

**Statistics on R&D Activities**  
Year 2017. Provisional data

**Internal R&D expenditure increased by 6.0% in 2017 and reached 14,052 million euros, 1.20% of GDP.**

Internal Research and Development (R&D) expenditure amounted to 14,052 million euros in 2017, representing an increase of 6.0% with respect to the previous year.

This expenditure represented 1.20% of the Gross Domestic Product (GDP), compared to 1.19% in 2016.

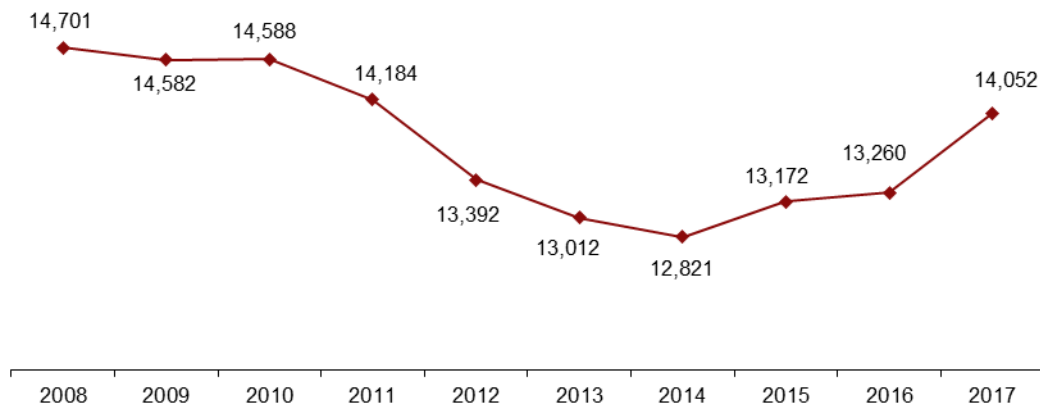
By implementing sector, the Business sector represented the highest percentage of internal R&D expenditure, with 54.9% (which meant 0.66% of GDP). It was followed by the Higher Education sector, with 27.1% (0.33% of GDP).

In turn, internal R&D expenditure in the General Government sector accounted for 17.8% of national expenditure (0.21% of GDP). The remaining 0.2% corresponded to the Non-Profit Private Institutions (NPI) sector.

Comparing R&D expenditure in 2017 with that of the previous year, it increased by 8.3% in the Business sector, 4.4% in the Higher Education sector and 1.7% in the General Government sector.

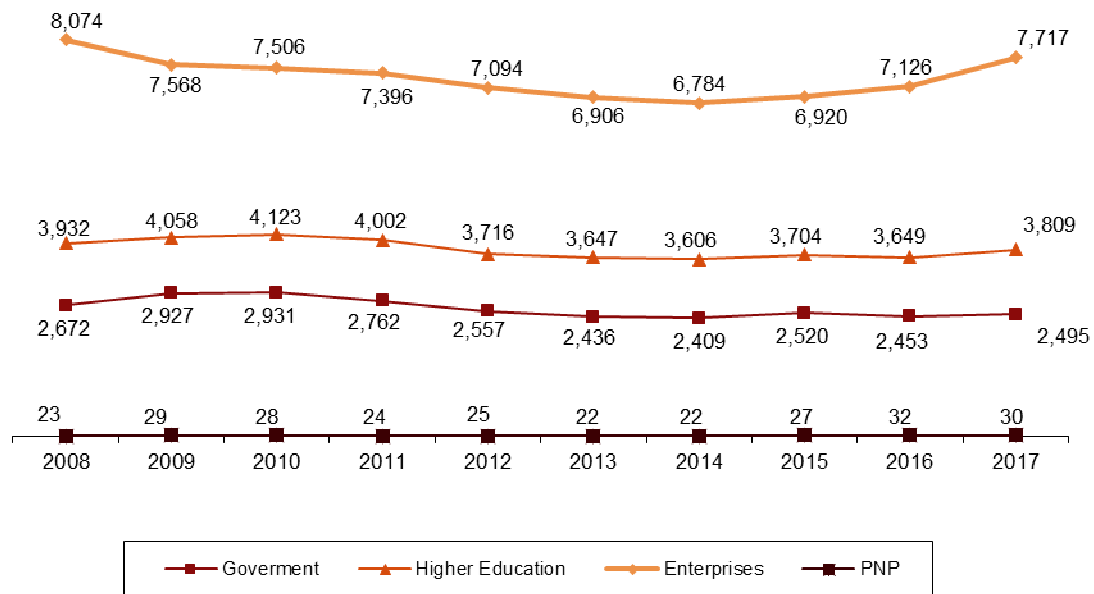
**Evolution of internal R&D expenditure. National total**

Million euros



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

Million euros



## Funding of internal R&D activities

Internal R&D activities were mainly financed in 2017 by the Business sector (47.7%) and the General Government (38.9%).

