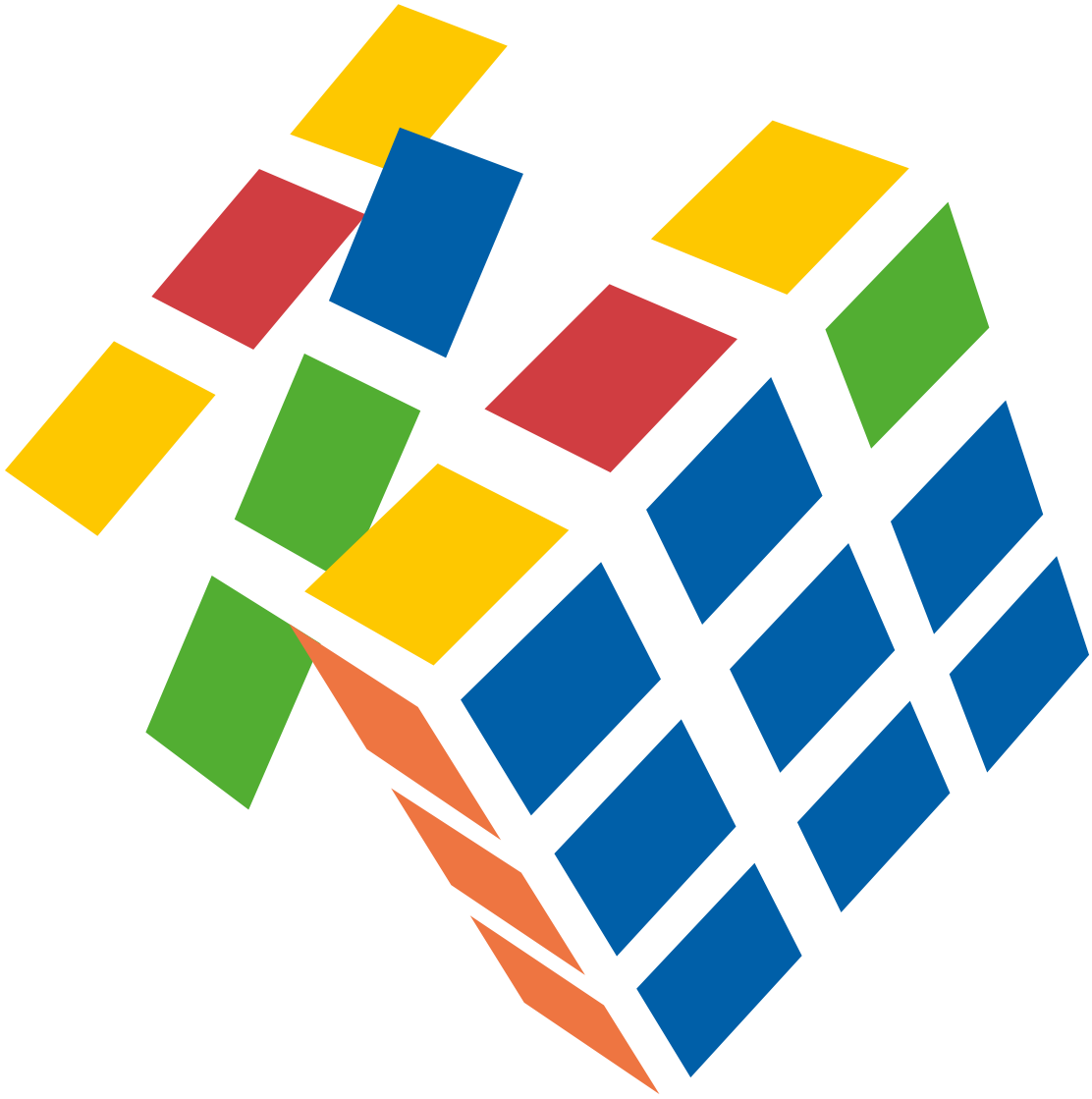


2023 skills forecast

Greece

cedefop

SKILLS FORECAST 2023 GREECE

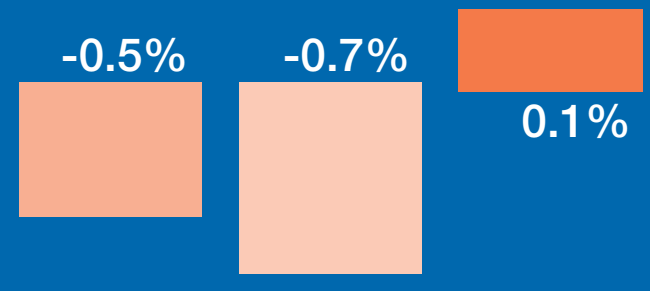
Employment in 2035

4 658 000

0.08%

increase 2021-35

% Employment growth 2021-35



Fastest-growing sectors

2021-35% growth

31% Electricity, gas, steam & air conditioning supply

24% Information & communication

Total job openings, 2021-35

2 968 000

- Replacement needs (90%)
- New job openings (10%)

