

Statistics on R&D Activities 2009



Identification of the organisation or centre

Amendments to the identification particulars (Complete only those sections subject to variation)

Name of the organisation or centre			NIF	
gistered address (street, square, av	icipality			
ovince	Provincial code Telephone	Fax	E-mail	
eries, clarifications or i	e contacted, if necessary, for modifications regarding this questionn		SIGNATURE OR S	EAL
ueries, clarifications or i	•		SIGNATURE OR S	EAL
r./Ms.:	modifications regarding this questionn		SIGNATURE OR S	EAL
ueries, clarifications or i r./Ms.: ost held:	modifications regarding this questionn		SIGNATURE OR S	EAL
ueries, clarifications or i Ir./Ms.: ost held: elephone	modifications regarding this questionn		SIGNATURE OR S	EAL

Nature, characteristics and purpose

These statistics are within the framework of the General plan for statistics on science and technology promoted by the Statistics Office of the European Union (Eurostat). They have the main objective of ascertaining the resources that research organisations and centres spend on R&D, for the purpose of estimating the national effort in research.

They are conducted following recommendations of the OECD (Frascati Manual).

Statistical Legislation of compulsory compliance

Statistical Secrecy

The personal information obtained by the statistical services, both directly from the informants and from administrative sources, shall be subject to protection, and covered by **statistical secrecy** (article 13.1 of the Law on Public Statistical Services, of 9 May 1989, (LFEP)). All statistical staff will be obliged to maintain statistical secrecy (article 17.1 of the LFEP).

Obligation to provide data

Laws 4/1990 and 13/1996 establish the obligation to provide the data that is requested for the compilation of these Statistics.

The statistical services may request data from all individuals and companies, regardless of whether they are Spanish or foreign, resident in Spain (Article 10.1 of the LFEP).

All individuals and companies that provide data, regardless of whether their collaboration is compulsory or voluntary, **must respond in a true**, **exact and comprehensive manner within the stipulated deadline** to the questions outlined in due form by the statistical services (art. 10.2 of the LFEP).

In order to monitor compliance with these regulations, the LFEP (art. 48) grants the INE sanctioning capacity.

Failure to comply with the obligations envisaged in this Law, as related to statistics for state purposes, shall be sanctioned in accordance with the terms established in the regulations contained in this Heading (art. 48.1 of the LFEP).

Very serious infringements shall be sanctioned with fines ranging from 3,005.07 to 30,050.61 euros. Serious infringements shall be sanctioned with fines ranging from 300.52 to 3,005.06 euros. Minor infringements shall be sanctioned with fines ranging from 60.10 to 300.51 euros (art. 51.1, 51.2 and 51.3 of the LFEP).

General considerations

For the purposes of these statistics, **the following are regarded as R&D activities**: the group of creative activities undertaken systematically, in order to increase the flow of scientific and technical knowledge and use them to introduce new applications. This activity comprises basic research, applied research and experimental development. The latter leads to new devices, products, materials, processes, services or systems. **The following are not included as R&D activities**: education, scientific and technical information, collection of data of a general nature, routine trials, everyday standardisation work or other technological activities relating to production or use of known products or processes. Mineral exploration is not included either, when it is aimed at discovering exploitable reserves and not essentially an increase in basic geological knowledge.

The criterion distinguishing R&D from other activities is the presence or lack of a notable degree of creativity or innovation.

General instructions

Information unit: The information that is requested in this questionnaire refers to the unit, organisation or centre whose identification data appears on the front cover. The data requested refers to all of the units dependent on this.

Reference period: Data must refer to the target year of the statistics.

Form of recording the data: Write down the data clearly. Please do not write in the shaded areas. The financial data is requested in euros with no decimals.

Consignment term: This questionnaire, duly completed with the required information, must be returned within a term not exceeding **15 days** from time of receipt.

Please carefully read the annex before completing this questionnaire.

