

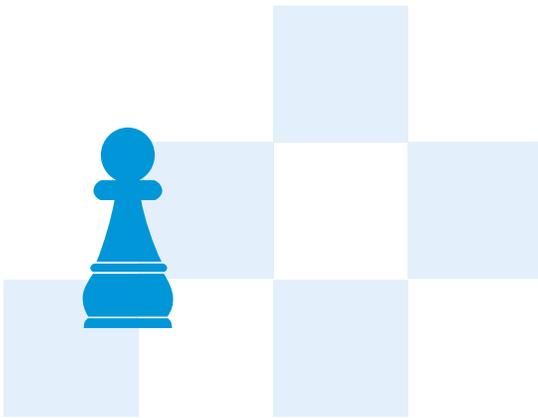


# European sectoral trends the next decade



# TRENDS ACROSS SECTORS AND DRIVERS OF CHANGE

Cedefop’s 2016 skills forecast offers insights into future trends in skill demand and supply across the European Union (EU). Trends are being driven mainly by demographic change, better access to education, technological advance and climate change. These drivers are expected to impact employment, occupations and qualifications in all sectors across the EU between now and 2025 in different ways, particularly by:



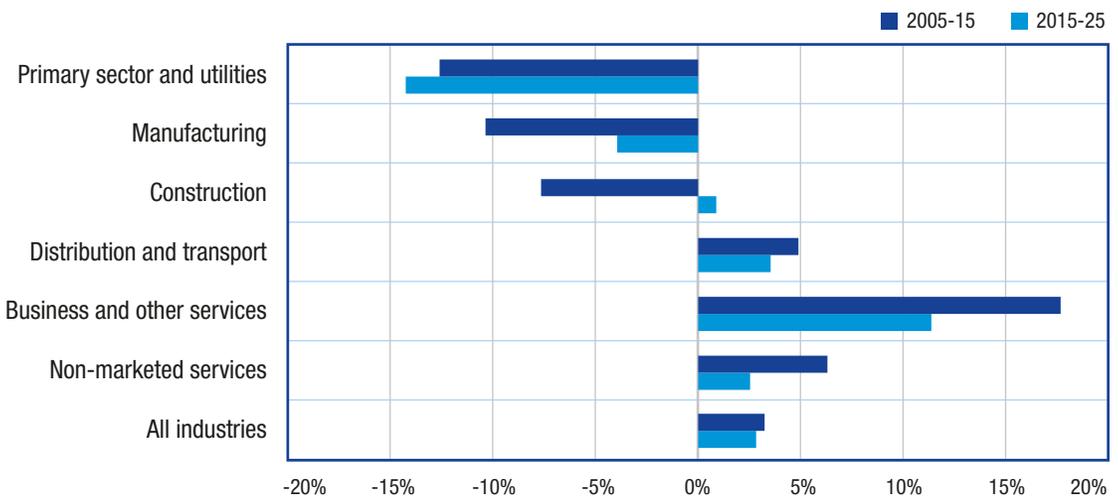
- encouraging **employment growth in services**.

Job growth across the EU is expected to be concentrated in business services, which by 2025, are expected to account for 30% of all jobs in the EU. Employment should continue to fall in the primary sector and manufacturing but employment trends vary within sectors. For example, in non-marketed services (mainly public sector services) the forecast is for fewer jobs in public administration and defence, but job growth in education and health and social services;

- increasing need for **high qualifications** <sup>(1)</sup>.

All sectors are expected to employ more highly qualified people, reacting to a combination of demand and supply factors. Technology, by replacing routine tasks, is making jobs more demanding and requiring higher skills (see below). Education attainment across the EU has risen, substantially increasing the pool of more highly qualified people available; when employment demand is low, some people will take jobs below their qualification level;

Figure 1. **Employment trends by sector, EU-28**



Source: Cedefop skills forecast (2016).

(1) Defined as ISCED level 5 and above.



### ■ high replacement demand.

Despite the trend towards demand for high-level qualifications, around 47% of all jobs will require medium-level qualifications. Demographic trends mean that around 14 of every 15 job openings will be to replace workers leaving their jobs, many of whom will retire. In many cases, not enough young people will enter the labour market to replace those leaving;

### ■ changes in job content and tasks.

Technological advance, through developments such as automation and the impact of the 'internet of things', sometimes termed the fourth industrial revolution, is expected to have major and lasting effects on job content and tasks. Automation, using robots and artificial intelligence, is already replacing routine tasks both in blue- and white-collar jobs at all qualification levels. But technology-induced new forms of collaboration and data collection are also changing work organisation and production processes, including working times and locations. New types of job are also being created. For example, jobs such as social media/online community manager and search engine optimisation specialist have emerged over the past decade. These changes increasingly require people to take on more complex tasks that combine technical and generic skills (such as communication and teamwork). Further, the shift to a greener, more sustainable economy will increase demand for green skills and jobs across sectors.

