

**R&D Statistics**  
Year 2020. Definitive data

**Internal R&D expenditure increased by 1.3% in 2020 and reached 15,768 million euros, 1.41% of GDP.**

**In per capita terms, spending on internal R&D amounts to 329 euros per inhabitant**

Internal Research and Development (R&D) expenditure amounted to 15,768 million euros in 2020, representing an increase of 1.3% with respect to the previous year.

This expenditure represented 1.41% of the Gross Domestic Product (GDP), compared to 1.25% in 2019.

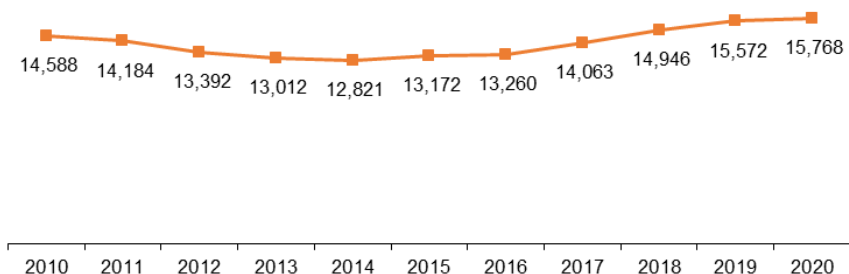
By implementing sector, the *Business* sector represented the highest percentage of *internal R&D* expenditure, with 55.6% (which meant 0.78% of GDP). It was followed by the *Higher Education* sector, with 26.6% (0.37% of GDP).

In turn, internal R&D expenditure in the *General Government* sector accounted for 17.5% of national expenditure (0.25% of GDP). The remaining 0.3% corresponded to the *Non-Profit Private Institutions* (NPI) sector.

Spending on R&D increased 0.3% compared to the previous year in the *Companies* sector, 1.5% in *Higher Education* and 4.0% in *General Government*.

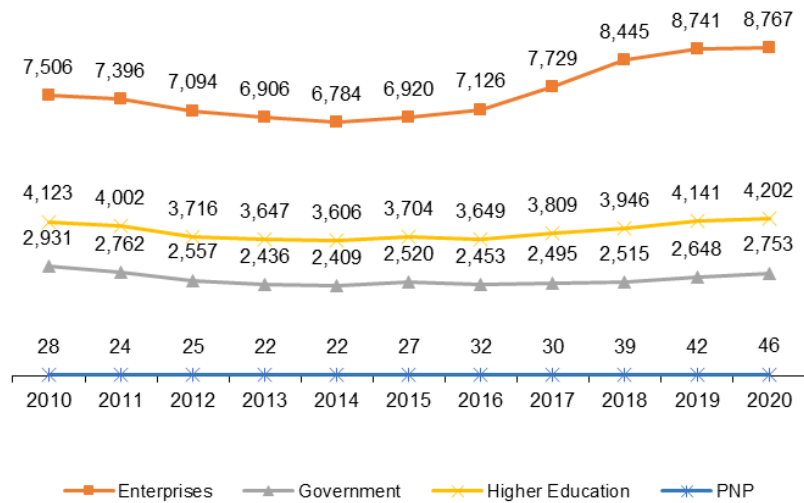
**Evolution of internal R&D expenditure. National total**

Millions of euros



## Evolution of internal R&D expenditure. Implementing Sectors

Millions of euros



## Funding of internal R&D activities

Internal R&D activities were mainly financed in 2020 by the *Business* sector (49.2% of the total) and the *General Government* (38.5%).

Funds from the Rest of the World (7.7%), from *Higher Education* (3.8%) and from IPSFL (0.8%) completed the funding.

By implementing sectors, internal R&D expenditure in the *General Government* and *Higher Education* was mainly financed by the *General Government* (79.8% and 72.1%, respectively). On the other hand, 83.2% of the financing 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 2020. Thousand euros

Execution sector	Total	Source of Funds				
		Govern- ment	Higher Education	Enterpri- ses	PNP	Rest of the World
<b>TOTAL</b>	<b>15,768,133</b>	<b>6,072,961</b>	<b>605,625</b>	<b>7,755,316</b>	<b>118,596</b>	<b>1,215,634</b>
Government	2,752,925	2,196,345	5,300	219,780	40,146	291,354
Higher Education	4,202,013	3,029,435	595,781	216,605	59,008	301,183
Enterprises	8,767,460	840,058	4,325	7,295,177	8,672	619,228
PNP	45,734	7,123	219	23,754	10,770	3,868

## Personnel employed in internal R&D

A total of 231,769 full-time equivalent persons were engaged in internal R&D activities in 2020, representing 12.1 per thousand of the total employed population and an increase of 0.2% over the previous year.

