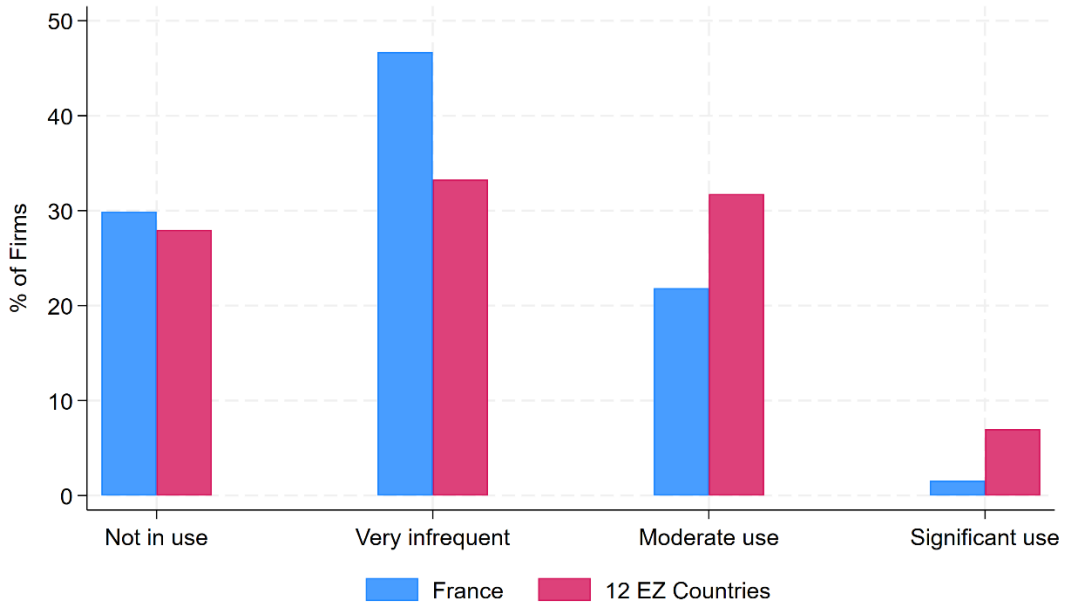
An AI Adoption Gap Among French Firms?

Sarah Mouabbi and Sebastian Stumpner

Using firm-level survey data from twelve euro-area countries, we find that French firms report significantly lower AI adoption than their euro-area peers. This gap is not explained by firm size or sectoral composition. While they are less likely to cite AI skills gaps, they more often point to data, privacy, and ethical concerns as barriers.

Chart 1. Use of Artificial Intelligence: France vs. euro area



Source: ECB, 2025Q4 SAFE survey
Note: The survey conducted in 2025Q4 included an ad hoc module on the use of AI. The results are based on responses from 4,968 firms across 12 euro-area countries, including 625 French firms.

