



CEDEFOP

European Centre for the Development  
of Vocational Training

EN



# 2023 skills forecast

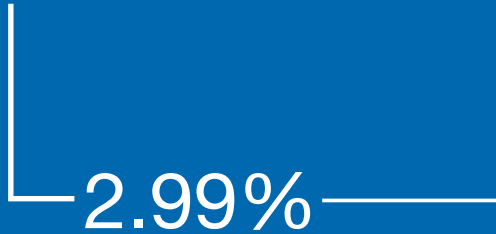
## Italy





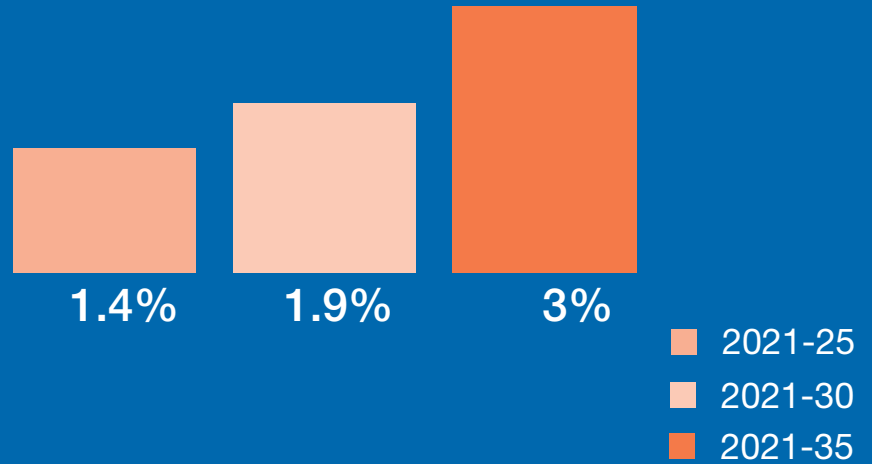
Employment in 2035

25 865 000



increase 2021-35

% Employment growth 2021-35



Fastest-growing sectors

2021-35% growth



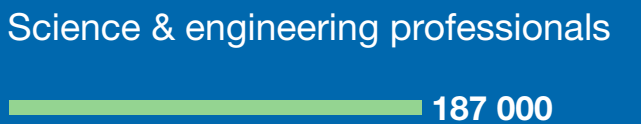
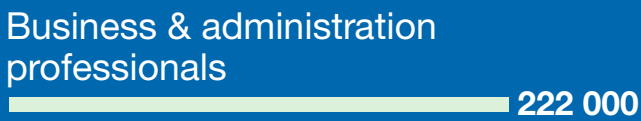
Total job openings, 2021-35

16 527 000

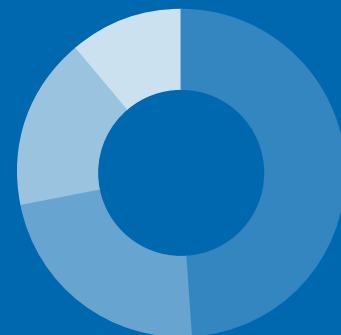


Highest-demand occupations

Largest creation of new jobs, 2021-35



Total job openings by skill level 2021-35



- High-skilled non-manual occupations (49%)
- Skilled non-manual occupations (23%)
- Skilled manual occupations (17%)
- Elementary occupations (11%)



