

18 November 2007

Statistics on Scientific Research and Technological Development (R&D)

Year 2008. Provisional results

Main results

- Expenditure on R&D rises to 14,701 million euros in 2008, reaching 1.35% of GDP, with an increase of 10.2% as compared with 2007.
- The Public Administration sector presents a growth rate of 13.8% as compared with the year 2007. In turn, the Tertiary Education sector increases 11.8%.
- Business expenditure on R&D rises 8.3% with respect to 2007.
- The company sector accounts for 54.9% of total expenditure on R&D, in comparison with the 55.9% registered in 2007.
- Public Administration financed 45.6% of R&D activities, as compared with 45.0% from the private sector.
- The Autonomous Communities that make the greatest effort in R&D activities are Comunidad de Madrid, País Vasco, Comunidad Foral de Navarra and Cataluña, all of which offer intensity figures that are higher than the national average.
- Castilla-La Mancha, Extremadura and Cantabria are the Autonomous Communities registering the highest growth rates with respect to 2007.

Expenditure on R&D reaches 1.35% of GDP

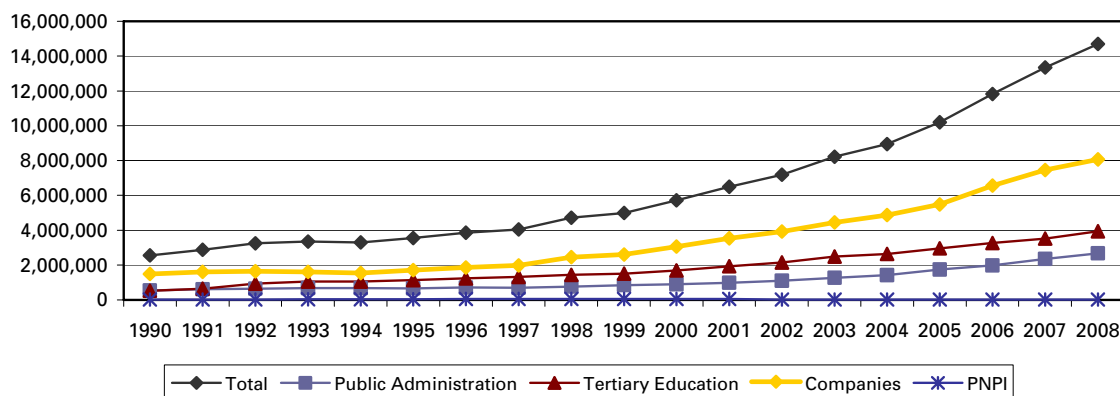
The internal expenditure on Research and Development (R+D) rose to 14,701 million euros in 2008, accounting for 1.35% of the Gross Domestic Product (GDP) and indicating an increase of 10.2% as compared with the year 2007.

By field of operation, **the company sector registered the highest percentage over the total expenditure on R+D (54.9%), accounting for 0.74% of the GDP.** The next sector in importance was Tertiary education (with 26.7% of the total expenditure, representing 0.36% of the GDP). The Public Administration expenditure on R+D accounted for 18.2% of the total expenditure and 0.25% of the GDP. The remaining 0.2% corresponded to the Private Non-Profit Institutions sector (PNPI).

In 2008, the business sector experienced an 8.3% increase in its expenditure on R&D activities, as compared with 2007. In addition, in this sector, the number of units carrying out R&D activities grew 2.6% with respect to 2007.

On the other hand, the Public Administration sector registered a growth rate of 13.8% in domestic expenditure on R&D.

Evolution of expenditure on R+D (thousand euros)



R&D activities are mainly financed by the Public Administration (90.6%) and the private sector

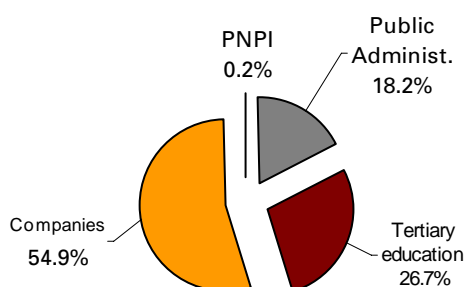
R&D activities were mainly financed by the Public Administration sector (45.6%) and the private sector (45.0%) in 2008. The funds originating from foreign sources (5.7%), from Tertiary Education (3.2%) and from the PNPI (0.5%) financed the remaining 9.4% of total expenditure on R&D.