Funds from the Rest of the World (8.2%), from Higher Education (4.3%) 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 (82.6% and 71.6%, respectively).

On the other hand, 82.3% 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 2017. Thousand euros

Execution sector	Total	Source of Funds				
		Government	Higher Education	Enterprises	PNP	Rest of the World
TOTAL	14,051,633	5,471,009	607,435	6,708,993	110,381	1,153,815
Government	2,495,023	2,060,964	3,877	148,022	47,101	235,060
Higher Education	3,808,958	2,728,289	600,355	198,098	40,150	242,067
Enterprises	7,717,438	675,555	3,036	6,352,061	14,324	672,463
PNP	30,213	6,202	167	10,812	8,806	4,226

### Personnel employed in internal R&D

A total of 215,713.1 full-time equivalent persons were engaged in internal R&D activities in 2017, representing 11.5 per thousand of the total employed population and an increase of 4.8% over the previous year.

The group of researchers reached the figure of 133,194.5 full-time equivalent persons, which represented 7.1 per thousand of the total employed population and an increase of 5.2% with respect to 2016.

40.0% of full-time equivalent personnel in internal R&D were women. The highest percentages of female participation were in the NPI (53.1% of total employment) and in the General Government (52.0%). In Higher Education, this percentage stood at 44.4%, whereas in the Business sector it was 31.3%.

### Personnel employed in R&D by implementing sector by occupation and sex Year 2017. In full-time equivalent

Execution Sector	Total personnel			Researchers		
	Total	Annual rate	% Women	Total	Annual rate	% Women
<b>TOTAL</b>	<b>215,713.1</b>	<b>4.8</b>	<b>40.0</b>	<b>133,194.5</b>	<b>5.2</b>	<b>38.8</b>
Government	40,282.9	0.8	52.0	20,844.3	0.9	47.9
Higher Education	79,285.5	5.4	44.4	62,541.9	7.1	41.6
Enterprises	95,635.9	6.1	31.3	49,552.3	4.9	31.3
PNP	508.8	-12.3	53.1	256.0	-23.6	52.7

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

All Autonomous Communities increased their internal R&D expenditure in 2017 as compared with the previous year.

Those that registered the highest growth rates were Illes Balears (19.6%), Galicia (13.3%) and Principado de Asturias (13.0%).

In turn, the lowest increases were in Aragón, (0.8%) Cantabria (2.9%) and País Vasco (3.6%).

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

Year 2017. Thousand euros

Region (NUTS-2)	R&D Expenditures			Total R&D personnel in FTE		
	Total sectors	Distribution Spending	Annual rate	Total sectors	Distribution personnel	Annual rate
<b>TOTAL</b>	<b>14,051,633</b>	<b>100.0</b>	<b>6.0</b>	<b>215,713.1</b>	<b>100.0</b>	<b>4.8</b>
Andalucía	1,421,997	10.1	4.6	24,438.8	11.3	5.7
Aragón	312,636	2.2	0.8	5,745.8	2.7	2.5
Asturias, Principado de	182,371	1.3	13.0	3,264.2	1.5	4.4
Balears, Illes	113,142	0.8	19.6	2,203.7	1.0	9.9
Canarias	220,264	1.6	10.9	3,360.3	1.6	4.9
Cantabria	109,005	0.8	2.9	1,723.3	0.8	-6.2
Castilla y León	683,055	4.9	12.6	9,478.2	4.4	6.8
Castilla-La Mancha	228,433	1.6	5.6	3,132.0	1.5	-0.6
Cataluña	3,273,410	23.3	5.5	48,551.3	22.5	4.2
Comunitat Valenciana	1,080,464	7.7	4.1	19,127.0	8.9	2.1
Extremadura	114,014	0.8	7.5	2,041.3	0.9	8.2
Galicia	570,946	4.1	13.3	10,266.0	4.8	9.6
Madrid, Comunidad de	3,692,625	26.3	5.4	51,616.5	23.9	6.0
Murcia, Región de	280,089	2.0	4.1	6,002.4	2.8	3.3
Navarra, Comunidad Foral de	342,525	2.4	11.0	4,830.0	2.2	5.3
País Vasco	1,349,881	9.6	3.6	18,465.2	8.6	3.6
Rioja, La	74,150	0.5	10.1	1,404.1	0.7	1.5

