Instituto Nacional de Estadística

Statistics on R&D Activities 2008

Institution identification

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

Institution name

Tax Identification Number (NIF)

Registered address (street, square, avenue, ...)

Postal code

Municipality

Province

Prov. code

Telephone

Fax

E-mail

Details of the person to be contacted, if necessary, for queries, clarifications or modifications regarding this questionnaire.

SIGNATURE OR SEAL

Mr. _____

Post held in the company: _____

Telephone number: _____ Fax:_____

E-mail: _____

Website: _____

Nature, characteristics and purpose

The Survey is included in the General plan for statistics on science and technology promoted by the Statistical Office of the European Communities (Eurostat). Its main purpose is to ascertain the resources dedicated to R&D by Private Non-Profit Institutions, in order to estimate the national research effort.

It is carried out following recommendations of the OECD (Frascati Manual).

Statistics Legislation of compulsory compliance

Statistical Secrecy You have just entered the Electronic Headquarters of the National Statistics Institute, which has been created to provide citizens ease of access electronically to information and administrative procedures, 24 hours a day, 365 days of the year.

The personal information obtained by the statistical services, both directly from the informants and from administrative sources, will be subject to protection, and are covered by **statistical secrecy** (art. 13.1 of the Law on Public Statistical Services, of 9 May 1989, LFEP). All statistical personnel will be obliged to maintain statistical secrecy (art. 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 be able to request data from all physical and legal persons, national and foreign, residents in Spain (Article 10.1 of the LFEP).

All individuals and legal entities 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) grants the INE sanctioning capacity.

In order to monitor compliance with these regulation, the LFEP (art. 48)

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

Very serious infringements will be sanctioned with fines ranging from 3,005.07 to 30,050.61 **euros**. Serious infringements will be sanctioned with fines ranging from 300.52 to 3,005.06 **euros**. Minor infringements will 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. Neither is mineral exploration included, when it is directed at discovering exploitable reserves and not essentially an increase in basic geological knowledge.

El criteria 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 requested in this questionnaire refers to the institution whose identification data is shown on the front cover. The data requested refers to the institution research centres in Spain as a whole.

Reference period: data must refer to the year dealt with by the statistics.

Form of recording the data: write down data clearly. 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 appendix before completing this questionnaire.

1. General institution data

1.1 Dependence of the institution

For each question, please mark with a cross (x) where appropriate

1. Does it impart higher education?

YES ☐ NO ☐

2. Does it sell production at significant economic price?

YES ☐ NO ☐

3. Who is the main financer of the institution?

☐ Companies ☐ Public Administration ☐ Higher education ☐ PNPI* for households

4. Who is the main controller of the institution?

☐ Companies ☐ Public Administration ☐ Higher education ☐ PNPI* for households

(*) PNPI: Private non profit institutions.

1.2 Institution activity

Briefly describe the purposes and activities of the institution

1.3 Trust or governing body of the institution

Without identifying any indivdual or entity, briefly describe the trust or governing body of the institution (for example, write public or private positions, company members, clergy, members of non-government, academic, legal organisations etc.)

2.Personnel employed in R&D activities in 2008

2.1 Staff employed in R&D, by occupation

Full-time equivalent (FTE) is the sum of the staff that works full-time, and the sum of fractions of time of the staff that works part-time, in 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. Techni-			,	,
3. Assis-			,	,
TOTAL PERSONNEL (1+2+3)			,	,
Of the researchers from point 1, indicate the interns in research			,	,

2.2 Staff employed in R&D, by qualification

Qualification	Personnel in R+D			Researchers (including interns)		
	Total	Women	Total on FTE * (1 decimal)	Total	Women	Total on FTE * (1 decimal)
1. PhDs			,			,
2. University graduates, architects, engineers and			,			,
3. University diplomas, technical architects engineers and similar			,			,
4. Advanced education cycles. (Specific professional training)			,			,
5. Intermediate special education cycles, baccalaureate qualifications and			,			,
6. Other studies			,			,
TOTAL (1+2+3+4+5+6)			,			,

2.3 Distribution of the staff in R&D by the Autonomous Communities in which the university carries out R&D activities

Autonomous Community	Personnel in R+D				Researchers (including interns)			
	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			,	,			,	,
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			,	,			,	,

(*) FTE: Full time equivalent.

