

24 November 2015

**Statistics on R&D Activities**  
*Final results. Year 2014*

**Expenditure on R&D reaches 12,821 million euros in the year 2014.  
This expenditure represents 1.23% of GDP**

**Internal expenditure on Research and Development (R&D)**

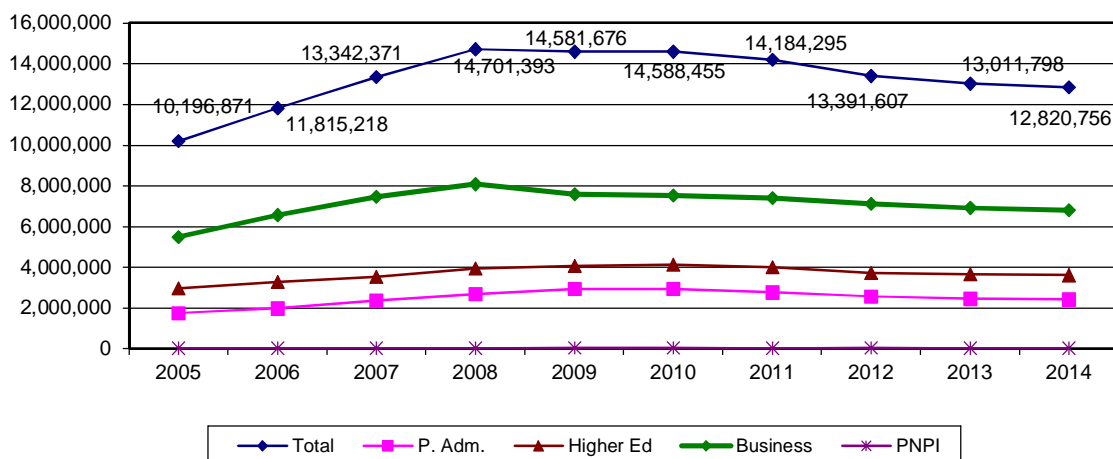
Internal expenditure on Research and Development (R&D) reached 12,821 million euros in 2014, indicating a decrease of 1.5%, as compared with the previous year. This expenditure represented 1.23% of Gross Domestic Product (GDP), as compared with the 1.26% of 2013.

By field of operation, the Business sector registered the highest percentage over the total R&D expenditure, standing at 52.9% (which accounted for 0.65% of GDP). The next sector in importance was Higher Education, with 28.1% of the total expenditure (representing 0.35% of GDP).

In turn, Public Administration R&D expenditure accounted for 18.8% of the total expenditure (0.23% of GDP). The remaining 0.2% corresponded to the Private Non-Profit Institutions sector (PNPI).

The three main sectors of operation reduced their expenditure on R&D activities in 2014 as compared with the previous year. The Public Administration and Higher Education sectors reduced their expenditure by 1.1% while the Business sector registered a decrease rate of 1.8%.

**Evolution of R&D expenditure (thousands of euros)**



## Financing of R&D activities

During the year 2014, R&D activities were mainly financed by the Business sector (46.4%) and the Public Administration (41.4%).

The funds originating from foreign sources (7.4%), from Higher Education (4.1%) and from the PNPI (0.7%) financed the remaining total R&D expenditure.

By field of operation, the R&D expenditure from Public Administration sector and Higher Education sector was mainly financed by the Public Administration (83.1% and 73.1%, respectively).

In turn, the Business sector financed its own R&D expenditure in 82.3% of the cases.

## Total internal R&D expenditure by field of operation and origin of the funds. Year 2014

Thousands of euros

Field of operation	Total	Origin of the funds (%)				
		Public Admin.	Higher Education	Business	PNPI	Foreign
TOTAL	12,820,756	41.4	4.1	46.4	0.7	7.4
Public Admin.	2,408,695	83.1	0.3	5.8	1.4	9.3
Higher Education	3,606,171	73.1	14.4	5.9	1.0	5.5
Business	6,784,311	9.7	0.0	82.3	0.1	7.8
PNPI	21,580	17.5	0.4	44.8	34.3	3.0

## Personnel employed in R&D

In the year 2014, a total of 200,232.6 persons were dedicated to R&D activities, on a full-time equivalent, representing 1.2% of the total employed population.

The group of researchers reached the figure of 122,235.4 persons on a full-time equivalent, representing 0.7% of the total employed population.

39.9% of personnel in R&D on a full-time equivalent were women. The highest percentages of female participation were recorded in Private Non-Profit Institutions (56.2%) and in Public Administration (51.0%). In Higher Education this percentage stood at 44.9%, whereas that in Business stood at 30.8%.

