

27 November 2019

Statistics on R&D Activities
Year 2018. Final data

Internal R&D expenditure increased by 6.3% in 2018 and reached 14.946 million euros, 1.24% of GDP.

Internal Research and Development (R&D) expenditure amounted to 14.946 million euros in 2018, representing an increase of 6.3% with respect to the previous year.

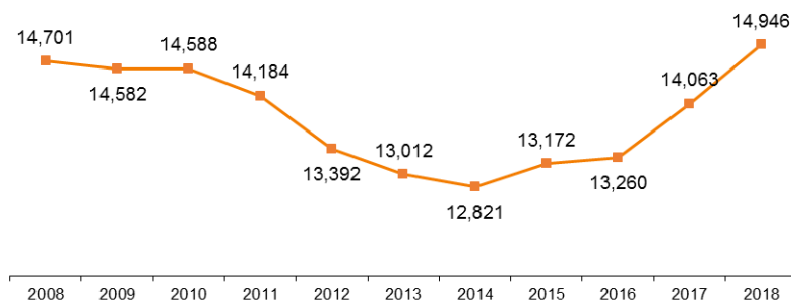
This expenditure represented 1.24% of the Gross Domestic Product (GDP), compared to 1.21% in 2017.

By implementing sector, the Business sector represented the highest percentage of internal R&D expenditure, with 56.5% (which meant 0.7% of GDP). It was followed by the Higher Education sector, with 26.4% (0.33% of GDP).

In turn, internal R&D expenditure in the General Government sector accounted for 16.8% of national expenditure (0.21% of GDP). The remaining 0.3% corresponded to the Non-Profit Private Institutions (NPI) sector.

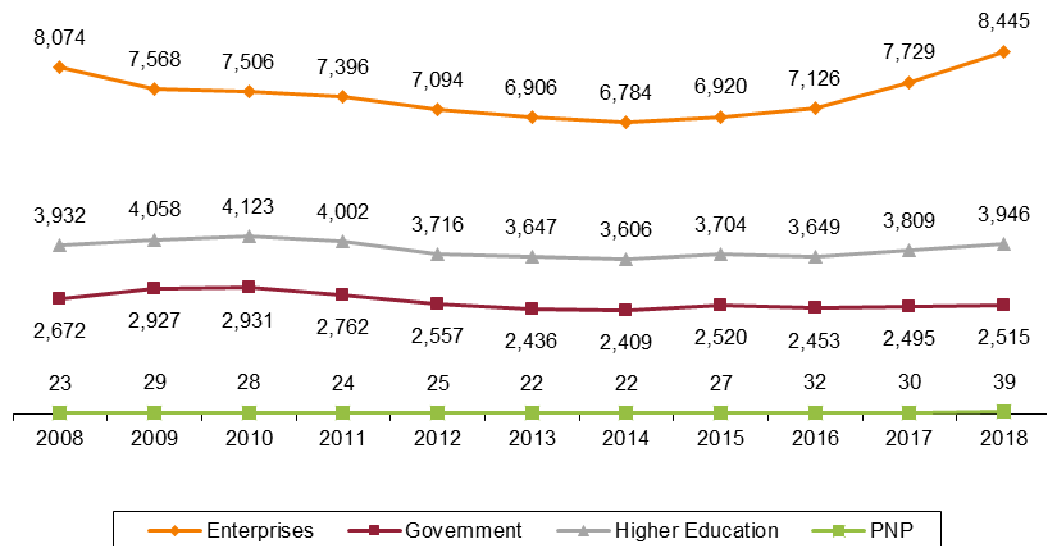
R&D expenditure increased by 9.3% compared to the previous year in the *Companies* sector, 3.6% in *Higher Education* and 0.8% in *Public Administration*.

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 2018 by the *Business* sector (49.5%) and the *General Government* (37.6%).

Funds from the *Rest of the World* (7.9%), from *Higher Education* (4.3%) and from *IPSFL* (0.7%) completed the funding.

By implementing sectors, internal R&D expenditure in the *General Government* and *Higher Education* was mainly financed by the *General Government* (82.4% and 70.4%, respectively).

