

27 November 2024

R&D Statistics

Year 2023. Definitive data

Main results

- Internal R&D expenditure increased by 15.8% in 2023, reaching 22.379 billion euros (1.49% of GDP).
- In per capita terms, internal R&D expenditure amounted to 460.2 euros per inhabitant.

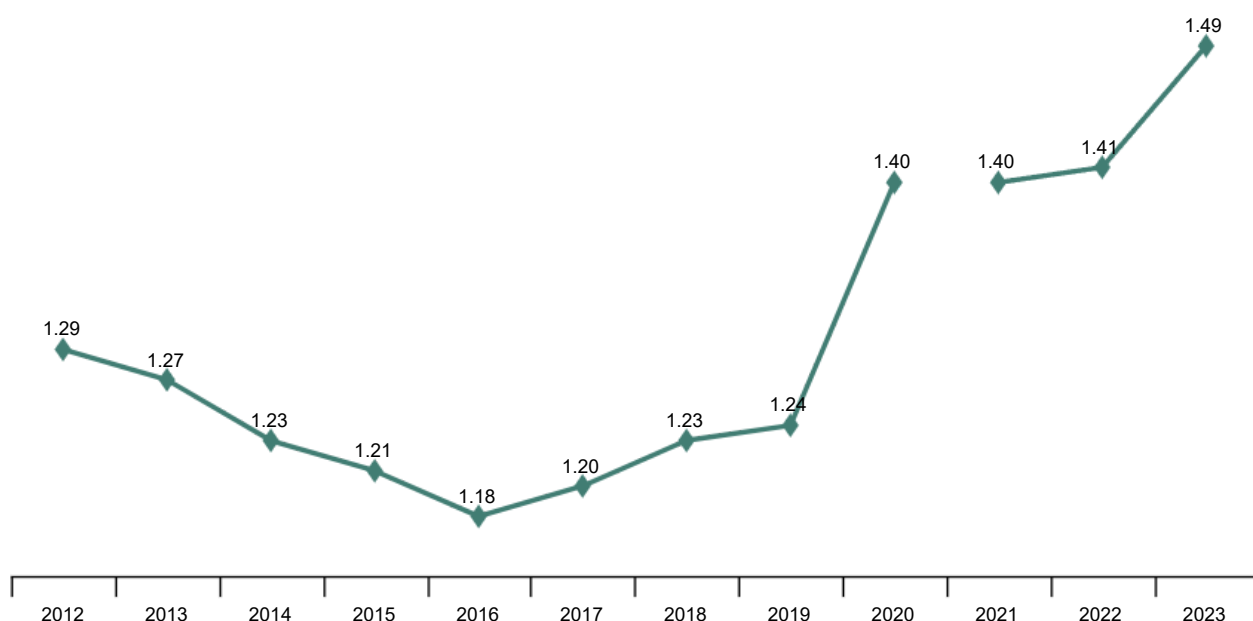
More information

- [Detailed results](#)
- [Infographic R&D in Spain](#)

Internal Research and Development (R&D) expenditure amounted to 22,379 millions of euros in 2023, representing an increase of 15.8% over the previous year. This expense accounted for 1.49% of the Gross Domestic Product (GDP).

Evolution of expenditure on internal R&D as a percentage of GDP. National Total (*)

Percentage



(*) Break in the series due to the change in the concept of "company" in 2021.