The group of researchers reached the figure of 145,372 full-time equivalent persons, which represented 7.6 per thousand of the total employed population and an increase of 1.0% with respect to 2019.

40.7% of full-time equivalent personnel in internal R&D were women. The highest percentages of female participation were in *General Government* (53.7% of total employment) and in the *IPSFL* (51.7%). In *Higher Education*, this percentage stood at 45.4%, whereas in the *Business* sector it was 31.7%.

## Personnel employed in R&D by implementing sector by occupation and sex

Full-time equivalence						
Execution Sector	Total personnel			Researchers		
	Total	Rate of Change	% Women	Total	Rate of Change	% Women
<b>TOTAL</b>	<b>231,769.1</b>	<b>0.2</b>	<b>40.7</b>	<b>145,371.5</b>	<b>1.0</b>	<b>39.9</b>
Government	42,160.4	1.9	53.7	22,526.8	1.7	50.3
Higher Education	84,324.6	1.5	45.4	67,211.8	0.9	43.1
Enterprises	104,727.8	-1.6	31.7	55,299.1	0.7	31.7
PNP	556.3	-0.3	51.7	333.8	8.1	50.8

## Expenditure and personnel in internal R&D by Autonomous Community

The autonomous communities with the highest growth rates in internal R&D spending in 2020 were Andalucía (5.8%), Región de Murcia (5.5%) and Comunidad de Madrid (3.7%).

On the other hand, those with the lowest growth rates in internal R&D spending were Extremadura (-10.0%), Aragón and Castilla y León (-5.3% in both).

## Internal R&D expenditure and total FTE personnel by Autonomous Community

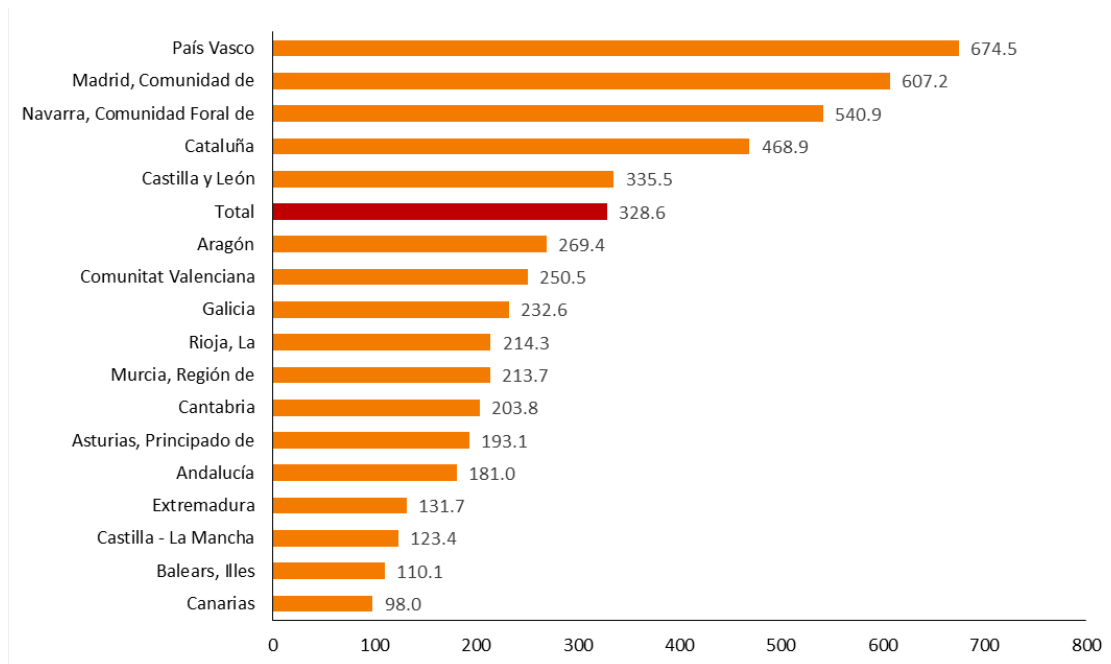
Comunidades autónomas	R&D Expenditures			Total R&D personnel in FTE		
	Total sectors	Distribu- tion Spen- ding	Annual Rate	Total sectors	Distribu- tion perso- nnel	Annual Rate
<b>TOTAL</b>	<b>15,768,133</b>	<b>100.0</b>	<b>1.3</b>	<b>231,769.1</b>	<b>100.0</b>	<b>0.2</b>
Andalucía	1,627,247	10.3	5.8	25,907.9	11.2	4.2
Aragón	339,438	2.2	-5.3	5,973.5	2.6	-4.7
Asturias, Principado de	193,658	1.2	-1.0	3,374.8	1.5	-9.1
Balears, Illes	137,698	0.9	2.6	2,776.6	1.2	-0.6
Canarias	217,808	1.4	-0.9	3,728.6	1.6	4.4
Cantabria	120,120	0.8	0.9	1,959.7	0.8	4.3
Castilla y León	758,475	4.8	-5.3	10,554.1	4.6	-0.4
Castilla-La Mancha	261,065	1.7	3.2	3,505.6	1.5	4.1
Cataluña	3,619,256	23.0	0.6	50,776.3	21.9	-2.6
Comunitat Valenciana	1,236,012	7.8	-2.2	20,608.3	8.9	-0.3
Extremadura	125,337	0.8	-10.0	2,647.0	1.1	2.9
Galicia	641,680	4.1	2.3	10,774.0	4.6	-2.8
Madrid, Comunidad de	4,252,947	27.0	3.7	57,171.4	24.7	2.9
Murcia, Región de	341,157	2.2	5.5	6,409.0	2.8	1.4
Navarra, Comunidad Foral de	366,353	2.3	3.0	4,758.2	2.1	-4.5
País Vasco	1,461,517	9.3	-0.9	19,517.0	8.4	-0.8
Rioja, La	64,412	0.4	-4.9	1,202.9	0.5	-4.6

