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Research & Development Expenditure and Personnel in Greece in 2013 - Main Indicators



Research & Development
Expenditure and Personnel
in Greece in 2013 - Main Indicators

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1. Summary

This summary report presents the final figures for the main Research and Development (R&D) Expenditure and Personnel indicators in Greece in 2013.

Since 2012 the National Documentation Centre (EKT) / National Hellenic Research Foundation (Official Journal of Government 1359/B/25.04.2012) has been the competence authority for the production of R&D statistics. The latest R&D survey has been conducted in collaboration with the Hellenic Statistical Authority (EL.STAT) as outlined in the relevant Memorandum of Cooperation that has been signed between the two organizations.

Data presented in this report are the final¹ data of the main indicators that have already been transmitted to Eurostat. The complete set of more detailed broken down type of expenditure, type of R&D personnel, educational level, sex, region, field of science, etc. will be made available in June 2015 (Commission Regulation 995/2012).

R&D expenditure as a percentage of GDP is used to calculate the R&D Intensity of a country. This indicator is used inter alia to monitor progress towards the EU2020 target that 3% of the EU's GDP to be invested in R&D.

In 2013 the GDP in Greece was EUR 182,438.0 million. It has decreased by 6.1% compared to 2012 and by 12.2% compared to 2011.

In 2013 Greece spent EUR 1,465.7 million in R&D activities. R&D expenditure increased by EUR 128.1 million compared to 2012 and by EUR 74.5 million compared to 2011. Overall R&D spending increased in all R&D sectors and in particular:

- In 2013, the Business Sector (BES) spent EUR 488.7 million on R&D. Compared to 2012, R&D expenditure in BES increased by 6.6%.
- In 2013, the Government Sector (GOV) spent EUR 410.1 million on R&D. Compared to 2012, R&D expenditure in GOV increased by 23.6%
- In 2013, the Higher Education Sector (HES) spent EUR 548.6 million on R&D. Compared to 2012, R&D expenditure in HES increased by 2.7%.
- In 2013, the Private non-profit Sector (PNP) spent EUR 18.3 million on R&D. Compared to 2012, R&D expenditure in PNP increased by 42.6%.

Regarding sources of funds for R&D expenditure, the following conclusions hold:

- In 2013, the Business Sector financed the R&D activity in all sectors with EUR 446.9 million. Compared to 2012, BES support for R&D increased by 7.0%.
- Financial support coming from the Government accounted for EUR 766.1 million. Compared to 2012, it increased by 13.8%.

With regard to the main sub-components of the government support, statistics reveal the following:

- The Ordinary Budget², which is part of the Government budget, financed R&D expenditure with EUR 411.3 million in 2013. Compared to 2012, this support has decreased by 14.5% and compared to 2011 by 18.5%

¹ Provisional figures for 2013 have been presented in the publication «Research & Development Expenditure in Greece in 2013 – Provisional data», National Documentation Centre, 2014 (available in Greek only).

² Ordinary Budget is allocated mainly to institutional funding of the public sector (including Universities)

- The Public Investment Budget³, which is the second largest component of the Government budget, financed R&D expenditure with EUR 296.5 million. Compared to 2012 this support increased by 115.3% and compared to 2011 by 137.8%

Regarding financing coming from abroad, the main source is the European Commission (EC) that funds R&D on a project basis. In 2013, EC support for R&D accounts for EUR 167.4 million. Compared to 2012, EC support increased by 1.7%.

In 2013, R&D funding by sector of performance is as follows:

- in the business sector, 81.6% (EUR 398.7 million) of the R&D expenditure in BES was enterprise-own funding
- in the government sector, 81.3% (EUR 333.5 million) of the R&D expenditure in the GOV sector was financed by government
- in the higher education sector, 72.1% (EUR 395.7 million) of R&D expenditure in the HE sector was funded by government
- in the private non-profit sector, 48.5% (EUR 8.8 million) of R&D expenditure in the PNP sector was funded by the institutions' own funds

Regarding the country's total R&D expenditure:

- The increased businesses' own-funded R&D, the substantial increase of the NSFR funds and on the other hand the GDP drop in 2013, are among the main factors that account for the 'R&D intensity' increase from 0.69% in 2012 to 0.80% in 2013

As far as personnel participating in R&D is concerned, there was an increase of the total R&D personnel (in full-time equivalents (FTEs)) across all R&D sectors.

More analytically, the total R&D personnel in Greece in 2013 came to 42,029.9 FTEs an increase of 12.5% in comparison with 2012 and 13.9% compared with 2011. The increase in the researcher category is bigger, with 29,054.7 FTEs, an increase of 17.2% in comparison with 2012 and 17.8% in comparison with 2011.

The figures for R&D personnel (in FTEs) per sector of R&D performance are as follows:

- in the business sector, the total number of R&D personnel for 2013 was 6,674.3 FTEs representing a slight increase of 2.2% in comparison with 2012. The number of researchers fell by -6.9% compared with 2012 (from 4,351.1 FTEs in 2012 to 4,051.4 FTEs in 2013) while other personnel rose by 20.3% (from 2,180.7 FTEs in 2012 to 2,622.9 FTEs in 2013).
- in the government sector, the total R&D personnel for 2013 was 11,435.5 FTEs an increase of 14.6% compared with 2012. The figure for the researcher category showed a definite increase of 28.1% in comparison with 2012 (from 4,510.0 FTEs in 2012 to 5,777.9 FTEs in 2013) while the increase for other personnel was far less, by 3.4% (from 5,471.8 FTEs in 2012 to 5,657.6 FTEs in 2013)
- in the sector of higher education, the total number of R&D personnel was 23,390.2 FTEs, an increase of 14.1% in comparison with 2012. There was an increase of 20.4% in the researcher category (from 15,723.4 FTEs in 2012 to 18,929.2 FTEs in 2013) while other personnel fell by -6.8% (to 4,461.0 FTEs in 2013 from 4,784.4 FTEs in 2012).
- in the private and non-profit sector, the total R&D personnel was 529.8 FTEs, an increase of 55.9 % compared with 2012.