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

	All ages	Under 25	Between 25 and 34	Between 35 and 44	Between 45 and 54	Between 55 and 65	Over 65 years old
Total researchers							
Of them, women							

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

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

REST OF EUROPEAN UNION: Germany, Austria, Belgium, Bulgaria, Cyprus, Denmark, Slovakia, Slovenia, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Netherlands, Poland, Portugal, United Kingdom, Czech Republic, Romania and Sweden.

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

	Personnel in R+D		Researchers (including interns)	
	Total	Women	Total	Women
1. Exact and natural sciences				
2. Engineering and technology				
3. Medical sciences				
4. Agricultural sciences				
5. Social Sciences				
6. Humanities				
TOTAL				

3. Expenses on internal R&D activities in 2008

3.1 Expenses on internal R&D activities

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

		Amount (euros with no deci-
- Remuneration of researchers on FTE (this includes the remuneration of the	1	
- Remuneration of technicians and assistants	2	
- Other current expenses (without VAT or amortisa-	3	
A. Total current expenditure on R&D (1+2+3)	A	
- Equipment and instruments (wit-	4	
- Land and buildings (without	5	
- Acquisition of specific software for R&D (including licences) (without	6	
B. Total capital expenses on R&D (4+5+6)	B	
C. Total internal expenses on R&D (A+B)	C	

3.2 Financing of internal R&D expenses in 2008

Breakdown of the total internal expenses on R&D from question 3.1, according to the original source of the funds received for R&D. Public should differentiate between the origin of funds by type of financing Administration. Refundable loans for carrying out R&D obtained from both the Administration and other sources, shall be included as their own funds. Fees, rights, donations and other entries of an institutional nature with which insitutions are financed (not specific R&D orders) should be included as own funds.

Source of the funds		Amount (euros with no decimals)
A. Financing by the institution itself		
- Own funds (including refundable loans, donations and fees of an institutional nature)	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 otherAutonomous administrations and their AI	3	
- From local administrations	4	
C. From other domestic sources in order to carry out R&D		
- From public companies	1	
- From private companies and research associations	2	
- From public universities	3	
- From private universities	4	
- From other non profit private institutions	5	
D. Funds from abroad for carrying out R&D		
- From foreign companies	1	
- From European Union programmes	2	
- From foreign Public Administrations	3	
- From foreign universities	4	
- From foreign private, non-profit institutions	5	
- From other international organisations	6	
Total internal expenses in R&D (this must coincide with		

3.3 Regionalisation of internal R&D expenses in 2008

Please distribute the total internal expenses on R&D shown in question 3.1, by Autonomous Community in which R&D activities were carried out.

Autonomous Community		Amount (euros with no decimals)
1. Andalucía	1	
2. Aragón	2	
3. Asturias (Principado de)	3	
4. Balears (Illes)	4	
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 expenses in R&D (this must coincide with **3.1.C**)		

3.4 Socioeconomic objective

Breakdown, as a percentage, internal expenses on R&D carried out by the institution in 2008 by socioeconomic purpose of the research (please do not write decimals) and check that the sum of the percentage is 100%.

		%
1. Exploration and exploitation of the land media and of the atmos-	1	%
2. Control and protection of the environment	2	%
3. Space exploration and exploitation	3	%
4.1 Transport and telecommunications systems	4.1	%
4.2 Other infrastructure	4.2	%
5. Production, distribution and rational use of energy	5	%
6. Industrial production and technology	6	%
7. Protection and improvement of human	7	%
8. Development of agriculture, livestock breeding, forestry and	8	%
9. Education	9	%
10. Culture, recreation and media	10	%
11. Systems, structures and political and social processes	11	%
12. Non-oriented research	12	%
13. Defence	13	%
TOTAL		**1 0 0 %**

