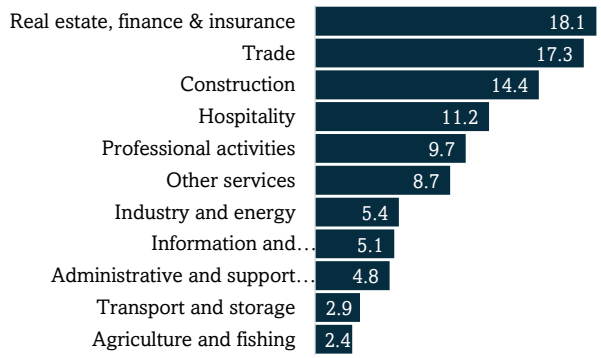
AI and employment in Spain: less concentration, more regional spread

In 2024, the total number of jobs highly exposed to AI stood at 11.2 million, up 600,000 from 2023. Employment dynamism is concentrated in less exposed occupations, whereas AI spreading out around the country. The transition requires active policies to accompany this transformation.

Commercial companies:

In April, 11,794 commercial companies were incorporated in Spain, representing a 0.3% increase compared to the same month in 2024. The subscribed capital dropped by 11.6% year-on-year, to an average of €36,187 per company (−11.9%). By sector, 18.1% of new companies operated in real estate, finance and insurance, followed by trade (17.3%). Meanwhile, 2,437 companies increased their capital, a 13.9% decrease compared to a year earlier, with a 32.3% drop in volume subscribed. Regarding company closures, 1,589 companies were dissolved in April, 10.5% fewer than in the same month of 2024. Most dissolutions were voluntary (84.4%), and the most affected sectors were trade (21%) and construction (17.8%).

Commercial companies created by main economic activity (%, April 2025)

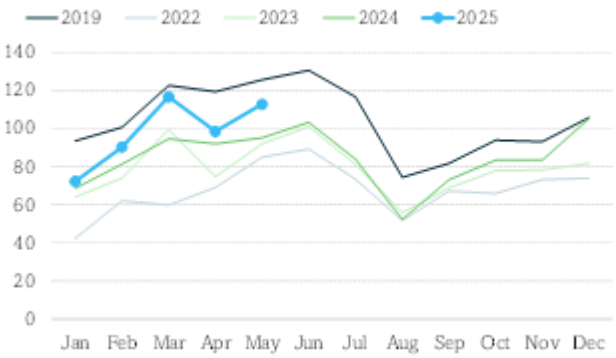


Source: Afi, INE

New registrations:

Growth in new passenger car registrations re-accelerated to 18.6% year-on-year in May to 112,820 units. So far this year, registrations are up 14%. The recent momentum reflects: (i) transformation in the composition of the new registrations, with hybrid and electric vehicles (which account for nearly 20% of sales) gradually replacing traditional internal combustion engines (contributing to delivery of the decarbonisation targets); and (ii) significant growth in new registrations in the parts of Valencia affected by last autumn's flash flooding.

Monthly trend in passenger's vehicle registrations (000 units)



Source: Afi, INE

…and what to watch for next week

From 16 to 20 June		
16 June	Service price index	1T-2025
17 June	Quarterly Labor Survey	1T-2025
20 June	Mortgages	April
	Service sector activity indicators	April
	Industry Turnover Index	April
	General Government Debt (advance)	April

AI and employment in Spain: less concentration, more regional spread

Last year, we analysed (here) the exposure of the different occupations to the challenge posed by AI in Spain. Given that this challenge lingers, now is a good time to take another look, using the most recent data available, at the situation in Spain: (i) how many jobs are most exposed to AI and how that number has trended in the last 12 months; (ii) how those exposed jobs break down sector-wise and regionally; and (iii) what are the implications for adapting the Spanish labour market for this disruptive technology, which is here to stay.