3.4% employment increase in 2021-35



Fastest growing occupation  
Legal, social and cultural professionals



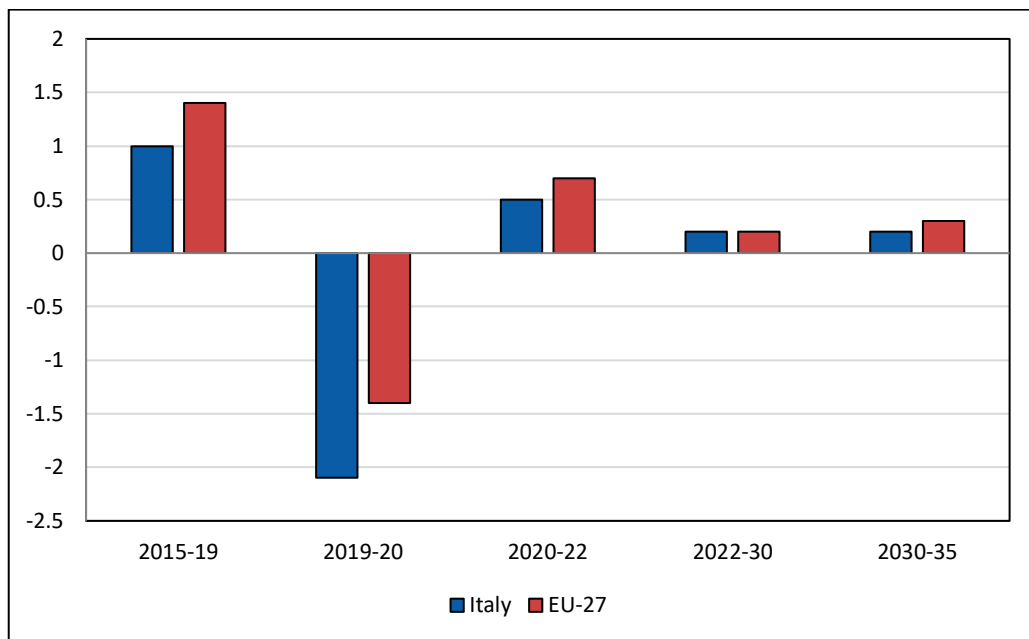
Fastest growing sector  
Information and communication

# Cedefop skills forecast: Italy

## 1. Employment outlook

Employment in Italy is forecast to grow slightly slower than the EU-27 average and at much slower rates than seen over 2015-19. Figure 1 shows that employment in Italy grew slightly slower than the EU-27 average over 2015-19 and fell slightly more sharply in 2020 as the Covid-19 pandemic hit. Employment in Italy is also estimated to have bounced back slightly less strongly than the EU-27 over 2020-22. Across the forecast period, employment in Italy is forecast to grow by around 0.2% pa compared with growth of around 0.2-0.3% pa for the EU-27 as a whole.

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



Source: Cedefop (2022 Skills Forecast).

## 2. Labour force overview

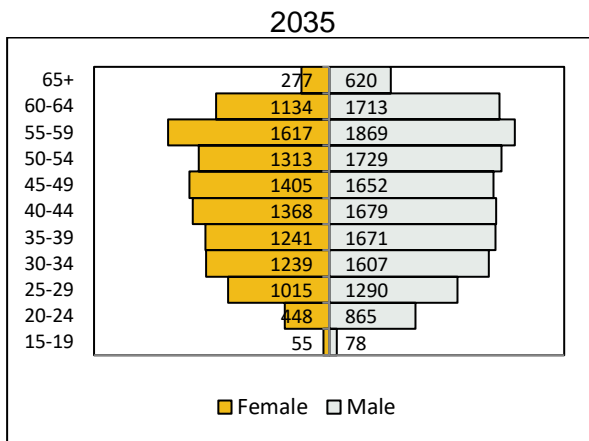
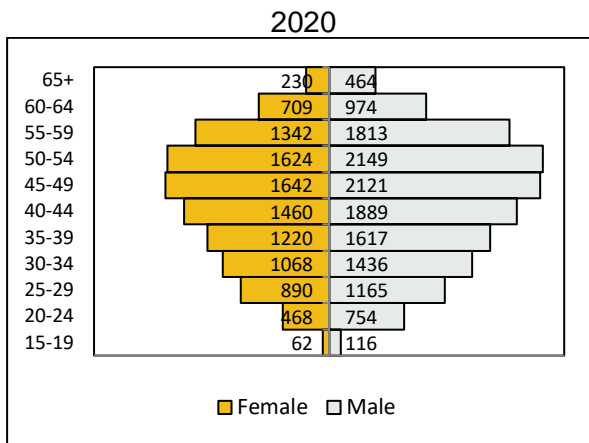
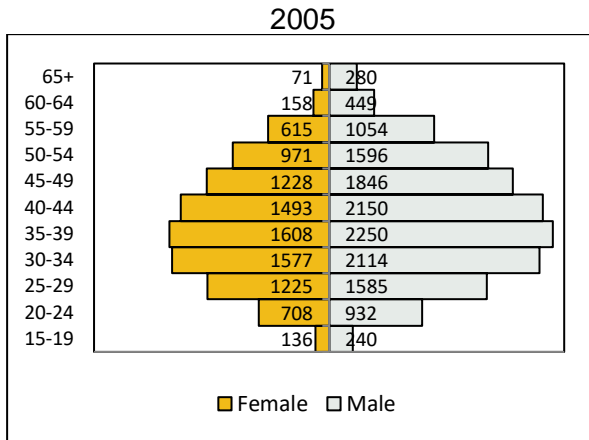
Figure 2 shows Italy's labour force by age group in 2005, 2020 and 2035. Changes in the labour force in Italy over the forecast period will continue to be driven by the ageing population and increasing participation rates in most age groups. The total labour force in Italy is projected to increase by around 2.5% over 2020-35, which is slightly slower than the expected increase in the EU-27 as a whole, compared with growth of almost 4% over the previous 15 years. The total participation rate in Italy is forecast to increase by 1 pp over 2020-35, similar to the change in the total rate for the EU-27. The total population is forecast to grow by less than 0.5% over 2020-35, compared with growth of 4.5% over 2005-20.