1. General data for the organisation or centre

1.1 List of centres whose research data is included in this questionnaire

Please enter the name, Tax Identification Number (NIF) and full address

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

1.2 Type of Administration on which it depends

Please mark where appropriate with an 'X':	
State Administration	5
Autonomous Administration	6
Local Administration (Regional Council, Municipal Council and the like)	7
PNPI* mainly controlled and/or financed by the Administration	8
(*) PNPI: Private Non-Profit Institutions.	
1.3 Institution type	

Please mark where appropriate with an 'X':

Administrative service (of a ministry, department, regional council, municipal council, etc.)	1
Administrative autonomous organisation	2
Trade, industrial, financial or similar autonomous organisation	3
Other public law entity Specify:	4
1.4 Administrative unit immediately above, to which it responds	

Please write the full name of the administrative unit immediately above

1.5 Functional dependency of health establishments

Only answer this question where the research body or centre identified on the cover of the questionnaire is a health establishment (hospital, clinic, sanatorium, hospital complex, etc.). Please mark the dependency of the centre with an 'X'.

National Health Management Institute	1
Health Service of the Autonomous Community	2
Regional or Municipal Council (including Insular Council, Inter-island Council and the like)	3
Other State Administration and Social Security units	4
Other Autonomous Administration units	5
Another entity	6

(Please specify: other jointly-managed public bodies, private charitable, private non-charitable, foundations, etc.).

2. Staff employed in internal R&D activities in 2009

2.1 Staff employed in internal R&D, according to occupation

The full-time equivalent (FTE) is the sum of the staff that works full-time and the fractions of time that the part-time staff works on R&D activities. (See annex at the end of the questionnaire).

Occupation	Total	Women	Total on FTE * (1 decimal)	Women on FTE * (1 decimal)
1. Researchers (including interns in research)				
2. Technicians				<u> </u>
3. Assistants				<u> </u>
TOTAL STAFF (1+2+3)				<u> </u>

Out of the researchers from point 1, please indicate the interns in research

	Staff in	R&D		Researc	Researchers (including interns)		
	Total	Women	Total on FTE *	Total	Women	Total on FTE (1 decimal)	
Qualification			(1 decimal)				
1. University doctorate-holders			<u> </u>	·		<u> </u>	
2. University graduates, architects, engineers and the like			<u> </u>			<u> </u>	
3. Diploma students, technical architects and							
engineers and the like			<u> </u>			<u> </u>	
4. Advanced training cycles (Specific							
Vocational Training)			<u> </u>	·		<u> </u>	
5. Intermediate training cycles, Post-Secondary qualification and the like							
6. Other studies							
TOTAL (1+2+3+4+5+6)			<u> </u>				

2.3 Distribution of staff in internal R&D, by Autonomous Community in which the organisation or centre carries out R&D activities

	Staff in	R&D			Researc	hers (inclue	ding interns)
Autonomous Community	Total	Women	Total on FTE * (1 decimal)	Women on FTE* (1 decimal)	Total	Women	Total on FTE * (1 decimal)	Women on FTE* (1 decimal)
1. Andalucía			<u> </u>			_		
			·					·
3. Asturias (Principado de)								· <u> </u>
					_			
0. Cataluãa								
10. Comunitat Valenciana								
11. Extremadura								
12. Galicia								
13. Madrid (Comunidad de)					_		<u> </u>	
14. Murcia (Región de)								
15.Navarra(Comunidad Foral de)			<u> </u>		_			<u> </u>
16. País Vasco			<u> </u>	<u> </u>			<u> </u>	
17. Rioja (La)			<u> </u>					
18. Ceuta			<u> </u>	<u> </u>	<u> </u>		<u> </u>	. <u> </u>
19. Melilla			<u> </u>	<u> </u>	<u> </u>		<u> </u>	. <u> </u>
TOTAL	. <u>.</u>		,	,			,	,

(*) FTF: Full-time equivalent.

2.4 Researchers, by sex and age group (including interns in research)

	All ages	Under 25 years of age	25 to 34 years old	35 to 44 years old	45 to 54 years old	55 to 64 years old	65 years old or over
Total researchers	,					,	
Of them, women							

2.5 Researchers, by nationality and sex (including interns in research)

	Total researchers	Of them, women
Spain		
Rest of the EU ¹		
Other European countries		
North America		
Central America		
South America		
Asia		
Africa		
Oceania		
TOTAL		

¹*Rest of the European Union:* Germany, Austria, Belgium, Bulgaria, Cyprus, Denmark, Slovakia, Slovenia, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, the Netherlands, Poland, Portugal, the United Kingdom, the Czech Republic, Romania and Sweden.

