

## Content

### 1. Contact

*National organisations responsible, by sector of performance, for the compilation and transmission of R&D statistics. Where more than one organisation are responsible for the same sector, information is presented separately for each one, in the respective sector area.*

#### 1.1. Contact organisation

Business Enterprise sector (BES)	Government sector (GOV)	Higher Education sector (HES)	Private non-profit sector (PNP)
National Documentation Centre (EKT) / National Hellenic Research Foundation (NHRF)	National Documentation Centre (EKT) / National Hellenic Research Foundation (NHRF)	National Documentation Centre (EKT) / National Hellenic Research Foundation (NHRF)	National Documentation Centre (EKT) / National Hellenic Research Foundation (NHRF)

#### 1.2. Contact organisation unit

Business Enterprise sector (BES)	Government sector (GOV)	Higher Education sector (HES)	Private non-profit sector (PNP)
Registers, Indicators and Services for Research & Innovation Unit	Registers, Indicators and Services for Research & Innovation Unit	Registers, Indicators and Services for Research & Innovation Unit	Registers, Indicators and Services for Research & Innovation Unit

#### 1.3. Contact name

Responsible person(s)

Business Enterprise sector (BES)	Government sector (GOV)	Higher Education sector (HES)	Private non-profit sector (PNP)
Evi Sachini, Nena Malliou, Tonia Ieromnimon	Evi Sachini, Nena Malliou, Tonia Ieromnimon	Evi Sachini, Nena Malliou, Tonia Ieromnimon	Evi Sachini, Nena Malliou, Tonia Ieromnimon

Additional information

*Particularities such as responsibility for only part of the sector*

Business Enterprise sector (BES)	Government sector (GOV)	Higher Education sector (HES)	Private non-profit sector (PNP)
EKT took over the collection and production of R&D and GBAORD statistics in spring 2012.  Before that it was the General Secretariat for Research and Technology (GSRT) that produced R&D statistics and further in the past (before 1985) it was the Ministry of Research and Technology and (before 1983) YEET (a special Agency for Scientific and Technological Research under the Ministry of Coordination).	EKT took over the collection and production of R&D and GBAORD statistics in spring 2012.  Before that it was the General Secretariat for Research and Technology (GSRT) that produced R&D statistics and further in the past (before 1985) it was the Ministry of Research and Technology and (before 1983) YEET (a special Agency for Scientific and Technological Research under the Ministry of Coordination).	EKT took over the collection and production of R&D and GBAORD statistics in spring 2012.  Before that it was the General Secretariat for Research and Technology (GSRT) that produced R&D statistics and further in the past (before 1985) it was the Ministry of Research and Technology and (before 1983) YEET (a special Agency for Scientific and Technological Research under the Ministry of Coordination).	EKT took over the collection and production of R&D and GBAORD statistics in spring 2012.  Before that it was the General Secretariat for Research and Technology (GSRT) that produced R&D statistics and further in the past (before 1985) it was the Ministry of Research and Technology and (before 1983) YEET (a special Agency for Scientific and Technological Research under the Ministry of Coordination).

#### 1.4. Contact person function

Business Enterprise sector (BES)	Government sector (GOV)	Higher Education sector (HES)	Private non-profit sector (PNP)
Evi Sachini: Director, Nena Malliou: Head of Unit, Tonia Ieromnimon: Statistical Expert	Evi Sachini: Director, Nena Malliou: Head of Unit, Tonia Ieromnimon: Statistical Expert	Evi Sachini: Director, Nena Malliou: Head of Unit, Tonia Ieromnimon: Statistical Expert	Evi Sachini: Director, Nena Malliou: Head of Unit, Tonia Ieromnimon: Statistical Expert

### 1.5. Contact mail address

Business Enterprise sector (BES)	Government sector (GOV)	Higher Education sector (HES)	Private non-profit sector (PNP)
National Documentation Centre (EKT) / National Hellenic Research Foundation (NHRF) Strategic Planning & Development Department 48, Vas. Constantinou Ave, GR-11635 Athens	National Documentation Centre (EKT) / National Hellenic Research Foundation (NHRF) Strategic Planning & Development Department 48, Vas. Constantinou Ave, GR-11635 Athens	National Documentation Centre (EKT) / National Hellenic Research Foundation (NHRF) Strategic Planning & Development Department 48, Vas. Constantinou Ave, GR-11635 Athens	National Documentation Centre (EKT) / National Hellenic Research Foundation (NHRF) Strategic Planning & Development Department 48, Vas. Constantinou Ave, GR-11635 Athens

### 1.6. Contact email address

Business Enterprise sector (BES)	Government sector (GOV)	Higher Education sector (HES)	Private non-profit sector (PNP)
<a href="mailto:esachin@ekt.gr">esachin@ekt.gr</a> , <a href="mailto:nmalliou@ekt.gr">nmalliou@ekt.gr</a> , <a href="mailto:ieromnia@ekt.gr">ieromnia@ekt.gr</a>	<a href="mailto:esachin@ekt.gr">esachin@ekt.gr</a> , <a href="mailto:nmalliou@ekt.gr">nmalliou@ekt.gr</a> , <a href="mailto:ieromnia@ekt.gr">ieromnia@ekt.gr</a>	<a href="mailto:esachin@ekt.gr">esachin@ekt.gr</a> , <a href="mailto:nmalliou@ekt.gr">nmalliou@ekt.gr</a> , <a href="mailto:ieromnia@ekt.gr">ieromnia@ekt.gr</a>	<a href="mailto:esachin@ekt.gr">esachin@ekt.gr</a> , <a href="mailto:nmalliou@ekt.gr">nmalliou@ekt.gr</a> , <a href="mailto:ieromnia@ekt.gr">ieromnia@ekt.gr</a>

### 1.7. Contact phone number

Business Enterprise sector (BES)	Government sector (GOV)	Higher Education sector (HES)	Private non-profit sector (PNP)
tel.: +30210 7273946, +30210 7273708	tel.: +30210 7273946, +30210 7273708	tel.: +30210 7273946, +30210 7273708	tel.: +30210 7273946, +30210 7273708

### **1.8. Contact fax number**

*[Not requested]*

### **2. Metadata update**

#### **2.1. Metadata last certified**

23/12/2014

#### **2.2. Metadata last posted**

23/12/2014

#### **2.3. Metadata last update**

23/12/2014

### **3. Statistical presentation**

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#### **3.1. Data description**

*[Not requested]*

#### **3.2. Classification system**

*Please attach, using the "Annexes" button below, Correspondence table between national and ISIC/NACE industrial classification (if available)*

### **3.3. Coverage - sector**

#### **3.3.1. Sector institutional coverage**

*For each sector provide information on rules of coverage and allocation of institutions to it (N.B. only differences from Frascati Manual (FM) guidelines need to be reported). Also, indicate information on hospitals and medical centres and in which sector their R&D activities are included.*

General information

*About national total if applicable, e.g. State and local gov excluded, or SSH excluded*

Institutional coverage is in line with Frascati Manual recommendations.