On the other hand, 82.8% 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 2018. Thousand euros

Execution sector	Total	Source of Funds				Rest of the World
		Govern-ment	Higher Education	Enterpri-ses	PNP	
TOTAL	14,945,692	5,620,738	649,999	7,397,346	97,692	1,179,916
Government	2,515,228	2,072,720	4,451	174,036	33,362	230,660
Higher Education	3,946,201	2,779,252	642,835	216,959	42,639	264,516
Enterprises	8,445,362	762,394	2,592	6,989,820	11,825	678,731
PNP	38,901	6,373	121	16,531	9,866	6,010

Personnel employed in internal R&D

A total of 225.696 full-time equivalent persons were engaged in internal R&D activities in 2018, representing 12.0 per thousand of the total employed population and an increase of 4.6% over the previous year.

The group of researchers reached the figure of 140.120 full-time equivalent persons, which represented 7.4 per thousand of the total employed population and an increase of 5.2% with respect to 2017.

40.0% of full-time equivalent personnel in internal R&D were women. The highest percentages of female participation were in the *General Governments* (52.6% of total employment) and in the *IPSFL* (52.4%). In *Higher Education*, this percentage stood at 44.7%, whereas in the *Business* sector it was 31.6%.

Personnel employed in R&D by implementing sector by occupation and sex Year 2018. In full-time equivalent job

Execution Sector	Total personnel			Researchers		
	Total	Annual Rate	% Women	Total	Annual Rate	% Women
TOTAL	225,696	4.6	40.0	140,120	5.2	38.8
Government	40,332	0.1	52.6	21,422	2.8	48.4
Higher Education	80,318	1.3	44.7	64,007	2.3	41.7
Enterprises	104,474	9.2	31.6	54,360	9.7	31.5
PNP	572	12.4	52.4	331	29.3	52.2

Expenditure and personnel in internal R&D by Autonomous Community

The Autonomous Communities with the highest rates of growth in expenditure on internal R&D in 2018 were Illes Balears (13.2%), Castilla y León (11.6%) and Aragón (8.6%).

In contrast, La Rioja (-6.5%), Castilla-La Mancha (-4.3%) and Canarias (-2.5%) presented the greatest decreases.

Internal R&D expenditure and total FTE personnel by Autonomous Community Year 2018. Thousand euros

Regions	R&D Expenditures			Total R&D personnel in FTE		
	Total sectors	%	Annual rate	Total sectors	%	Annual rate
TOTAL	14,945,692	100.0	6.3	225,696	100.0	4.6
Andalucía	1,479,417	9.9	4.0	24,732	11.0	1.2
Aragón	339,741	2.3	8.6	6,124	2.7	6.6
Asturias, Principado de	188,453	1.3	3.3	3,331	1.5	2.1
Balears, Illes	128,558	0.9	13.2	2,685	1.2	21.8
Canarias	214,965	1.4	-2.5	3,606	1.6	7.3
Cantabria	117,858	0.8	8.1	1,847	0.8	7.2
Castilla y León	762,659	5.1	11.6	9,976	4.4	5.2
Castilla-La Mancha	219,039	1.5	-4.3	3,166	1.4	1.1
Cataluña	3,512,716	23.5	7.2	51,830	23.0	6.8
Comunitat Valenciana	1,174,248	7.9	8.5	19,306	8.6	0.9
Extremadura	121,950	0.8	6.9	2,192	1.0	7.4
Galicia	590,727	4.0	3.3	10,631	4.7	3.6
Madrid, Comunidad de	3,922,792	26.2	6.2	54,222	24.0	5.0
Murcia, Región de	303,097	2.0	8.1	6,149	2.7	2.6
Navarra, Comunidad Foral de	344,439	2.3	0.4	4,942	2.2	2.3
País Vasco	1,451,319	9.7	7.4	19,571	8.7	5.9
Rioja, La	69,507	0.5	-6.5	1,285	0.6	-8.4