2.6 Staff dedicated to internal R&D activities, by scientific field or discipline

	Staff in R&	D	Researchers (including interns)		
	Total	Women	Total	Women	
1. Exact and natural sciences					
2. Engineering and technology					
3. Medical sciences					
4. Agrarian					
5. Social sciences					
6. Humanities					
TOTAL					

3. Expenditure on R&D activities in 2009

3.1 Expenditure on internal R&D activities

Expenditure on remunerations shall be those corresponding to the total paid to the researchers on FTE and the total technicians and assistants on FTE specified in 2.1. For the rest of the parts of this section, expenditure shall be calculated as a percentage of the part that corresponds to R&D.

	Amount (euros without decimals)
- Remunerations of researchers on FTE (including the remuneration of interns)	1
- Remunerations of technicians and assistants	22
- Other current expenses (without VAT or amortizations)	33
A. Total current expenditure on R&D	A
- Equipment and instruments	4
- Land and buildings (without VAT)	55
- Acquisition of specific software for R&D (including licences) (without VAT)	6
B Total capital expenditure on R&D	BB
C. Total internal expenditure on R&D	CC

3.2 Financing of internal R&D expenditure in 2009

Breakdown of the total internal expenditure on R&D from question 3.1, according to the original source of the funds received for R&D. In section B. Public financing should differentiate between the origin of funds, by type of Financing Administration, including within it the budgetary resources of the organisation, subsidies, loans, contracts, etc., according to the type of administration on which it depends.

Source of the funds		Amount decimals)	(euros	without
A. Financed by the actual organisation or centre				
- (This includes inheritance income, refundable loans and income from sales or provision of services)	_1			
B. Public financing				
- From the State Administration and its Autonomous Institutions (AI)	1			
- From the State Administration to which it belongs (where appropriate) and its AI	2			
- From other Autonomous administrations and their Al	3			
- From local administrations	4			
C. Other domestic sources to carry out R&D - From public	1			
- From private companies and research associations	2			
- From public universities	3			
- From private universities	4			
- Private Non-Profit Institutions	5			
D. Funds from abroad for carrying out R&D				
- From foreign companies	1			
- From European Union	2			
- From foreign public administrations	3			
- From foreign universities	4			
- From foreign Private Non-Profit Institutions	5			
- From other international organisations	6			
Total internal expenditure on R&D (this must coincide with 3.1.C)				

3.3 Regionalisation of internal R&D expenditure in 2009

Please distribute the total internal expenditure on R&D indicated in question 3.1, according to the Autonomous Community in which the R&D activities have been carried out.

Autonomous Community		Amount	(euros	without
	1	decimals)		
1. Andalucía	i			
2. Aragón				
3. Asturias (Principado de)	3			
4. Balears (Illes)	Λ			
5. Canarias	5			
6. Cantabria	6			
7. Castilla y León	7			
8. Castilla-La Mancha	8			
9. Cataluña	9			
10. Comunitat Valenciana	10			
11. Extremadura	11			
12. Galicia	12			
13. Madrid (Comunidad de)	13			
14. Murcia (Región de)	14			
15. Navarra (Comunidad Foral de)	15			
16. País Vasco	16			
17. Rioja (La)	17			
18. Ceuta	18			
19. Melilla	19			
Total internal expenditure on R&D (this must coincide with 3.1.C)				

3.4 Socio-economic objective

Please break down, as a percentage, the R&D expenditure that the organisation or centre has incurred in 2009, according to the socio-economic purpose or objective of the research (do not write decimals), and check that the sum of percentages is 100%.

	<u> </u>			
1. Exploration and exploitation of the land media and of the atmosphere	1			1
2. Control and care of the environment	2			
3. Exploration and exploitation of space	3			
4.1 Transport and telecommunications systems	4.1			
4.2 Other infrastructures	4.2			
5. Production, distribution and rational use of energy	5			
6. Industrial production and technology	6			
7. Protection and improvement of human health	7			
8. Development of agriculture, livestock breeding, forestry and fishing	8			
9. Education	9			
10. Culture, leisure, religion and communication	10			
11. Political and social systems, structures and processes				
12. Unguided research				
13. Defence	13			
TOTAL		1	0	0

3.5 Research expenditure on the protection and improvement of human health

If in the previous question (3.4 Socio-economic objective) there is a percentage of expenditure on R&D in point 7. Protection and improvement of human health, please indicate the expenditure, according to the Autonomous Community in which the health research is carried out.