Ceuta and Melilla data are not included because of statistical secret

The Autonomous Communities with the highest spending on internal R&D activities per inhabitant were País Vasco (674.5 euros), Comunidad de Madrid (607.2) and Comunidad Foral de Navarra (540.9).

On the contrary, those that registered the lowest expenditure per inhabitant were Canarias (98.0 euros), Illes Balears (110.1) and Castilla-La Mancha (123.4).

### Spending on internal R&D per inhabitant and by autonomous communities

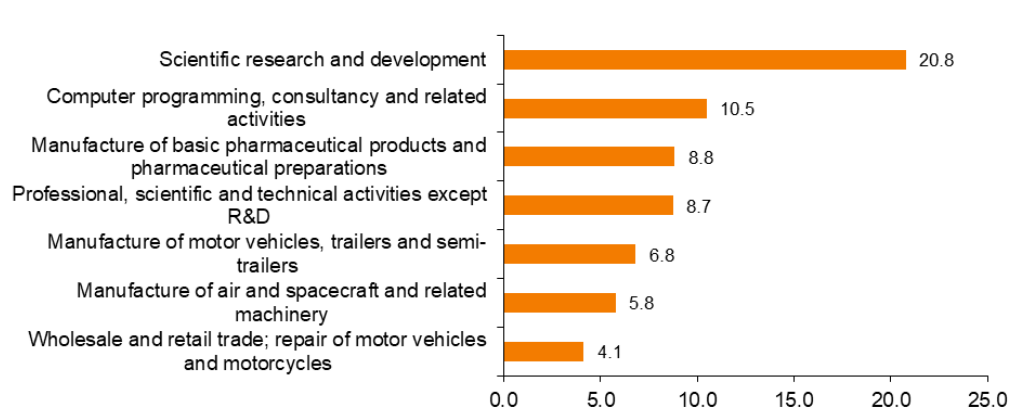


### Distribution of internal R&D expenditure by branch of activity

Companies in the *Services* sector accounted for 51.6% of expenditure on business internal R&D in the year 2020, while those in *Industry* sector accounted for 46.2%.

By activity branches, *R&D Services* (with 20.8% of total spending), *Programming, consulting and other IT activities* (10.5%) and *Pharmacy* (8.8%) stood out.

### Distribution of internal R&D expenditure by branch of activity



## Data Review and Update

The data published today are final. All results are available on INEBase.

## Methodological note

The main objective of the Statistic on scientific research and technological development (R&D) activities is to measure the economic and human resources allocated to research by all the economic sectors into which the economy is divided (companies, general government, higher education and private non-profit institutions) for the purpose of:

- To provide an instrument for the management, planning, decision-making and control of national science policy.
- To provide statistical bodies with the information they request, obtained in accordance with international standards that allow comparability between countries.

**Type of survey:** annual continuous survey.

**Population scope:** companies, public bodies, universities and higher education institutions and private non-profit institutions that carry out R&D activities.

**Geographical scope:** the entire national territory.

**Reference period of the results:** year prior to the year of data collection.

**Reference period of the information:** for expenditure, the calendar year; for staff, the annual average and full-time equivalence (persons/year).

**Sample size:** 45,000 companies, 537 public administration centres (including public hospitals), 83 universities, 120 higher education centres and 116 private non-profit institutions.

**Type of sampling:** comprehensive for directory units and by random sampling of non-included companies.

**Collection method:** mixed system with mail and interviewer participation.

For more information you can access the methodology and the standardized methodological report at:

[https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica\\_C&cid=1254736176754&menu=metodologia&idp=1254735576669](https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736176754&menu=metodologia&idp=1254735576669)

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