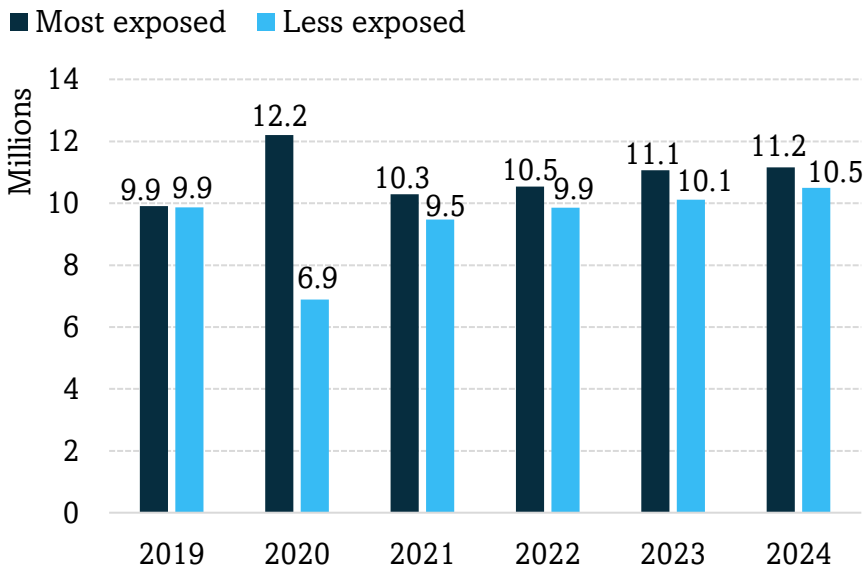
Jobs most exposed to AI

In 2024, the total number of jobs highly exposed to AI stood at 11.2 million, up 600,000 from 2023. That is the smallest annual increase since 2020

The jobs most exposed to artificial intelligence in Spain are concentrated in professional and intellectual jobs, technical support work and administrative occupations. Using the microdata from the annual labour force survey (LFS), we once again identify these groups as the most vulnerable to automation and the changes this technology is ushering in.

In 2024, the total number of jobs highly exposed to AI stood at 11.2 million, up 96,000 from 2023. That annual increase is the smallest annual increase since 2020 and contrasts with the trend in the least exposed occupations, which number 10.5 million (Exhibit 1).

Exhibit 1. Jobs with above- and below-average exposure to AI in Spain (million), 2019-2024



Source: Afi, INE (annual LFS microdata)

Recent trend the jobs most exposed to AI

The trend in the number of jobs most exposed to AI has changed course with respect to prior years. Whereas during the pandemic and early years of the recovery, the most exposed professions were more dynamic and resilient, thanks partly to growth

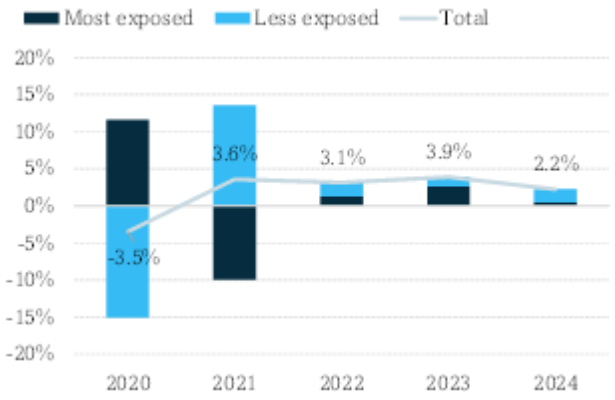
On a cumulative basis, the volume of jobs most exposed to AI is currently 13% higher than in 2019

in specific sectors, such as the education and health sectors, the rate of growth in these occupations slowed considerably in 2024.

In fact, the jobs least exposed to AI were more dynamic in 2024: 2.2% of total growth in employment is explained by these professions, compared to 0.2% in the case of the most exposed jobs (Exhibit 2).