(The percentage from point **7**. **Protection and improvement of human health**, multiplied by the total research expenditure of the centre, must be equal to the expenditure on research in the protection and improvement of human health)

Autonomous Community	Amount decimals)	(euros	without
1. Andalucía			
2. Aragón			
3. Asturias (Principado de)			
4. Balears (Illes)			
5. Canarias			
6. Cantabria			
7. Castilla y León			
8. Castilla-La Mancha			
9. Cataluña			
10. Comunitat Valenciana			
11. Extremadura			
12. Galicia			
13. Madrid (Comunidad de)			
14. Murcia (Región de)			
15. Navarra (Comunidad Foral de)			
16. País Vasco			
17. Rioja (La)			
18. Ceuta			
19. Melilla			
Total expenditure on research in the protection and improvement of human health			

3.6 Research grants

Please estimate the total value of the grants received in the year 2009 by the research interns listed in section 2.1, regardless of the type of grant and the organisation that has granted it to them. This figure must be included in the remuneration of researchers from question 3.1.

researchers from qu	uestion 3.1.			• • • • • • • • • • • • • • • • • • •
				Amount (euros without decimals)
1. Research grants				11
	, as a percentage		nternal expenditure on R&D that the write decimals, and check that the su	organisation or centre has incurred in
1. Fundamental or k				1 %
2. Applied research				2 8
3. Experimental res				3 8
TOTAL				1 0 0 %
3.8 Activities bas	sed on biologi	cal sciences and	d technologies in 2009	
	• .	· · ·	ice and technology to living organisms, as irpose of producing knowledge, goods an	well as to their parts, products and models,
or compounds obtaine (including biocomputi	ed from them, for the form the	he purpose of obtair hnology)?	d technology applied to living organisms ing knowledge or products of value ogical sciences and technologies	YES NO \rightarrow Please go to section \downarrow 3.9
The full-time equivale on biological sciences		of the staff that wo	rks full-time and the fractions of time tha	t the part-time staff works on activities based
	Personnel		Staff on FTE (1 decimal)	Total expenses (euros with no decimals)
	Total	Women	Total Women	
Resources used:			/ /	
			tific research and technologica Total staff on FTE* (1 decimal)	Total internal expenditure on R&D (euros without
Resources anticipat (*) FTE: Full-time equiva	alent.			·
	ne acquisition of	R&D services out		a contract, agreement, etc. It does not
				Amount (euros without decimals)
A. Purchase of R&D	services in Spair	n (without VAT)		
 From companies From Public Admir 	nistration bodies			1
- From universities				3
- From Private Non-	Profit Institutions			4
B. Purchase of R&D		(without taxes)		
- From foreign comp				1
 From foreign publi From foreign university 		5		23
 From foreign Priva From other interna 	te Non-Profit Ins			45_
C. Total purchase of	f R&D services (A	(+B)		
4. How long	did it take t	o complete t	this questionnaire?	
Including the time	required to coll	ect the informati	on necessary to do so	
				Hours

Observations

Anex

1 Scientific Research and Experimental Development (R&D) Activities 1.1 Basic definitions

Scientific research and experimental 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 criterion referring to creative work carried out systematically is met by projects with specific objectives and a budget.

The term R&D comprises three activities: basic research, applied research and experimental research:

• **Basic research** consists of experimental or theoretical work that is mainly undertaken to obtain new knowledge on the essentials of observable phenomena and facts, without considering giving them any particular application or use whatsoever.

• **Applied research** also consists of the original work carried out to acquire new knowledge; however, it is mainly directed towards a specific practical objective.

• Experimental development consists of systematic work based on existing knowledge, obtained from the research and/or practical experience, aimed at the production of new materials, products or devices; at the establishment of new processes, systems and services, or at the substantial improvement of those already existing.

