OECD
BETTER POLICIES FOR BETTER LIVES

Policy Brief

AI and skills: What we know so far

5 June 2026

Key messages

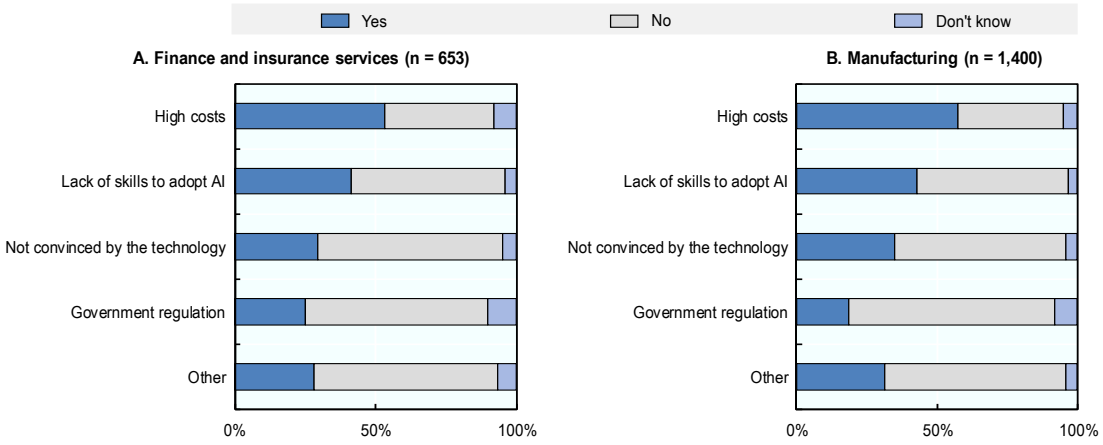
- Artificial Intelligence (AI) is often discussed in terms of technological breakthroughs, algorithms and investment figures. Yet as AI continues to transform workplaces, one of the decisive factors in whether economies will benefit from this shift may not be the technology itself, but the skills of the people using it.
- A lack of skills is holding back the adoption of AI: many businesses, especially SMEs, report that shortages of relevant skills limit their ability to use AI. 40% of employers in manufacturing and finance cite skills as the main barrier to adoption, and over half of SMEs not using generative AI.
- At the same time, AI is raising the skills bar. It is shifting demand toward higher-level skills, with over half of employers in manufacturing and finance reporting an increased need for highly educated workers.
- Skill needs are not limited to coding: fewer than 1% of workers need advanced AI skills, while most require digital skills, and the ability to use, analyse and interpret data. Alongside this, managerial skills and human skills such as problem-solving, creativity and innovation remain important.
- Many firms are investing in retraining and upskilling their workforce, and more than half of workers using AI report receiving employer-funded training. This investment pays off: workers who receive training are more likely to report positive outcomes from AI adoption, including better job performance and improved working conditions.
- Policy responses must strive to monitor evolving skill demands; scale up access to AI-relevant skills, especially for SMEs and workers at risk of falling behind; and ensure lifelong training and reskilling opportunities, with shared responsibility among employers, workers and governments.
- Training must be part of a broader policy package, including efforts to facilitate social dialogue on the use of AI in the workplace, as well as measures that promote transparency, explainability and accountability, and ensure that AI: is safe and secure; preserves worker privacy; produces objective results so that they do not perpetuate and exacerbate labour market biases and discrimination.

A lack of skills is a major barrier to AI adoption

Many businesses, especially small and medium-sized enterprises (SMEs), report that their ability to use AI is constrained by a lack of people with the right skills. Around 40% of employers in manufacturing and finance who have not yet adopted AI say that skills are the main reason (Lane, Williams and Broecke, 2023[1]) (Figure 1), as do more than half of SMEs that are not yet using generative AI (OECD, 2025[2]).

