European Centre for the Development of Vocational Training

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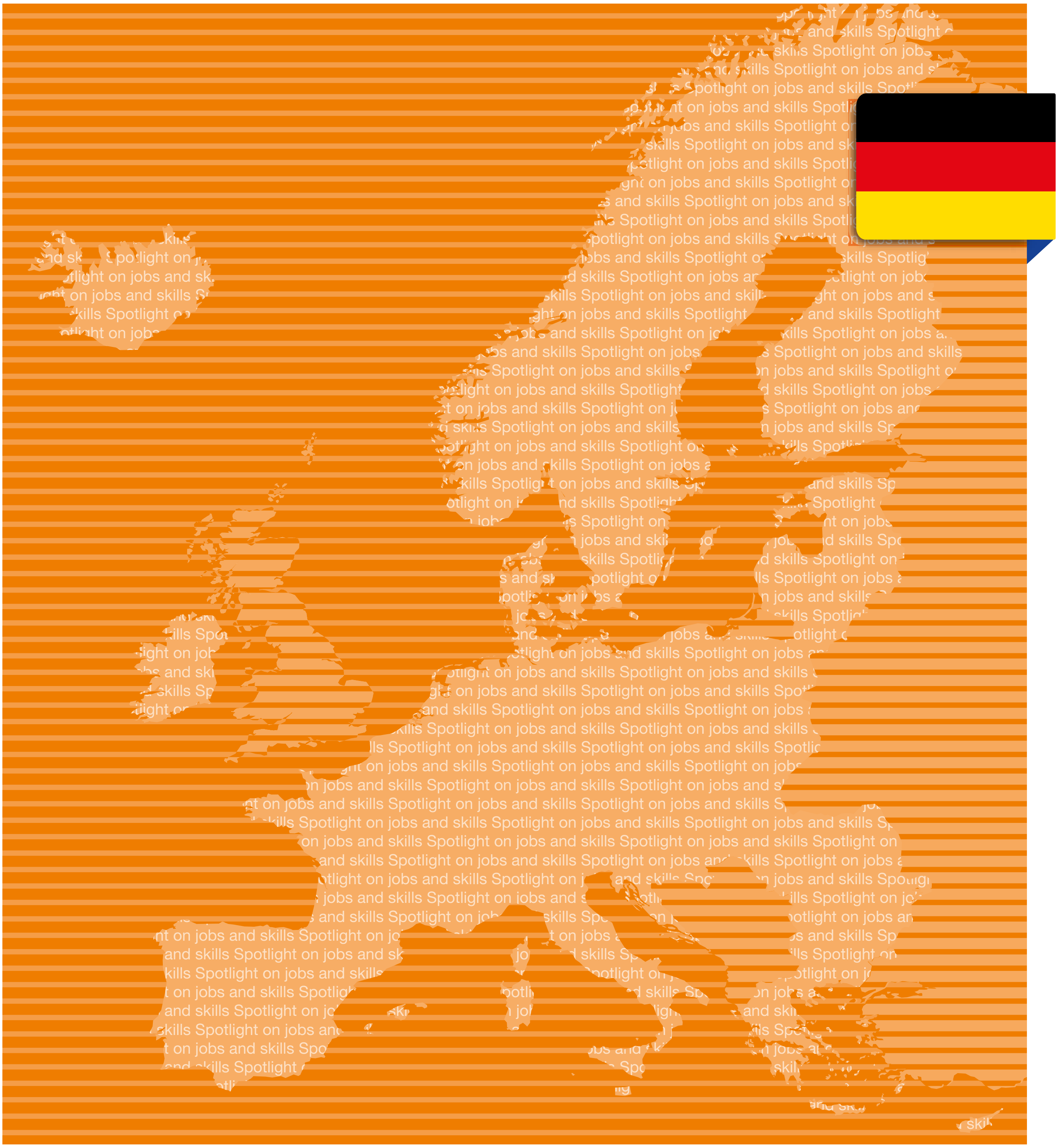


SPOTLIGHT ON JOBS AND SKILLS

GERMANY

2025

Introduction

Drawing on its rich country-level skills intelligence, Cedefop develops its Spotlights on jobs and skills for EU-27 Member States, Iceland and Norway. The Spotlights provide insights into the current labour market landscape, future trends, and skills anticipation in each country. The analysis is based on Cedefop's skills intelligence online tool, its skills forecast, the European Skills Index (ESI), online job advertisements, sectoral and occupational skills intelligence, and country-specific skills anticipation reports.