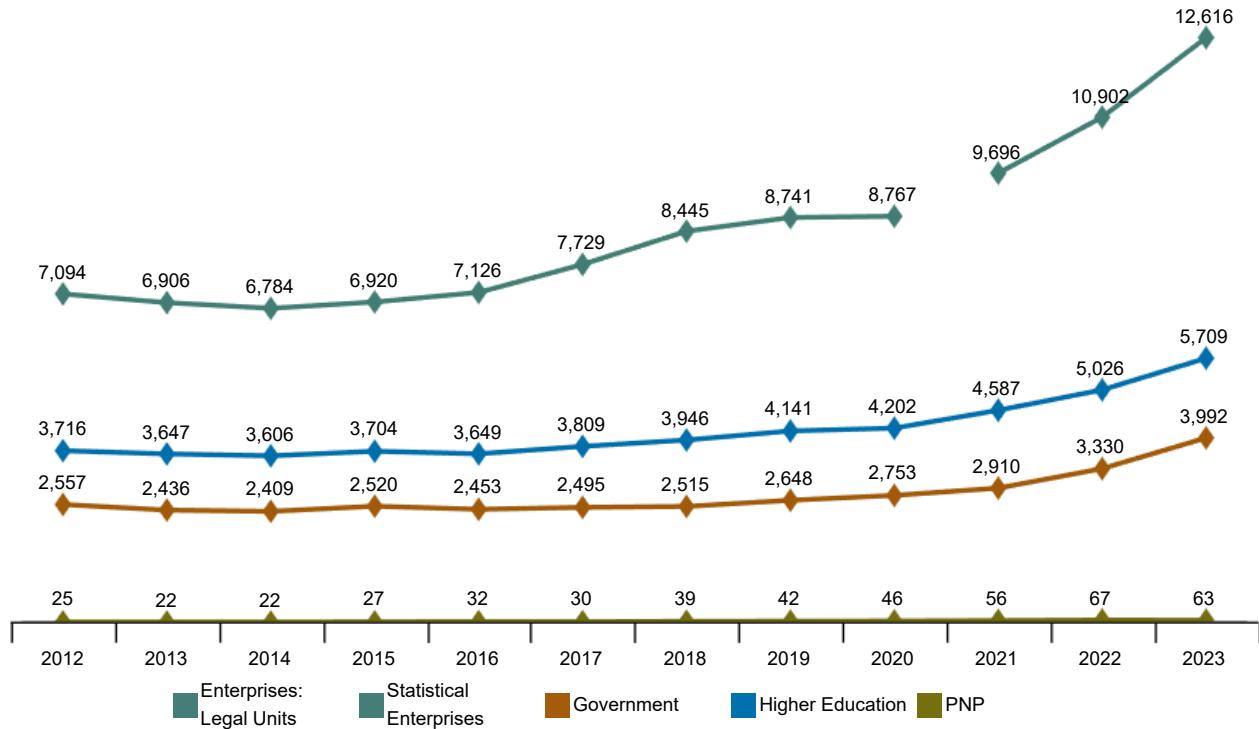
The Business sector had the highest percentage of internal R&D expenditure, with 56.4% (0.84% of GDP). It was followed by the *Higher Education* sector, with 25.5% (0.38% of GDP).

In turn, internal R&D expenditure in the *General Government* sector accounted for 17.8% of domestic expenditure (0.27% of GDP). The remaining 0.3% was from the Non-Profit Private Institutions (NPI) sector.

R&D expenditure increased by 15.7% compared with the previous year in the *Business* sector, 13.6% in *Higher Education* and 19.9% in *General Government*.

Evolution of internal R&D expenditure. Implementing Sectors (*)

Million of euros



(*) Break in the series due to the change in the concept of "company" in 2021.

Funding of internal R&D activities

Internal R&D activities were mainly financed in 2023 by the Business sector (48.0% of the total) and the General Government (38.3%).

By implementing sectors, internal R&D expenditure in the General Government and Higher Education was mainly financed by the General Government. On the other hand, 80.5% of the funding of internal R&D expenditure in the Business sector came from the sector itself.

Internal R&D expenditure by implementing sector and by source of funds. Year 2023

Thousands of euros

Implementing sector	Total	Source of funds				
		General Government	Higher Education	Companies	SSPPI	Rest of the world
TOTAL	22,379,154	8,570,453	905,486	10,738,158	145,983	2,019,073
General Government	3,992,243	3,330,449	8,101	251,314	48,298	354,081
Higher Education	5,708,661	3,993,503	895,445	298,919	66,883	453,913
Companies	12,615,739	1,238,707	1,667	10,157,751	20,49	1,197,125
SSPPI	62,511	7,795	274	30,175	10,313	13,954

Personnel employed in internal R&D


A total of 282,415 full-time equivalent (FTE) persons were engaged in internal R&D activities in 2023, representing 13.3 per thousand of the total employed population and an increase of 7.2% over the previous year.

Researchers totalled 175,044 full-time equivalent persons, which accounted for 8.3 per thousand of the total employed population and an increase of 8.2% with respect to 2022.

40.9% of full-time equivalent in-house R&D personnel were women. The highest percentages of female participation were in General Government (54.5% of total employment) and in the SSPI (52.5%).

R&D personnel by implementing sector, occupation and gender. Year 2023

In full-time equivalence



Implementing sector	Total personnel			Research personnel		
	Total	Variation rate	% Women	Total	Variation rate	% Women
TOTAL	282,415.2	7.2	40.9	175,043.7	8.2	39.6
General Government	47,755.8	6.2	54.5	25,337.7	6.7	50.5
Higher Education	98,957.2	7.5	46.6	77,973.5	7.4	43.7
Companies	134,793.1	7.4	31.9	71,234.5	9.7	31.2
SSPPI	909.1	2.3	52.5	498.0	-5.8	49.2

Expenditure and personnel in internal R&D by Autonomous Community

The autonomous communities with the highest growth rates in internal R&D spending in 2023 were Galicia (28.2%), Principado de Asturias (28.1%) and Illes Balears (22.4%).

In contrast, internal R&D expenditure saw the smallest increases in the autonomous city of Melilla (4.2%), in Castilla-La Mancha (6.0%) and in the autonomous city of Ceuta (6.5%).