3.5 Protection and improvement of human health

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

1. Andalucía	%	6. Cantabria	%	11. Extremadura	%	16. País Vasco	%
2. Aragón	%	7. Castilla y León	%	12. Galicia	%	17. Rioja (La)	%
3. Asturias (Principado de)	%	8. Castilla-La Mancha	%	13. Madrid (Comunidad de)	%	18. Ceuta	%
4. Balears (Illes)	%	9. Cataluña	%	14. Murcia (Región de)	%	19. Melilla	%
5. Canarias	%	10. Comunitat Valenciana	%	15. Navarra (Comunidad Foral de)	%	**Sum equal to 3.4.7**	%

3.6 Research grants

Estimate the total value of the grants received during the year 2008 by the research interns listed in section 2.1, regardless of the type of grant and of the organisation that granted it. This figure should be included in the remueration of researchers from question 3.1.

		Amount (euros with no decimals)
1. Research grants	1	

3.7 Type of research

Breakdown, as a percentage, CURRENT internal expenses on R&D carried out by the institution in 2008 according to the following classification (please do not write decimals and check that the sum of the column is 100%).

		%
1. Fundamental or basic research	1	%
2. Applied research	2	%
3. Experimental development	3	%
TOTAL		**1 0 0 %**

3.8 Activities based on biological sciences and technologies in 2008

Biotechnology comprises the application of science and technology to living organisms, as well as to their parts, products and models, in order to alter living or inert material, for the purpose of producing knowledge, goods and/or services.

1. Does the centre perform any activity (production, distribution or sale of products or services, R&D) that employs or contains living cells (yeast, bateria, cell cultures) or any of their active parts (proteins, enzymes, biological molecules, etc.)? YES ☐ NO ☐ → Please go to section ↓

2. Indicate the resources dedicated to activities based on biological sciences and technologies

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 actvities based on biological sciences and technologies.

	Personnel		Staff on FTE (1 decimal)		Total expenses (euros with no decimals)
	Total	Women	Total	Women	
Resources used:			,	,	

3.9 Evolution of annual resources in scientific research and technological development activities)

	Total personnel in FTE* (1 decimal)	Total internal expenditure on R&D (euros with no decimals)
Resources anticipated for 2009	,	

(*) FTE: Full time equivalent.

3.10 Purchase of R&D services in 2008

These are those motivated by the acquisition of R&D services outside the institution by means of contract, agreement, etc. . Please do not include institutional fees to finance other public or private, or international bodies, etc. which does not imply a direct R&D acquisition.

		Amount (euros with no deci-
A. Purchase of R&D services in Spain (without VAT)		
- To companies	1	
- To Public Administration bodies	2	
- To universities	3	
- To private non-profit institutions	4	
B. Purchase of R&D services abroad (without taxes)		
- To foreign companies	1	
- To foreign Public Administrations	2	
- To foreign universities	3	
- From foreign, private, non-profit institutions	4	
- From other international organisations	5	
C. Total purchase of R&D services (A+B)		

4. General information on the ICT systems of the institution in the year 2008

4.1 Did the institution have access to the following information and communications technologies (ICT)?

	YES	NO
1. Computers	☐	☐
2. Local Area Network (LAN)[1]	☐	☐
3. Intranet[2]	☐	☐
4. Extranet[3]	☐	☐
5. Internet connection [4]	☐	☐
- Broadband internet connection (xDSL, Cable, PLC, LMDS, Frame Relay ...)	☐	☐
6. E-mail	☐	☐
7. Web page	☐	☐

(1) Local Area Network (LAN): communication network between computers located in the same building or in nearby buildings, thus enabling users to exchange data, share a printer or be regulated by a single central computer.
(2) Intranet: company internal communication network by means of IP protocol, for the exclusive use of the organisation.
(3) Extranet: Secure extension of an Intranet or restricted access area of a website, enabling an external user to access private parts of the organisation.
(4) Internet: refers to networks based on the IP protocol: www, web-based extranet, web-based EDI and web-based mobile phones.

5. How long did it take you to complete this questionnaire?

Including time spent gathering information needed for this

|_|_|_| Hours

Observations

The National Statistics Institute would like to thank you for taking part

Annex

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

1.1 Basic definitions

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 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 development:

• **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 improvment of those already existing.