Hospitals and medical centres

*Please provide information on which sectors hospital and medical centres are included (to be also included under appropriate sector) See FM § 97, 167, 209, 211-213, 434, 449-450.*

University hospitals are included in the higher education sector.

Private and PNP hospitals are included in the BE and PNP sector respectively.

Government hospitals are included in the GOV sector since 2012 (for reference year 2011 and onwards).

Business Enterprise sector (BES)

*(see FM 3.4)*

Coverage of BES is in line with Frascati Manual recommendations. The survey covers enterprises that potentially have R&D activities in Greece regardless of size or private/public status.

Government sector (GOV)

*(see FM 3.5)*

Coverage of GOV is in line with Frascati Manual recommendations. It covers public or private institutions administered or/and financed by Ministries (public research centres, archaeological and cultural institutions, public hospitals, agricultural institutions, etc) as well as Greek Public Independent Authorities.

Higher Education sector (HES)

(see FM 3.6) Total (or partial?) inclusion of:

Universities and colleges: core of the sector (FM § 209).	Post-secondary establishments: (FM § 210).	University hospitals and clinics: Included, entire institutions or only teaching/training clinics (FM § 211-213).	HE Borderline institutions: Included if administered by universities or other post-secondary education units and not being market producers of R&D (FM §214-221).
Universities are fully included. Technological Educational Institutes (TEI) are also fully included since 2012 (reference year 2011 and onwards).	Included since 2012 (reference year 2011 and onwards): military, theological and other academies (e.g. public health academy), private colleges, etc.	Entire institutions (university hospitals) are included.	University research institutes (EPI) and similar establishments in the Technological Educational Institutes (Technological Research Centres / KTE) are included since 2012 (reference year 2011 and onwards).

Private non-profit sector (PNP)

(see FM 3.7)

Included?	If included, included separately or grouped with another sector?
Yes, since 1993.	Included separately.

### 3.3.2. R&D variable coverage

*Please indicate any differences from FM, in particular in relation to:*

- R&D administration and other support activities: any deviations from FM § 26, 131-132.*
- Consultants: Treatment of consultants in R&D expenditure and personnel if different from FM § 296*
- Clinical trials: Are they included (see FM § 130)?; In which sector(s); How has R&D been separated .*

Business Enterprise sector (BES) - R&D administration and other support activities
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Included.
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Business Enterprise sector (BES) - Consultants
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In line with Frascati manual recommendations, on-site consultants are included. Outsourcing costs are excluded and reported separately (since the 2013 survey a question has been added about extramural expenditure).
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Business Enterprise sector (BES) - Clinical trials

Clinical trials (phases 1, 2, 3 and occasionally 4) undertaken by pharmaceutical companies are covered.

Government sector (GOV) - R&D administration and other support activities

Included.

Government sector (GOV) - Clinical trials

Clinical trials that are conducted in public hospitals or public research centres are included since 2012 (reference year 2011 onwards).

Higher Education sector (HE) - R&D administration and other support activities

Administrative personnel supporting R&D activities are included.

Higher Education sector (HE) - Post-graduate student coverage

*(see FM §305, 89-94) [R&D activities of post-graduate students (fully, partially, not at all included?) as concerns R&D expenditure and personnel]*

Post-graduate students who receive payment for their R&D activities (participation to research projects, fellowship, grants etc.) are fully included. Other post-graduate students are also included, but reported in the questionnaire separately.

Higher Education sector (HE) - Clinical trials

Included.

Private non-profit sector (PNP) - R&D administration and other support activities

Included.

Private non-profit sector (PNP) – Clinical trials

Included when performed in PNP hospitals.

### **3.3.3. Fields of Science (FOS)**

*Please indicate for each sector, any differences in the coverage of NSE and SSH as presented in FM (Table 3.2), e.g. certain sciences excluded from coverage. Also indicate any difficulties encountered with the FOS classification.*

Business Enterprise sector (BES) - *e.g.NSE only, or NSE + SSH not separately available*

Both NSE and SSH are covered. In the 2011 questionnaire information about personnel (total personnel and researchers) data and expenditure data was collected also the FOS breakdown (6 major fields), covering both NSE and SSH. However, due to the length of the questionnaire and the fact that this breakdown is not requested by the Regulation, this question has been dropped down from the 2013 questionnaire.

Government sector (GOV)

Both personnel (total personnel and researchers) data and expenditure data are collected and classified according to FOS classification (6 major fields), covering both NSE and SSH.

Higher Education sector (HE)

Both personnel (total personnel and researchers) data and expenditure data are collected and classified according to FOS classification (6 major fields), covering both NSE and SSH.

Private non-profit sector (PNP)

Both personnel (total personnel and researchers) data and expenditure data are classified according to FOS classification (6 major fields), covering both NSE and SSH.

### 3.3.4. International R&D transactions

*Please indicate availability of statistics on international R&D transactions – receipts and payments - and difficulties encountered with the coverage of R&D expenditures of foreign affiliates.*

#### Availability of Receipts from abroad by sector (*FM §407*)

Funding from abroad is covered by all sectors and is broken down into: European Commission (e.g. Framework and other EU Programmes), Foreign Business enterprises, International Organisations, Other sources. For the BES category 'foreign business enterprises' is further broken down into 'foreign enterprises within the same group' and 'other foreign enterprises'.

#### Availability of Payments to abroad by sector (*FM §412*)

Since the 2013 survey, data about extramural expenditure to abroad (enterprises and other organisations separately) has been collected in the 'Extramural Expenditure' chapter of all questionnaires (BES, GOV, HES, PNP).