## IMPACT ON EDUCATION AND TRAINING NEEDS

To support the EU workforce in preparing for the anticipated effects of these trends, education and training need to ensure:

- a balanced mix of skills across sectors, countries and qualification levels;
- broader skill profiles across occupations and qualifications, combining technical and behavioural skills;
- acquisition of new specialised and technical skills as these are changing more rapidly throughout working life.

As the labour market of the future will offer fewer opportunities to those with low-level or no qualifications, it is important that young people do not leave education and training early.

Demography and changes in job content emphasise the importance of continuing vocational training. Targeted reskilling and upskilling opportunities should enable Europe's ageing labour force to adapt to changes brought about by technological advance, more flexible forms of work organisation, new materials and processes, changes in regulations, and the need for environmental sustainability.

Fewer young people entering the labour force also highlights the importance of activation and training policies to encourage more people to participate in the labour market.

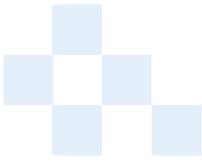
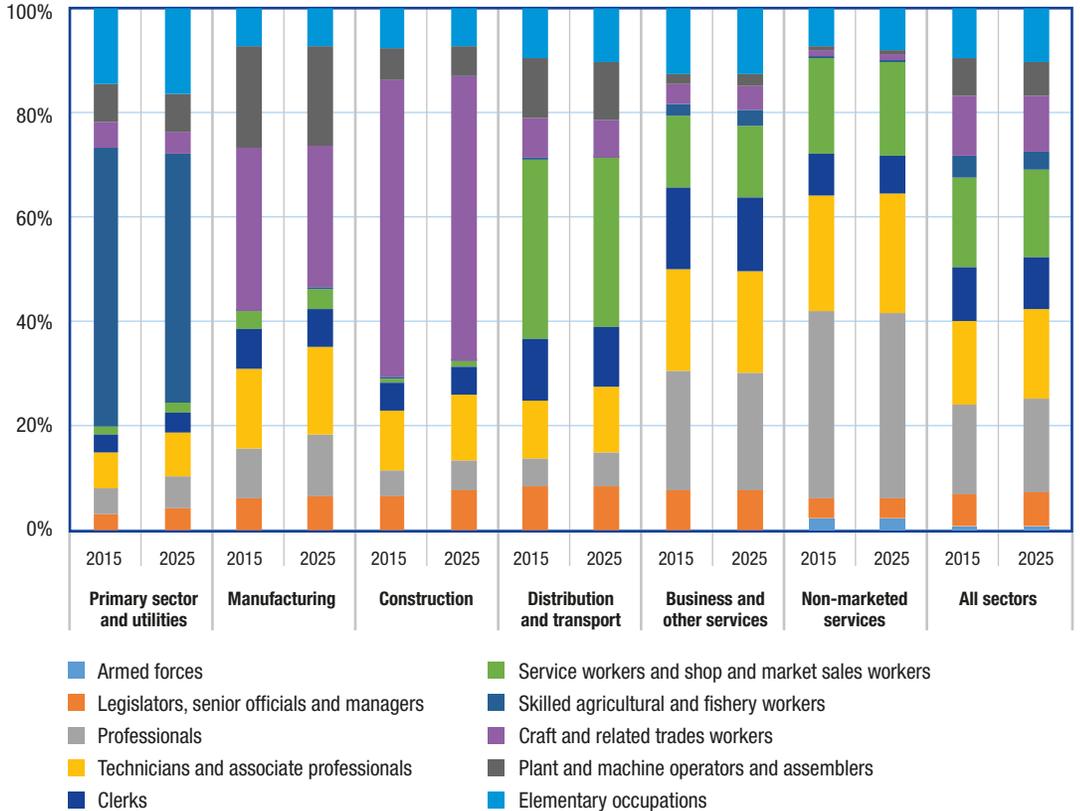
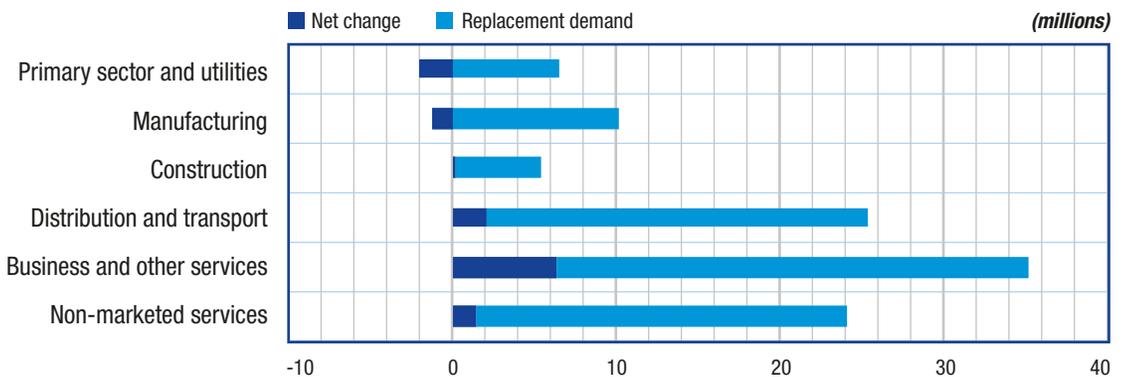