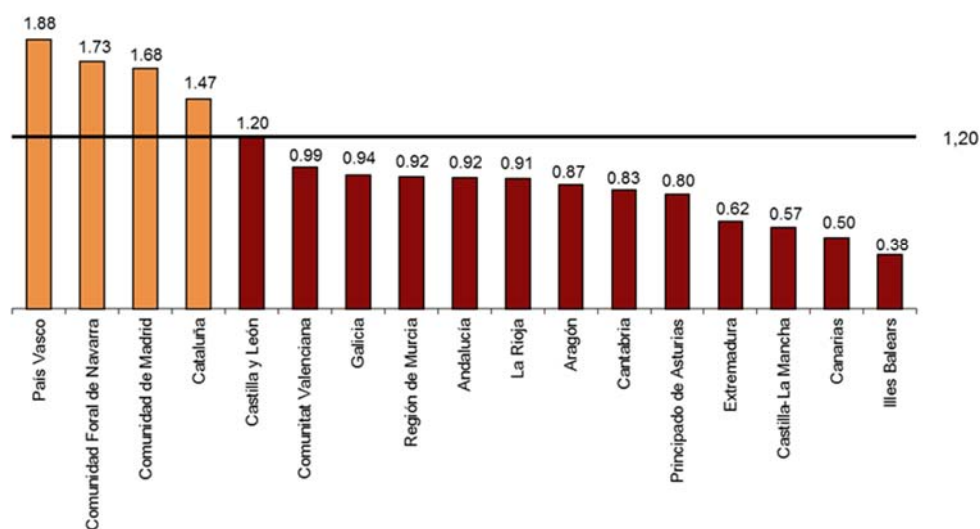
Data from the autonomous cities of Ceuta and Melilla are not provided for statistical confidentiality

The Autonomous Communities with the highest percentage of internal R&D expenditure over GDP were País Vasco (1.88% of GDP), Comunidad Foral de Navarra (1.73%) and Comunidad de Madrid (1.68%). These Autonomous Communities, together with Cataluña, were the only ones that surpassed the national average.

In contrast, those with the lowest percentages were Illes Balears (0.38% of GDP), Canarias (0.50%) and Castilla-La Mancha (0.57%).

### Internal R&D expenditure as a percentage of GDPmp by Autonomous Community

Year 2017. Percentage



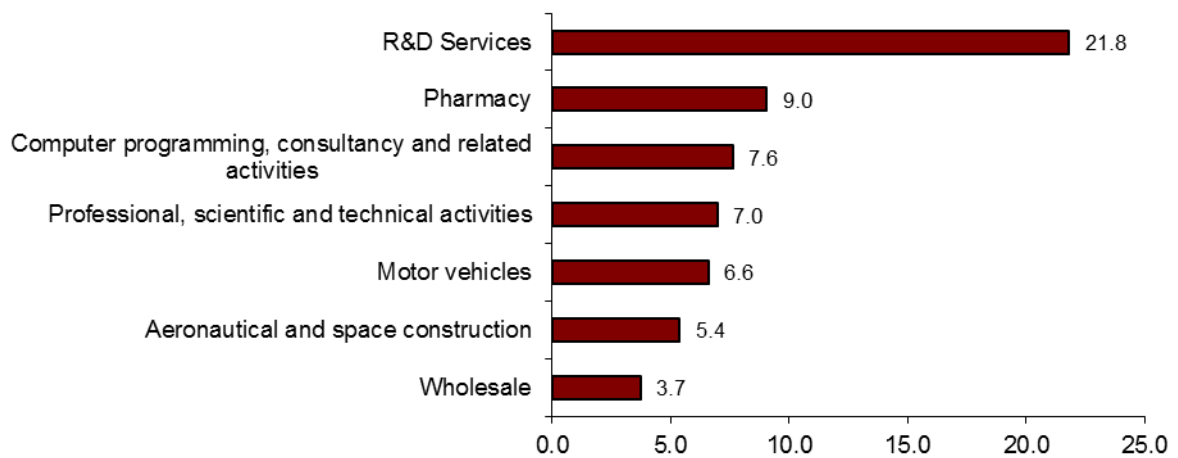
### Distribution of internal R&D expenditure by branch of activity

Companies in the *Services* sector accounted for 49.0% of expenditure on business internal R&D in the year 2017, while those in *Industry* sector accounted for 48.5%.

By branches of activity, noteworthy were *R&D Services* (with 21.8% of total expenditure), *Pharmacy* (9.0%) and Programming, consultancy and other computer activities (7.6%).

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

Year 2017. Percentage



## Review and update of data

The results published today are provisional. The final results will be published in the second quarter of 2019.

## 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, 115 higher education centres and 121 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/dynqs/INEbase/en/operacion.htm?c=Estadistica\\_C&cid=1254736176754&menu=metodologia&idp=1254735576669](https://www.ine.es/dynqs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736176754&menu=metodologia&idp=1254735576669)

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