



EU companies top US and China counterparts in R&D investment growth, breaking decade-long trend

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Europe's industry has increased its investment in research and development (R&D) by 9.8% in 2023, surpassing the growth of corporate R&D investment in the US (+5.9%) and China (+9.6%) for the first time since 2013, according to the new edition of the [EU Industrial R&D Investment Scoreboard](#) published today. In 2023, the EU was second globally in R&D private investment (18.7%), trailing the US (42.3%), but ahead of China (17.1%), Japan (8.3%) and countries in the rest of the world (13.6%). Despite slowing global R&D growth (+7.8% vs. +12.6% in 2022), the top 2000 companies invested a record €1257.7 billion on R&D in 2023. The top 50, among them 11 EU companies, contributed 40.1% of investments, revealing a strong concentration of R&D in the biggest players.

Research and innovation (R&I) will be at the centre of the EU's economy in the coming years, aimed at boosting innovation and scientific excellence in the race to a clean and digital economy, and contributing to the EU's sustainable competitiveness and prosperity.

This year's Scoreboard reaffirms that, while European companies are relevant global players, the industrial structure explains the innovation gaps with main competitors. Moreover, the EU must further boost private R&I investments, develop key sectors, such as Information & Communication Technologies (ICT) and health, address disparities among Member States, and promote technology deployment and the creation and growth of EU-based players.

EU leads R&D investments in automotive, which together with ICT and health drive global R&D growth

In the past decade, four sectors – software, ICT hardware, health, and automotive – have accounted for more than three-quarters of global R&D investment. The ICT software sector has grown the fastest across the world, with a 10-year compound annual growth rate of 13.3%, followed by health (7%), ICT hardware (6.9%) and automotive (6.3%). R&D investments in ICT and health are now slowing down from their post-COVID-19 surge.

In the **automotive sector**, a stronghold for the EU, companies headquartered in the EU accounted for 45.4% of global R&D investment of the sector in 2023 and invested over twice as much as their US and Japanese peers, and more than three times as much as Chinese competitors. On the other hand, the R&D investment of EU **ICT software** companies remained marginal on the global scale, whereas US-based firms constitute 70% of the sector's global R&D and China has established significant R&D-investing companies. Companies from the US also account for 43.3% of the total R&D of the **ICT hardware** sector, where large players from the Republic of Korea and Taiwan are gaining global relevance in semiconductor manufacturing.

At the same time, the **health sector** has the largest number of companies in the top 2000, with 437 companies, including smaller biotech ones. Among them, 238 US-based companies are leading in **health R&D** (52% of global total), while the number of Chinese companies in the health sector has increased from 13 to 63 over 10 years, closing in on the EU (64 firms in 2023). Global investment in the **energy sector** has seen a 21% increase in 2023 to €23.8 billion, surpassing the aerospace and defence and just below the chemicals sector.

A closer look at the EU

Spread across 19 Member States, the top 800 companies based in the EU invested €247.7 billion in R&D in 2023, growing by 8.7% from the previous year. The automotive sector leads the EU-800 list, accounting for 34.2% of EU corporate R&D investments, followed by the health sector (19.3%), ICT hardware (14%) and ICT software (7.8%). Some of the EU companies in the semiconductor, automotive components, and biotech/pharma sectors have seen extraordinary

increases in R&D investment, growing between two to fifty times over the past decade. Such investment increases suggest ongoing diversification and significant growth potential in these areas.

Among the top EU-800 companies, there are 99 **small and medium-sized businesses (SMEs)** with fewer than 250 employees. Most of them (74) are in the health sector and are based in Sweden, France, Denmark, and Germany. French SMEs lead in R&D investment (34% of the total), followed by Sweden (21.3%) and the Netherlands (16.6%). These SMEs invested €2.4 billion in R&D in 2023, a 3.7% increase compared to the previous year.

Lower performing research and innovation countries, the so-called **widening countries**, are less represented in the Scoreboard ranking. In 2023, of the 2000 top corporate R&D investors in the world, only four have headquarters in one of the EU 15 widening Member States (one each in Portugal, Hungary, Slovenia, and Malta). Over half of the 14000 subsidiaries of Scoreboard companies in EU widening countries are in Czechia (34.1%) and Poland (16.6%), revealing the importance of these top innovators headquartered in other EU countries for some of the widening countries.

Background

The EU Industrial R&D Investment Scoreboard has been published annually since 2004. The 2024 Scoreboard provides economic information from the latest financial accounts (Financial Year 2023) of the world's top 2000 R&D investors, as well as the top 800 companies based in the EU. These companies account for 85-90% of global private R&D funding.

The Scoreboard has become a reference for analyses and data in science, industry and policymaking, with major publications referring to its findings, such as the recent [report by Mario Draghi - The future of European competitiveness](#), the report [Align, act, accelerate](#), as well as various policy documents in the past 20 years. The Scoreboard data is made available to the public, in accordance with the [Commission's open science practice](#).

For more information

[2024 EU Industrial R&D Investment Scoreboard](#)

JRC Science Hub news - [EU companies lead global R&D investment growth, breaking decade-long trend](#)

[Economics of Industrial Research and Innovation](#)

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Quote(s):

"Research and innovation investments will determine tomorrow's economy, industry and competitiveness. We count on the contribution of European corporate leaders to help close our innovation gap with other world regions. Solid innovation ecosystems will boost our start-ups and SMEs, and will contribute to our shared prosperity, building on our robust industrial base."
Ekaterina Zaharieva, Commissioner for Startups, Research and Innovation - 18/12/2024

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