A criterion that allows R&D to be distinguished from other related activities is the existence, within the core of R&D, of an appreciable element of innovation and the resolution of a scientific and/or technological uncertainty; in other words, R&D appears when the solution to a problem is not evident to someone who is perfectly aware of the set of knowledge and basic techniques customarily used in the sector at hand.

Not constituting R&D are those activities that do not contain an appreciable element of innovation, as well as those routine activities that do not imply the resolution of a scientific or technological uncertainty.

1.2 Staff in R&D

All staff directly employed in R&D must be accounted for. as well as those persons who provide services directly related to R&D activities, such as directors, administrators and office staff.

Researchers are professionals who work on the conception or creation of new knowledge, products, processes, methods and systems, and on the management of their respective projects (it includes postgraduate students and interns who carry out R&D activities).

Technicians and/or similar personnel are persons whose main tasks require technical knowledge and experience in one or various fields of engineering, physical and life sciences, or social sciences and humanities. They participate in R&D, carrying out scientific and technical tasks that require the application of operational methods and principles, generally under the supervision of researchers.

Assistants (remaining staff) include workers, both qualified and unqualified, and secretaries and office staff, who participate in the execution of the R&D projects, or who are directly related to the execution of said projects.

1.3 Staff in R&D on FTE

The staff on full-time equivalent (FTE) is the sum of the staff that works full-time and the fractions of time that the part-time staff works on R&D activities. Therefore, a person dedicated full-time to R&D shall be counted as 1, and a person who dedicates 20% of their time to R&D shall be counted as 0.2. If someone works for three months full-time during the year, s/he will be counted as 0.25, as this is one-quarter of the year. If a person works for part of the year full-time, and part of the year part-time, an estimation of the annual dedication to R&D will be calculated with a weighting (if s/he is, for example, 3 months full-time and 9 months 20% dedicated to R&D, then we calculate: 0.25*1 + 0.75*0.2 = 0.4).

1.4 Examples of R&D in exact and natural sciences and engineering

- The study of chemical reactions. The attempt to optimise one of these reactions. The experimental development for a

"greater scale" repetition of the process optimised in the laboratory.

- Determining the sequences of amino acids of a molecule. The research undertaken in order to distinguish between the antibodies of different illnesses. The experimental development for searching for a method of synthesising the antibody of a given illness.

-The activities of scientific and technical services and integrated libraries in research laboratories when they are predominantly aimed at researchers in those laboratories.

- The production of new theorems or algorithms in the theoretical field of Computational Sciences.

- The development of Information technologies at a level of operative systems, data processing programming languages, communications software and software development or Internet technology development tools

- The researching of methods for the design, development, effective use and maintenance of the software. The development of software that causes advances in general approximations of the collection, transmission, storage, recovery, handling or visualisation of information.

- R&D on tools or technologies in specific computational areas (image processing, geographical representation of data, character recognition, artificial intelligence and other areas).

1.5 Examples of R&D in agrarian sciences

The research in agrarian sciences encompasses the promotion of agriculture, forests, fishing and food production.

- The research in chemical fertilisers, biological pest control and the mechanisation of agriculture.

- The research on the impact of agricultural and forestry activities on the environment.

activities on the environment.

- The research in the development of food productivity and technology

1.6 Examples of R&D in social sciences and humanities

- The study of the variables that influence the school results of children belonging to different social and ethnic groups. The study of the reading process in adults and children, in order to develop a new method for teaching adults and children to read

- The study of the structure and socio-occupational mobility of a society. The development of a model that uses the data obtained for the purpose of foreseeing the future consequences of recent trends in social mobility.

- The research of new types of insurance contract to cover market risks. The research into new types of means for saving. The development of a new method for managing an investment fund.

- The analysis of regional variations or other types existing in the use of a language, for the purpose of determining the influence of geographical or social variables in its development.

- The study of specific aspects of a particular language, such as syntax, semantics, phonetics, phonology, social or regional variations, etc.

- The study of sources of all types (manuscripts, monuments, art works, buildings, etc.) in order to gain a better understanding of historical phenomena

- The statistics institutes carry out research activities on the conceptual and methodological work regarding the development of completely new or substantially modified statistical surveys and systems. The modifications to established methodologies, or the development of new methodologies, often requires a considerable amount of research.