

How Artificial Intelligence redefines labour market vulnerability in Europe

From historical risks to future resilience



PATHS2INCLUDE



The AI shift: new risks for the workforce

AI adoption is reshaping the EU labour market. While traditional vulnerabilities persist (affecting migrants and those with low education), AI introduces a new "Adaptability Risk".

This risk affects 14% of the EU workforce—specifically those whose jobs are highly exposed to AI automation but who currently lack the digital skills to adapt.

Key findings:

- The overlap:** Current and future risks overlap significantly for women and late-career workers.
- The new vulnerable:** AI risk arises for groups not traditionally seen as vulnerable, particularly tertiary-educated employees.
- The definition:** High AI Adaptability Risk = **high AI exposure** (cognitive/interpersonal tasks) + **low digital tool use**.

Methodology

Classifying the workforce

- We categorized workers based on their exposure to AI and their current digital skills.
- The most critical group is "High Adaptability Risk".

AI adaptability group	High adaptability risk	Technologically ready		No adaptability need
		Exposed to AI	Not exposed to AI	
AI Exposure	High	High	Low	Low
Digital device use	Low	High	High	Low
Typical occupations	<ul style="list-style-type: none"> Teaching professionals Sales workers Legal, social and cultural associate professionals 	<ul style="list-style-type: none"> Information and communications technology professionals General and keyboard clerks Business and administration professionals 	<ul style="list-style-type: none"> Science and engineering professionals Science and engineering associate professionals Health professionals 	<ul style="list-style-type: none"> Cleaners and helpers, Agricultural, forestry and fishery/labourers Building and related trades workers
Share of EU workforce	14%	34%	12%	40%

Source: Own elaboration based on EU LFS 2022 data.

Who is most at risk?

AI adaptability risk creates new patterns of vulnerability. It disproportionately affects women and late-career workers, while notably introducing high risks for tertiary-educated employees—a group not historically considered vulnerable.

Table 1. The table presents the shares of socio-economic groups among (a) different labour market statuses and (b) AI risk among the 25-64 EU population in 2022.

Group	All	Employees	(a)	(b)
			Labour market vulnerability (underemployed/inactive/unemployed)	AI Adaptability Risk
Tertiary Education	37%	41%	26%	47%
Women	50%	47%	58%	59%
Age 25-34	23%	24%	23%	22%
Age 35-54	52%	56%	42%	56%
Age 55-64	25%	20%	36%	22%
Migrants	16%	15%	20%	14%
Parents	20%	22%	17%	22%
Whole population	100%	79%	28%	14%

Note: Countries have equal weights.

Source: Own elaboration based on EU LFS 2022. Interpretation: (a) In the EU population aged 25–64 in 2022, 50% were women. Among all employees, 47% were women, while among all labour-market-vulnerable individuals, 58% were women. (b) Among all employees at high risk of AI exposure, 59% were women.

Policy implications

To ensure resilience in the EU labour market, policy must pivot:

- Target digital upskilling:** Prioritize occupation-specific training for the 14% of workers (e.g., teachers, sales) who face high AI exposure but lack digital tools.
- Support late-career workers:** As the workforce ages, productivity depends on older workers. Tailored programs are needed to help them adapt to AI-affected tasks.
- Broaden the scope of support:** Interventions must expand beyond traditional groups to include tertiary-educated workers, who now face significant adaptability risks despite their high education levels.

PATHS2INCLUDE is a 3-year research project funded by Horizon Europe that investigates the multi-dimensional aspects of discrimination, policies that could reduce inequalities and promote social inclusion in European labour markets and risk factors of vulnerability that may arise in the future of work. The research focuses on three key labour-market processes: recruitment; career paths; and early exit from working life, giving particular attention to labour-market participation at the intersection of gender, ethnicity, age, health, disability and care responsibilities.



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.