The population aged 15-59 in Italy is forecast either to grow weakly or to decline quite strongly during 2020-35, while the population aged 60 and over is forecast to grow strongly, reflecting trends in the relevant younger cohorts in preceding periods.

The participation rates of all age groups between 20 and 64 in Italy are forecast to grow quite strongly over 2020-35, with the strongest increases projected for the 60-64 (19 pp), 55-59 (14 pp) and 30-34 (10 pp) age groups and the increase for the other age groups between 20 and 64 expected to be at least 5 pp.

Female participation rates in Italy are generally forecast to increase by more than male rates, reflecting the lower starting point for female rates, and the total participation rate (which reflects the combination of changes in population and participation by age group) for females is projected to increase by 2 pp over 2020-35 while the total male participation rate is projected to remain static over the same period.

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

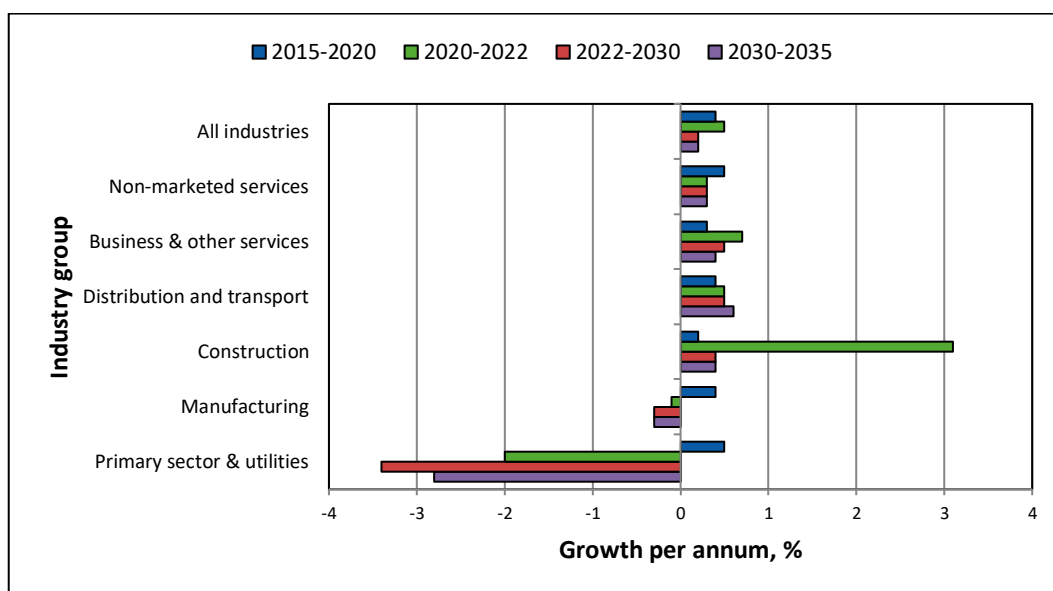


Source: Cedefop (2022 Skills Forecast).