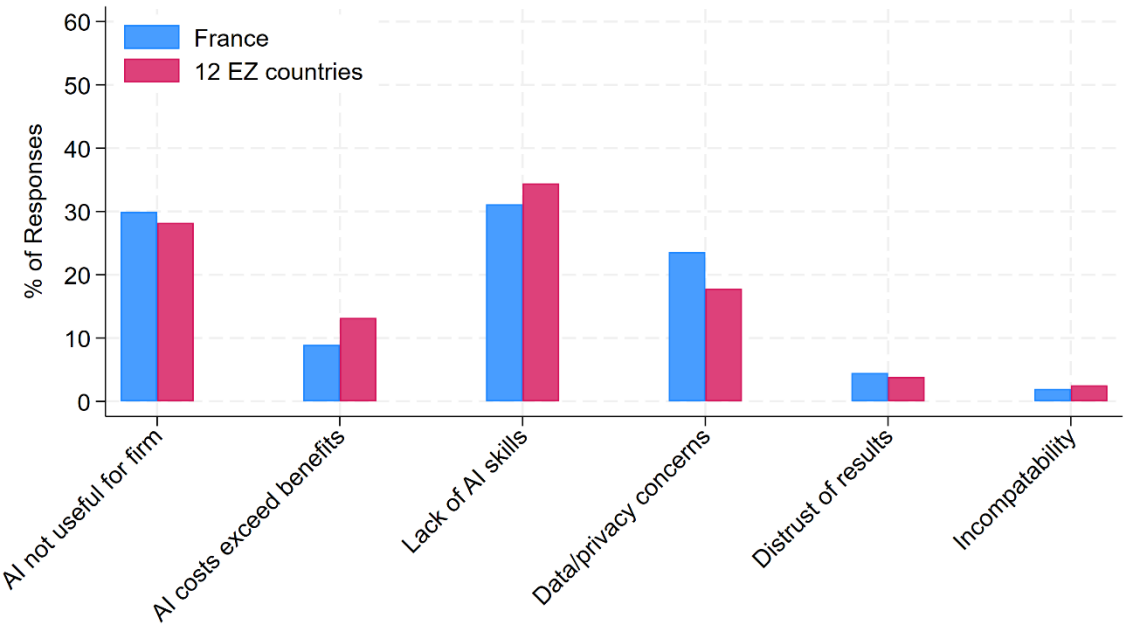
Artificial intelligence (AI) has been widely described as one of the most significant technological advances of recent years. Examining its adoption by firms across countries is important for assessing how widespread the use of this technology is and for gauging its potential economic relevance. Although based solely on self-reported data, firm-level surveys provide a useful way to quantify AI adoption. In this context, the recent Survey on the Access to Finance of Enterprises (SAFE) includes a dedicated module on AI, allowing for comparable evidence across euro-area countries. Using these data, adoption by French firms appears markedly lower than in the euro area: 39% of euro-area firms report moderate or significant AI use, compared with 23% in France. This share is also below that observed in the other large euro-area economies: Germany (46%), Italy (27%), and Spain (44%).

Why do French firms use AI less than their euro-area peers?

The lower use of AI by French firms is not trivially explained by differences in firm size or sectoral composition. Across the euro area, larger firms are generally more likely to adopt AI than smaller ones: among the twelve euro-area countries, 46% of large (above 250 employees) firms report a moderate or significant use of AI, compared with 32% of micro (below 10 employees) firms. France lags in every firm-size category, with the gap particularly pronounced among large firms: only 22% of large French firms report moderate or significant AI use, compared with 46% for large firms in the euro area. A similar pattern emerges across sectors. AI use in the euro area is highest in services (40%), followed by trade (30%), industry (28%), and construction (28%). French firms report lower AI adoption in each of these sectors (31%, 18%, 21%, and 17%, respectively), indicating that the overall gap is not driven by sectoral differences.

To assess whether the gap instead reflects differences in perceived barriers to adoption, firms reporting no, infrequent, or moderate AI use are asked to explain why they do not adopt AI more intensively. Overall, no clear factor emerges to explain the difference between French and euro-area firms. The distribution of responses is largely similar across the two groups. Some minor differences do emerge: French firms are less likely to cite a lack of AI-related skills, but more likely to point to data, privacy, and ethical concerns (Chart 2).