Figure 1. A lack of skills is a major barrier to AI adoption

Percentage of all employers



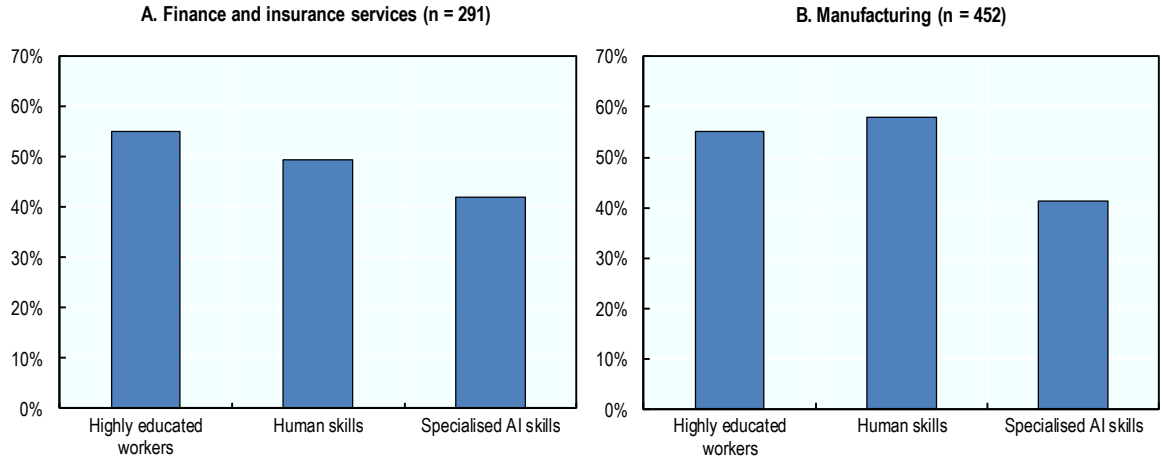
Note: All employers were asked: "I'm going to list a few potential barriers to the adoption of artificial intelligence. In each case, please tell me whether it has ever been a barrier to adopting artificial intelligence in your company: High costs/Lack of skills to adopt artificial intelligence/Government regulation/Not convinced by the technology/Any other barriers not previously mentioned".
Source: Lane, Williams and Broecke (2023[1]), "The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers", https://doi.org/10.1787/ea0a0fe1-en.

AI increases the need for high-skilled workers

At the same time, many report that AI is increasing the demand for highly skilled workers. In manufacturing and finance for example, more than half of employers that have adopted AI say it increased the need for highly educated workers (Lane, Williams and Broecke, 2023[1]) (Figure 2). This fits with broader evidence showing that employment has grown fastest in roles that are most exposed to AI (Lane, 2024[3]). In these jobs, AI tends to complement rather than replace employees and increases the demand for high-level skills.

Figure 2. Employers say AI raises the demand for highly educated workers

Percentage of employers that have adopted AI



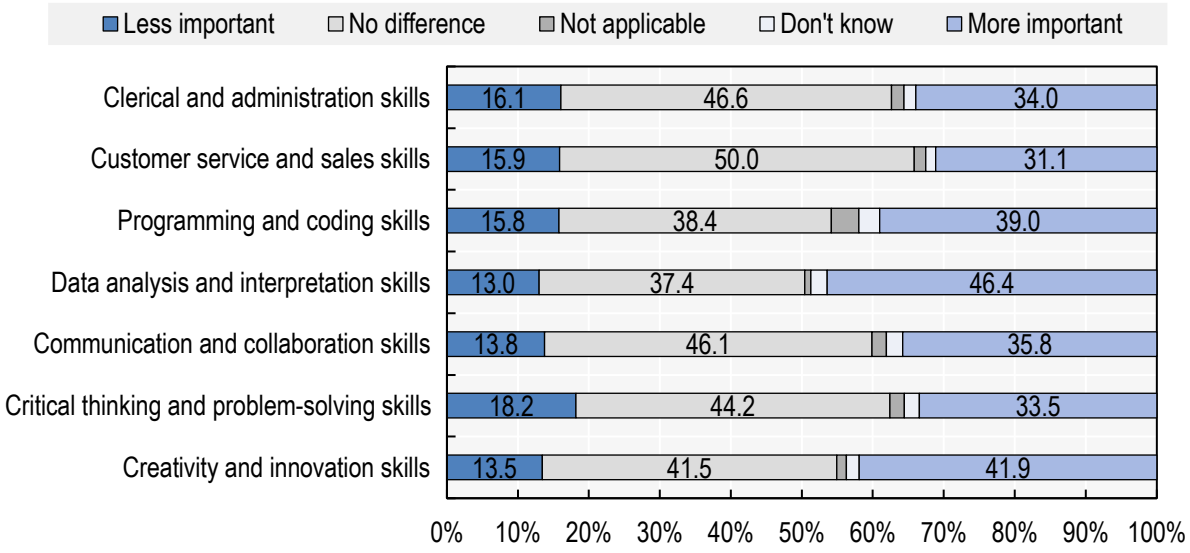
Note: Employers that have adopted AI were asked: "In your company, has artificial intelligence made it more important to have specialised artificial intelligence skills, such as those needed to maintain or develop artificial intelligence/human skills, such as creativity and communication/highly educated workers?"
Source: Lane, Williams and Broecke (2023[1]), "The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers", https://doi.org/10.1787/ea0a0fe1-en.