#### Coverage of R&D expenditure of foreign affiliates

Foreign affiliates in the BE sector that conduct their R&D activities in Greece are covered. The questionnaire includes a question about whether the reporting unit is member of a group of enterprises as well as the country where the parent company is located.

### 3.3.5. Extramural expenditures

*Please indicate whether you compile statistics on expenditure on extramural R&D and on the method that is employed to separate it from intramural expenditure.*

Availability of Extramural expenditures
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Not collected in the 2011 survey but included in the 2013 survey.
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### 3.4. Statistical concepts and definitions

Variable specificities

#### 3.4.1. R&D expenditure

*Please provide information on:*

- *coverage of years - specify whether calendar or fiscal (if latter, please specify period)*
- *source of funds; any divergence from FM (see FM section 6.3)*
- *Type of R&D (Basic Research, Applied Research, Experimental Development) (FM section 4.2);*
- *Type of costs (labour costs, other current costs, capital expenditure): Deviations from FM sections 6.2.2. and 6.2.3; more detailed breakdown of costs than in the FM, please describe*
- *Socio-economic objectives (specify any difficulties with implementation the classification – see FM §287-288)*

*For BE sector only:*

- *Economic activity of the unit: (main econ. activity of the institution conducting the R&D activity, or main R&D activity or R&D project). Specify any difficulties in adapting national data to ISIC/NACE classification used in questionnaire? Divergences?*

- *Economic activity of industry served (for enterprises in ISIC/NACE Div. 73): How are data obtained (surveys, estimates), contents or aim of R&D project; divergences from FM objectives and national objectives*
- *Product field: Problems collecting data by product field.*

Business Enterprise sector (BES) expenditure

Coverage of years	Source of funds	Type of R&D	Type of costs	Socio-economic objective
Calendar year.	No divergence from the Frascati Manual recommendations. In addition, government funding is further split into the categories: a) Funding covered by the National Strategic Reference Framework (NSRF) 2007 - 2013, and b) other government funding.	Data are available for total intramural R&D expenditure.	Data available. Since 2012 (reference year 2011 onwards), breakdown for capital expenditure (land and buildings, instrument and equipment) is also available. Moreover, current cost are broken into labour costs of the enterprise's persons employed, labour cost of on-site consultants, and other current costs.	Data not available.

Economic activity of the unit	Economic activity of industry served (for enterprises in ISIC/NACE 73)	Product field
R&D resources are allocated to the principal economic activity of the enterprise, according to NACE rev.2.	Not collected.	Not collected.

Government sector (GOV) expenditure

Coverage of years	Source of funds	Type of R&D	Type of costs	Socio-economic objective
Calendar year.	No divergence from the Frascati Manual recommendations. In addition, government funding is split into the categories: a) Own funds, b) Ordinary Government Budget, c) National Strategic Reference Framework (NSRF) 2007 - 2013. d) Investment Government Budget other than the National Strategic Reference Framework (NSRF) 2007 -2013, e) other government source (e.g. regions, municipalities, special accounts, etc.).	Since 2012 (reference year 2011 onwards) data are available for total intramural R&D expenditure.	Data available. Since 2012 (reference year 2011 onwards), breakdown for capital expenditure is also available. Moreover, current costs are broken into labour costs of the enterprise's persons employed, labour cost of on-site consultants, and other current costs.	Since 2012 (reference year 2011 onwards) data is available.

Higher Education sector (HE) expenditure

Coverage of years	Source of funds	Type of R&D	Type of costs	Socio-economic objective
Calendar year.	No divergence from the Frascati Manual recommendations. In addition, government funding is split into the categories: a) Ordinary Government Budget – which covers General University Funds, b) Investment Government Budget other than the National Strategic Reference Framework (NSRF) 2007 -2013, c) National Strategic Reference Framework (NSRF) 2007 -2013, d) other government source (e.g. regions, municipalities, special accounts, etc.)	Since 2012 (reference year 2011 onwards) data is available for total intramural R&D expenditure.	Data available. Since 2012 (reference year 2011 onwards), breakdown for capital expenditure is also available. Moreover, current costs are broken into labour costs of the enterprise's persons employed, labour cost of on-site consultants, and other current costs.	Not collected.

Private non-profit sector (PNP) expenditure



Coverage of years	Source of funds	Type of R&D	Type of costs	Socio-economic objective
Calendar year.	No divergence from the Frascati Manual recommendations. In addition, government funding is split into the categories: a) Ordinary Government Budget , b) Investment Government Budget other than the National Strategic Reference Framework (NSRF) 2007 -2013, c) National Strategic Reference Framework (NSRF) 2007 -2013, d)other government source (e.g. regions, municipalities, special accounts, etc.).	Since 2012 (reference year 2011 onwards) data is available for total intramural R&D expenditure.	Data available. Since 2012 (reference year 2011 onwards), breakdown for capital expenditure is also available.	Not collected.

R&D expenditure – Defence R&D

*Please, indicate methods for obtaining data or making estimates*

Information about defence R&D is separately available for the GOV sector only (NABS classification). Defence R&D that is covered in other sectors is not separately available.

### 3.4.2. R&D personnel

Please provide information on:

- *reference period - indicate period for calculation of personnel (HC) data [fixed date – specify, average number of persons employed during the calendar year, total number of persons employed during the calendar year];*
- *coverage of years – for FTE, specify whether calendar or fiscal (please specify period);*
- *Occupation - difficulties encountered with classifying both Headcounts (HC) and Full-time equivalent on R&D (FTEs) by Occupation (researcher, technicians, other support staff)*
- *Qualification - difficulties encountered with classifying both Headcounts (HC) and Full-time equivalent on R&D (FTEs) by Qualification (ISCED -97)*
- *Age – problems with classification groups*
- *Citizenship – difficulties encountered with definition*

#### 3.4.2.1. R&D personnel - head counts (HC)

Business Enterprise sector (BES) headcount

Reference period	Occupation	Qualification	Age	Citizenship
Calendar year.	Information about the two occupational categories (researchers and other R&D personnel) is collected. Since 2012 (reference period 2011	Qualification is available for the two occupational categories and sex. Data are separately available for ISCED 2011 level 8, ISCED 2011 levels 5, 6	Since 2012 (reference year 2011 onwards) information about age (and sex) of the researchers has been collected in head counts.	Since 2012 (reference year 2011 onwards) information about citizenship (and sex) of the researchers has been collected in head counts.