Chart 2. Reported Reasons for Limited AI Adoption Among Firms



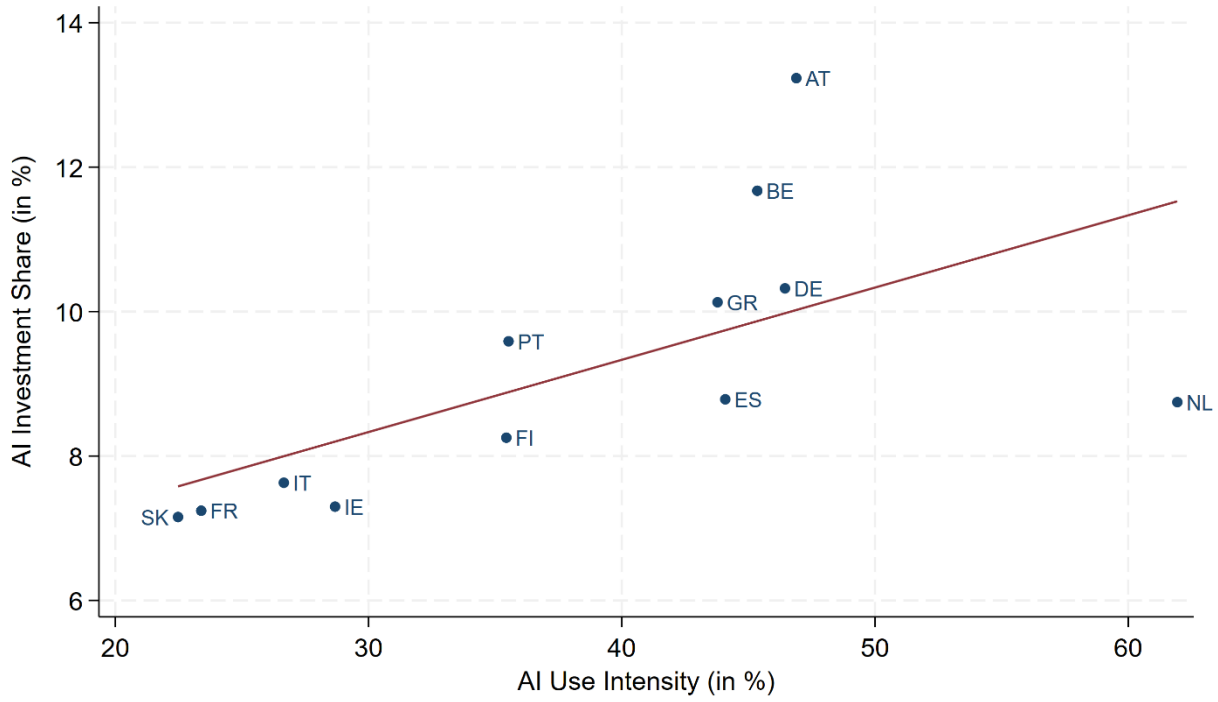
Source: ECB, 2025Q4 SAFE survey
Note: The figure provides the distribution of reported reasons for limited AI use among firms.

Widening Disparities in AI adoption

Based on this survey's results, there is little indication that French firms are poised to catch up in AI use. The reported share of AI investment in total planned investment over the next year is 7.2% for French firms, compared with 9.1% for the euro area. In the data AI investment tends to be higher for firms with a high current level of AI intensity, which suggests that adoption gaps are likely to widen over time. Chart 3 documents this relationship at the country-level, plotting the average country

planned AI investment share against the share of firms with current moderate or significant use of AI. As AI adoption accelerates and remains uneven across firms and countries, these gaps may further widen and amplify economic disparities.

Chart 3. AI Investment Share by Firms' Existing AI Intensity in Twelve Euro-Area Countries



Source: ECB, 2025Q4 SAFE survey, authors computation
Note: The figure plots the country-level average AI investment share (investment in AI as a share of total investment) against the share of firms with moderate or significant use of AI.

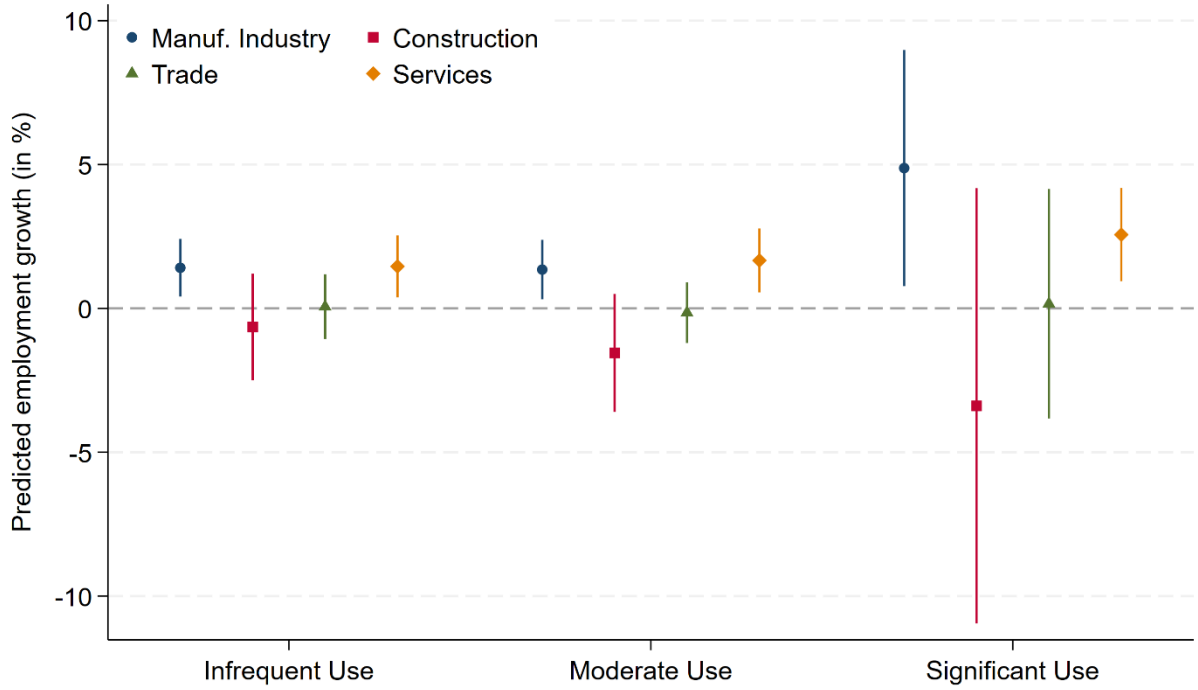
In 2025Q2, the same survey asked firms about their AI investment share over the preceding 12 months. At that time, the weighted average share was 1.8%, rising to 9.1% today. The 7.3 percentage point increase is driven by both the extensive and intensive margins of investment. The share of firms that invest in AI has risen from 30% to 79% (extensive margin), while among firms that invest in AI technologies, the average AI investment share has risen from 5.9% to 11.6% (intensive margin). These patterns are similar in France and the euro area. Aggregating these shares at the country level and computing the correlation between past investment declarations and future investment plans yields 55%, suggesting that countries that invested more in AI previously also plan to invest more now. This pattern is consistent with widening disparities in AI adoption across countries.