³ Public Investment Budget includes funds for the implementation of National Strategic Reference Framework NSRF 2007-2013 : (<http://www.espa.gr/en/pages/staticwhatisespa.aspx>) and other government priorities. It is mainly allocated to public and private institutes in the form of projects/programmes

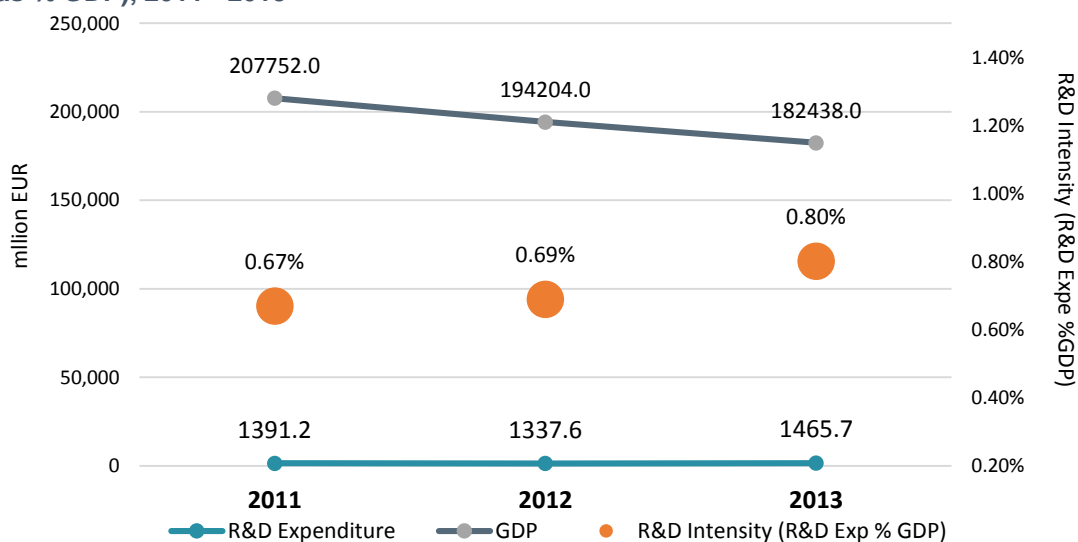
2. R&D Intensity

This chapter presents the R&D intensity indicator for Greece, expressed as the R&D expenditure as a percentage of GDP. This indicator reflects the progress towards the Europe 2020 strategy target for 3% of the EU GDP to be invested in R&D by 2020.

TABLE 1.
R&D Expenditure, national GDP (in million EUR) και R&D Intensity (R&D Expenditure as % GDP), 2011 - 2013

	2011	2012	(%) Annual change 2012-2011	2013	(%) Annual change 2013-2012
R&D Expenditure (million EUR)	1 391.2	1 337.6	↓ -3.9%	1 465.7	↑ +9.6%
GDP (million EUR)	207 752.0	194 204.0	↓ -6.5%	182 438.0	↓ -6.1%
R&D Intensity (R&D Expenditure as % GDP)	0.67%	0.69%	↑ +2.9%	0.80%	↑ +16.6%

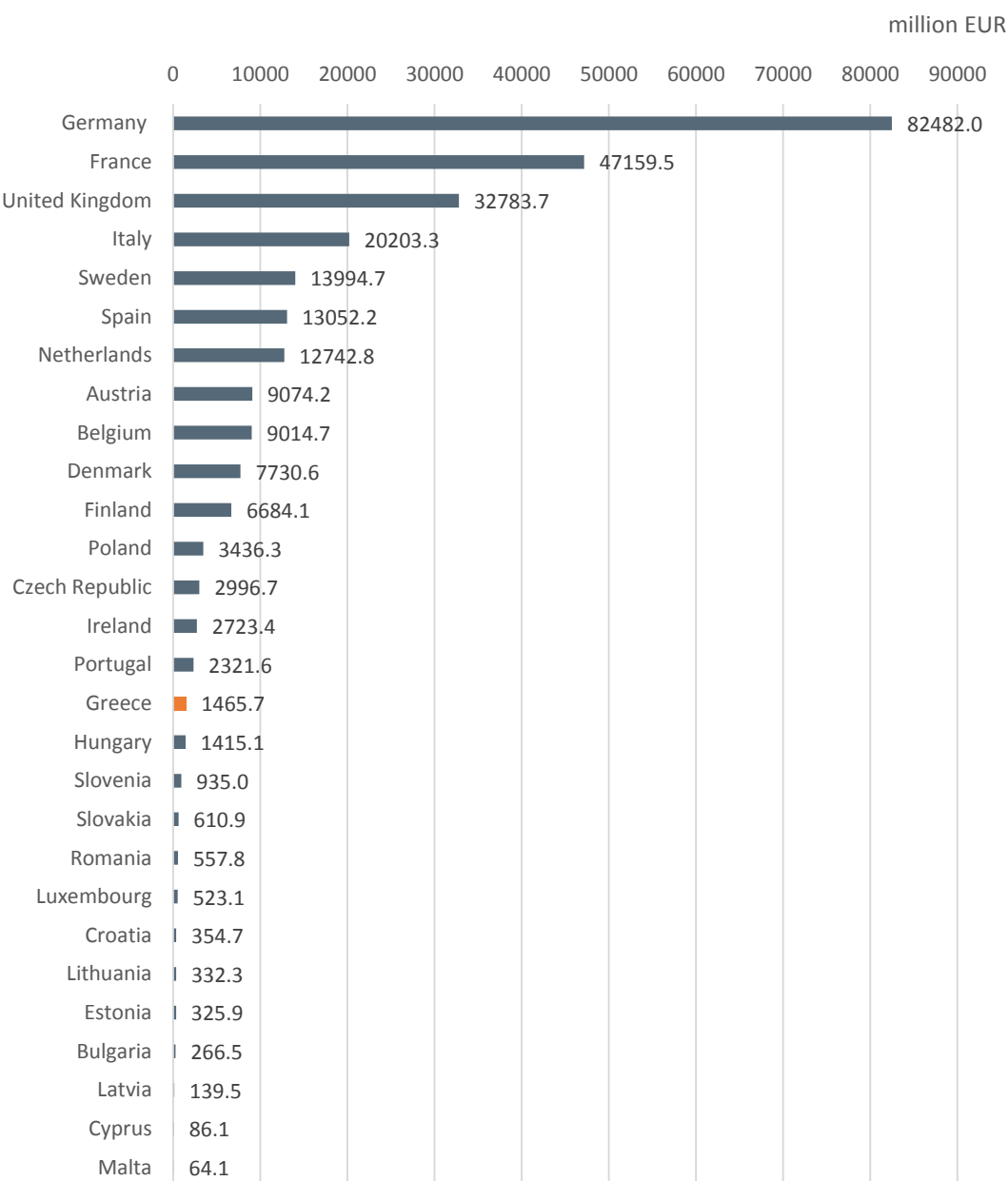
FIGURE 1.
R&D Expenditure, national GDP (in million EUR) and R&D intensity (R&D Expenditure as % GDP), 2011 - 2013



3. Greece among EU28 countries, in 2013

The following figures show Greece's ranking among the EU28 Member States, according to the data that have been published by Eurostat⁴. Figure 2 shows countries in ascending order according to the R&D expenditure for 2013 (in million EUR), while Figure 3 presents the ranking according to the R&D intensity of the same year.