The basic criteria 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 creativity 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.**

No t constituting R&D are those activities that do not contain an appreciable element of innovation, routine activities that do not imply the resolution of a scientific or technological uncertainty.

1.2 Personnel 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, for example, executives, administrators and office staff.

Researchers. are professionals that 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 that 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, 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 operationalmethods and principles, generally under the supervision of researchers.

Auxiliary personnel (remaining personnel) includes workers, both qualified and unqualified, and secretaries and office personnel, whom participate in the execution of the R&D projects, or whom are directly related to the execution of said projects.

1.3 Personnel in R&D in FTE

The staff on a full-time equivalent (FTE) is the sum of the staff that works full-time, and the fractions of time of the staff that works part-time, in 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 a 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. Experimental development for repeating on a "larger scale" the process optimised in the laboratory.
- Determining the sequences of amino acids of a molecule. Research undertaken in order to distinguish between the antibodies of different illnesses. Experimental development for searching for a method of synthesising the antibody of a specific illness.
-The activities of scientific and technical services and integrated libraries in research laboratories when they are predominantly aimed at reaearchers in those laboratories
- The development of Information Technologies at a level of operating systems, programming languages, data processing, communication software and software development tools or development of internet technology
- The researching of methods for the design, development, effective use and maintenance of the software. The development of software that produces advances in general approximations of the collection, transmission, storage, recovery, manipulation or visualisation of information.

1.5 Health research

This does not only refer to biomedical research, but also to a broader field including R&D in relation to health in social sciences, above all research in health services, aimed at protecting and promoting human health

Medical sciences comprise the following scientific fields:

- Basic medicine (anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and immunohematology, clinical chemistry, clinical microbiology, pathology)

- Clinical medicine (anaesthesia, pediatrics, obstetrics and gynaecology, internal medicine, surgery, Odontology, neurology, psychiatry, radiology, therapy, otorhinolaryngology, ophthalmology)

- Health sciences (public health, social medicine, hygiene, nursing, pathology)

Examples of R&D in health

- Research carried out in the fields of **medical sciences** (basic medicine, clinical medicine and health sciences). For example, research in cardiology, respiratory diseases, mental illness, etc.
- There is health research into **biological sciences**, particularly into genetics, the objuective of which is human health. For example, cancer research, research into degenerative illnesses, etc.
-Research into **social and humanitarian sciences**, the objective of which is to protect and improve human health. For example, research into prevention of drug addition.
- Clinical trials:

Before launching new medicine, vaccines or treatments onto the market, they must undergo systematic trials in order to ensure their safety and effectiveness. These clinical trials are divided into four standardised phases, three of which are carried out before permission to manufacture is granted. In order to be able to draw international comparisons, it has been agreed that phases 1, 2 and 3 may be included in R&D. Phase 4 of the clinical trials, in which the medicine or treatment undergoes continued trials following approval and manufacture, must only be included as R&D if it gives rise to scientific or technological advances. Furthermore, not all activities carried out before obtaining a manufacturing permit are regarded as R&D, particularly when there is a significant delay following the end of phase 3 of the trials, during which advertising and development activities may commence.

1.6 Examples of R&D in agricultural sciences

Research on agricultural sciences includes promotion of agriculture, forests, fishing and the production of food.

- Research on chemical fertilisers, biocides, biological control of plagues and the mechanisation of agriculture.
- research on the impact of agricultural and forestry activities on the environment.
- Research on the development of food productivity and technology

1.7 Examples of R&D in social sciences and humanities

- The study of variables which influence the school results of children belonging to different social and ethnic groups. Study of the reading process in adults and children, in order to develop a new methodology for teaching adults and children to read
- Study of the structure and socio-occupational movility of a society. Development of a model which uses data obtained in order to prevent future consequences of recent trends in social mobility.
- Analysis of the regional variation or of other existing types of language use, in order to determine the influence of geographical or social variables in its development.
-Study of specific aspects of a particular language such as syntax, semantics, phonetics, phonology, social or regional veriations, etc.
- Study of all kinds of sources (manuscripts, monuments, works of art, buildings, etc.) in order to gain a better understanding of historical phenomena.