Internal R&D expenditure and total FTE personnel by autonomous community. Year 2023

Thousands of euros



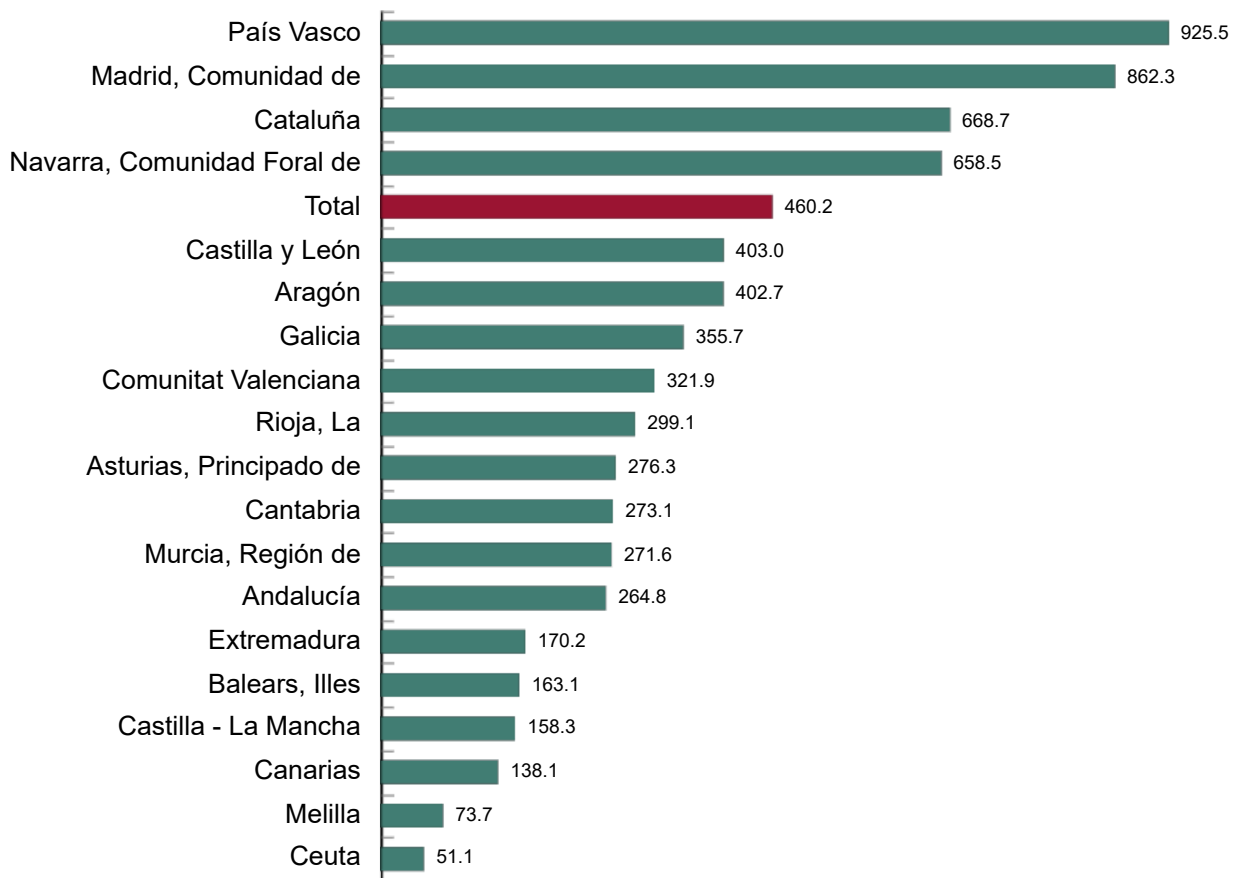
	Internal R&D expenses			Total internal R&D personnel in FTE		
	Total sectors	Distribution of expenditure	Annual rate	Total sectors	Personnel distribution	Annual rate
TOTAL	22,379,154	100.0	15.8	282,415.2	100.0	7.2
Andalucía	2,285,666	10.2	20.9	32,473.9	11.5	13.9
Aragón	543,624	2.4	21.6	8,057.9	2.9	10.1
Asturias, Principado de	278,98	1.2	28.1	4,714.6	1.7	30.3
Balears, Illes	201,008	0.9	22.4	3,525.9	1.2	8.9
Canarias	309,304	1.4	13.9	4,644.0	1.6	10.1
Cantabria	161,454	0.7	16.6	2,526.7	0.9	11.8
Castilla y León	963,634	4.3	11.1	11,740.5	4.2	0.3
Castilla-La Mancha	332,831	1.5	6.0	3,943.4	1.4	-11.4
Cataluña	5,364,909	24.0	11.1	60,172.5	21.3	2.4
Comunitat Valenciana	1,713,279	7.7	15.3	25,289.9	9.0	10.2
Extremadura	179,329	0.8	13.5	2,654.6	0.9	-10.9
Galicia	962,801	4.3	28.2	13,856.3	4.9	12.2
Madrid, Comunidad de	6,039,560	27.0	17.7	69,885.8	24.7	8.4
Murcia, Región de	426,454	1.9	10.1	7,346.2	2.6	2.6
Navarra, Comunidad Foral de	446,706	2.0	9.0	5,920.9	2.1	10.7
País Vasco	2,062,113	9.2	16.3	23,996.6	8.5	6.9
Rioja, La	96,928	0.4	17.7	1,413.1	0.5	-4.0
Ceuta	4,252	0.0	6.5	91.0	0.0	44.2
Melilla	6,321	0.0	4.2	161.3	0.1	138.6