## Personnel employed in R&D, by field of operation according to occupation and sex. Year 2014

On a full-time equivalent

Field of operation	Personal total			Researchers		
	Total	Variation rate (%)	% Women	Total	Variation rate (%)	% Women
TOTAL	<b>200,232.6</b>	<b>-1.5</b>	<b>39.9</b>	<b>122,235.4</b>	<b>-0.8</b>	<b>38.6</b>
Public Admin.	38,764.2	-1.5	51.0	20,180.2	-2.4	45.9
Higher Education	73,427.7	-2.0	44.9	57,156.4	-0.8	41.9
Business	87,642.0	-1.1	30.8	44,688.6	-0.1	30.9
PNPI	398.7	0.9	56.2	210.2	6.5	56.2

## R&D expenditure by Autonomous Community

The five Autonomous Communities that registered increases in R&D expenditure as compared with the previous year were La Rioja (16.5%), Región de Murcia (4.0%), Galicia (1.8%), Comunitat Valenciana (1.3%) and Aragón (0.9%).

In turn, the rest of Autonomous Communities reduced their R&D expenditure. Extremadura (–10.5%), Cantabria (–7.5%) and Principado de Asturias (–6.6%) registered the greatest decreases.

## Total internal R&D expenditure and total personnel employed in FTE by Autonomous Community. Year 2014

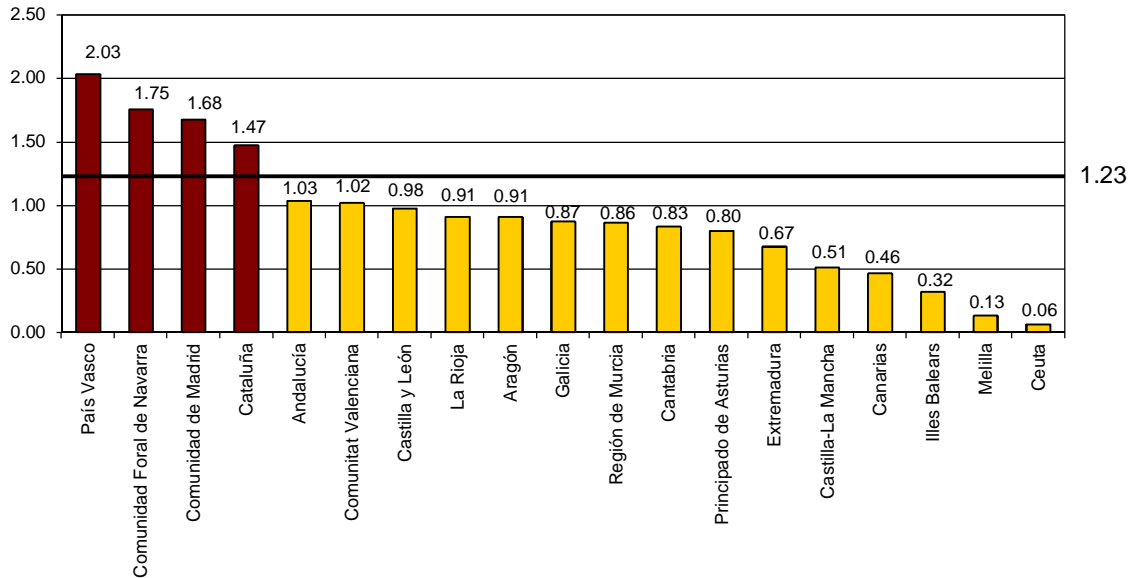
Thousands of euros

Autonomous Communities	R&D expenditure			Total R&D personnel in FTE		
	Total sectors	Expenditure	Variation rate (%) 2014-2013	Total sectors	Expenditure	Variation rate (%) 2013-2014
<b>TOTAL</b>	<b>12,820,756</b>	<b>100.0</b>	<b>-1.5</b>	<b>200,232.6</b>	<b>100.0</b>	<b>-1.5</b>
Andalucía	1,465,740	11.4	-0.4	23,632.5	11.8	-2.1
Aragón	300,795	2.3	0.9	5,401.7	2.7	-2.4
Asturias, Principado de	171,612	1.3	-6.6	3,114.9	1.6	-7.6
Balears, Illes	85,335	0.7	-1.9	1,846.0	0.9	-0.1
Canarias	192,994	1.5	-5.0	3,307.7	1.7	-5.0
Cantabria	101,828	0.8	-7.5	1,780.7	0.9	0.0
Castilla y León	526,820	4.1	-0.8	8,854.7	4.4	-0.1
Castilla-La Mancha	193,038	1.5	-4.2	2,808.1	1.4	1.1
Cataluña	2,937,731	22.9	-0.8	43,898.4	21.9	-1.4
Comunitat Valenciana	1,011,352	7.9	1.3	18,638.7	9.3	0.6
Extremadura	116,010	0.9	-10.5	1,906.6	1.0	-10.1
Galicia	477,279	3.7	1.8	9,405.1	4.7	0.2
Madrid, Comunidad de	3,312,342	25.8	-3.6	46,463.1	23.2	-2.4
Murcia, Región de	233,692	1.8	4.0	5,412.4	2.7	2.3
Navarra, Comunidad Foral de	313,655	2.4	-1.1	4,433.1	2.2	-4.2
País Vasco	1,306,278	10.2	-1.7	17,842.7	8.9	-1.3
Rioja, La	71,369	0.6	16.5	1,438.8	0.7	8.4
Ceuta	1,013	0.0	2.1	22.9	0.0	55.0
Melilla	1,874	0.0	7.1	24.5	0.0	-20.7