	onwards) information about all occupations is also available by sex, educational level (and sex) and by region (and sex).	and 7 and 'other qualification' in line with the new classification that has been introduced with the Com. Reg. 995/2012		
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Government sector (GOV) headcount

Reference period	Occupation	Qualification	Age	Citizenship
Calendar year.	Information about the two occupational categories (researchers and other R&D personnel) is collected. Since 2012 (reference period 2011 onwards) information about all occupations is also available by sex, educational level (and sex), by major field of science (and sex) and by region (and sex).	Qualification is available for all occupational categories and sex. Data are separately available for ISCED 2011 level 8, ISCED 2011 levels 5, 6 and 7 and 'other qualification' in line with the new classification that has been introduced with the Com. Reg. 995/2012	Since 2012 (reference year 2011 onwards) information about age (and sex) of the researchers has been collected in head counts.	Since 2012 (reference year 2011 onwards) information about citizenship (and sex) of the researchers has been collected in head counts.

Higher Education sector (HE) headcount

Reference period	Occupation	Qualification	Age	Citizenship
Calendar year.	Information about the two occupational categories (researchers and other R&D personnel) is collected. Since 2012 (reference period 2011 onwards) information about all occupations is also available by sex, educational level (and sex), by major field of science (and sex) and by region (and sex).	Qualification is available for all occupational categories and sex. Data are separately available for ISCED 2011 level 8, ISCED 2011 levels 5, 6 and 7 and 'other qualification' in line with the new classification that has been introduced with the Com. Reg. 995/2012	Since 2012 (reference year 2011 onwards) information about age (and sex) of the researchers has been collected in head counts.	Since 2012 (reference year 2011 onwards) information about citizenship (and sex) of the researchers has been collected in head counts.

Private non-profit sector (PNP) headcount

Reference period	Occupation	Qualification	Age	Citizenship
Calendar year.	Information about the two occupational categories (researchers and other R&D personnel) is collected. Since 2012 (reference period 2011 onwards) information about all occupations is also available by sex,	Qualification is available for all occupational categories and sex. Data are separately available for ISCED 2011 level 8, ISCED 2011 levels 5, 6 and 7 and 'other qualification' in line with the new classification that	Not available / not collected.	Not available / not collected.

	educational level (and sex) and by region (and sex).	has been introduced with the Com. Reg. 995/2012		
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### 3.4.2.2. R&D personnel - Full Time Equivalentents (FTEs)

Business Enterprise sector (BES) - FTEs

Coverage of years	Occupation	Qualification	Age	Citizenship
Calendar year.	Information about the two occupational categories (researchers and other R&D personnel) is collected. Since 2012 (reference period 2011 onwards) information about all occupations is also available by sex, educational level (and sex) and and by region (and sex).	Qualification is available all occupational categories and sex. Data are separately available for ISCED 2011 level 8, ISCED 2011 levels 5, 6 and 7 and 'other qualification' in line with the new classification that has been introduced with the Com. Reg. 995/2012	Not available / not collected.	Not available / not collected.

Government sector (GOV) - FTEs

Coverage of years	Occupation	Qualification	Age	Citizenship
Calendar year.	Information about the two occupational categories (researchers and other R&D personnel) is collected. Since 2012 (reference period 2011 onwards) information about all occupations is also available by sex, educational level (and sex), by major field of science (and sex) and by region (and sex).	Qualification is available all occupational categories and sex. Data are separately available for ISCED 2011 level 8, ISCED 2011 levels 5, 6 and 7 and 'other qualification' in line with the new classification that has been introduced with the Com. Reg. 995/2012	Not available / not collected.	Not available / not collected.

Higher Education sector (HE) - FTEs

Coverage of years	Occupation	Qualification	Age	Citizenship
Calendar year.	Information about the two occupational categories (researchers and other R&D personnel) is collected. Since 2012 (reference period 2011 onwards) information about all occupations is also available by sex,	Qualification is available all occupational categories and sex. Data are separately available for ISCED 2011 level 8, ISCED 2011 levels 5, 6 and 7 and 'other qualification' in line with the new classification that	Not available / not collected.	Not available / not collected.

	educational level (and sex), by major field of science (and sex) and by region (and sex).	has been introduced with the Com. Reg. 995/2012		
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Private non-profit sector (PNP) - FTEs

Coverage of years	Occupation	Qualification	Age	Citizenship
Calendar year.	Information about the two occupational categories (researchers and other R&D personnel) is collected. Since 2012 (reference period 2011 onwards) information about all occupations is also available by sex, educational level (and sex), by major field of science (and sex) and by region (and sex).	Qualification is available for all occupational categories and sex. Data are separately available for ISCED 2011 level 8, ISCED 2011 levels 5, 6 and 7 and 'other qualification' in line with the new classification that has been introduced with the Com. Reg. 995/2012	Not available / not collected.	Not available / not collected.

FTE calculation

Means of calculation of FTE if known. In particular, how do you account for time devoted to research by post-graduate students.

Reporting units made the calculation of FTEs following the questionnaire guidelines that have been drafted in line with FM recommendations (§ 333). Information about how calculations were performed has been provided by respondents in the metadata chapter of the questionnaire.

BES: The most commonly used approach is that of estimations made by the manager(s) of the reporting enterprise, followed by the use of time-sheets. Combination of the two has also been used to some extent. Smaller proportion of enterprises applied different coefficients to different personnel categories (e.g. scientific personnel, technicians, administrations staff, etc.) or used other estimation approaches (e.g. 100% for all staff working in the R&D unit of the enterprise and smaller coefficients for other staff categories).

GOV: FTE calculations in GOV were mainly based on estimates made by directors / heads of the public institutions, and to a lesser extent on time-sheets. Combination of the two has also been reported to some extent. Institutions have also reported the use of other methods, such as the application of different coefficients to different staff categories –depending on occupation or type of contract, the implementation of survey to the staff, etc.

HES: The use of different approaches for the calculation of FTEs in HES is very similar to that described in the two previous sectors, the most prominent approach being the application of different coefficients on different staff category: 30-50% time spent on R&D for permanent teaching personnel (professors, lectures, etc.), 30-50% for special teaching personnel depending on their classification into researchers or technicians, 100% for administrative staff working in the special university (and TEI) units that administer research projects (ELKE) and 10-30% for other administrative staff.