### 3. Sectoral employment trends

Figure 3 shows the annual average employment growth by broad sector in Italy between 2015 and 2035. Growth in employment in Italy is expected to be led by growth in *Distribution & transport*, *Business & other services* and *Construction*, which are all forecast to grow by around 0.5% pa. Employment in *Non-marketed services* is forecast to grow by around 0.3% pa. Employment in and *Manufacturing* is forecast to fall by around 0.3% pa, while employment in *Primary sector & utilities* is forecast to fall sharply, by around 2.5-3.5% pa.

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), employment growth in *Business & other services* is forecast to be driven by growth in *research & development*, *computer programming & information services*, *real estate activities*, *media*, *architectural & engineering services* and *other service activities*, all with growth of more than 0.7% pa over 2022-30. Within *Distribution & transport*, employment growth is forecast to be driven by *accommodation & catering services*, *water transport*, *air transport* and *land transport*, all with a growth of 0.5% pa or above over 2022-30. Within *Non-marketed services*, employment growth is expected to be driven by the sub-sector of *health*, while *public administration & defence* is forecast to see a decline in employment of 0.5% pa over 2022-30. Although employment in *Manufacturing* is generally forecast to decline, the sub-sector of *optical & electronic equipment* is

forecast to see employment growth of 0.6% pa over 2022-30. The fall in employment forecast for *Primary sector & utilities* is expected to be driven by a strong fall in employment in the relatively large (accounting for 3.7% of total employment in Italy in 2020) *agriculture* sector.

## 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 need replacement workers. Most occupations are expected to shrink or to stagnate during the forecast period, except for high skills occupations such as *Legislators, senior officials & managers, Professionals* and *Technicians & associate professionals*, which are expected to show net job creation. All occupations are, however, expected to see job openings over the forecast period due to replacement demand. Total job openings are expected to be greatest for *Professionals* and *Technicians & associate professionals*, accounting for 24% and 18% of total job openings, respectively. In total, the number of jobs is forecast to increase by 890,000, while replacement demand is expected to be 16.8 million, so that there are projected to be around 17.7 million job openings altogether.

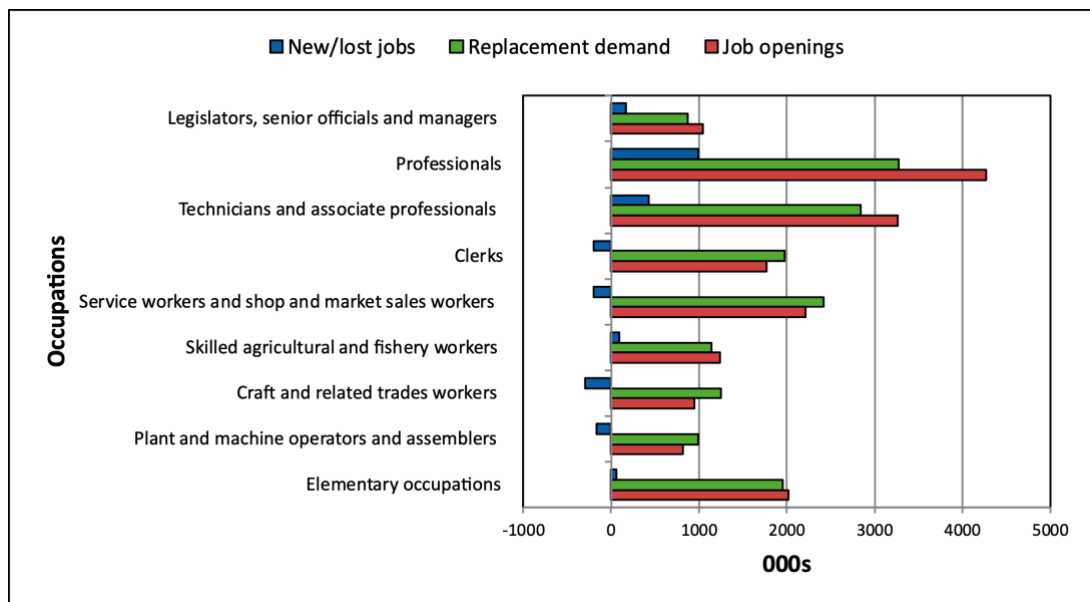
At the more detailed level, most job openings (taking both new/lost jobs and replacement needs together) are expected to be in high skilled non-manual occupations found mostly in services, such as *business & administration associate professionals, teaching professionals, business & administration professionals, science & engineering associate professionals* and *health associate professionals*, which are each expected to account for 5% or more of total job openings. Some skilled non-manual occupations, such as *general & keyboard clerks, personal care workers, sales workers* and *personal service workers*, are also projected to provide a relatively large number of job openings, each accounting for 4% or more of total job openings. Most of these are forecast to see a decline in jobs, especially sales