Highest-demand occupations

Largest creation of new jobs, 2021-35

54 000 Personal service workers

49 000 Sales workers

36 000 Personal care workers

Total job openings by skill level 2021-35

- High-skilled non-manual occupations (30%)
- Skilled non-manual occupations (41%)
- Skilled manual occupations (21%)
- Elementary occupations (8%)

increase in high-skilled labour demand 2021-35

16%

EU overview 2035

3.4%

employment increase in 2021-35

Fastest growing occupation

Legal, social and cultural professionals

Fastest growing sector

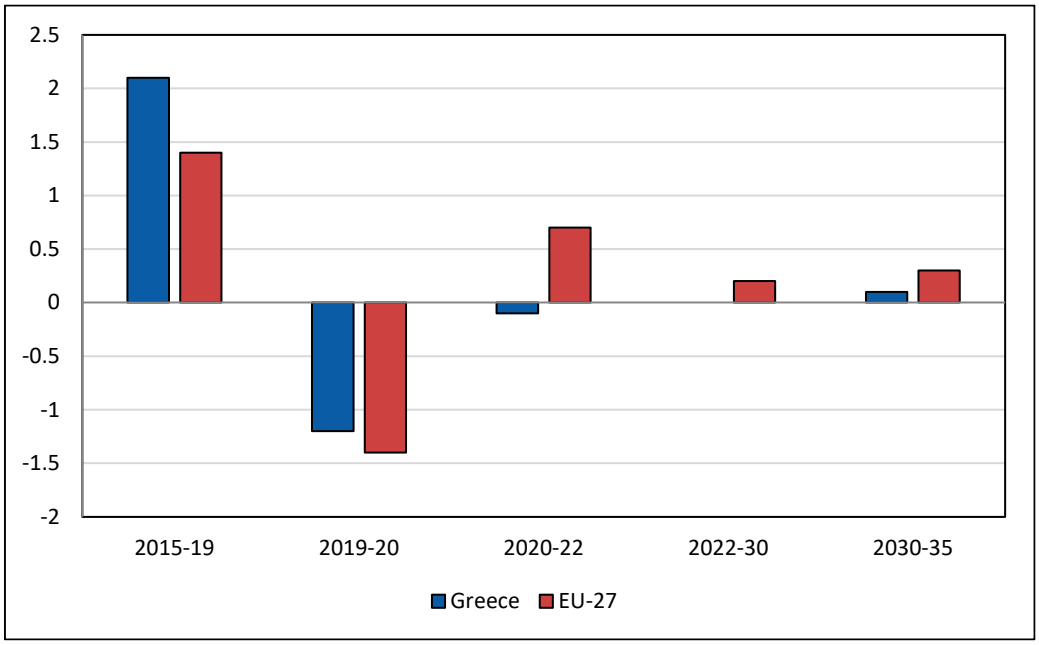
Information and communication

Cedefop skills forecast: Greece

1. Employment outlook

Employment in Greece is forecast to remain broadly static over the forecast period, compared with slight growth in the EU-27 as a whole. Figure **1** shows that employment in Greece grew quite a bit faster than the EU-27 average over 2015-19 and fell slightly less sharply in 2020 as the Covid-19 pandemic hit. However, employment in Greece is estimated not to have bounced back over 2020-22, unlike the case for the EU-27. Across the forecast period, employment in Greece is forecast to see very little growth, of around 0.0-0.1% pa compared with growth of around 0.2-0.3% pa for the EU-27.

Figure 1**. Annual percentage employment growth in Greece and the EU-27, 2015-35**



Source: Cedefop (2022 Skills Forecast).