For postgraduate students, FTEs have been calculated by one of the following approaches or combinations: time-sheets for participation to research projects, 1 FTE for active PhD students only (irrespective of whether they receive a salary or grand for their R&D activities), 0.7 FTE when information about PhD students is retrieved from administrative sources in cases of non-response.

PNP: Similar to other categories.



FTE concept

Is the FTE concept uniform across sectors?

As described in detail in Section 3.2.2.5

#### **3.4.2.3. R&D personnel - Cross-classification by occupation and qualification**

*Please indicate availability of R&D personnel and researchers cross-classified by occupation and qualification, whether in HC or FTE, and the frequency of such data.*

Since 2012 (reference year 2011 onwards), headcount and FTE data for R&D personnel are cross-classified by occupation and qualification (and sex) for all R&D sectors.

#### **3.5. Statistical unit**

*[Not requested, available in the Quality Report]*

#### **3.6. Statistical population**

*(See FM 7.3)*

### 3.6.1. Target population - BES

*The following table is to be filled in when sample/census survey is used for collection of raw data*

all firms or only potential R&D performers? (see FM §441, 443)	regular and occasional R&D performers? (see FM §435)	size cut-off point? (see FM §441)	size classes covered (see FM §183) (and if different for some industries/services)?	NACE/ISIC classes covered (see FM §169)
All firms known or supposed to perform R&D.	Regular and occasional R&D performers.	No size cut-off point.	All size classes are covered: 0, 1-9, 10-49, 50-249, 250-499, >=500.	All NACE Rev.2 classes covered.

*The following table is to be filled in when administrative data or pre-compiled statistics are used*

all firms or only potential R&D performers? (see FM §441, 443)	regular and occasional R&D performers? (see FM §435)	size cut-off point? (see FM §441)	size classes covered (see FM §183) (and if different for some industries/services)?	NACE/ISIC classes covered (see FM §169)
N/A	N/A	N/A	N/A	N/A

### 3.6.2. Target population - GOV

*The following table is to be filled in when sample/census survey is used for collection of raw data*

all firms or only potential R&D performers? (see FM §441, 443)	regular and occasional R&D performers? (see FM §435)
All institutions known or supposed to perform R&D.	Regular and occasional R&D performers. The GOV sector in Greece includes public research centres (100% R&D performers) as well as other institutions that perform R&D along other activities on regular or occasional basis.

*The following table is to be filled in when administrative data or pre-compiled statistics are used*

all firms or only potential R&D performers? (see FM §441, 443)	regular and occasional R&D performers? (see FM §435)
N/A	N/A

### **3.6.3. Target population - HES**

*The following table is to be filled in when sample/census survey is used for collection of raw data*

all firms or only potential R&D performers? (see FM §441, 443)	regular and occasional R&D performers? (see FM §435)
All institutions that fall into HES category: universities, Technological Educational Institutes (TEI), university hospitals, university research institutes (EPI) and similar establishments in the Technological Education Institutes (Technological Research Centres / KTE), military, theological and other academies, private HE colleges.	Regular and occasional R&D performers.

*The following table is to be filled in when administrative data or pre-compiled statistics are used*

all firms or only potential R&D performers? (see FM §441, 443)	regular and occasional R&D performers? (see FM §435)
N/A	N/A

#### **3.6.4. Target population - PNP**

*The following table is to be filled in when sample/census survey is used for collection of raw data*

all firms or only potential R&D performers? (see FM §441, 443)	regular and occasional R&D performers? (see FM §435)
All potential R&D performers that can be classified into the PNP category.	Regular and occasional R&D performers.

*The following table is to be filled in when administrative data or pre-compiled statistics are used*

all firms or only potential R&D performers? (see FM §441, 443)	regular and occasional R&D performers? (see FM §435)
N/A	N/A

**3.7. Reference area**

*[Not requested]*

**3.8. Coverage - Time**

*[Not requested]*

**3.9. Base period**

*[Not requested]*

**4. Unit of measure**

*[Not requested]*

## 5. Reference Period

*[Not requested, available in the Quality Report]*

## 6. Institutional Mandate

-

### 6.1. Institutional Mandate - legal acts and other agreements

*Requested only for European countries*

#### 6.1.1. International statistical legislation

*International legislation implemented in national legislation or followed on a voluntary basis, for the provision of R&D statistics to international organisations.*

Legal acts / agreements

*To be pre-filled at least with Commission Regulation 753/2004*

Commission Regulation 753/2004 for reference year before 2012 and Com. Reg. 995/2012 for reference year 2012 onwards.

#### Nature of the 'obligations' of responsible national organisations to produce statistics and report them to international organisations

The General Secretariat for Research and Technology assigned, in spring 2012, the responsibility for the collection and reporting to Eurostat and OECD of R&D statistics to EKT (see relevant decision ΦΕΚ 1359/Β/25.04.2012 in Greek here: <http://metrics.ekt.gr/el/statistika-etak/eggrafa-anaforas>).

EKT was in close collaboration with EL.STAT. (Hellenic Statistical Authority) throughout the data production period (from survey design to final assessment of results). In addition, the two organisations signed a Memorandum of Understanding in 28.01.2014 to cover the 2013 survey. EKT is already a member of the Hellenic Statistical System (ELSS). Official certification is expected to be granted upon standard reviewing procedure that has been initiated by EL.STAT .

#### 6.1.2. National statistical legislation

Is there R&D specific statistical legislation or is the production of national R&D statistics governed by the general national statistical legislation?

The production of national R&D statistics is governed by general national statistical legislation.

Legal acts

Greek Law 3832/2010 available in Greek only: <http://metrics.ekt.gr/el/statistika-etak/eggrafa-anaforas>).

As derived from the legal acts: Obligation of responsible organisations to produce statistics

Yes.

As derived from the legal acts: Right of responsible organisations to collect data – obligation of (natural / legal) persons to provide raw and administrative data

Both are covered by Greek Law 3832/2010.

As derived from the legal acts: Obligation of responsible organisations to protect confidential information from disclosure

In line with the principles of the European Statistics Code of Practice in the frame of the Hellenic Statistical System.