Figure 2. **Distribution of employment by main occupational group across six broad sectors (EU-28), 2015-25**



Source: Cedefop skills forecast (2016).

Figure 3. **Composition of total job openings by broad sector (EU-28), 2015-25**



Source: Cedefop skills forecast (2016).

## SECTORAL TRENDS AT A GLANCE

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Employment in the **primary and utilities sector** across the EU will continue to decline. The largest falls are forecast for Estonia, Croatia, Italy, Hungary and Poland. Despite fewer jobs overall, in 2025, the primary and utilities sector should still account for around 30% of employment in Romania and 20% in Bulgaria. Employment decline in the sector is mostly due to job losses in agriculture, driven by urbanisation, global competition, lower public subsidies, climate change and technological advance. The last of these, along with deregulation and, in some Member States, privatisation of providers, are factors expected to lead to job losses in utilities (electricity, gas and water supply).

Employment in the sector will continue to be dominated by skilled agricultural and fishery workers, but their share of employment is expected to fall. Technological advance, linked to environmental sustainability, will lead to more jobs for professionals and technicians and associate professionals in the sector. Jobs for elementary occupations are also expected to grow indicating some risk of job polarisation of the sector.

This trend towards higher-level occupations should translate into demand for more highly qualified people. However, the sector is characterised by high replacement demand as many people are expected to retire, particularly from agriculture, over the next decade. Consequently, the sector will still provide a substantial number of jobs for those with medium- and low-level qualifications.

The employment share of European **manufacturing** is forecast to continue to fall between now and 2025, even in countries with strong manufacturing traditions such as France and Germany. But job losses in this sector are expected to be far fewer than in the previous decade. Manufacturing will continue to be a major employer in 2025, providing around 12% of all jobs in Europe and substantially more in many countries: 23% in the Czech Republic, 19% in Slovakia, 18% in Hungary and Slovenia.

Employment trends vary within the sector. Employment is expected to rise in production of motor vehicles and of other machinery and

equipment, but fall substantially in textiles, leather and clothing and metals and metal products.

Craft and related trades workers will remain the core of the sector, accounting for around a third of jobs in the sector by 2025, but less than in 2015. The proportion of jobs for professionals is forecast to increase from around 10% to 12% between now and 2025. This trend looks set to continue as around two-thirds of job openings in manufacturing over the next 10 years are forecast to be for professionals and for technicians and associate professionals. Due to technology, more integrated cross-sectoral value chains and outsourcing, 45% of jobs in 2025, compared to 28% in 2015, are expected to require high-level qualifications.

The outlook for **construction** at European level is relatively stable. Around 6% of the European labour force is expected to be working in this sector in 2025, similar to 2015. However, in two thirds of Member States, employment in construction is forecast to be higher than the EU average, including Croatia (12%), Luxembourg (11%) and, Ireland (10%), which had seen jobs in construction nearly halved between 2005 and 2015. In contrast, employment in construction is expected to shrink in Germany, Romania and the UK.

In 2025, more than half of the jobs in construction will be for craft and related trades workers. However, the sector will experience increasing skills demand, with some 13% employed as technicians and associate professionals in 2025, compared to 11.5% in 2015. Skills needed in construction are likely to change to meet demands for 'green' and energy efficient buildings that follow new designs and use new materials. The forecast indicates that demand for people with high-level qualifications could double, to account for one third of all jobs in construction by 2025.