2. Labour force overview

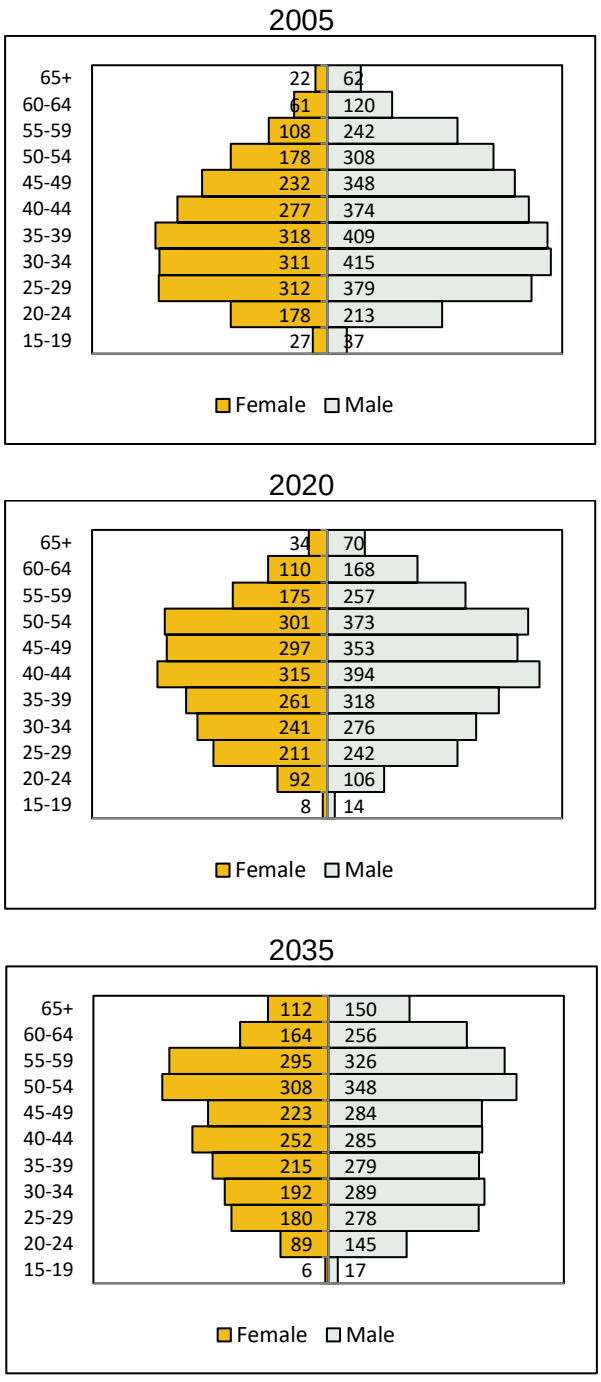
Figure 2 shows Greece's labour force by age group in 2005, 2020 and 2035. Changes in the labour force in Greece over the forecast period will continue to be driven by the ageing population and increasing participation rates in most age groups. However, the total labour force in Greece is projected to increase by around 1.5% over 2020-35, which is an improvement on the decline of more than 6% seen over the previous 15 years. This compares with an expected increase in the labour force of just under 3% over 2020-35 for the EU-27. The total participation rate in Greece is forecast to increase by 2 pp over 2020-35, compared with an increase of 1 pp in the total rate for the EU-27. Total population is forecast to fall by 3% over 2020-35, compared with a fall of just over 1% seen over 2005-20.

Apart from those aged 25-29, the population aged between 15 and 54 in Greece, and especially those aged 35-54, is forecast to decline during 2020-35, while the population aged 55 and above, and particularly those aged 64 and above, is forecast to grow quite strongly, reflecting trends in the relevant younger cohorts in preceding periods.

The participation rates of those aged 20-24 and 35 and above in Greece are forecast to grow quite strongly over 2020-35, with the strongest increases projected for the 55-59 age group (23 pp), 60-64 age group (16 pp) and 35-39 age group (11 pp).

The pattern of differences between changes in male and female participation rates in Greece is mixed, with female rates increasing faster than male rates for 35-44 and 50-59 year-olds, and the reverse true for 15-34, 45-49 and 60 year-olds and above. Overall, the total participation rate for females is projected to increase by 1 pp and for males to increase by 3 pp in Greece over 2020-35.