workers, so job openings will be created due to a large replacement demand. Among skilled manual workers, building & related trades workers are projected to account for 5% of job openings, due to a strong expansion in total jobs as well as strong replacement demand. Among elementary occupations, *cleaners & helpers* is also projected to account for 5% of total job openings, due entirely to replacement demand, as the total number of jobs for these occupations is forecast to contract.

In recent years Italy has experienced an outflow of highly qualified workers towards other EU Member States, with workers looking for better employment and higher wages. Although the increase in employment is expected to focus on occupations requiring high-skilled workers, it won't be enough to accommodate the greater supply of highly skilled workers within the labour force. Therefore, some highly qualified workers might fill positions requiring a medium level of education.

Two factors explain this phenomenon. The first, as stressed below, is that education choices are often misaligned with labour demand, with the result that some young adults are educated in fields (mainly humanities) where there is low demand and so they end up working in low skill jobs generating the phenomenon of overeducation. The second is that the wage premium to education is relatively low in Italy compared to other European countries, especially for technical high skill education (STEM), with the result that the few graduates in these disciplines often apply for jobs abroad.

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).

An increasing specialisation in many sectors will influence the occupational composition of employment in Italy. In most of the occupations, the occupation-specific effect has a much stronger impact than the industry size effect. Overall, the sector size and the occupation-specific effect are expected to lead to increased shares of *professionals, managers and associate professionals*, but also in occupations which support the production process such as *building and related trade workers and assemblers*. High-skilled occupations that benefit the most from these trends are, for example, *science and engineering professionals and business professionals*. Despite the negative industry size effect, some occupations, such as administrative and commercial managers, will continuously grow due to the stronger and positive impact of the occupation-specific effect. The same cannot be said for *agricultural workers, agricultural, forestry and fishery labourers* characterised by high and opposite effects, but the negative industry size effect outweighs the occupation-specific effect.

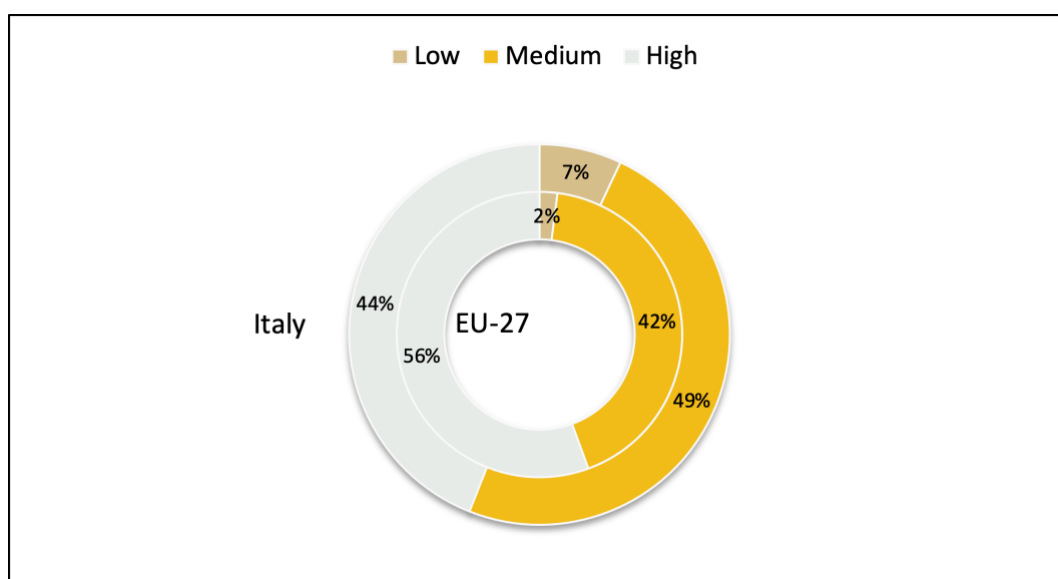
Therefore, the overall effect of occupational change depends on several factors that need to be considered together. Increasing automation and digitisation, moves toward a service-oriented economy, including within manufacturing, will lead to a greater use of higher-level occupations at the expense of intermediate occupations. While the lower-level occupations are expected to increase over the next decade slightly, intermediate occupations will experience an overall decrease. The strongest occupations among medium-qualified occupations are, for example, *assemblers, building and related trades workers*. The weakest occupation is represented by *handicraft and printing workers*. However, the projected reductions cannot outweigh the positive growth mainly among high-skilled occupations.