As derived from the legal acts: Rights of access of third organisations / persons to data and statistics

Third parties (or persons), other than GSRT and EL.STAT., are given access to aggregated data only.

Planned changes of legislation

No changes to our knowledge.



### **6.1.3. Standards and manuals**

Standards adopted and used

*e.g. Frascati manual*

Frascati Manual.

### **6.2. Institutional Mandate - data sharing**

*[Not requested]*

## **7. Confidentiality**

-

### **7.1. Confidentiality - policy**

*[Not requested, available in the Quality Report]*

## **7.2. Confidentiality - data treatment**

Treatment of confidential information
N/A

## **8. Release policy**

-

### **8.1. Release calendar**

*[Not requested]*

### **8.2. Release calendar access**

*[Not requested]*

### **8.3. Release policy - user access**

*[Not requested]*

### **9. Frequency of dissemination**

*[Not requested]*

### **10. Dissemination format**

-

#### **10.1. Dissemination format - News release**



#### **10.2. Dissemination format - Publications**

## Content

*Description of the tables produced and the variables reported in them. Alternatively provide link to official web site where the tables are published – please provide a brief outline in English if the dissemination language is not EN, FR or DE*

Dedicated webpage for R&D and Innovation statistics <http://metrics.ekt.gr/> has been created by EKT. Besides data dissemination, this site also accommodates the platform for the collection of R&D microdata through electronic questionnaire.

R&D data dissemination is made through different formats:

- 1) Publications (<http://metrics.ekt.gr/el/statistika-etak/meletes>): Publications that present the main findings of the R&D survey and in addition publications which analyze specific issues more in depth (e.g. R&D in HES, the role of women in R&D – similar to SHE figures publication). Currently we have translated the 2011 R&D publication into English and the translation of the 2013 results has been scheduled to come out shortly.
- 2) Data briefs (<http://metrics.ekt.gr/el/statistika-etak/sintoma-arthra>): These are kind-of Statistics Explained pages that briefly analyze the results of specific topics. Currently published are two report, in Greek.
- 3) Data tables (<http://metrics.ekt.gr/el/statistika-etak/datatables>): This is a dissemination tree where we publish data in the form of data tables. Data have been grouped into the following branches: R&D Expenditure and Personnel, GBAORD, Innovation in enterprises. This data tree is in Greek only.

## On-line publication

*In case of online publication provide the link where it can be found*

Publications: <http://metrics.ekt.gr/statistika-etak/meletes>

Data briefs: <http://metrics.ekt.gr/el/statistika-etak/sintoma-arthra>

More publications in other R&D and Innovation related topics (e.g. bibliometric indicators) can be found here:  
<http://metrics.ekt.gr/el/ekdoseis>

Format of released information

*e.g. paper publications, CD-ROMS, web sites etc.*

All publications are available in electronic form through our website (<http://metrics.ekt.gr/el/>). In addition, the main R&D publications (e.g. the 'Research and Development Expenditure and Personnel in Greece in 2011) are also produced in paper form and posted to all the data providers as well as the main users of R&D statistics.

### **10.3. Dissemination format - online database**

Online database

*Please provide the link to the online database*

Data tables: <http://metrics.ekt.gr/el/statistika-etak/datatables>

### **10.4. Dissemination format - microdata access**

#### Access rights to the information

Microdata access is not provided to users outside EKT. Upon user requests, we produce more detailed analysis compared to the analysis of data requested and transmitted to Eurostat. This analysis is still in aggregated form. Data are protected for confidentiality and aggregations are produced in such way as not to reveal the identity of the enterprises/institution.

#### Cost of access

No charges

### **10.5. Dissemination format - other**

## **11. Accessibility of documentation**

-

### **11.1. Documentation on methodology**

*[Not requested]*

## **11.2. Quality management - documentation**

*[Not requested, available in the Quality Report]*

## **12. Quality management**

-

### **12.1. Quality assurance**

*[Not requested]*

### **12.2. Quality management - assessment**

*The following tables are to be filled in when administrative data or pre-compiled statistics are used*

**BES**

Quality of the sources

*Criteria used in quality assessment; Frequency of quality assessments; Assessment results*

N/A

## **GOV**

Quality of the sources

*Criteria used in quality assessment; Frequency of quality assessments; Assessment results*

Quality of administrative and other sources is considered to be very good.

## **HES**

Quality of the sources

*Criteria used in quality assessment; Frequency of quality assessments; Assessment results*

Quality of administrative and other sources is considered to be very good.

## **PNP**



Quality of the sources

*Criteria used in quality assessment; Frequency of quality assessments; Assessment results*

N/A

### **13. Relevance**

-

#### **13.1. Relevance - User Needs**

*[Not requested, available in the Quality Report]*

#### **13.2. Relevance - User Satisfaction**

*[Not requested, available in the Quality Report]*

#### **13.3. Completeness**

*The four following tables report the availability of R&D variables by sector of performance. The tables contain the following columns:*

- *Dimension: the variables used for the breakdown of R&D variables.*
- *Availability: Y (Yes) - if data are available; Specify the year data collection begun for the respective R&D variable - dimension combination. N (No) if no data are available*
- *Frequency: frequency of data collection (e.g. annual or every two years)*
- *Gap years: years with missing data*

*Modifications:*

- *Description: description of modifications with respect to the recommendations of the Frascati manual, e.g. in the classification used for the respective dimension, in the coverage of the respective dimension's extent, etc. Changes in classifications are reported only for dimensions with specifically prescribed classifications in Frascati.*
- *Year of introduction: year the modifications were introduced*
- *Reasons: the reason for the modifications or for not collecting data for the respective R&D variable - dimension combination..*

### 13.3.1. Business Enterprise Sector (BES)

#### 13.3.1.1: R&D data availability for the BES - R&D Personnel (HC)

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Sex	Y-1999	Biennial	2009	Annual frequency	2011	N/A
Occupation	Y-1993	Biennial	2009	Annual frequency	2011	N/A
Qualification	Y-1993	Biennial	2009	N/A	N/A	N/A
Age	Y-2011	Biennial	N/A	Available for researchers only	2011	N/A