Total domestic expenditure on R&D, by field of operation and origin of the funds. 2008

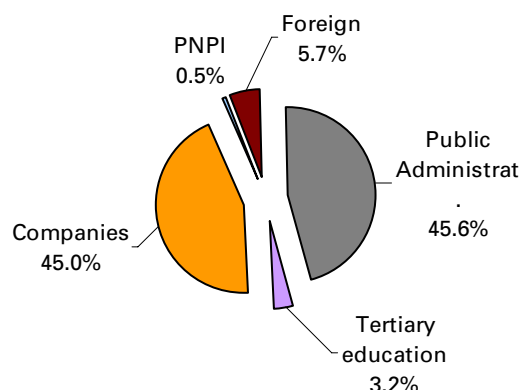
Thousand euros

Field of operation	Total	Public Administration	Tertiary Education	Companies	PNPI	Foreign
TOTAL	14,701,393	6,699,339	473,985	6,608,550	81,416	838,103
Public Administration	2,672,288	2,352,916	5,610	156,724	20,787	136,251
Tertiary education	3,932,413	2,893,854	465,263	346,782	37,508	189,007
Companies	8,073,521	1,444,958	2,825	6,099,298	14,761	511,680
PNPI	23,171	7,611	287	5,746	8,361	1,165

Total domestic expenditure on R&D activities, by field of operation. Year 2008



Total domestic expenditure on R+D, by origin of the funds. Year 2008.



Comunidad de Madrid, País Vasco, Comunidad Foral de Navarra and Cataluña, the Autonomous Communities making the greatest effort in R&D

The Autonomous Communities that made the greatest effort in 2008 in R&D activities were Comunidad de Madrid (2.00% of its GDP), País Vasco (1.96%), Comunidad Foral de Navarra (1.92%) and Cataluña (1.61% of its GDP). These were the only Communities to register intensity figures above the national average for R&D expenditure.

On the other hand, the Autonomous Communities that recorded the highest growth rates were Castilla-La Mancha (24.2%), Extremadura (21.3%) and Cantabria (19.9%).

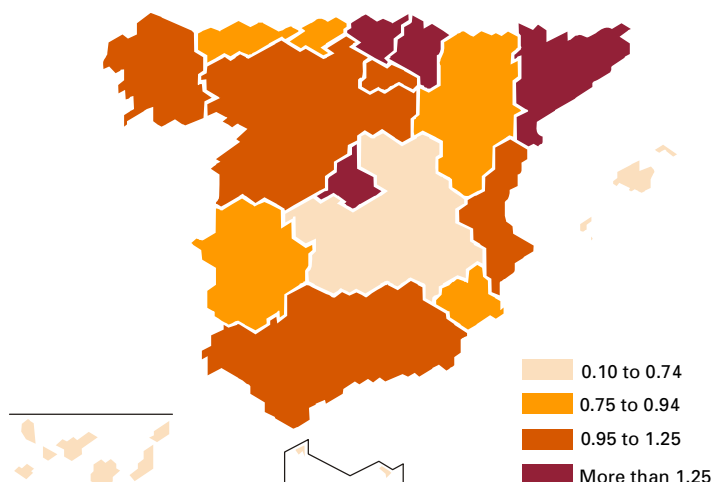
Total domestic expenditure on R&D, by Autonomous Community and field of operation. 2008

Thousand euros

	Total sectors	% of regional GDP*	Companies	Public Administration	Tertiary Education	PNPI
Andalucía	1,538,947	1.03	515,612	361,330	661,049	955
Aragón	352,376	1.03	206,439	71,414	74,418	105
Asturias (Principado)	229,678	0.96	99,076	36,433	93,306	863
Balears (Illes)	97,385	0.35	20,038	30,302	46,250	795
Canarias	268,834	0.62	60,590	81,374	126,835	34
Cantabria	140,792	1.00	53,862	23,802	59,914	3,213
Castilla y León	739,944	1.26	458,526	73,951	207,447	19
Castilla-La Mancha	265,742	0.72	149,046	34,815	81,564	316
Cataluña	3,286,376	1.61	2,001,096	554,638	724,400	6,242
Comunitat Valenciana	1,113,507	1.05	484,306	134,116	494,743	342
Extremadura	156,400	0.86	30,177	39,918	86,223	83
Galicia	584,213	1.04	280,742	77,511	225,669	291
Madrid (Comunidad de)	3,892,147	2.00	2,237,034	996,775	649,875	8,464
Murcia (Región de)	243,521	0.86	95,239	47,721	100,426	136
Navarra (C. Foral de)	358,665	1.92	247,314	27,985	83,260	107
País Vasco	1,345,572	1.96	1,088,583	63,984	192,771	234
Rioja (La)	81,001	1.00	45,606	16,011	18,413	971
Ceuta and Melilla	6,292	0.20	235	206	5,850	-

(*) Data calculated with respect to GDP of the year 2007, base 2000.