Workers will increasingly need to be able to use, analyse and interpret data

Only a small share of workers (less than 1%) will need advanced AI-specific skills such as programming or model development (Green and Lamby, 2023[4]). Instead, AI is increasing the importance of digital skills, and the ability to use, analyse and interpret data. Alongside this, managerial skills and human skills such as problem-solving, creativity and innovation will remain essential (OECD, 2025[2]; Milanez, Lemmens and Ruggiu, 2025[5]) (Figure 3). Keeping track of how these skill demands evolve will be crucial for shaping education, training and skills policies, and for ensuring that workers are equipped to use AI at work.

Figure 3. Generative AI has made data analysis and interpretation skills more important, along with other skills

Percentage of SMEs that report generative AI made each skill more or less important



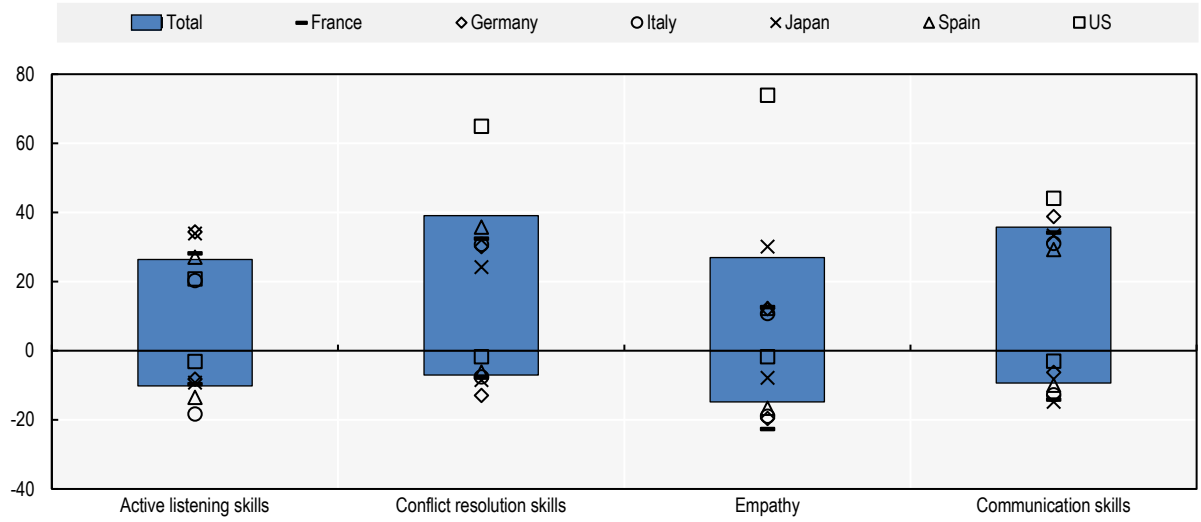
Note: Respondents were asked: "I'm going to read to you a number of skills. For each of them, can you tell me whether you think generative AI has made the skill more important, less important or whether it has made no difference to the importance of the skill for workers in your industry?" Results include users and non-users' responses.
Source: OECD (2025[2]), *Generative AI and the SME Workforce: New Survey Evidence*, https://doi.org/10.1787/2d08b99d-en.

Does AI reduce the need for social and emotional skills?