Citizenship	Y-2011	Biennial	N/A	Available for researchers only	2011	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011, N - 2013	Biennial	N/A	N/A	2013	This question has been removed from the questionnaire to reduce the length of the questionnaire
Type of institution (see FM § 177 - 179)	Y-2011	Annual	N/A	N/A	N/A	N/A
Economic activity	Y-2011	Biennial	N/A	N/A	N/A	N/A
Product field	N	N/A	N/A	N/A	N/A	N/A
Employment size class	Y-2011	Biennial	N/A	N/A	N/A	N/A

### 13.3.1.2: R&D data availability for the BES - R&D Personnel (FTE)

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Sex	Y-1999	Annual	2009	Annual frequency	2011	N/A
Occupation	Y-1993	Annual	2009	Annual frequency	2011	N/A

Qualification	Y-1993	Biennial	2009	N/A	N/A	N/A
Age	N	N/A	N/A	N/A	N/A	N/A
Citizenship	N	N/A	N/A	N/A	N/A	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011, N - 2013	Biennial	N/A	N/A	2013	This question has been removed from the questionnaire to reduce the length of the questionnaire
Type of institution (see FM § 177 - 179)	Y-2011	Biennial	N/A	N/A	N/A	N/A
Economic activity	Y-2011	Biennial	N/A	N/A	N/A	N/A
Product field	N	N/A	N/A	N/A	N/A	N/A
Employment size class	Y-2003	Biennial	N/A	Annual frequency	2011	N/A

### 13.3.1.3: R&D data availability for the BES - R&D Expenditure

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Source of funds	Y	Annual	N/A	N/A	N/A	N/A
Type of R&D	Y-2003	Biennial	2009	N/A	N/A	N/A
Type of costs	Y	Annual	2009	N/A	N/A	N/A
Socio-economic objective	N	N/A	N/A	N/A	N/A	N/A
Region	Y-2007	Biennial	2009	N/A	N/A	N/A
Major field of science & technology	Y-2011, N - 2013	Biennial	N/A	N/A	2013	This question has been removed from the questionnaire to reduce the length of the questionnaire
Type of institution (see FM § 177 - 179)	Y-2011	Annual	N/A	N/A	N/A	N/A
Economic activity	Y	Biennial	2009	N/A	N/A	N/A
Economic activity of industry served(for	N	N/A	N/A	N/A	N/A	N/A

enterprises in NACE 73)						
Product field	N	N/A	N/A	N/A	N/A	N/A
Employment size class	Y	Biennial	2009	N/A	N/A	N/A

13.3.1.4: R&D data availability for the BES - Other

*Please provide information by variable-dimension combination at national level. e.g. source of funds for Extramural R&D expenditure*

Dimension [any additional dimension available at national level. Please also indicate the relevant R&D variable, e.g. Extramural R&D expenditure)]	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Extramural R&D expenditure by source of funds	Y-2013	Annual	N/A	N/A	N/A	N/A
Intramural expenditure by type of cost further broken down by: Labour cost related to the production of	Y-2013	Annual	N/A	N/A	N/A	This has been agreed with the Hellenic Statistical Authority to serve the needs of National Accounts

own-account software, Other current cost related to the production of own-account software, Other current cost related to product license fees, Capital cost for instruments and equipment related to product license fees						
Capital expenditure broken down by a) Land and buildings, b) Instruments and	Y-2011	Annual	N/A	N/A	N/A	N/A



equipment (including computer software)						
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

### 13.3.2. Government sector (GOV)

#### 13.3.2.1: R&D data availability for GOV - R&D Personnel (HC)

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Sex	Y-1999	Biennial	2007, 2009	Annual frequency	2011	N/A
Occupation	Y-1993	Biennial	2007, 2009	Annual frequency	2011	N/A
Qualification	Y-1993	Biennial	2007, 2009	Annual frequency	2011	N/A
Age	Y-2011	Biennial	N/A	Available for researchers only	2011	N/A

Citizenship	Y-2011	Biennial	N/A	Available for researchers only	2011	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011	Biennial	N/A	N/A	N/A	N/A
Type of institution (see FM § 193)	Y-2011	Annual	N/A	N/A	N/A	N/A

#### 13.3.2.2: R&D data availability for GOV - R&D Personnel (FTE)

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Sex	Y-1999	Annual	2007, 2009	Annual frequency	2011	N/A
Occupation	Y-1993	Annual	2009	Annual frequency	2011	N/A
Qualification	Y-1993	Annual	2007, 2009	Annual frequency	2011	N/A
Age	N	N/A	N/A	N/A	N/A	N/A
Citizenship	N	N/A	N/A	N/A	N/A	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011	Biennial	N/A	N/A	N/A	N/A

Type of institution (see FM § 193)	Y-2011	Annual	N/A	N/A	N/A	N/A
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### 13.3.2.3: R&D data availability for GOV - R&D Expenditure

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Source of funds	Y	Annual	2007	N/A	N/A	N/A
Type of R&D	Y-2011	Biennial	N/A	N/A	N/A	N/A
Type of costs	Y	Annual	2007, 2009	N/A	N/A	N/A
Socio-economic objective	Y-2011	Biennial	N/A	N/A	N/A	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011	Biennial	N/A	N/A	N/A	N/A
Type of institution (see FM § 193)	Y-2011	Annual	N/A	N/A	N/A	N/A

13.3.2.4: R&D data availability for GOV - Other

*Please provide information by variable-dimension combination at national level. e.g. source of funds for Extramural R&D expenditure*

Dimension [any additional dimension available at national level. Please also indicate the relevant R&D variable, e.g. Extramural R&D expenditure)]	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Extramural R&D expenditure by source of funds	Y-2013	N/A	N/A	N/A	N/A	N/A

<p>Intramural expenditure by type of cost further broken down by: Labour cost related to the production of own-account software, Other current cost related to the production of own-account software, Other current cost related to product license fees, Capital cost for instruments and equipment related to</p>	<p>Y-2013</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>This has been agreed with the Hellenic Statistical Authority to serve the needs of National Accounts</p>
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product license fees						
Capital expenditure broken down by a) Land and buildings, b) Instruments and equipment (including computer software)	Y-2011	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

**13.3.3. Higher Education sector (HES)**

13.3.3.1: R&D data availability for HES - R&D Personnel (HC)