Recent employment developments

Germany continues to be the largest economy in the EU, with its unemployment rate in 2023 returning to pre-COVID-19 levels at 3% – one of the lowest in the EU and half the EU average). In 2023, the main sector of employment is manufacturing ([1]) (18%), followed by health and social care, and wholesale and retail trade (14% and 13%, respectively) (Figure 1). Professionals and associate professionals accounted for a large share (42%) of employment in 2023.

Germany's strong manufacturing sector, largely driven by the automotive industry and its world-leading companies, employs a wider range of occupations than other sectors. In 2023, examples include researchers and engineers (38% of whom work in manufacturing), electrical engineering workers (37%), accounting clerks (29%), office professionals (19%) and sales workers (7%). Some of these shares are among the highest across EU countries.

In 2023, one third of the employed population was highly qualified, which is double the share of the low qualified workers. The share of overqualified graduates (25-34) remains lower than the EU average (18% versus 23%). However, the share of the overqualified has increased by 6% since 2011, signalling a potential skills mismatch compared with the recent past. Germany is among the countries with a high share of the employed population participating in education and training activities, but still needs to make progress to meet the EU and national targets set for 2030.

On the demographic front, in 2023 47% of employees were female, signalling a good gender balance. That is not the case in all occupations. Among CEOs, officials and legislators, and machine and plant operators, female participation (21% for each) is among the lowest in the EU. By contrast, female participation in construction (15%) is the highest in the EU. In total, 38% of the workforce (EU average 35%) were aged over 50. Nevertheless, the employment share of the youngest age group (15-24) is higher than the EU average (10% versus 8%). Notably, Germany has the lowest unemployment rate in the EU for the same group (6%), while the share of those aged 15-24 who are neither in employment nor in education or training (NEETs) is low (8%) compared to other EU Member States.

Recent skills and learning developments

Analysis of online job advertisements in Germany, collected by Cedefop and Eurostat in 2023, suggests that the occupations most in demand are in the manufacturing (22%), professional (20%), and administrative services (10%) sectors. The most in-demand occupations are highly skilled professional and associate professional roles, accounting for almost half of the total job advertisements. Driven by the digital transition, and supporting the important manufacturing sector, four out of five professional roles advertised by employers are for ICT and office professionals, and research and engineering roles. Almost one third of the online job advertisements for health professionals are for nursing and midwifery staff, highlighting the importance of vocational education and training (VET) for the health sector in Germany.

According to Cedefop's European Skills Index (ESI), in 2024 the skills system of Germany ranks in the middle of the 31 European countries analysed – five places lower than in 2017. However, in the past

([1]) To learn more about the classification of sectors, occupations, and qualification levels discussed in this report, see Annex 2 of Cedefop skills forecast methodological framework (April 2023).

seven years, Germany has considerably improved its ESI skills activation score (10% relative increase) and is among the top three countries for the employment rate of recent graduates. The ESI skills matching score has also increased by 22%, thanks to a drop in the long-term unemployment rate from 2% in 2017 to 1% in 2024, and in the share of underemployed part-time workers from 4% to 1%. Germany's ESI skills development score has dropped, particularly because of declining performance of 15-year-olds in reading, maths and science (5% relative decrease compared with 2017) and educational attainment at upper secondary level and above (4% relative decrease compared with 2018).

In 2023, the share of workers with above-basic digital skills was below the European average (24% versus 33%). This share is still low if one focuses only on the above-basic digital skills of those aged 25-34, where Germany outperforms Bulgaria and Romania but lags behind the rest of the EU Member States. Targeted policies to support and expand up- and reskilling initiatives, as well as to boost participation in digital skills training, could help address emerging digital skills gaps that hold back the rapidly evolving digital transition.

Future employment trends

Despite a marginal annual increase in its labour force, the Cedefop skills forecast projects relative stability in overall employment in the country until 2035. The education sector is expected to have the second-largest growth in absolute numbers and the largest relative growth. Employment growth in this sector is expected to be three times the EU average. Decreases in employment are expected for all broad sectors at different rates (ranging from 1% in business services to over 10% in construction), apart from non-marketed services (including education and health activities), which are expected to grow by more than 12% in terms of employment. Expected employment growth is highest in education (26%), electricity, gas, steam and air conditioning supply (22%), and human health and social work activities (14%).

