

From Safe to Exposed: How AI is redrawing the map of work

Coface

More than three years after the launch of ChatGPT, the impact of artificial intelligence (AI) on employment remains largely invisible in aggregate statistics. However, it is beginning to emerge on the fringes in certain segments of the labor market, particularly in entry-level roles within the most vulnerable sectors. By providing a unique mapping of the exposure to AI-driven automation of the tasks that make up different occupations, this joint study by Coface and the Observatory of Threatened and Emerging Jobs (OEM) highlights a shift in the frontier of automation.

With AI, it is now cognitive, complex and skilled tasks that are appearing increasingly at risk, posing a risk of upheaval in the structure of employment.

An innovative methodology for measuring the potential for automation of tasks and occupations

The aim of this study is to provide a detailed mapping of the areas where the spread of AI is most likely to transform work. This granular analysis reveals vulnerabilities that are still largely overlooked by aggregated statistics, as exposure varies significantly across tasks, occupations, sectors, countries and regions.

The methodology developed by the OEM addresses three limitations frequently observed in existing analyses: a lack of granularity in the analysis of occupations, low reproducibility of assessments based on expert judgements or evaluations produced by AI and the absence of a genuine forward-looking dimension regarding the various phases of AI development.

Each of the 923 professions analyzed is broken down into tasks, which are themselves subdivided into elementary actions described as triplets (verb, object, context). This breakdown allows for a more precise assessment of the degree to which each task is exposed to automation. The elementary actions are then scored using explicit and reproducible rules.

This method provides a concrete response to the three identified limitations. Firstly, it significantly refines the analysis of occupations by distinguishing the rating by generic basic action, regardless of the occupation in question. Secondly, it improves the reproducibility of assessments through explicit and auditable rules. Finally, it introduces a genuine forward-looking dimension, enabling the exposure of tasks to be projected across several phases of AI development – five in the context of this study – rather than merely providing a snapshot at a single point in time.

Alongside the OEM, Coface has helped to expand this framework by developing a method for **weighting tasks based on their importance and frequency**, refining the forward-looking scenarios and scoring rules, and broadening the empirical scope of the analysis to nearly **thirty countries**.

This assessment of exposure to automation is deliberately rough and supply-side focused: **it measures the technical exposure of tasks to automation, and thus in no way prejudices the volume of net job losses.**

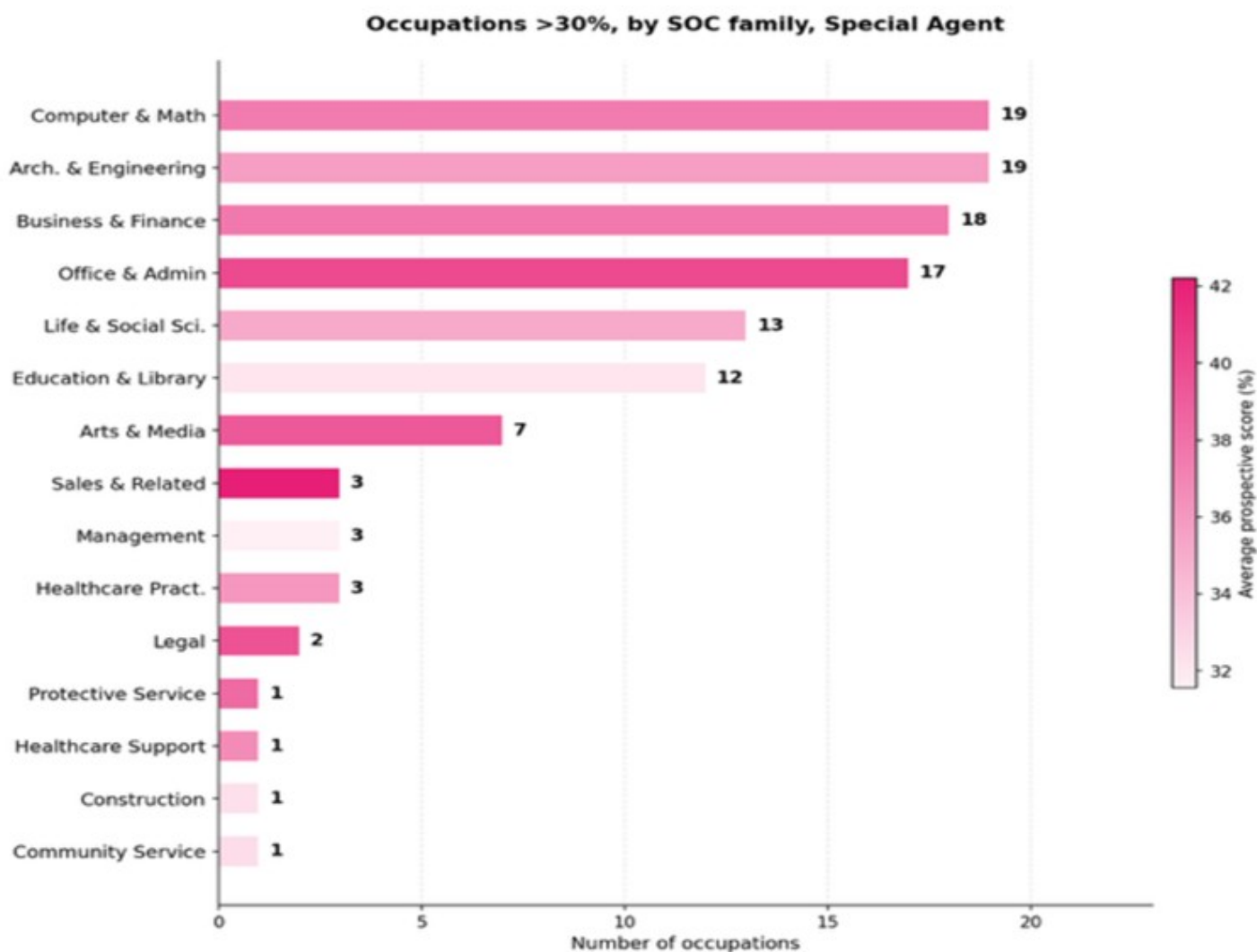
Indeed, by design, it does not take into account demand dynamics, the potential creation of new tasks, or the frictions that may slow down or limit the actual deployment of AI.