Social and emotional skills, such as empathy, communication and teamwork remain essential in many jobs. However, there are signals that in parts of Europe the demand for certain social skills is declining as AI becomes more widely used in the workplace. For example, in Germany, France, Italy and Spain, managers are more likely to believe that algorithmic management tools reduce their need for empathy (20%) rather than increase it (12%) (Milanez, Lemmens and Ruggiu, 2025[5]; Green and Lamby, 2023[4]) (Figure 4). It is still too early to draw firm conclusions, and such signals should be interpreted with caution. However, they highlight the need to monitor not only how AI affects productivity and skills, but also how it reshapes the human side of work, such as job quality, social interaction and well-being.

Figure 4. In some countries, algorithmic management seems to go paired with a lower demand for social and emotional skills

Percentage of managers using algorithmic management software reporting increases/decreases in the need for skills



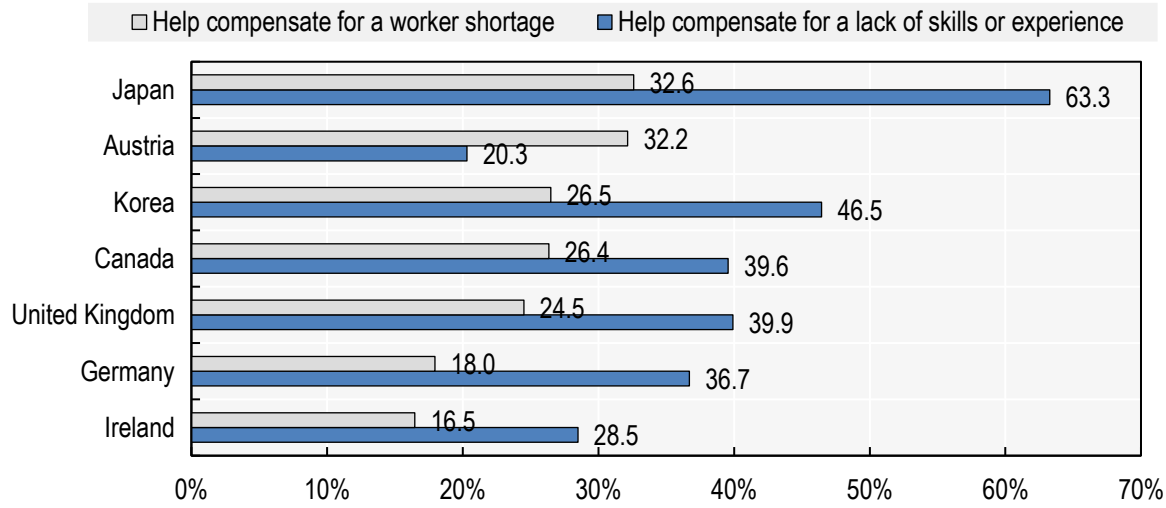
Note: Managers were asked: "In your opinion, would you say that the use of such software in your workplace increases, decreases, or has no effect on the need for managers to have the following skills?"
Source: Milanez, Lemmens and Ruggiu (2025[5]), "Algorithmic management in the workplace: New evidence from an OECD employer survey", https://doi.org/10.1787/287c13c4-en.

AI can help address skill shortages

AI is not only creating demand for new skills, it is also helping businesses manage existing shortages. Nearly two in five SMEs report having faced a worker shortage in the past two years, while a third report a lack of skills or experience among staff. Generative AI helps fill these gaps: nearly 40% of SMEs that experienced a skills gap say that generative AI helps compensate for it, and a quarter said it helps compensate for a worker shortage (OECD, 2025[2]).

Figure 5. SMEs in Japan are most likely to say that generative AI helps compensate for labour and skill shortages

Percentage reporting that generative AI helped compensate for worker shortage/skill gap, among SMEs using generative AI and experiencing shortage/gap