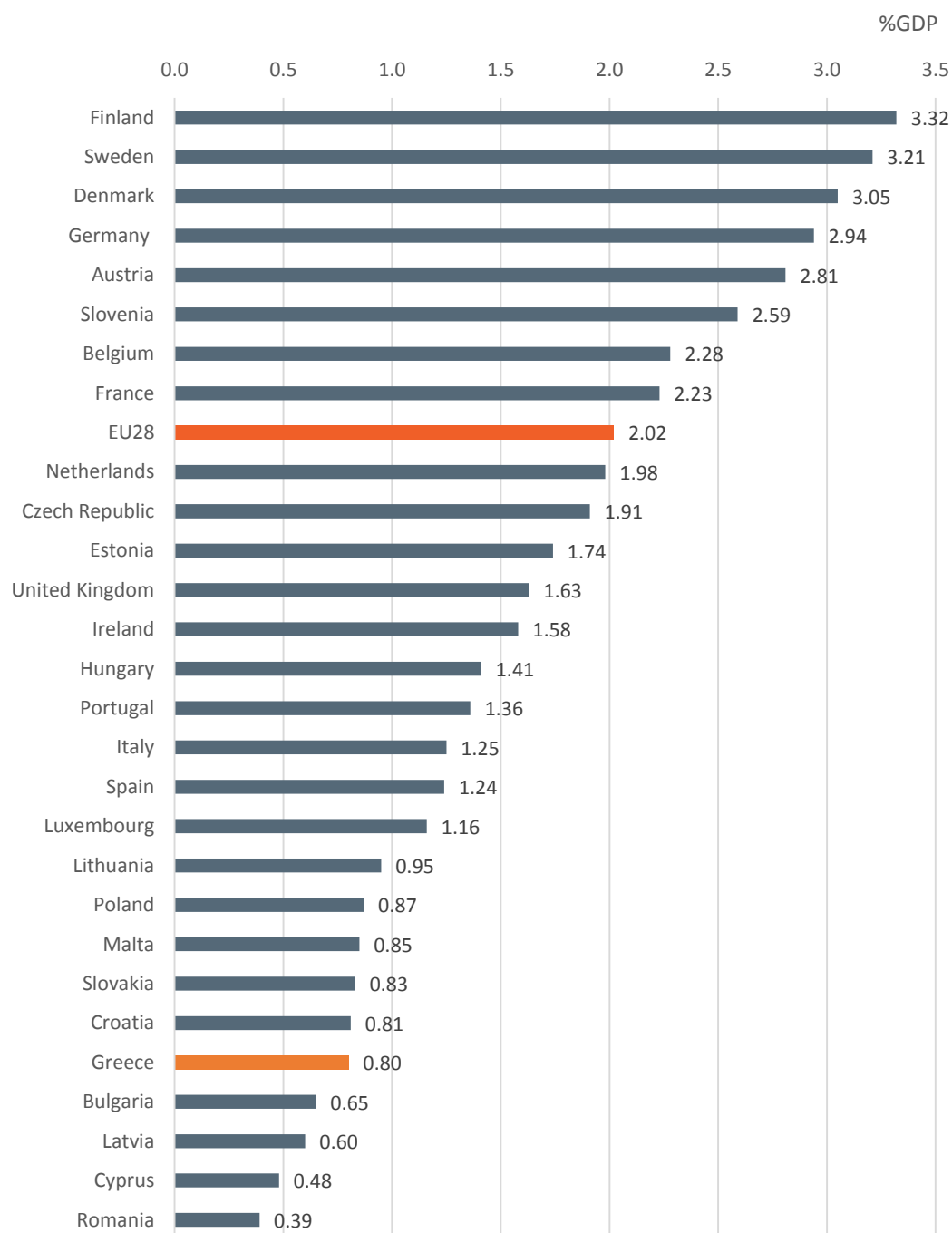
FIGURE 2.
R&D Expenditure (in million EUR) in Greece and in other EU28 Member States, 2013



* Figures for Ireland refer to year 2012

⁴ http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/9-17112014-BP/EN/9-17112014-BP-EN.PDF (17.11.2014)

FIGURE 3.
R&D intensity (R&D Expenditure as %GDP) in Greece and in other EU28 Member States, 2013



* Figures for Ireland refer to year 2012

4. R&D Expenditure by sector of performance

This chapter presents R&D expenditure across the four sectors identified by the Frascati Manual ⁵.

Throughout the tables and diagrams of this report, the four R&D sectors of performance which are used to classify the institutes/entities that perform R&D activities, are referred to in the following order:

- BES - Business Sector
- GOV - Government Sector
- HES - Higher Education Sector
- PNP - Private Non Profit Sector

Analysis of the categorisation of the entities included in the four sectors is made in Chapter 8 - Methodological Notes.

TABLE 2.
R&D Expenditure by sector of performance (in million EUR and annual changes), 2011 - 2013

Sector of performance	2011	2012	(% Annual change 2012-2011)	2013	(% Annual change 2013-2012)
	R&D Expenditure (million EUR)	R&D Expenditure (million EUR)		R&D Expenditure (million EUR)	
BES	485.9	458.6	↓ -5.6%	488.7	↑ +6.6%
GOV	331.7	331.9	— 0.1%	410.1	↑ +23.6%
HES	559.5	534.3	↓ -4.5%	548.6	↑ +2.7%
PNP	14.0	12.8	↓ -8.8%	18.3	↑ +42.6%
TOTAL⁶	1 391.2	1 337.6	↓ -3.9%	1 465.7	↑ +9.6%

⁵ Frascati Manual, Proposed Standard Practice for Surveys on Research and Experimental Development, OECD, 2002

⁶ Differences between aggregates and components can be due to rounding.

FIGURE 4.
R&D Expenditure by sector of performance (in million EUR), 2011 - 2013

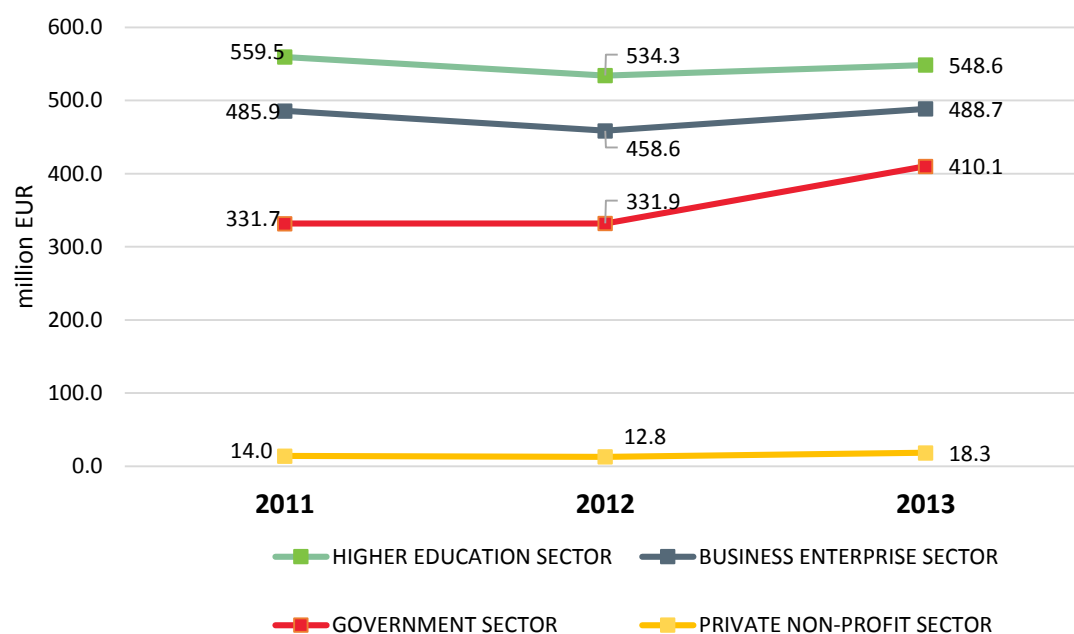


TABLE 3.
R&D Intensity (R&D Expenditure as %GDP) by sector of performance, 2011 - 2013

Sector of performance	2011	2012	2013
BES	0.23%	0.24%	0.27%
GOV	0.16%	0.17%	0.22%
HES	0.27%	0.28%	0.30%
PNP	0.01%	0.01%	0.01%
TOTAL	0.67%	0.69%	0.80%

5. Source of funds

This chapter presents R&D expenditure by source of funds.