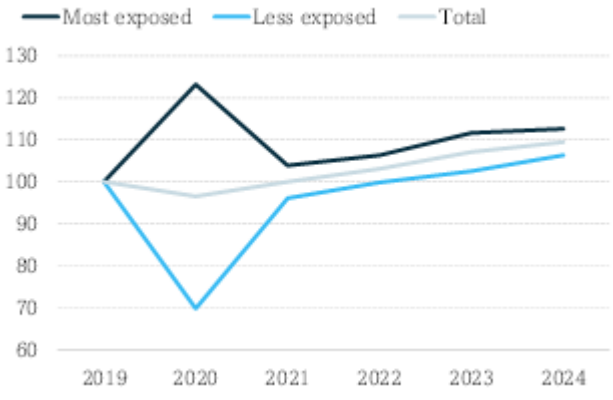
On a cumulative basis, the volume of jobs most exposed to AI is currently 13% higher than in 2019, albeit with momentum waning in favour of the jobs least affected by automation in the last two years. Thanks to the momentum in both categories, the number of people in work in Spain in 2024 was 7.1% above pre-pandemic levels (Exhibit 3).

Exhibit 2. Jobs with above- and below-average exposure to AI in Spain (contribution to the YoY change in total employment), 2019-2024



Source: Afi, INE (annual LFS microdata)

Exhibit 3. Jobs with above- and below-average exposure to AI in Spain (rebased: 100 = 2019), 2019-2024



Source: Afi, INE (annual LFS microdata)

The sector breakdown continues to reveal concentration in exposure to AI in knowledge-intensive sectors of the economy, although in 2024 certain specialist industrialised activities also presented higher AI penetration.

Sector breakdown of the jobs most exposed to AI

By area of economic activity, the highest concentration of jobs exposed to AI continues to be observed in knowledge-intensive and data-processing sectors, such as financial, legal and accounting services and, especially, programming and IT services, where virtually all employment is considered highly exposed. These sectors already topped the ranking in 2023 and continue to account for significant share of exposure to AI in the overall Spanish economy.

The main development in 2024 is that, compared to stability in the sectors that are more exposed, there has been a slight decrease in the percentage of job holders exposed to AI in certain technical service areas and creative activities, where until 2023 exposure had been systematically topping 90%. On the other hand, other industrial sectors, such as the manufacture of electronic, optical and pharmaceutical products, have gained share, etching out a partial shift in exposure towards certain high-tech niche manufacturing activities (Exhibit 4).

This pattern suggests that the spread of AI, far from limited to professional services, is beginning to reach more specialised areas of the manufacturing sector where the automation of cognitive and process control tasks is taking hold. Although services continue to account for the bulk of jobs more exposed to AI, in 2024 we are beginning to see this phenomenon having more of an influence in high-tech areas of the manufacturing sector.

Exhibit 4. Jobs with above-average exposure to AI by sector in Spain (% of total job holders in each sector and annual change 2023 - 2024, pp)

Source: Afi, INE (annual LFS microdata)

Although the regional contrasts persist, the AI phenomenon is beginning to spread further afield, helping to reduce the enormous digital gap between regions

Regional breakdown of the jobs most exposed to AI

The regional breakdown of the jobs most exposed to AI continues to echo the structural differences in the productive landscape. In 2024, Madrid, Catalonia, the Basque region, Navarre and, for the first time, Cantabria, ranked above the national average in terms of the percentage of highly exposed jobs (Exhibit 5). In the case of Cantabria, its entry into this group is not attributable to a significant increase in exposure in absolute terms, but rather a slight drop in the national average, so displacing the relative threshold.