The Autonomous Communities with the greatest expenditure in R&D activities over the GDP in 2014 were País Vasco (2.03% of GDP), Comunidad Foral de Navarra (1.75%), Comunidad de Madrid (1.68%) and Cataluña (1.47%). These four Communities were the only ones with numbers in R&D expenditure intensity above the national average.

In turn, the Autonomous Communities with the lower effort in R&D activities in 2014 were Illes Balears (0.32% of GDP), Canarias (0.46%) and Castilla-La Mancha (0.51%).

**R&D Expenditure / GDPpm (%)**

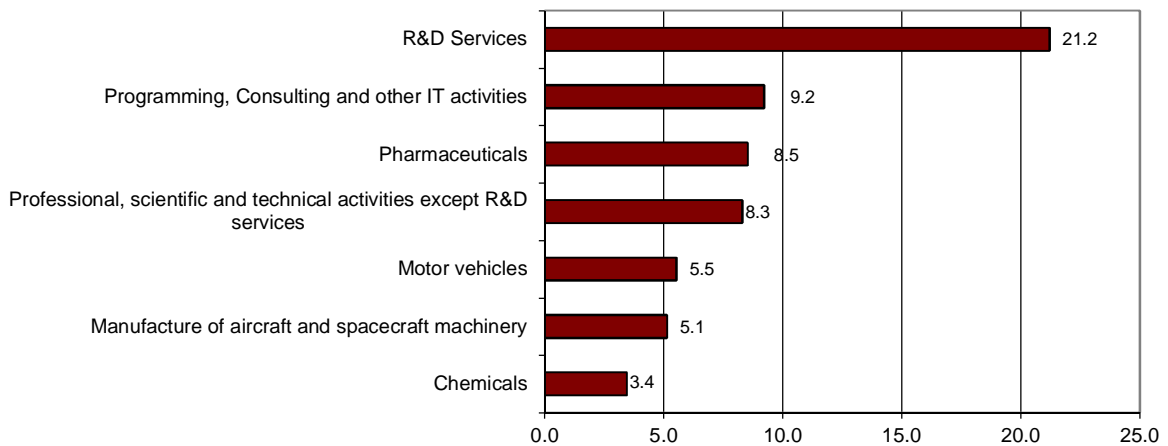


**Distribution of R&D expenditure by branch of activity**

Companies in the Services sector accounted for 49.2% of R&D expenditure in the year 2014, whereas Industry accounted for 48.0%.

By branch of activity, worth noting were *R&D Services* (with 21.2% of total expenditure), *Programming, consultancy and other IT-related activities* (9.2%) and *Pharmaceuticals* (8.5%)

**Distribution of R&D expenditure by branch of activity. Year 2014 (%).**



## Methodological note

The R&D statistics have been prepared following the methodological recommendations of the *Proposed Standard Practice for Surveys on Research and Experimental Development* of the OECD (Frascati Manual). In particular, the new version expressly recommends *that all companies carrying out R&D work, either continuously or sporadically, be included in R&D surveys.*

Until the year 2001, the R&D Statistics were based solely on a census of the known statistical units that carried out R&D activities. For this purpose, an annual request was made to different bodies of the State Central Administration and the Autonomous Communities for information on the units receiving aid in order to carry out R&D activities.

Since the year 2002, this statistical operation has been carried out co-ordinately with the survey on Innovation in Companies, researching a census of potentially researching statistical units, which is updated annually, and with a randomly chosen sample of companies.

Scientific research and technological development (R&D) comprises the creative work carried out systematically in order to increase the volume of knowledge, including the knowledge of man, culture and society, and the use of this knowledge to create new applications.

The main aggregates for quantifying the national effort invested in R&D activities are *internal R&D expenditure*, which includes current and capital expenditure corresponding to R&D activities undertaken within the State throughout the year, and the *personnel dedicated to R&D tasks*, which includes all of the persons who have worked in the country throughout the year, on a full-time equivalent (FTE).