The **distribution and transport** sector is expected to expand slightly and employ around a quarter of the EU workforce by 2025, ranging from 20% in Sweden to around 34% in Greece and 37% in Cyprus. Job growth is expected across most parts of the sector, in particular in wholesale and retail and in accommodation and catering, but fewer jobs are forecast in land and water transport.

The sector occupational structure seems relatively stable. High levels of interaction with people make job tasks in this sector less routine and so less vulnerable to replacement by technology. However, new technologies and climate change underpin the sector's growing demand for more highly qualified people. The proportion of jobs requiring high-level qualifications is forecast to be almost double at 41% by 2025, with around 50% of jobs requiring medium-level qualifications. Demand for highly qualified people is forecast to be high in warehousing and postal services, possibly mirroring increased complexity in warehousing/logistics jobs involving technical, engineering, mathematical, managerial and interpersonal skills.

Job growth across the EU is forecast to be driven mainly by **business and other services**. This sector is expected to account for around 30% of all jobs and to provide 95% of all new jobs in the EU between now and 2025. This sector is particularly large in Luxembourg, where it is forecast to account for around 39% of jobs by 2025, the UK and Italy (33% and 32% respectively).

Employment across the sector will grow, particularly in legal, accounting and consulting services and administrative and support services (where the need to replace people leaving the occupation or retiring is high). Apart from a small decline in the proportion of clerical jobs, reflecting the trend of technology replacing routine tasks seen in other sectors, there are no major changes in the sector's occupational structure.

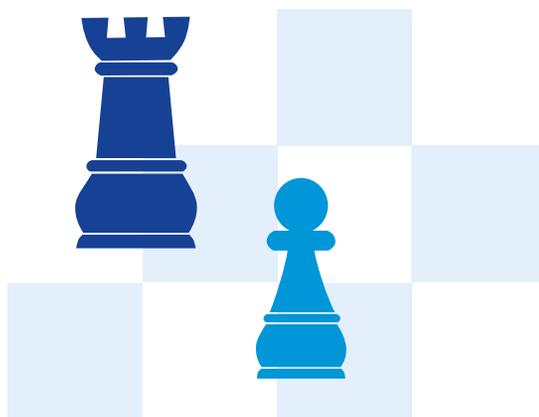
The sector covers a broad range of industries, from computing and information services to banking and finance, which traditionally require highly qualified employees. However, the trend to more highly qualified jobs is forecast to

accelerate between 2015 and 2025. Around half of the jobs in business and other services are expected to require high-level qualifications in 2025, compared to 41% in 2015. Jobs requiring medium-level qualifications in this sector will remain substantial at around 40% in 2025, while low-level qualification jobs are forecast to fall significantly from almost one fifth in 2015 to around one tenth in 2025.

**Non-marketed services** (mainly public sector services) are expected to employ around a quarter of the European workforce in 2025, ranging from 12% in Romania to 35% in Sweden. Overall, employment in this sector is expected to increase, but unevenly. While jobs in health and education will grow, employment in public administration and defence is projected to fall.

The sector's occupational structure is forecast to remain broadly stable, with professionals, and technicians and associate professionals accounting for around 55% of the labour force in 2025.

However, technological innovation, cross-border mobility of health workers (health and social care) and ageing teachers (education) are changing the nature of jobs and skill needs in the sector. These changes are expected to push up the share of jobs requiring high-level qualifications, from 50% in 2015, to 55% in 2025.