What can we expect from the use of AI for the labour market and inflation in the euro area?

A common concern is that increased AI use substitutes for labour and leads to job losses. However, the survey, which includes firms' expectations for selling prices and wages, provides little evidence to support this view. In the manufacturing industry and services, firms that use AI more intensively tend to exhibit higher expected employment growth, while in construction and trade there is no clear

relationship (Chart 4). These findings are based on within-country and within-sector variation in AI use across firms, thereby controlling for differences in country- or industry-level economic conditions.

Chart 4. Use of AI and Employment Growth by Sector in the euro area



Source: ECB, 2025Q4 SAFE survey, authors computation
Note: This figure reports the regression coefficients (symbol) and confidence intervals (bars) from four separate estimations, one for each sector (manufacturing industry, construction, trade, services). We regress predicted 1-year future employment growth on three AI-use dummies (infrequent, moderate, and significant), while controlling for country and firm-size fixed effects. Firms reporting no AI use serve as the reference category, so the coefficients represent differences in employment growth relative to that group. Large firms are excluded due to missing sectoral information.

However, these findings should be interpreted with caution, as AI use is not exogenous and other factors correlated with AI adoption may also affect firm employment and price growth, meaning the results are purely descriptive rather than indicative of a causal effect. Nonetheless, our findings are consistent with Aghion et al. (2025), who examine the relationship between AI adoption and employment at the firm level using French data from the *Information and Communication Technologies in Business* survey (Insee, 2021) for 2018–2020. They show that AI-adopting firms tend to be larger, more productive, and concentrated in IT and scientific activities. Importantly, AI adoption is positively associated with firm-level employment growth, supporting the idea that productivity gains from AI enable firms to expand and increase labour demand. Similar evidence is found by Aldasoro et al. (2026), who use matched EIBIS-ORBIS data on over 12,000 non-financial firms across the European Union to show that AI adoption positively affects both productivity and employment. The consequences for aggregate labour demand are, however, less clear, as firms adopting AI might expand at the expense of other firms that fail to do so.

If firms are using AI for process innovation, productivity gains may follow. A key question is who benefits from these gains: firms, workers or consumers. So far, based on the SAFE survey, we observe no relationship between AI use and future price growth, suggesting that firms do not plan to pass on

potential productivity gains to consumers through lower prices. In contrast to Falk and Nagengast (2026), who find that German firms expect wages to rise with the adoption of generative AI, we find no evidence that wage expectations differ across firms with greater AI use. Taken together, this suggests that to the extent that higher AI use boosts productivity, these gains will likely lead to increased firm profits in the short run.

To provide additional insights on the type of technologies considered (e.g., generative and non-generative AI, robotics, etc.) and on the direct expectations of firms with respect to the impact of AI (e.g. on their productivity or employment), a survey of a large sample of French firms should be carried out by Banque de France in the coming months. – stay tuned!