In per capita terms, internal R&D expenditure amounted to 460.2 euros per inhabitant in 2023. The communities with the highest expenditure were the País Vasco (925.5 euros), Comunidad de Madrid (862.3) and Cataluña (668.7).

In contrast, those that recorded the lowest expenditure per inhabitant were the autonomous cities of Ceuta (51.1 euros), Melilla (73.7), and Canarias (138.1).

Internal R&D expenditure per inhabitant and by autonomous communities. Year 2023

Euros



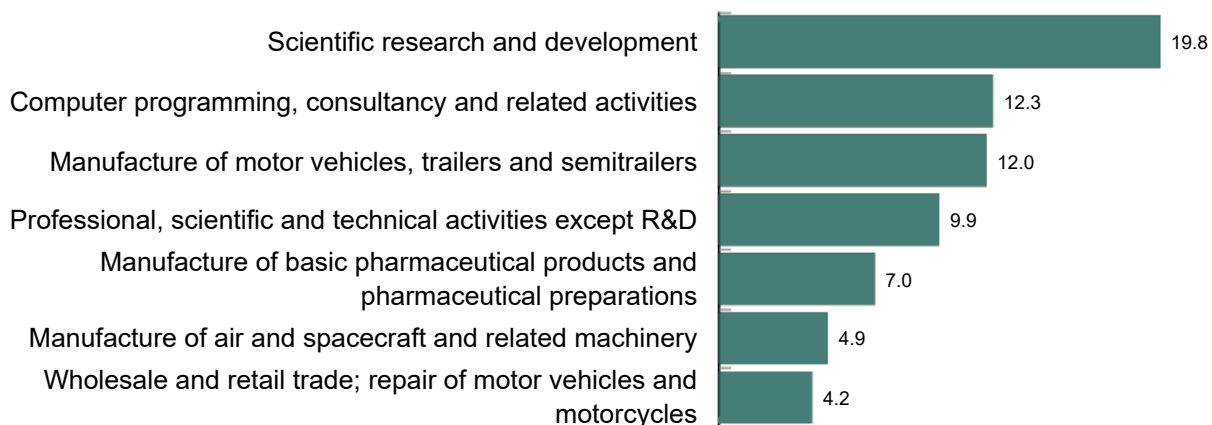
Distribution of internal R&D expenditure by branches of activity

Companies in the Services sector accounted for 53.3% of expenditure on business internal R&D in 2023, while those in the Industry sector accounted for 45.0%.

By branches of activity, R&D Services (with 19.8% of total spending), Programming, consulting and other IT activities (12.3%) and Motor vehicles (12.0%) stood out.

Distribution of internal R&D expenditure by branch of activity. Year 2023

Percentage



Data revisions and updates

The data published today are final. All the results of this operation are available at [INEbase](#).

Methodological note

The main objective of the Statistics on scientific research and technological development (R&D) activities is to measure the economic and human resources devoted to research by all sectors of the economy (companies, general governments, higher education and non-profit private institutions) in order to:

- Provide a tool for the management, planning, decision-making and control of national science policy.
- Provide statistical authorities with the information they request, obtained according to international standards that allow comparability across countries.

Type of survey: annual continuous survey.

Population scope: companies, general government, universities and higher education centres and non-profit private institutions engaged in R&D activities.

Geographical scope: the whole national territory.

Results reference period: year preceding the year of data collection.

Information reference period: for expenditure: calendar year; for personnel: annual average and full-time equivalent (people/year).

Sample size: 45,000 companies, 531 public administration centres (including public hospitals), 90 universities, 133 higher education centres and 175 private non-profit institutions.


Sample type: exhaustive for directory units and random for companies that are not included.

Collection method: mixed system with mailshots and interviewer participation.

More information on the [methodology](#) and the [standardised methodological report](#).

INE statistics are produced in accordance with the Code of Good Practice for European Statistics. More information on [Quality at INE](#) and [Code of Best Practices](#).

For further information see [INEbase](#)

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