Table 4 analyses the sources of funds for R&D activities for the whole country.

Tables 5 - 8 analyse the sources of funds for R&D activities carried out in each of the R&D sectors of performance.

In accordance with the Frascati Manual, sources of funds fall into the 5 following categories :

Businesses – This includes funding from private Greek businesses and businesses from the wider public sector (eg State-owned Enterprises - SOEs) that is used for own funding R&D within the enterprises or funding to other sectors.

Government - This includes funding from the state (central and regional government) as well as the own-funding of R&D bodies which belong to the GOV sector. In the table, the government sector is analysed using the following categories:

- Ordinary budget: R&D expenditure funded from the ordinary budget. It mainly covers public organisations, Universities, Technological Educational Institutes, etc.
- NSRF (National Strategic Reference Framework): R&D expenditure funded through the NSRF projects
- Other sources: R&D expenditure funded by the Public Investment Budget except for NSRF, Budget annexed to the General Budget, Regions, Municipalities etc. It also includes R&D carried out by organisations belonging to the GOV sector with their own resources (using their own capital, donations, legacies, bequests, rents, etc.).

Higher Education – This includes funds from institutes in the sector of higher education to other sectors. It also includes own funding of HES institutes, both public (own capital, donations, legacies, bequests, rents, etc) and private Institutes of Vocational Training (IEK).

Private non-profit organisations – This includes funding from PNP institutions to other sectors and own-funding of the PNP sector.

Abroad – This includes funding from:

- European Union (eg European Union Framework Programmes)
- Other sources from abroad: R&D which is conducted by Greek institutions and is funded by businesses from abroad, from international organisations or other bodies from abroad.

TABLE 4.
R&D Expenditure by source of funds (in million EUR and annual changes), 2011 – 2013

Source of funds	2011	2012	2012		2013	2013	
	R&D Exp. (million EUR)	R&D Exp. (million EUR)	(%) Annual change 2012-2011		R&D Exp. (million EUR)	(%) Annual change 2013-2012	
Businesses	455.5	414.8	↓	- 8.9%	443.9	↑	+7.0%
Government	684.9	673.6	↓	-1.7%	766.10	↑	+13.8%
Government: Ordinary Budget	504.4	481.2	↓	-4.6%	411.3	↓	-14.5%
Government: NSRF	124.7	137.8	↑	+10.5%	296.5	↑	+115.3%
Government: other source	55.7	54.6	↓	-2.1%	58.3	↑	+6.9%
HES	31.6	26.2	↓	-17.0%	38.1	↑	+45.4%
PNP	13.9	12.1	↓	-13.1%	12.6	↑	+4.4%
Abroad	205.2	210.9	↑	+2.7%	204.9	↓	-2.8%
EU	165.2	164.6	—	-0.4%	167.4	↑	+1.7%
Other sources from abroad	40.0	46.2	↑	15.5%	37.5	↓	-18.9%
TOTAL	1,391.2	1,337.6	↓	-3.9%	1,465.7	↑	+9.6%

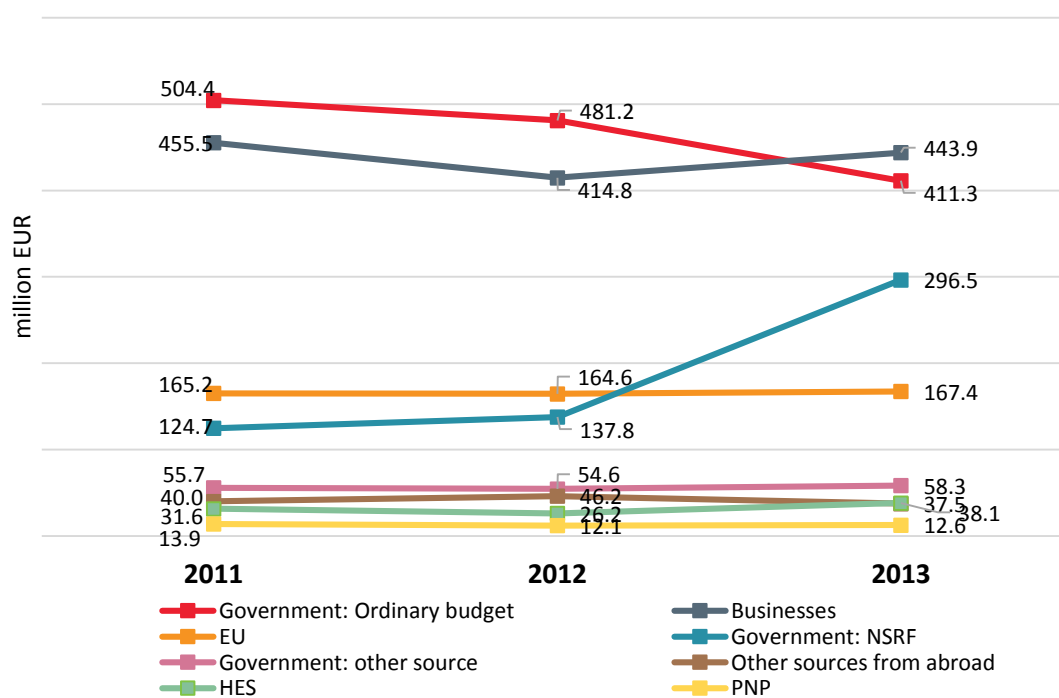
FIGURE 5.
R&D Expenditure by source of funds (in million EUR), 2011 - 2013


TABLE 5.
R&D Expenditure in the Business Enterprise Sector by source of funds (in million EUR),
2011 – 2013

Source of funds	2011	2012	2013
Businesses (own funds)	382.8	354.1	398.7
Government	39.1	37.6	34.0
Government: NSRF	26.5	24.9	28.7
Government: other source	12.5	12.7	5.3
HES	0.6	0.5	0.3
PNP	0.3	0.2	0.0
Abroad	63.0	66.2	55.7
EU	40.9	38.6	36.3
Other sources from abroad	22.1	27.6	19.4
TOTAL	485.9	458.6	488.7

FIGURE 6.
R&D Expenditure in the Business Enterprise Sector by source of funds (in million EUR),
2011 – 2013