Up to 2035, professionals and associate professionals will continue to dominate the labour market in terms of employment share, as they will be in demand in almost half of job openings. Employment for professionals will expand rapidly, with more than one fifth of job openings resulting from expansion rather than replacement demand – particularly for ICT, teaching, and business and administration professionals.

The annual growth in the labour force is expected to be about the same among males and females. In 2022, there were over 11 million people aged 50-59 in the German labour force. A fall of more than 1.5 million people is projected for this age group by 2035, offset by a sharp increase in those aged 65+ (from 1.6 to 3.5 million), in line with EU trends. These projections and broader demographic developments underline the importance of supplying professionals to the healthcare sector and related occupations, and signal societal imbalances that go beyond the labour market.

Future skills and learning trends

Quantitatively, most job openings between 2023 and 2035 are expected for high-skilled, non-manual occupations. Job openings for medium- and low-qualified workers are mostly driven by replacement demand, which creates new employment opportunities despite their combined employment share falling from 69% to 66%. According to Cedefop's skills forecast, the high demand expected for highly skilled individuals comes with an increase in the labour supply of highly skilled individuals. Nevertheless, the forecast highlights potential shortages in highly skilled occupations and roles, which need to be addressed proactively.

In contrast to the rest of the EU Member States, employment growth in the high-tech economy in Germany is projected to be slightly negative (-1.3%). Nevertheless, the employment share in high-tech occupations is expected to remain in line with the EU average in 2035.

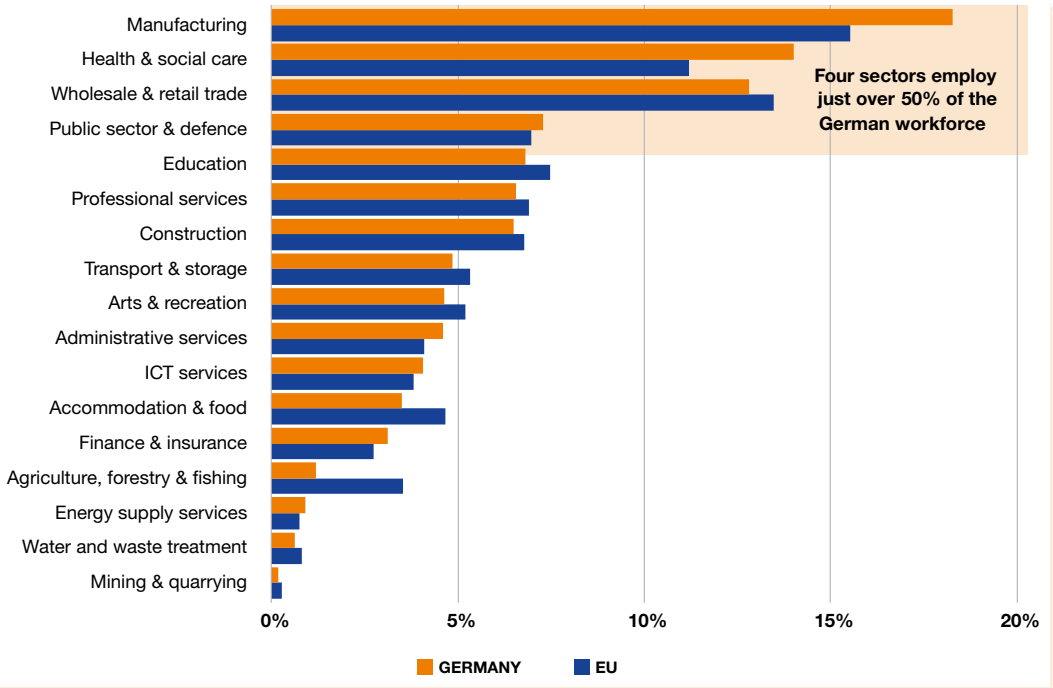
Expected skill shortages

Data from the Cedefop Labour and Skills Shortage Index indicate that the highest shortages are expected for professionals, skilled agricultural and fishery workers, and elementary occupations (Figure 3). Zooming in, high shortages are revealed for highly skilled occupations, particularly for legal, and social and cultural professionals. High index scores, indicating likely future skill shortages, are also projected for other high-skilled occupations such as chief executives, senior officials, and legislators (driven primarily by high expected replacement needs), science and engineering professionals (fuelled by expected future imbalances between job qualifications and requirements), and teaching professionals (due to imbalances as well as high demand, which might outpace provision).