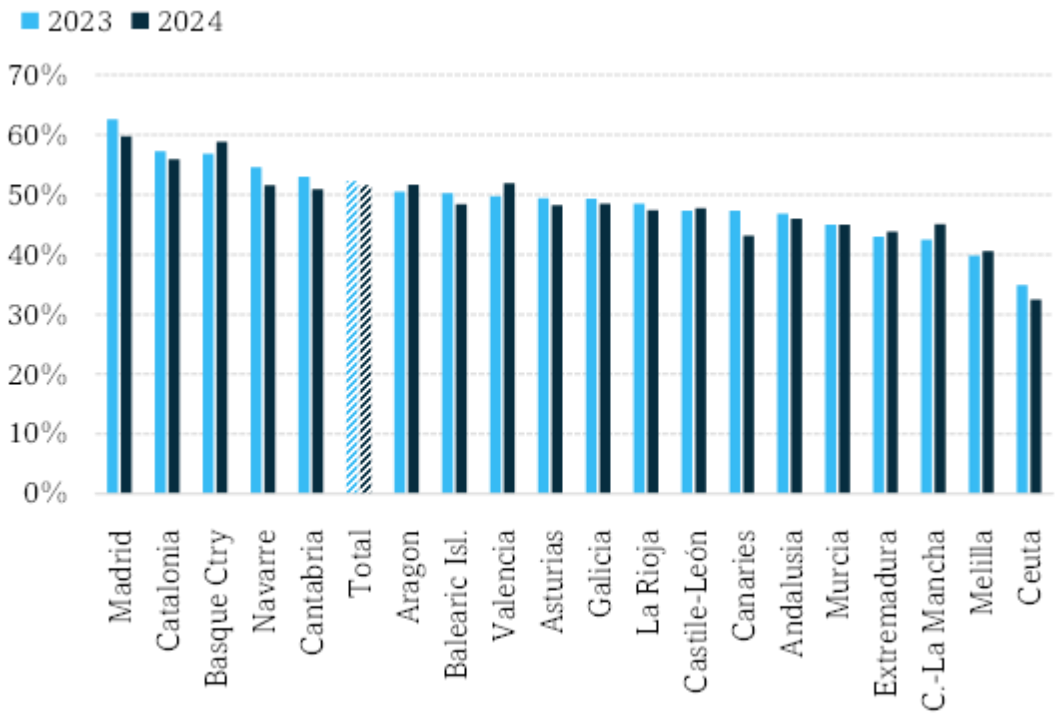
Among the regions that traditionally top this ranking, Madrid and Catalonia lost a little share by comparison with 2023. This may be related with a shift in the

composition of these regions' employment towards less exposed jobs or with more diversified demand for labour. In contrast, the Basque region recorded a net increase in the share of exposed jobs, consolidating its position as a technology hub highly intensive in professional service and technical jobs.

Elsewhere, the numbers also reveal a relative increase in exposure in traditionally laggard regions, such as Castile-La Mancha, Extremadura and Valencia, which reported moderate increases with respect to 2023. Although they remain below the national average, the pattern suggests that AI is beginning to spread beyond the main economic poles, possibly due to greater use of AI in specific sectors or the knock-on effects of digitalisation policies.

This panorama suggests that although the regional contrasts persist, the AI phenomenon is beginning to cast its net wider, helping to reduce the enormous digital gap that separates certain regions from the frontrunners in this particular race. This implies both challenges and opportunities in terms of adaptation and investment that all the regions should pay attention to in the context of the European funds.

Exhibit 5. Jobs with above-average exposure to AI by region (% of total jobs in each region), 2023-2024



Source: Afi, INE (annual LFS microdata)

Employment dynamism is concentrated in

The recent trend in the number of jobs most exposed to AI in Spain points to a new equilibrium. Although exposure remains concentrated in knowledge-intensive sectors and regions where advanced sectors account for high shares of employment,

less exposed occupations, whereas AI spreading out around the country. The transition requires active policies to accompany the transformation already underway.

the 2024 numbers reveal less concentration than in prior years. Slower growth in the more exposed jobs (coupled with faster growth in the least exposed jobs) suggests a possible transition in the way in which AI is reconfiguring the labour market and has important implications for the technology adoption strategy.

We are also seeing a degree of regional convergence, marked by relative increases in traditionally less exposed regions, thanks to capitalisation on investment opportunities and the strategic commitment on display in certain regions of Spain. This combination of factors suggests that the labour transformation process is gaining structural depth and regional reach, albeit neither uniform nor free from risks. Making the most of these dynamics will require active and differential policies focused on nurturing talent, fostering innovation and ensuring an inclusive transition that does not widen existing gaps.

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