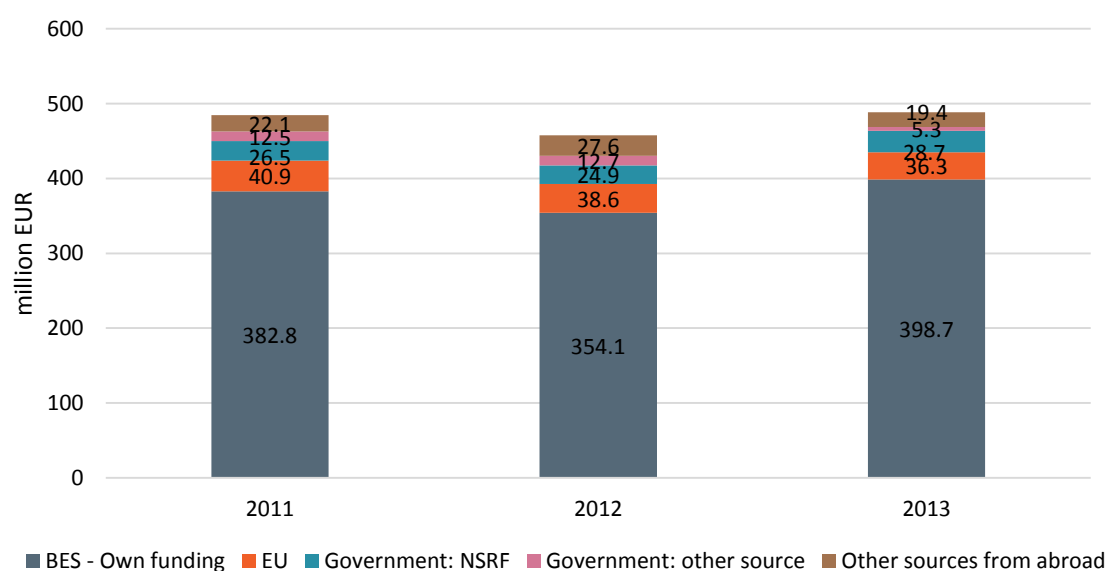


TABLE 6.
R&D Expenditure in the Government Sector by source of funds (in million EUR), 2011 – 2013

Source of funds	2011	2012	2013
Businesses	21.8	18.1	14.6
Government	255.2	257.3	333.5
Government: Ordinary Budget	163.4	160.0	158.2
Government: NSRF	55.4	61.8	139.7
Government: other sources (including own funding)	36.4	35.5	35.6
HES	0	0	0.2
PNP	0.3	0.3	0.0
Abroad	54.4	56.2	61.8
EU	44.9	46.3	54.4
Other sources from abroad	9.5	9.8	7.4
TOTAL	331.7	331.9	410.1

FIGURE 7.
R&D Expenditure in the Government Sector by source of funds (in million EUR), 2011 – 2013

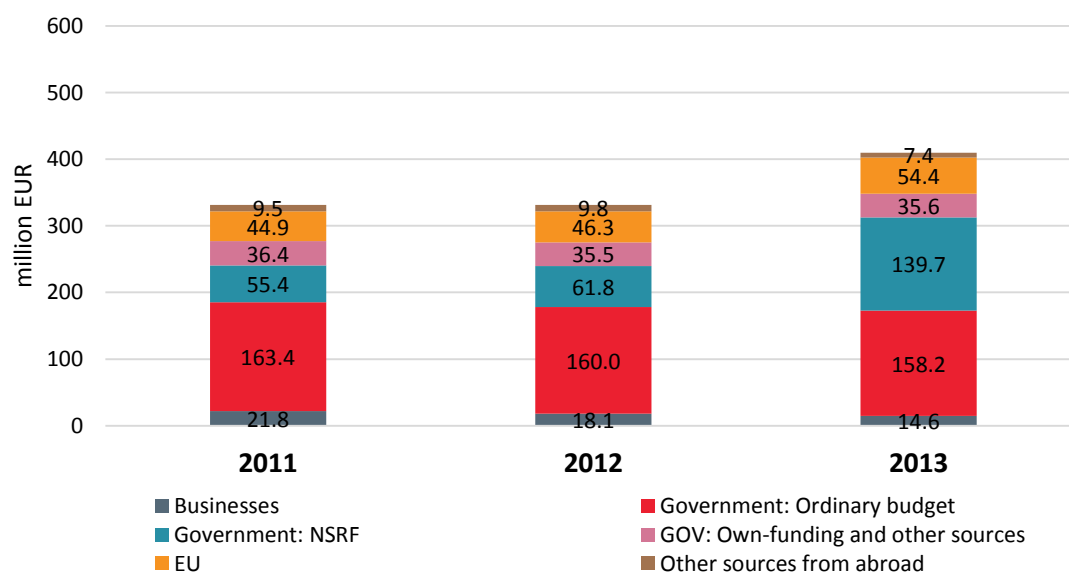


TABLE 7.
R&D Expenditure in the Higher Education Sector by source of funds (in million EUR),
2011 – 2013

Source of funds	2011	2012	2013
Businesses	50.1	42.1	30.0
Government	389.2	377.3	395.7
Government: Ordinary Budget	340.9	321.2	253.1
Government: NSRF	41.5	49.8	125.5
Government: other sources	6.7	6.3	17.1
HES (including own-funding)	30.9	25.7	37.7
PNP	4.1	3.2	3.8
Abroad	85.2	86.0	81.5
EU	77.3	78.1	74.6
Other sources from abroad	7.9	7.9	6.9
TOTAL	559.5	534.3	548.6

FIGURE 8.
R&D Expenditure in the Higher Education Sector by source of funds (in million EUR),
2011 – 2013