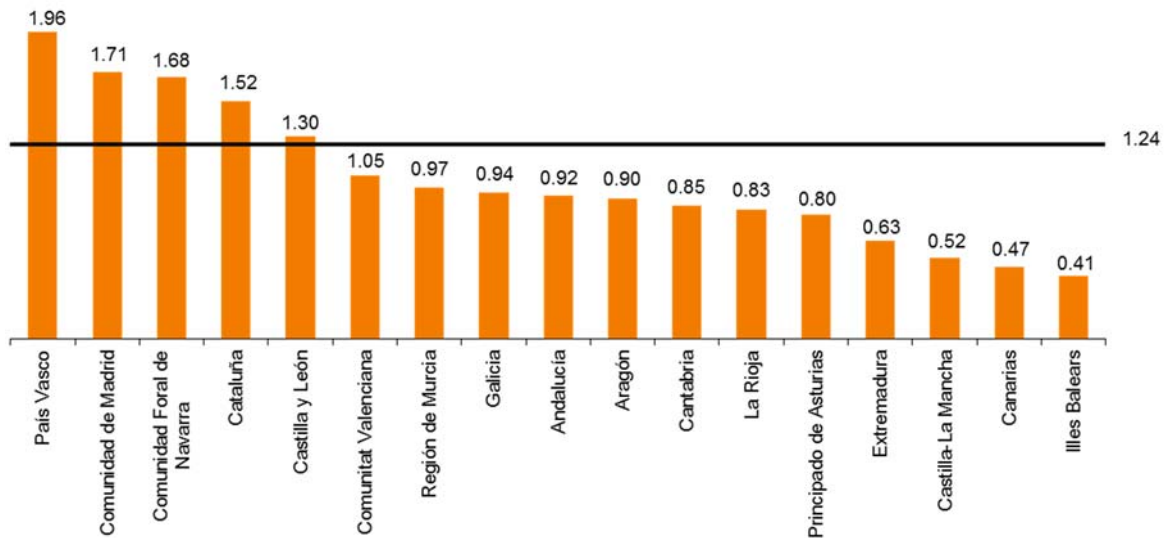
Ceuta and Melilla data are not included because of statistical secret

The Autonomous Communities with the highest percentage of internal R&D expenditure over GDP were País Vasco (1.96% of GDP), Comunidad de Madrid (1.71%) and Comunidad Foral de Navarra (1.68%).

In contrast, those with the lowest percentages were Illes Balears (0.41% of GDP), Canarias (0.47%) and Castilla-La Mancha (0.52%).

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

Year 2018. Percentage



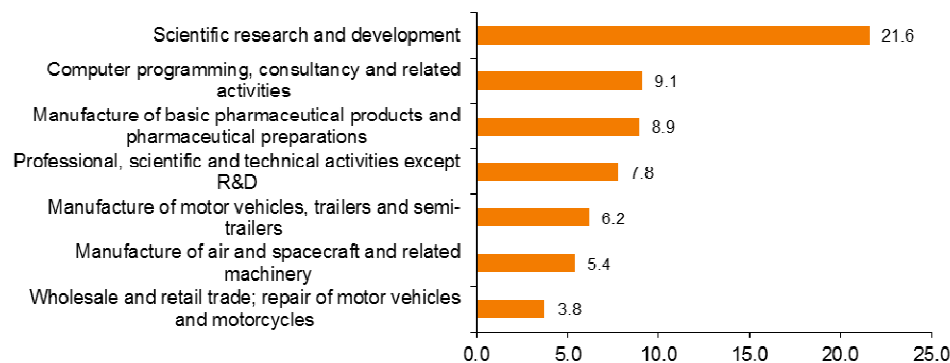
Distribution of internal R&D expenditure by branch of activity

Companies in the *Services* sector accounted for 50.4% of expenditure on business internal R&D in the year 2018, while those in *Industry* sector accounted for 47.3%.

By branches of activity, noteworthy were *R&D Services* (with 21.6% of total expenditure), *Programming, consultancy and other IT activities* (9.0%) and *Pharmacy* (8.9%).

Distribution of internal R&D expenditure by branch of activity

Year 2018. Percentage



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, 549 public administration centres (including public hospitals), 83 universities, 125 higher education centres and 125 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

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