## 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.

About half (49%) of the total job openings expected to be created in Italy over the period up to 2035 will require medium level qualifications, about 7 pp more than the EU-27 average. The other half of total job openings (44%) will require high level qualifications, and 7% will require a low level of qualifications.

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



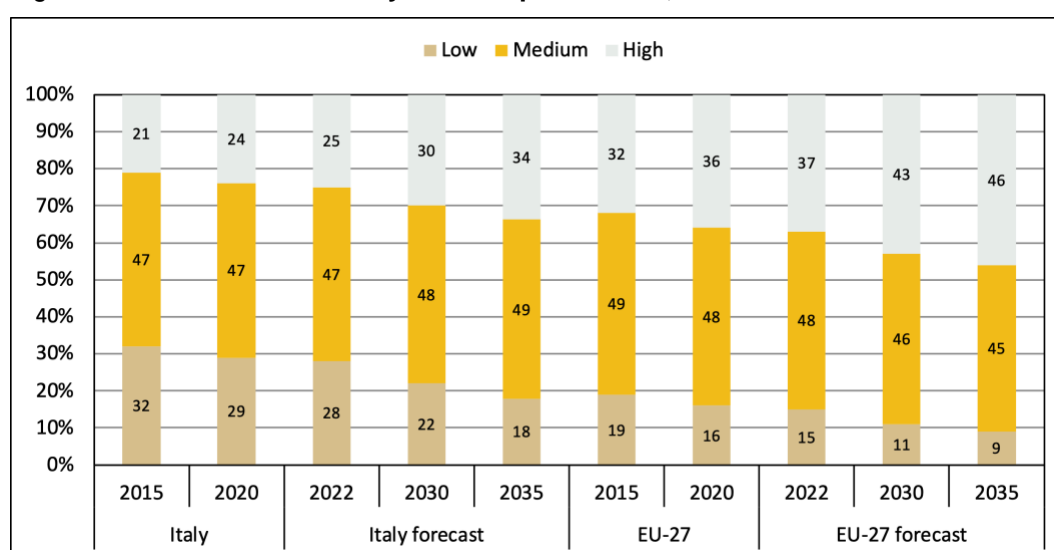
Source: Cedefop (2022 Skills Forecast).

Total job openings are highest among *Business and administration associate professionals* and *Teaching professionals* in Italy

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

Italy is expected to experience substantial changes over 2022-35 in the labour force's qualification structure, as seen in Figure 6. The share of people with high level qualifications in Italy is expected to increase, from 25% in 2022 to 34% in 2035. The medium qualified labour force levels will be fairly stable over time (rising from 47% to 49%), while remaining the largest qualification group. The share of those with low levels of qualification is expected to decrease by 10 pp, to 18% in 2035. In Italy, the share of those with intermediate and low qualifications is expected to remain at a higher level than the EU-27 average, while the share of people with high qualifications will remain lower than the EU-27 average.

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



Source: Cedefop (2022 Skills Forecast).

In Italy, the supply of workers with high qualifications is expected to be below the demand.