Figure 2. **Distribution of the labour force (thousands), 2005-35**

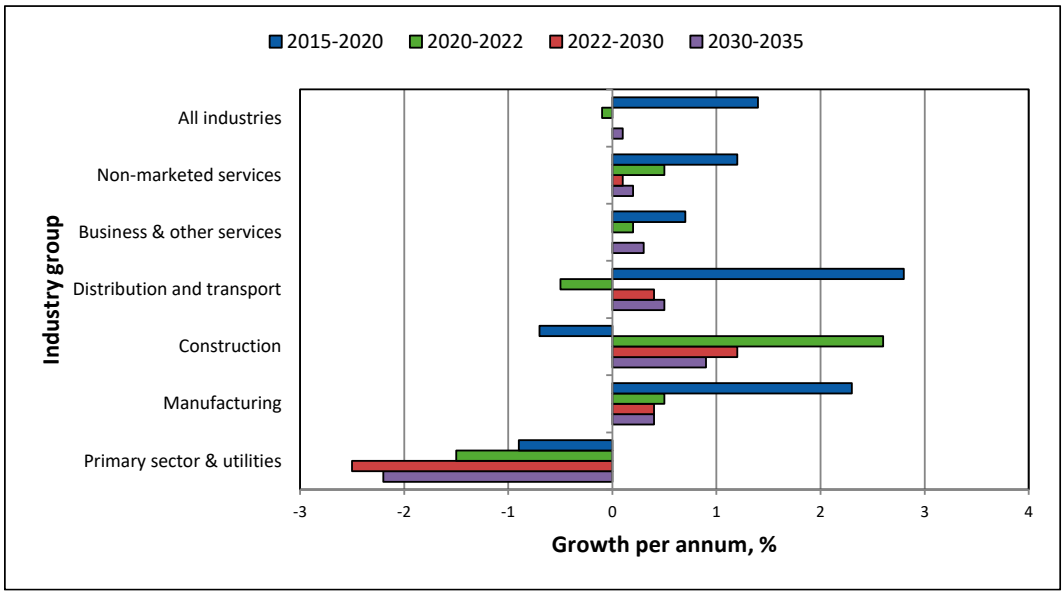


Source: Cedefop (2022 Skills Forecast).

3. Sectoral employment trends

Figure **3** shows annual average employment growth by broad sector in Greece between 2015 and 2035. Although total employment in Greece is expected to remain broadly static over the forecast period, the picture among the broad sectors is mixed. Employment in *Construction* is forecast to grow by around 1% pa and in *Manufacturing* and *Distribution & transport services* to grow by around 0.5% pa. *Business & other services*, which are expected to drive employment growth in many countries, is forecast to see no employment growth over 2022-30 and only a slight increase over 2030-35. Employment in the *Primary sector & utilities* is forecast to decline by 2.2-2.5% pa over 2022-35.

Figure 3. **Employment growth by broad sector of economic activity, 2015-35**



Source: Cedefop (2022 Skills Forecast).

In terms of sub-sectors (i.e. below the level of the six broad sectors discussed above), the growth pattern is more mixed. The *Manufacturing* sub-sectors of *optical & electronic equipment*, *other machinery & equipment*, *basic metals & metal products*, *electrical equipment*, *other transport equipment* and *motor vehicles* are all forecast to see relatively strong employment growth (1% pa or above) over the forecast period, although they each account for only a small proportion of employment in Greece. Food, drink & tobacco, a *Manufacturing* sub-sector which does account for a relatively large proportion of employment (almost 3% in 2020) in Greece, is forecast to see slightly weaker growth but still around 0.7% pa over the whole forecast period. The *Business & other services* sub-sectors of *arts &*

entertainment, *telecommunications*, *research & development*, *media* and *computer programming & information services* are also all forecast to grow by at least 1% pa over 2022-30, and faster over 2030-35. Still, the *Business & other services* sub-sectors of *architectural & engineering services*, *administrative & support services*, *real estate activities*, and *legal, accounting & consulting services* are all forecast to see declines in employment over the forecast period. The decline in employment in the *Primary sector & utilities* is mainly due to the forecast continued decline in *agriculture*, which accounted for more than 10% of total employment in Greece in 2020. In *Distribution & transport services*, the large sub-sectors of *wholesale & retail trade* and *accommodation & catering services* are forecast to see employment growth, albeit relatively modest, over the forecast period.