GERMANY

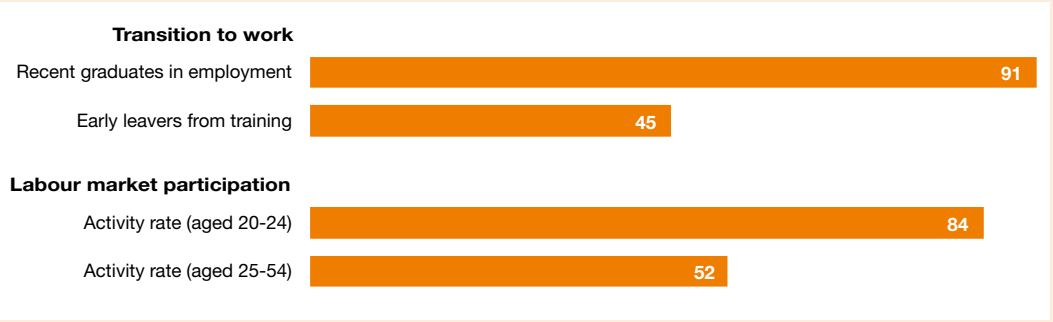
Jobs and skills in figures

Distribution of employment (%) across sectors in Germany and the EU, 2023



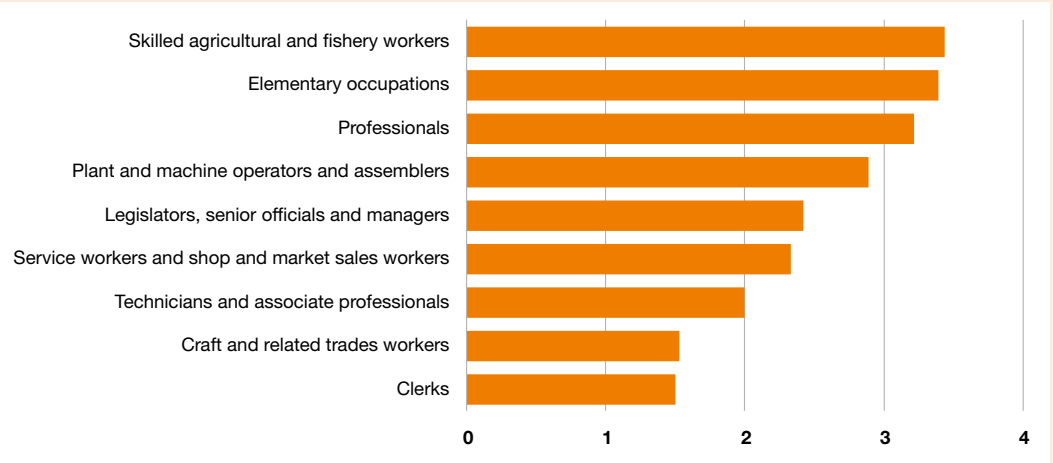
Source: Cedefop skills intelligence tool.

ESI skills activation pillar in Germany in 2024



NB: The ESI measures countries' 'distance to the ideal' performance, i.e. the highest achieved by any country over a period of seven years. The ideal performance is scaled to 100, with national scores computed and compared to that. Example: a score of 65 suggests that the country has reached 65% of the ideal performance, with 35% (100-65) room for improvement.
Source: Cedefop ESI.

Cedefop Labour and Skills Shortage Index, 2022-35, Germany



NB: The Labour and Skills Shortage Index is the simple average of the quartiles in each of the three pillars: (1) employment growth; (2) replacement demand; (3) supply/demand imbalance (IFIOD). A score of 4 indicates a higher level of shortage, and 1 no shortage. The outcome of the pillars is based on the relative evaluation in quantiles of the occupation (here for all EU-27).
Source: Cedefop Labour and Skills Shortage.

Further information

- Cedefop. (2023). *Skills forecast methodological framework*.
- Cedefop. (2023). *Skills anticipation in Germany*. Data insights series.
- Cedefop. (2024). *Evolution of European skills systems: performance 2015 to 2022.* Publications Office of the European Union.
- Cedefop. (2024). *Vocational education and training policy briefs 2023 – Germany*. Cedefop monitoring and analysis of vocational education and training policies.
- Cedefop. (2025). *Skills forecast report: Germany*.

Cedefop Skills intelligence tool
Cedefop Skills forecast
Cedefop Skills OVATE
Cedefop European Skills Index
Cedefop Labour and Skills Shortage Index
Cedefop Timeline of VET policies in Europe – VET policies in Germany

This Spotlight was drafted by Cedefop's Skills intelligence and foresight team.
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