Intensity of expenditure on R&D (%). Year 2008



R&D activities employ 10.6 persons per thousand of the employed population

In the year 2008, a total of 215.676 persons were dedicated to R&D activities, on a full-time equivalent, representing 10.65 per thousand of the total employed population.

The group of researchers reached the figure of 130,966 persons that year, accounting for 6.47 per thousand of the employed population.

39.1% of R&D personnel were women. The highest percentages of female participation in R&D activities were recorded in the PNPI (56.6%) and the Public Administration (50.9%). In companies, this percentage stood at 30.1%.

Personnel employed in R&D, by field of operation and according to occupation and sex. 2008

Full-time equivalent

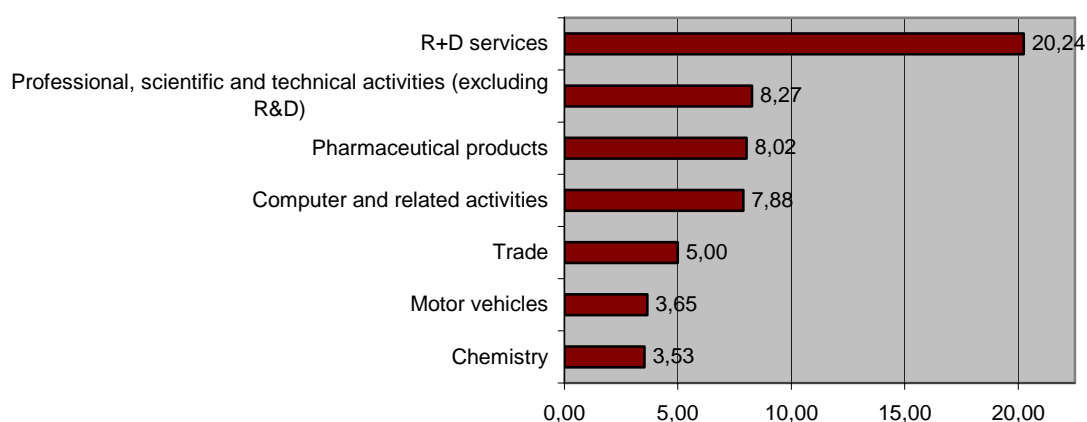
Field of operation	Total		Researchers	
	Total	Women	Total	Women
TOTAL	215,676	84,400	130,986	49,990
Public Administration	41,139	20,926	22,578	10,880
Tertiary Education	78,846	34,548	61,736	25,357
Companies	95,207	28,652	46,375	13,604
PNPI	484	274	298	149

Industry and the services sector account for 96.2% of R+D expenditure in the company sector

Industry accounted for 44.4% of expenditure on R&D in 2008, while services sector companies represented 51.8% of said expenditure.

By branch of activity, *R&D services companies* (CNAE 72) were worth noting, with 19.1% of total expenditure, and *Professional, scientific and technical activities* (CNAE 69, 70, 71, 72, 73, 74, 75), with 8.3%.

Distribution of expenditure on R&D, by branch of activity. Year 2008



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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 exclusively on a census of the statistical units known to carry 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.

The inclusion of sporadic R&D made it necessary to obtain information on the rest of the units not previously included a priori in the R&D Directory. This goal was achieved through a sample study of approximately 27,000 units that were representative of the group of companies with 10 or more employees and within the scope of the study.

Since the year 2002, this statistical operation has been carried out together with the survey on Technological Innovation in companies, researching a census of potentially investigating statistical units, which is updated annually, and which this year is comprised of 26,000 units, plus a randomly chosen sample of companies.

Scientific research and technological development (R&D) is comprised of 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 *gross domestic expenditure on R&D*, which includes current and capital expenditure corresponding to R&D activities undertaken within the State throughout the year, and the *personnel working on R&D tasks*, which includes all of the persons who have worked in the country throughout the year, on a full-time equivalent (FTE).