4. Job openings by occupational group

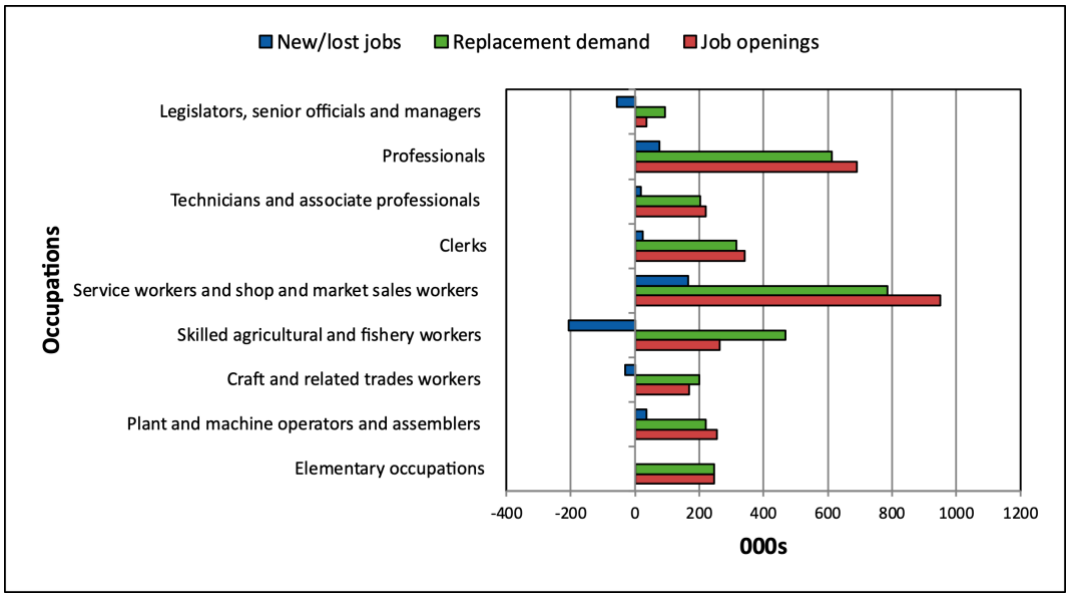
Cedefop skills forecasts estimate the total job openings by occupational group as the sum of net employment change and replacement needs. Net employment change refers to new jobs created or jobs lost due to the expansion or contraction of employment in that sector or occupation. Replacement needs arise 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 4 shows the total job openings by broad occupational group over 2020-35. The number of job openings indicates the number of jobs that are required to be filled due to lost/newly created jobs and those that are in need of replacement workers. Although only *Legislators, senior officials & managers*, *Skilled agricultural & fishery workers* and *Craft & related trades workers* are expected to see a decline in total employment over this period, only some of the other broad sectors are expected to see particularly strong expansion demand. Thus, job openings are expected to be driven mainly by replacement demand. Service workers & shop & market sales workers are forecast to see the strongest growth in new jobs, together with the strongest replacement demand for workers, and are expected to account for around 11% of total job openings. Overall, the economy is forecast to expand by only 25,000 jobs over this period, but replacement demand will mean that there will be more than 3 million job openings.

At a more detailed level, the most job openings (taking both new/lost jobs and replacement needs together) are generally expected to be in skilled non-manual

and skilled manual occupations. *Sales workers* and *personal service workers* (skilled non-manual) are expected to see the greatest number of job openings, accounting for 13% and 12%, respectively, of all job openings. This will be driven by relatively strong increases in the number of jobs and strong replacement demand. *General & keyboard clerks* will also see a large number of job openings. Among skilled manual occupations, *market-oriented skilled agricultural workers* and *drivers & mobile plant operators* are expected to see a large number of job openings (both 7% of total), which in the case of the former is due to a very large replacement demand for more than compensating for a large contraction in the total number of jobs. Among high-skilled non-manual occupations, *teaching professionals*, *health professionals* and *legal, social & cultural professionals* have the greatest number of job openings, accounting for 4% or more of the total. The total number of *teaching professionals* is expected to decline somewhat over this period, but there is also expected to be a very large replacement demand as ageing workers retire or workers move into other occupations. Job openings for *elementary* occupations are forecast to be relatively low, with a declining number of jobs in some occupations such as *cleaners & helpers* and *food preparation assistants*.

Figure 4**. Job openings by broad occupational group, 2020-35**



Source: Cedefop (2022 Skills Forecast).

5. Drivers of occupational change

Within the Cedefop skills forecast, 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 than others).

The occupational composition of employment in Greece is mainly characterised by changes in the level of specialisation within occupations and, in fewer cases, by changes in industry size. Stronger occupation-specific and industry effects will lead to an increasing share of *senior officials and legislators, professionals, technicians and other associate,* but also in less qualified occupations such *customer services clerks, assemblers, agricultural, forestry and fishery labourers.* High-skilled occupations that can benefit from these trends are, for example, *chief executives, senior officials and legislators*, and, particularly, *professionals* and *associate professionals in health*. Despite the evident and positive impact of the industry size effect, several high-skilled occupations will decrease due to the strong and negative occupations-specific effect. Among the occupations that will suffer the most are *managers.* Another interesting fact is the significantly increasing share of *agricultural, forestry and fishery labourers* due to the strong and positive impact of occupation-specific effect, high enough to compensate for the negative industry size effect.