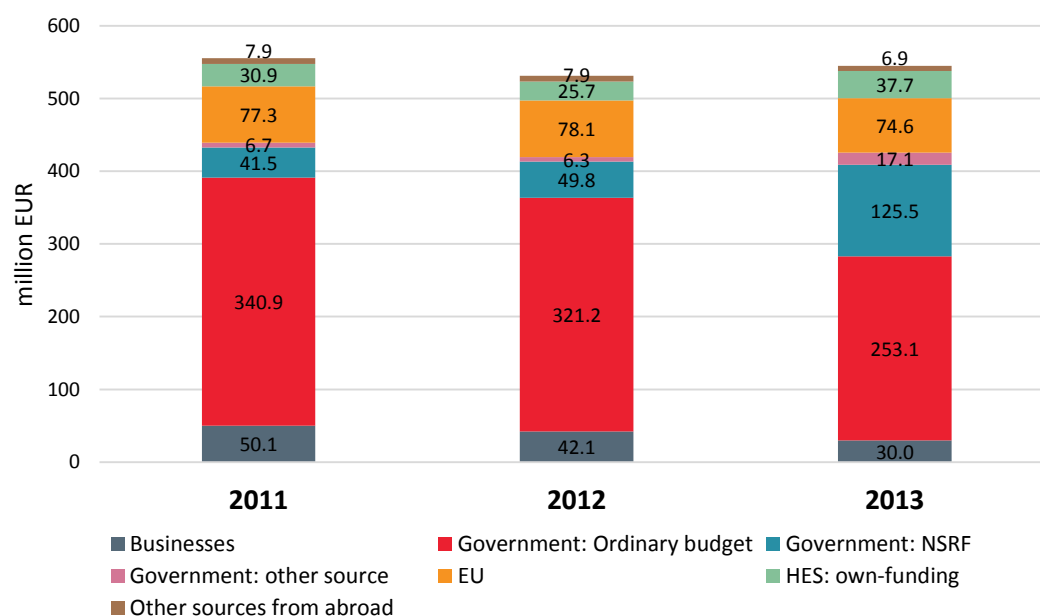
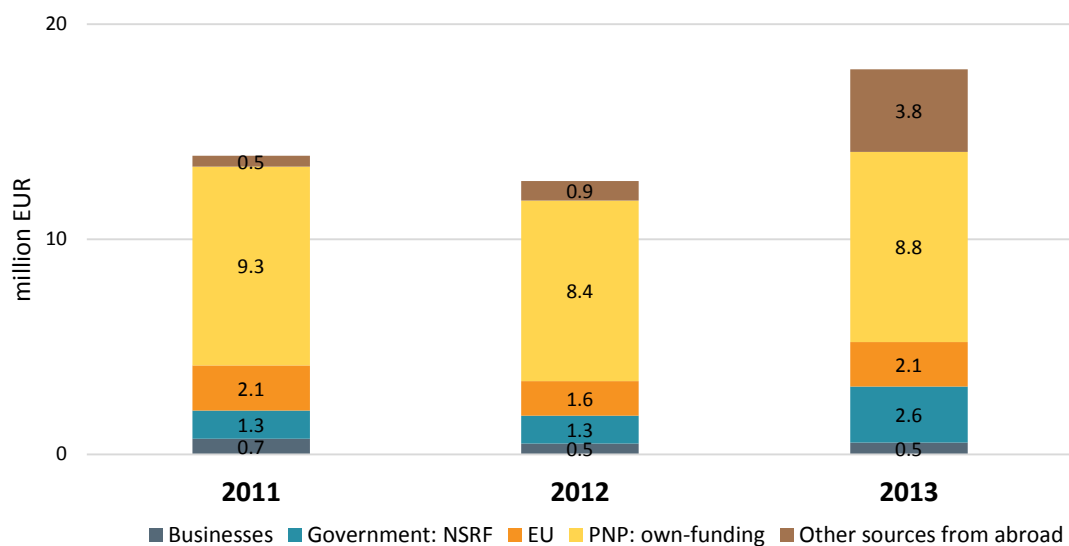


TABLE 8.
R&D Expenditure in the Private Non-Profit Sector by source of funds (in million EUR),
2011 – 2013

Source of funds	2011	2012	2013
Businesses	0.7	0.5	0.5
Government	1.5	1.4	2.9
Government: Ordinary budget	0.1	0.0	0.0
Government: NSRF	1.3	1.3	2.6
Government: other sources	0.1	0.1	0.3
HES	0.0	0.0	0.0
PNP (including own-funding)	9.3	8.4	8.8
Abroad	2.6	2.5	5.9
EU	2.1	1.6	2.1
Other sources from abroad	0.5	0.9	3.8
TOTAL	14.0	12.8	18.3

FIGURE 9.
R&D Expenditure in the Private Non-Profit Sector by source of funds (in million EUR),
2011 – 2013



6. R&D Expenditure in the Research Institutes administered by GSRT⁷

This chapter presents the evolution of R&D Expenditure of the research institutes that are supervised by the General Secretariat for Research and Technology⁸ by source of funds, during the years 2011 – 2013.

TALBE 9.

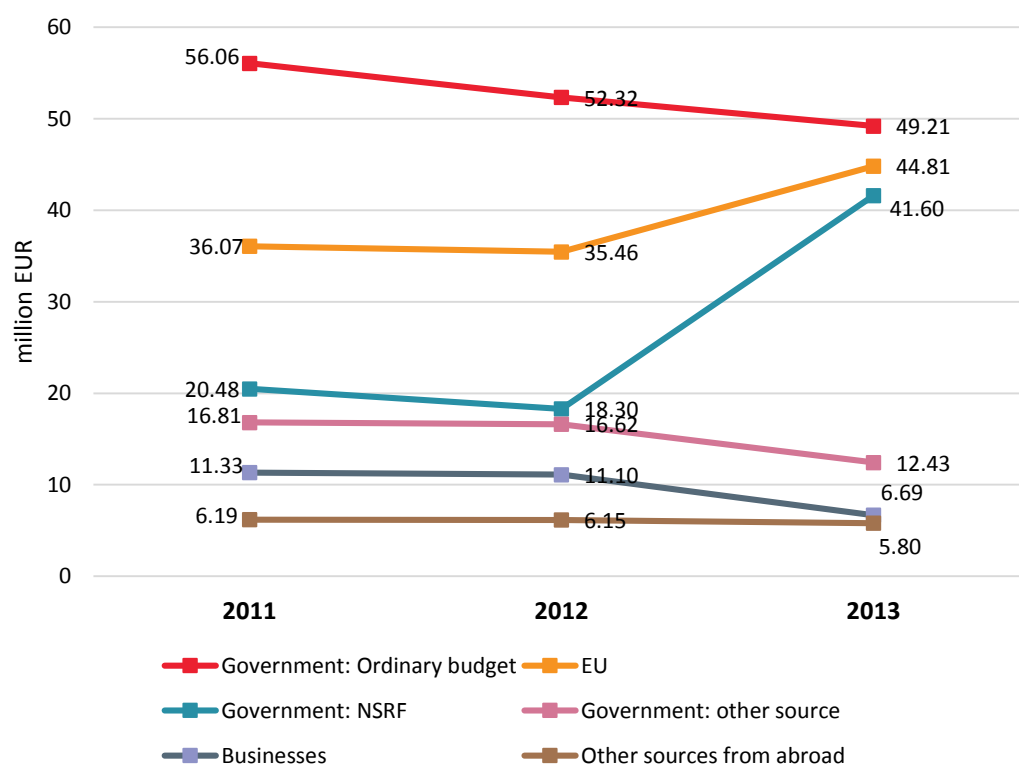
R&D Expenditure in the GSRT Research Institutes by source of funds (in million EUR and annual changes), 2011 – 2013

Source of funds	2011	2012	(% Annual change 2012-2011)	2013	(% Annual change 2013-2012)
	R&D Exp (million EUR)	R&D Exp (million EUR)		R&D Exp (million EUR)	
Businesses	11.33	11.10	↓ -2.0%	6.69	↓ -39.8%
Government	98.89	92.49	↓ -6.5%	111.01	↑ +20.0%
Government: Ordinary budget	56.06	52.32	↓ -6.7%	49.21	↓ -6.0%
Government: NSRF	20.48	18.30	↓ -10.6%	41.60	↑ +127.4%
Government: other sources (include. own funding)	22.35	21.87	↓ -2.2%	20.20	↑ -7.6%
HES	0.00	0.00		0.09	
PNP	0.10	0.08		0.00	
Abroad	42.26	41.61	— -0.7%	50.61	↑ +21.6%
EU	36.07	35.46	↓ -1.7%	44.81	↑ +26.4%
Other sources from abroad	6.19	6.15	— -0.6%	5.80	↓ -5.7%
TOTAL	152.58	145.28	↓ -4.8%	168.39	↑ +15.9%

⁷ GSRT: General Secretariat for Research and Technology

⁸ Research Institutes (in alphabetic order in Greek): National Observatory of Athens, National Hellenic Research Foundation, The Centre for Research and Technology (including Center for Research and Technology – Thessaly), National Center for Scientific Research ‘DEMOKRITOS’, Hellenic Centre for Marine Research, National Centre for Social Research, Greek Atomic Energy Commission, Hellenic Pasteur Institute, “Alexander Fleming” Biomedical Sciences Research Center, Athena-Research and Innovation Center in Information, Communication and Knowledge Technologies, Foundation for Research & Technology – Hellas, Thessaloniki Science Center & Technology Museum - NOESIS.