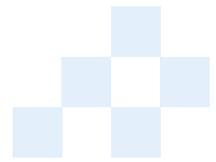


Figure 4. Qualification needs in total job openings by sector (EU-28), 2015-25

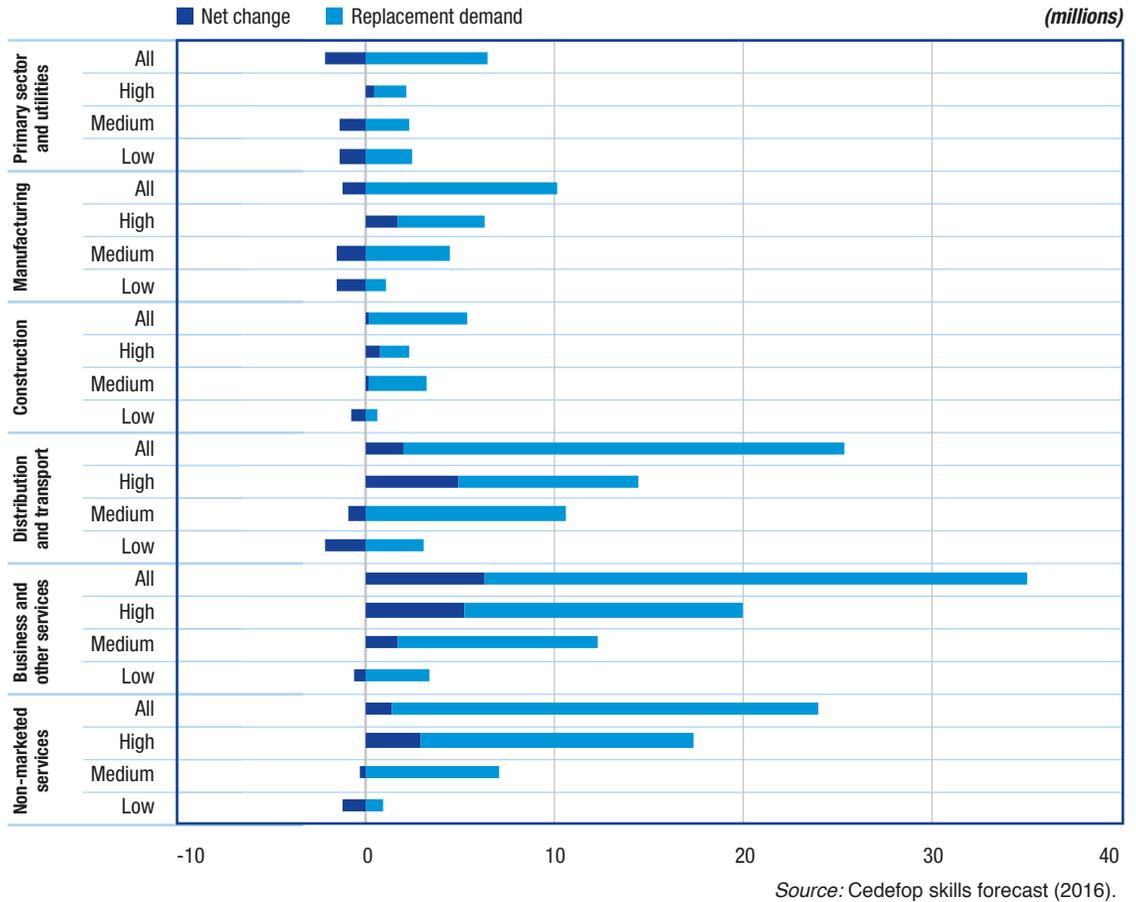
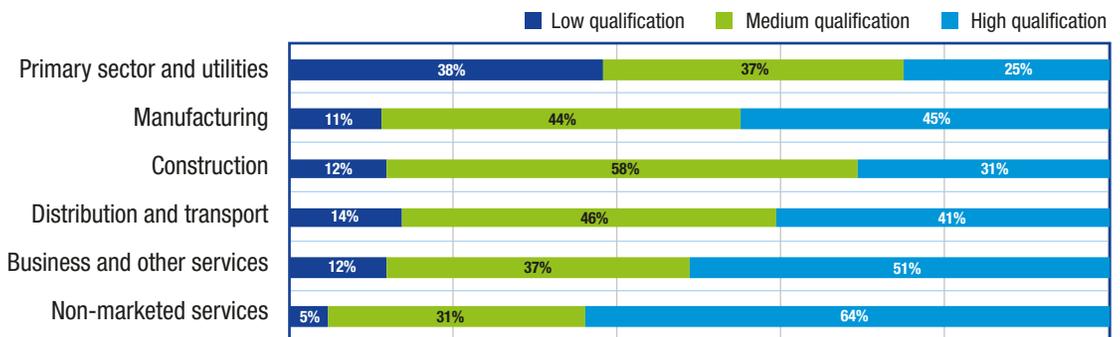


Figure 5. Distribution of total job openings by qualification in six broad sectors (EU-28), 2015-25



Source: Cedefop skills forecast (2016).

## CEDEFOP'S SKILLS SUPPLY AND DEMAND FORECAST SCENARIO 2015-25

- Covers all 28 EU Member States plus Iceland, Norway and Switzerland, using harmonised data and methodology and validated by national experts
- Produces estimates for the economically active population by gender, five year age bands and broad qualification levels
- Produces estimates for employment trends by sector, occupation and three broad qualification levels
- Presents total job openings as the sum of new jobs (net employment growth) and the need to replace workers (replacement demand) who leave their jobs for various reasons, including retirement
- Takes account of global economic developments up to August 2015 and reflects the latest Eurostat population forecast (Europop, 2013)
- Is aligned with the European Commission's short-term macroeconomic forecast and its reports
- Total employment data correspond to those reported in national accounts

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