Therefore, the overall effect of occupational change depends on several factors that need to be considered together. Increasing automation and digitisation, moves toward a service-oriented economy, including within manufacturing, will lead to greater use of higher-level occupations at the expense of some medium and low-level occupations. All relevant lower-level occupations are expected to increase apart from *cleaners, refuse, street and related service occupations*. Intermediate occupations will experience an overall reduction. Among the medium-qualified occupations becoming stronger are *assemblers, customer service clerks* and *personal, care, protective service.*

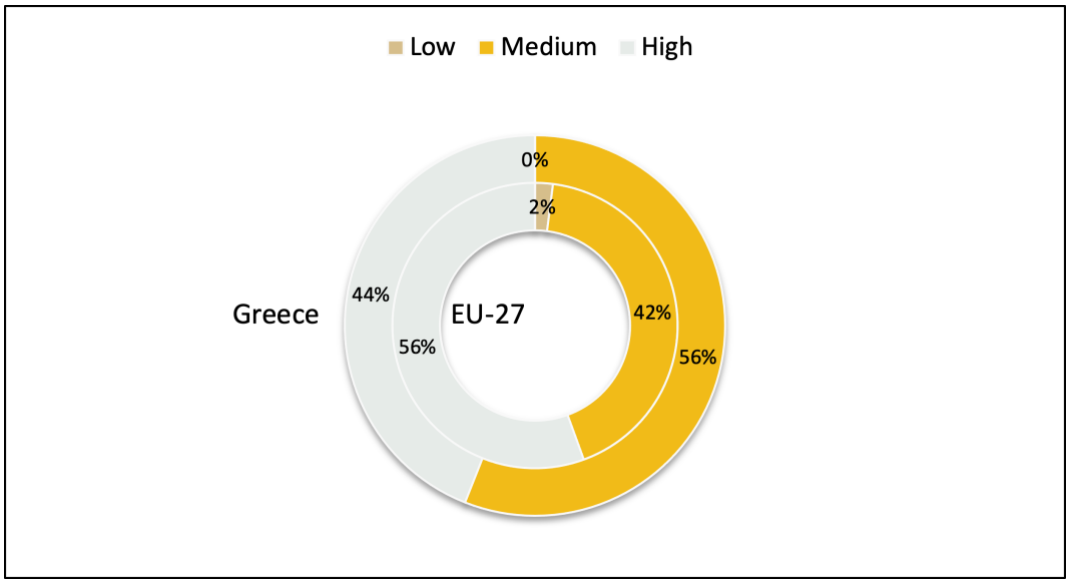
The overall increase in occupations is enough to ensure employment growth for all occupations combined.

6. Demand for and supply of skills

Within the Cedefop skills forecast, skills are proxied by the highest level of qualification held by individuals in the labour force and in 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 5 shows the shares of total job openings by qualification level for Greece and the EU-27 over 2018-30. In Greece, as in the EU-27 somewhat less than half of all job openings (44%) are expected to require a high qualification, while the share of medium qualifications is with 56% significantly higher. Compared to the EU-27, a lower share of job openings requires higher qualifications, while a higher share is expected to require medium qualifications.