FIGURE 10.
R&D Expenditure in the GSRT Research Institutes by source of funds (in million EUR),
2011 – 2013



7. R&D Personnel

R&D personnel consists of all persons employed directly on R&D, as well as those providing direct services such as R&D managers, administrators, and clerical and staff. R&D personnel includes the following categories: researchers and other R&D personnel.

The figures below present the evolution of the R&D Personnel, expressed in Full Time Equivalents (FTEs) during the 3-year period 201 – 2013, for both total R&D Personnel and Researchers.

TABLE 10.
R&D Personnel by sector of performance (FTE and annual changes), 2011 – 2013

Sector of performance	2011	2012	(% Annual change 2012-2011)	2013	(% Annual change 2013-2012)
	R&D Personnel (FTE)	R&D Personnel (FTE)		R&D Personnel (FTE)	
BES	6 323.5	6 531.8	↑ +3.3%	6 674.3	↑ +2.2%
GOV	9 617.4	9 981.8	↑ +3.8%	11 435.5	↑ +14.6%
HES	20 639.7	20 507.8	– -0.6%	23 390.2	↑ +14.1%
PNP	330.5	339.8	↑ +2.8%	529.8	↑ +55.9%
TOTAL	36 913.3	37 361.0	↑ +1.2%	42 029.9	↑ +12.5%

FIGURE 11.
R&D Personnel by sector of performance (FTE), 2011 – 2013

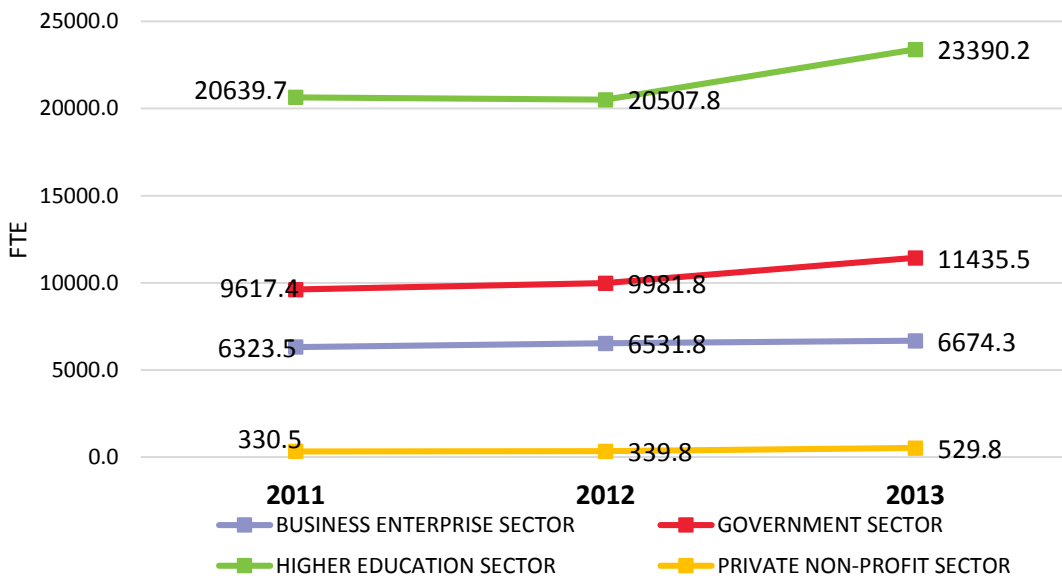
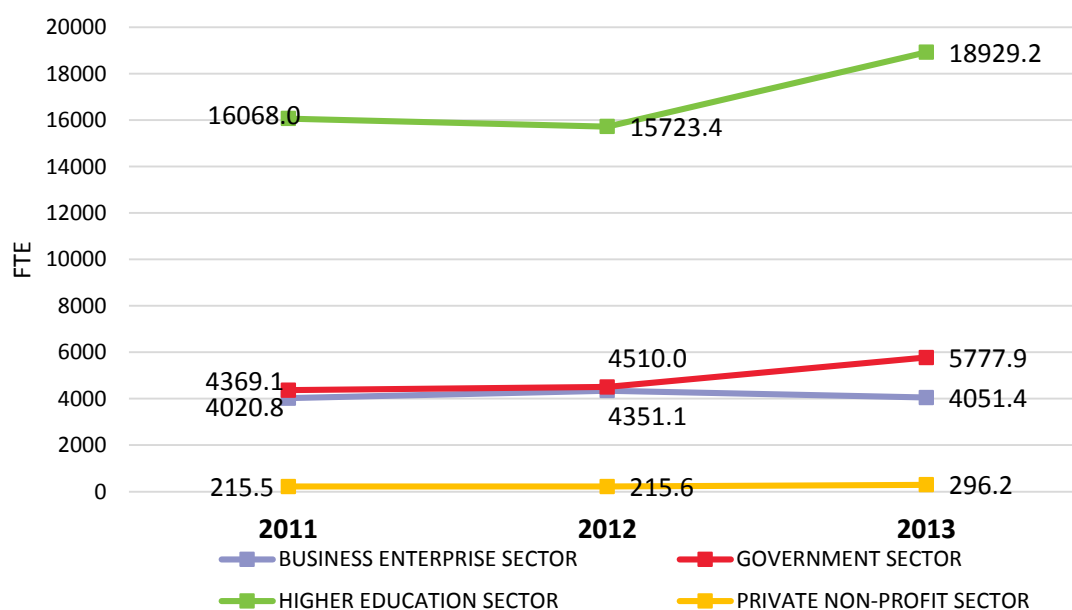


TABLE 11
Researchers by sector of performance (FTE and annual changes), 2011 - 2013

Sector of performance	2011		2012		2013	
	Researchers (FTE)	Researchers (FTE)	(%) Annual change 2012-2011	Researchers (FTE)	(%) Annual change 2013-2012	
BES	4 020.8	4 351.1	↑ +8.2%	4 051.4	↓ -6.9%	
GOV	4 369.1	4 510.0	↑ +3.2%	5 777.9	↑ +28.1%	
HES	16 068.0	15 723.4	↓ -2.1%	18 929.2	↑ +20.4%	
PNP	215.5	215.6	— 0.0%	296.2	↑ +37.4%	
TOTAL	24 674.3	24 800.0	— +0.5%	29 054.7	↑ +17.2%	