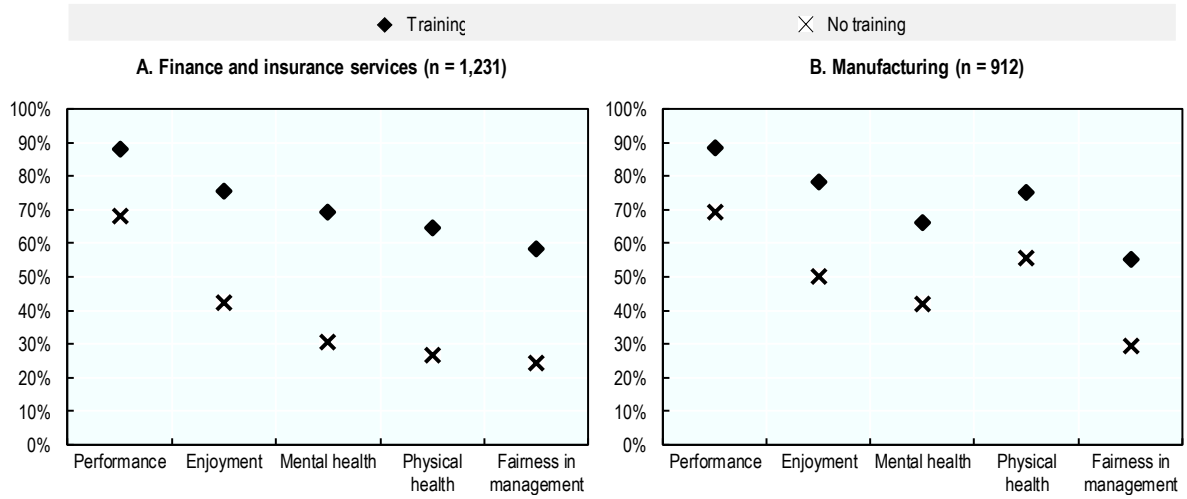


Note: SMEs using generative AI were asked: "Did generative AI help your company compensate for this worker shortage (the lack of skills or experience)?"
Source: OECD (2025[2]), *Generative AI and the SME Workforce: New Survey Evidence*, https://doi.org/10.1787/2d08b99d-en.

Training is the dominant – and effective – employer response

Many firms are investing in retraining and upskilling their existing workforce, and more than half of workers using AI report receiving employer-funded training (Lane, Williams and Broecke, 2023[1]). This investment pays off: workers who receive training are more likely to report positive outcomes, including better job performance and improved working conditions (Lane, Williams and Broecke, 2023[1]).

Figure 6. AI users who have received training are even more likely to report positive outcomes of AI on performance and working conditions



Note: AI users were asked: "How do you think AI has changed your own job performance (performance)/how much you enjoy your job (enjoyment)?/your physical health and safety in the workplace (physical health)?/your mental health and well-being in the workplace (mental health)?/how fairly your manager or supervisor treats you (fairness in management)?" The figure shows the proportion of AI users who said that each of these outcomes were improved (a lot or a little) by AI.
Source: Lane, Williams and Broecke (2023[1]), "The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers", https://doi.org/10.1787/ea0a0fe1-en.

What can policymakers do?

- While there are still gaps in the evidence, particularly regarding the exact skills that will be needed and how these can be best acquired, the evidence indicates that skills are a key component of the enabling infrastructure to both advance AI adoption and to ensure it benefits workers, employers and economies. There is also a challenge in that the data to inform policy often lag behind actual labour market developments and the very rapid progress in AI. The most recent data included in this brief, for example, date from late 2024.
- Policy responses must therefore strive to:
  - Closely monitor evolving skill demands and the impact of AI on employment, including on different population sub-groups;
  - Scale up access to AI-relevant skills, especially for SMEs and workers at risk of falling behind;
  - Ensure lifelong training and reskilling opportunities, with shared responsibility among employers, workers and governments; and
  - Align skills policies with broader economic policies and strategies to maximise their impact.
- Many countries have already developed dedicated AI strategies (OECD, 2024[6]). Moreover, numerous countries have introduced incentives to support employers in providing training for their employees, typically through subsidies or tax deductions. However, these financial incentives often lack a direct focus on AI skills (i.e. the skills required to develop and maintain AI). Similarly, whilst financial support for training programmes is on offer to workers and jobseekers, these initiatives are not explicitly tied to AI skills development.

- These measures must be part of a broader policy package, including efforts to facilitate social dialogue on the use of AI in the workplace, as well as measures that promote transparency, explainability and accountability, and ensure that AI: is safe and secure; preserves worker privacy; produces objective results so that they do not perpetuate and exacerbate labour market biases and discrimination.

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