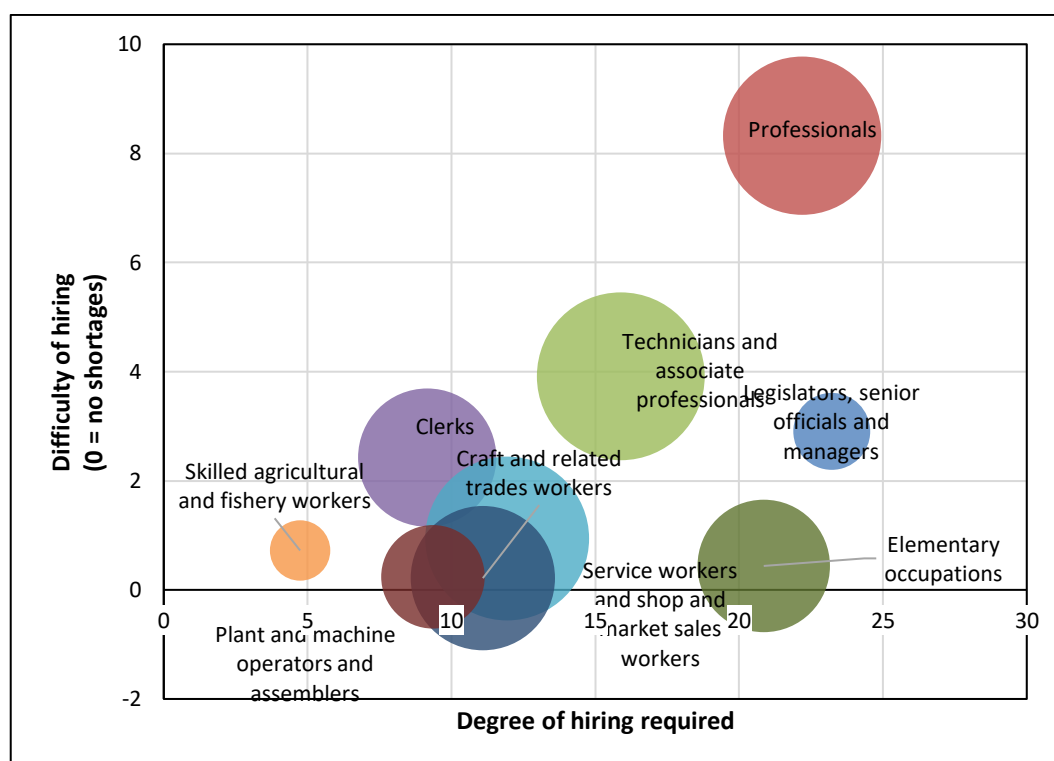
Figure 7 shows an indicator, *difficulty of hiring*, whose aim is to approximate shortages of supply by qualifications and its impact on occupations. This measure, shown along the vertical axis, indicates increasing difficulties to fulfil demand given the available supply of qualifications used in the 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 shows that occupations within higher occupations show some hiring difficulties. The highest combination of hiring difficulties along with a large degree of hiring required is among the *Professionals*. Legislators, senior officials and managers also show a high degree of hiring, yet with much lower hiring difficulties, implying that a significant share of their employment comes from below higher qualifications.

Figure 7. Indicators of future hiring difficulties (Italy), 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 overall imbalances in the Italian labour market rely on the labour force's supply aligning with the labour market's requirements. An increase in qualifications towards the higher qualified while keeping the medium qualified constant suggests a good basis for meeting the anticipated change in demand. There are, however,

concerns about choices made by students within the broad education categories, as there is a large debate suggesting that labour market issues are not considered in the choice of degree studied, particularly among university graduates, with the result that the highly educated can end up being overeducated and in the wrong field for the positions they obtain in employment.

Some markets tend to be very difficult to forecast both the demand and the supply side of the labour market in these sectors as the market does not drive them.

For both the health and educational sectors, most of Italy's employment is public. Both demand and supply factors are thus affected by government policy. Employment in the public sector generally occurs in waves, so there are some cohorts of people with a peak of employment in these sectors. In the case of health professionals, for instance, a large cohort of doctors is due to retire in the coming years, implying large replacement demand. On the supply side, education policy limits the future supply. For example, the number of doctors is regulated by the fixed number of admissions to medical schools, which has increased only marginally recently.

High skill workers that do their training in Italy are also prone to migrate in large numbers to other EU countries where they can find better jobs and mostly higher wages. These internal (within the EU-27) migration flows might change quickly and thus are difficult to include.

## 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) <sup>(1)</sup>, and the short-term macroeconomic forecast produced by DG ECFIN in May 2022 <sup>(2)</sup>. 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.

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(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](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 Italy has been developed in collaboration with Emilio Colombo, Università Cattolica del Sacro Cuore, Milano, Italy.

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