Figure 5**. Shares of total job openings by level of qualification, 2022-35**



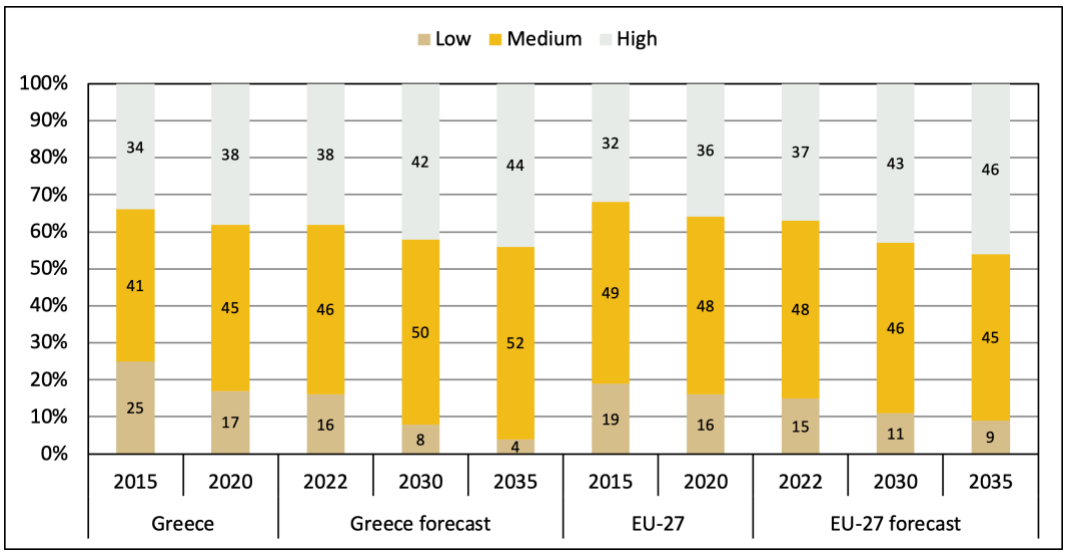
Source: Cedefop (2022 Skills Forecast).

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.

Figure **6** depicts the development of qualification shares in the labour force in Greece and the EU-27. Greece is rapidly increasing its share of higher qualified in the labour market. While the share was at 38% in 2022, it is expected to increase to 44% by 2035. The share of intermediate qualified is also increasing, having a share of 46% in 2022, it will increase to a high of 52%. Both increases are at the expense of the share of low qualified.

Relative to the EU-27 average qualification mix, Greece is expected to continue to have a lower share of high qualified and a higher share of medium qualified.

Figure 6**. Labour force share by level of qualification, 2015-35**



Source: Cedefop (2022 Skills Forecast)

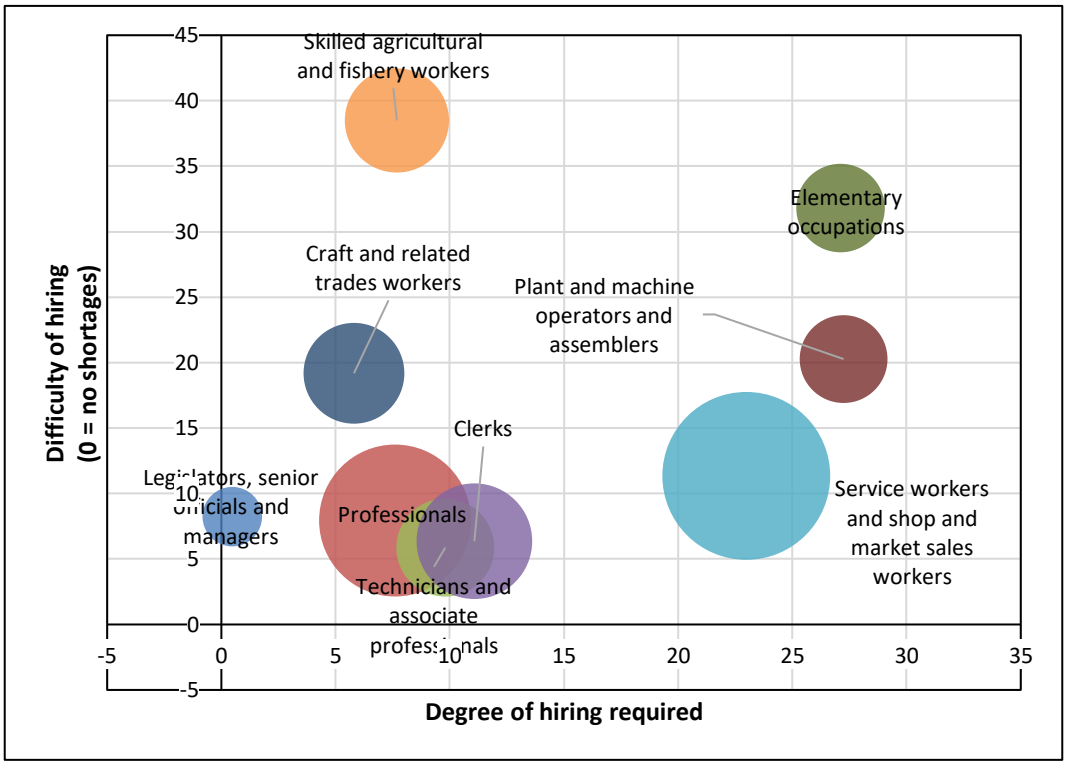
Overall, the forecast implies a shortage of the low qualified, while the high and medium educated supply is forecast to fill the demand within high and low-level occupations sufficiently. Some employees will likely be at levels below the qualification level obtained.