FIGURE 12.
Researchers by sector of performance (FTE), 2011 - 2013



8. Methodological Notes

<p>Brief data description</p>	<p>The official Research & Development – R&D statistics produce indicators for personnel carrying out R&D and expenditure spent on R&D activities across all sectors of the economy: Business Enterprise Sector (BES), Government Sector (GOV), Higher Education Sector (HES) and Private non-Profit (PNP) Sector as well as for the country as a whole.</p> <p>R&D expenditure is used to calculate the R&D Intensity of a country. This indicator is used to monitor progress towards the EU2020 target that 3% of the EU's GDP be invested in R&D.</p> <p>This publication presents final data for R&D expenditure and R&D Personnel (in FTEs) for 2013 in accordance with the European Regulation (995/2012⁹). Further and more detailed analyses of final figures (R&D expenditure by type of cost, etc and R&D Personnel by sex, qualification, etc.) shall be published in the summer of 2015 http://metrics.ekt.gr/statistika-etak.</p>
<p>Institutional Coverage</p>	<p>Statistics for R&D Expenditure and R&D Personnel are collected and analysed by Sector of R&D performance. The institutions that perform R&D and are used as statistical units to provide the information, are categorized into the four sectors:</p> <ul style="list-style-type: none"> ▪ Business Enterprise Sector – BES: which includes all firms, organizations and institutions whose primary activity is the market production of goods or services (other than higher education). In addition, this sector includes public enterprises as well as non-profit institutions mainly serving the enterprises. Economic activity (NACE rev.2) and size class coverage is defined in Commission Regulation 995/2012. ▪ Higher Education Sector - HES: which includes all Universities and Technological Educational Institutes (TEI), and moreover the University research institutes (EPI) and similar establishments in the Technological Educational Institutes (Technological Research Centres / KTE), University Hospitals, Private Institutes of Vocational Training (IEK) accredited by the Ministry of Education and Religious Affairs, as well as other HE schools/academies (e.g. Higher Ecclesiastical Schools, Military Academies) ▪ Government Sector – GOV: which includes all departments, offices and other bodies administered or / and financed by Ministries, such as the Public Research Centers and other Research Institutes that are supervised by the General Secretariat for Research and Technology (GSRT) (<i>in alphabetic order in Greek</i>): <i>National Observatory of Athens, National Hellenic Research Foundation, The Centre for Research and Technology (including Center for Research and Technology – Thessaly), National Center for Scientific Research ‘DEMOKRITOS’, Hellenic Centre for Marine Research, National Centre for Social Research, Greek Atomic Energy Commission, Hellenic Pasteur Institute, “Alexander Fleming” Biomedical Sciences Research Center, Athena-Research and Innovation Center in Information, Communication and Knowledge Technologies, Foundation for Research & Technology – Hellas, Thessaloniki Science Center & Technology Museum – NOESIS</i>, other Public Research Institutions supervised by different Ministries (<i>indicative and non-exhaustive list of GOV institutions is the following: Academy of Athens, Biomedical Research Foundation Academy of Athens, Hellenic Agricultural Organisation DEMETRA (former National Agricultural Research Foundation - NAGREF), Benaki Phytopathological Institute, Center for Renewable Energy Sources and Saving, Mediterranean Agronomic Institute of Chania, Computer Technology Institute and Press “Diophantus”, etc</i>), archaeological and cultural institutions, public hospitals, public independent authorities, etc.

⁹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:299:0018:0030:EN:PDF>

	<ul style="list-style-type: none"> ▪ Private Non Profit Sector –PNP: This sector includes non-market, private non-profit institutions serving the general public, such as non-market units, professional and learned societies, charities, relief or aid agencies, trades unions, consumers’ associations, etc. An indicative and non-exhaustive list of PNP institutions is the following: Foundation of the Hellenic World, Hellenic Foundation for European and Foreign Policy, L’Ecole Française d’Athènes, Hellenic Cooperative Oncology Group, Lambrakis Foundation, THORAX Institute, Environmental Centre ARCTUROS, WWW Hellas, Institute of Therapy and Environment, Hellenic Institute for Research on Cancer, etc.
<p>Concepts and definitions of main variables</p>	<p>Basic statistical concepts and definitions, standard classifications and guidelines for the production of R&D statistics are outlined in the Frascati Manual (OECD, 2002).</p> <p>Research & Development – R&D</p> <p>According to the Frascati Manual, R&D comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications.</p> <p>The term R&D covers three activities: basic research, applied research and experimental development.</p> <p>R&D not only covers the activities carried out by research organisations or R&D departments but also occasional R&D in other units.</p> <p>More definitions are available in the EKT online Glossary of Terms and Definitions (http://metrics.ekt.gr/el/lexicon/2).</p>
<p>Legal framework</p>	<p>R&D data collection is based on Commission Regulations 995/2012 (from reference year 2012 onwards) on statistics on Science and Technology.</p> <p>The National Documentation Centre, the national institution for the collection, documentation and provision of science and technology content (www.ekt.gr), was assigned the responsibility for the collection and compilation of R&D statistics in April 2012 (Official Journal of Government 1359/B/25.04.2012) by the General Secretariat for Research and Technology (GRST).</p> <p>The collection of the data presented in this publication was made in collaboration with the Hellenic Statistical Authority (Memorandum of Understanding of 28.01.2014).</p>
<p>Data collection</p>	<p>The data are collected through census survey in all R&D performers in the HE, GOV and PNP sectors as well as in all previously known enterprises that perform R&D (~700 enterprises). For the needs of the survey, EKT developed dedicated register of all known R&D performers, based on information from administrative sources. The R&D register is updated on a systematic basis.</p> <p>Especially for BES, the census part of the survey has been supplemented with sample survey in more than 4 000 enterprises in collaboration with the Hellenic Statistical Authority (ELSTAT). The sample has been drawn from the National Business Register that is maintained by ELSTAT. More than 200 interviewers were drawn from the special ELSTAT register of ‘temporary statistical interviewers’ and were assigned to collect data for the needs of the R&D survey.</p> <p>EKT has developed tailor-made software that is based on open-source technologies to support data collection and data processing.</p> <p>Data validation and editing has been performed in collaboration with respondents, whenever necessary. Consistency checks have also been conducted between the collected data and relevant data provided by the following administrative sources:</p> <ul style="list-style-type: none"> ▪ Monitoring Information System (M.I.S.) the central information system about projects financed under the National Strategic Reference Framework (NSRF) – Source: Special Service for the Monitoring Information System (M.I.S.) ▪ eCORDA database with information about signed grants and beneficiaries with regards to EU Framework Programme for Research (FP7) - Source: European Commission ▪ General University Funds (GUF) and University personnel data – Source: Ministry of Education and Religious Affairs

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- Funds for Public Hospitals – Ministry of Health
 - Private Balance Sheets database – Source: ICAP
 - GBAORD data – Source: Official GBAORD data that have been collected and compiled by EKT and made available in Eurostat dissemination database

Data processing and data analysis have been conducted using standard methodological techniques and Eurostat guidelines on the harmonized production of R&D statistics across Member States.



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HELLENIC REPUBLIC
Ministry of Culture,
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The project is co-financed by Greece and the European Union