The study highlights a major break with previous waves of automation: AI does not represent a continuation of technologies such as robotics or software but **shifts the focus towards cognitive tasks that are complex and non-repetitive**. Its impact is profoundly varied: it is felt first at the task level, before having an uneven impact on occupations, occupational groups and, beyond that, on the sectors in which they are concentrated.

In the main scenario studied, concerning the deployment of agent-based AI, approximately one in eight occupations crosses the 30% threshold of automatable tasks, which the study identifies as a threshold for profound transformation of the profession, paving the way for potentially significant redeployment of staff, without necessarily signifying its disappearance.

The most exposed professions are concentrated in fields that are highly cognitive and information-intensive: engineering, IT, administrative roles, finance, law, and certain creative and analytical professions.

Number of professions with $\geq 30\%$ of tasks that can be automated, by occupational group, Special Agent' scenario



[Data for graph in .xlsx format](#)

Conversely, the least vulnerable occupations remain largely manual or involve human interactions that are difficult to standardize: manufacturing, construction, maintenance, transport, catering, cleaning, and certain care and support activities.

The study also measures the actual content of work at risk in each labor market examined by comparing the proportion of automatable tasks in each of the 923 occupations to its employment volume. By grouping them into eight broad categories, it identifies the occupational groups most at risk.

The main findings are clear: **more than a quarter of the work content could be automated** in the management and administration, creative professions, law and finance, as well as engineering and IT sectors. Conversely, face-to-face services and technical, craft and industrial production occupations remain below the 10% threshold. Jobs in care, education, sales and, more broadly, people-facing professions occupy an intermediate position: some of their tasks are at risk, but their human dimension continues to act as a protective factor.

Significant disparities between countries

The study highlights that countries' exposure to AI-driven automation varies significantly, ranging from around 12% of work content exposed to automation ((defined as the proportion of automatable tasks relative to total employment) in [Turkey](#) to nearly **20%** in the [United Kingdom](#). These differences are largely explained by the structure of the economies, which largely determines the structure of employment and, consequently, the proportion of tasks that can potentially be automated.

The wealthiest economies and those most oriented towards cognitive services thus appear to be the most exposed to automation. In addition to the UK, the [Netherlands](#), [Ireland](#) and [Luxembourg](#) have a higher concentration of information-intensive occupations, whilst countries where employment remains more oriented towards trade, personal services, [construction](#), [transport](#) or other more physically intensive activities show a more moderate exposure. The study identifies five groups of countries with similar profiles.

The potential effects of the roll-out of AI extend beyond the issue of employment alone. Because it targets skilled and well-paid occupations, the roll-out of **AI could ultimately disrupt economic and social balances.**

By automating some of the tasks performed in the most skilled professions, it could notably shift a significant portion of the value added from labor to capital. For countries whose tax systems rely heavily on direct and/or indirect taxation of labor, this development would pose a dual budgetary challenge, **reducing tax revenue** (social security contributions, income tax, VAT, etc.) **whilst at the same time increasing public expenditure** (unemployment insurance, training).

The study also invites us to **consider more broadly the value of education and the qualifications currently awarded at the end of various educational pathways.** If some of the tasks for which long courses of study prepare become more easily automatable, the link between educational attainment, pay and job security could weaken. Without (yet) concluding that higher education is no longer necessary, these findings suggest that employers may place less emphasis on qualifications alone, and instead focus on skills that remain complementary to AI, such as judgement, adaptability or the ability to oversee its use.

Finally, the rise of AI could give rise to new geopolitical, logistical and operational vulnerabilities due to the concentration of its most critical assets (semiconductors, language models, data centers) amongst a limited number of companies and countries that control the technologies.

Conclusion: a transformation capable of reshaping work

Whilst the exact trajectory of these transformations remains uncertain, and whilst the transition from the technical exposure of tasks to their net effects on employment is by no means automatic, one point nevertheless stands out clearly:

AI is not being deployed on the fringes of work, but across a section of its cognitive, non-

routine and skilled functions, long perceived as the most secure. Because these functions form part of occupations that play a major role in generating income, added value and tax revenue, it seems unlikely that such a transformation could take place without reshaping, to varying degrees, the nature of jobs and the balances that underpin them.

> Download [the full study](#) (.pdf) or [catch up the authors' keynote](#) during Coface Country Risk Conference