Figure **7** shows an indicator, *difficulty of hiring*, whose aim is to approximate shortages of supply by qualifications and its impact on occupations. This measure, shown along

the vertical axis, indicates increasing difficulties to fulfil demand given the available supply of qualifications used in the occupation. Along the horizontal axis, the *degree of hiring required* in the occupation is depicted. Higher values indicate that to reach the forecast result that occupation will need to adjust more (in terms of workers with particular qualifications) relative to the base year (2018) levels. These changes (degree of hiring required) can be due to a change in the qualifications required or increases in the number employed. The size of the bubble indicates the *overall employment level*, bigger bubbles indicate more employment while smaller bubbles less employment.

Occupations with both a high *degree of hiring required* and a high *difficulty of hiring* (i.e. towards the top right of the figure) are likely to have the most difficulties in achieving a suitable workforce.

Figure 7**. Indicators of future hiring difficulties, 2022-35**



Source: Cedefop (2020 Skills Forecast).

Note: Indicators were calculated at the level of the underlying 2-digit occupation groups. Aggregation was based on the employment weights within each 1-digit occupation group.

The increasing supply of higher educated workers suggests shortages, particularly among the low qualified. These shortages could imply that some of the higher and medium educated will have to be employed within occupations at a lower level than they qualify for, or it will result in hiring difficulties.

Consequently, Figure 7 shows a higher degree of hiring among lower level occupations: Elementary occupations, Plant machine operators and assemblers,

as well as Service workers and shop and market sales workers. The degree to which they experience hiring difficulties reflects the relative importance of low qualified in their employment mix, with more difficulties among Elementary occupations and lower difficulties among Service workers.

Skilled agricultural and fishery workers are expected to show high hiring difficulties in the forecast while low degrees of hiring. It shows the lack of increase in employment combined with a stable (low) qualification mix in this occupation group.

Hiring difficulties among higher occupations, such as *Professionals,* are expected to be low and the degree of hiring modest.

Cedefop methodology

The Cedefop Skills Forecast offers quantitative projections of future trends in employment, by sector of economic activity and occupational group. Future trends in the level of education of the population and the labour force are also estimated. Cedefop's forecast uses harmonised international data and a common methodological approach allowing cross-country comparisons between employment trends in sectors, occupations and qualifications. The forecast and methodology is validated by a group of national experts. The forecast does 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 the forecast covers the period up to 2035. The forecast takes account of global economic developments up to May 2022. The European Economy experienced a sharp downturn in 2020 due to the global pandemic, and partially bounced back in 2021. However, the strength of the recovery in the short term is threatened by global factors such as supply chain disruptions, the consequences of the war in Ukraine and high inflation.

The key assumptions of the baseline scenario incorporate the Eurostat population forecast available in May 2022 (Europop 2019) ([1]), and the short-term macroeconomic forecast produced by DG ECFIN in May 2022 ([2]). Several revisions to the data affect the Cedefop Skills forecast 2022, when compared to the 2019 update. For example, the population projections used in the 2022 update are generally more pessimistic than those used in the 2019 update (i.e. Europop 2015), with a corresponding impact on labour force figures. The source of historical labour force data is the European Labour Force Survey, which in 2021 underwent important methodological changes causing a break in the time series for several variables, including labour force. As a consequence, in many Member States the participation rates in 2021 are noticeably above/below historical trends, which causes the Cedefop Skills forecast 2022 to be revised in the same direction, compared to the 2019 update. Moreover, some Member States experienced significant revisions in the historical data series for sectoral employment from the National Accounts.

The Cedefop Skills forecast 2022 is made consistent with the objectives set by the European Green Deal by incorporating suitable assumptions in terms of additional investment, power sector technologies, energy balances and carbon pricing.

Energy and commodity price forecasts from the World Bank and the IEA are used as inputs to the Cedefop Skills forecast, which therefore incorporate the recent surge in prices.

([1]) https://ec.europa.eu/eurostat/web/population-demography/population-projections/database

([2]) https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/spring-2022-economic-forecast_en

For the latest update and access to more detailed Cedefop skills forecast data visit our Skills forecast project page.

The country fiche for Greece has been developed in collaboration with Michael Chletsos, Professor at the University of Piraeus, Greece.

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