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Sex	Y-1999	Biennial	2007, 2009	Annual Frequency	2011	N/A
Occupation	Y-1993	Biennial	2007, 2009	Annual Frequency	2011	N/A
Qualification	Y-1993	Biennial	2007, 2009	Annual Frequency	2011	N/A
Age	Y-2011	Biennial	N/A	Available for researchers only	2011	N/A
Citizenship	Y-2011	Biennial	N/A	Available for researchers only	2011	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011	Biennial	N/A	N/A	N/A	N/A
Type of institution (see FM § 227)	N	N/A	N/A	N/A	N/A	N/A

13.3.3.2: R&D data availability for HES - R&D Personnel (FTE)

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Sex	Y-1999	Annual	2007, 2009	Annual frequency	2011	N/A
Occupation	Y-1993	Annual	2009	Annual frequency	2011	N/A
Qualification	Y-1993	Annual	2007, 2009	Annual frequency	2011	N/A
Age	N	N/A	N/A	N/A	N/A	N/A
Citizenship	N	N/A	N/A	N/A	N/A	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011	Biennial	N/A	N/A	N/A	N/A
Type of institution (see FM § 227)	Y-2011	Annual	N/A	N/A	N/A	N/A

### 13.3.3.3: R&D data availability for HES - R&D Expenditure

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Source of funds	Y	Biennial	2007	N/A	N/A	N/A
Type of R&D	Y-2011	Biennial	N/A	N/A	N/A	N/A



Type of costs	Y	Biennial	2007, 2009	N/A	N/A	N/A
Socio-economic objective	N	N/A	N/A	N/A	N/A	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011	Biennial	N/A	N/A	N/A	N/A
Type of institution (see FM § 227)	Y-2011	Annual	N/A	N/A	N/A	N/A

#### 13.3.3.4: R&D data availability for HES - Other

*Please provide information by variable-dimension combination at national level. e.g. source of funds for Extramural R&D expenditure*

Dimension [any additional dimension available at national level. Please also indicate the relevant R&D variable, e.g. Extramural R&D expenditure)]	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Extramural R&D expenditure by source of funds	Y-2013	N/A	N/A	N/A	N/A	N/A
Intramural expenditure by type of cost further broken down by: Labour cost related to the production of	Y-2013	N/A	N/A	N/A	N/A	This has been agreed with the Hellenic Statistical Authority to serve the needs of National Accounts

own-account software, Other current cost related to the production of own-account software, Other current cost related to product license fees, Capital cost for instruments and equipment related to product license fees						
Capital expenditure broken down by a) Land and buildings, b) Instruments and	Y-2011	N/A	N/A	N/A	N/A	N/A

equipment (including computer software)						
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

### 13.3.4. Private Non-profit sector (PNP)

*If PNP is included in one of the other sectors then this table needs not be filled in*

#### 13.3.4.1: R&D data availability for PNP - R&D Personnel (HC)

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Sex	Y-1999	Biennial	2007, 2009	Annual frequency	2011	N/A
Occupation	Y-1993	Biennial	2007, 2009	Annual frequency	2011	N/A
Qualification	Y-1993	Biennial	2007, 2009	Annual frequency	2011	N/A

Age	N	N/A	N/A	N/A	N/A	N/A
Citizenship	N	N/A	N/A	N/A	N/A	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011, N-2013	Biennial	N/A	N/A	2013	This question has been removed from the questionnaire to reduce the length of the questionnaire

#### 13.3.4.2: R&D data availability for PNP - R&D Personnel (FTE)

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Sex	Y-1999	Annual	2007, 2009	Annual frequency	2011	N/A
Occupation	Y-1993	Annual	2009	Annual frequency	2011	N/A
Qualification	Y-1993	Annual	2007, 2009	Annual frequency	2011	N/A
Age	N	N/A	N/A	N/A	N/A	N/A
Citizenship	N	N/A	N/A	N/A	N/A	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011, N-2013	Biennial	N/A	N/A	2013	This question has been removed from the questionnaire to reduce the length of the questionnaire

### 13.3.4.3: R&D data availability for PNP - R&D Expenditure

	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Source of funds	Y	Biennial	2007, 2009	N/A	N/A	N/A
Type of R&D	Y-2011	Biennial	N/A	N/A	N/A	N/A
Type of costs	Y	Biennial	2007, 2009	N/A	N/A	N/A
Socio-economic objective	N	N/A	N/A	N/A	N/A	N/A
Region	Y-2011	Biennial	N/A	N/A	N/A	N/A
Major field of science & technology	Y-2011, N-2013	Biennial	N/A	N/A	2013	This question has been removed from the questionnaire to reduce the length of the questionnaire

### 13.3.4.4: R&D data availability for PNP - Other

Please provide information by variable-dimension combination at national level. e.g. source of funds for Extramural R&D expenditure

Dimension [any additional dimension available at national level. Please also indicate the relevant R&D variable, e.g. Extramural R&D expenditure)]	Availability (Y-start year, N)	Frequency	Gap years	Modifications - Description	Modifications - Year of introduction	Modifications - Reasons
Extramural R&D expenditure by source of funds	Y-2013	N/A	N/A	N/A	N/A	N/A
Intramural expenditure by type of cost further broken down by: Labour	Y-2013	N/A	N/A	N/A	N/A	This has been agreed with the Hellenic Statistical Authority to serve the needs of National Accounts

cost related to the production of own-account software, Other current cost related to the production of own-account software, Other current cost related to product license fees, Capital cost for instruments and equipment related to product license fees						
Capital expenditure broken down by a) Land and	Y-2011	N/A	N/A	N/A	N/A	N/A



buildings, b) Instruments and equipment (including computer software)						
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

**14. Accuracy**

-

**14.1. Accuracy - overall**

*[Not requested, available in the Quality Report]*

## **14.2. Sampling error**

*[Not requested, available in the Quality Report]*

## **14.3. Non-sampling error**

*[Not requested, available in the Quality Report]*

## **15. Timeliness and punctuality**

-

### **15.1. Timeliness**

*[Not requested, available in the Quality Report]*

### **15.2. Punctuality**

[Not requested, available in the Quality Report]

## 16. Comparability

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### 16.1. Comparability - geographical

#### 16.1.1. General

*Please describe general issues of international comparability, e.g. divergences from FM or concordance to international classifications, or survey coverage, etc. and, if possible, provide a quantitative evaluation of the impact. Please give emphasis to divergences from FM that have not been reported earlier in the questionnaire.*

No deviations from FM recommendations and classifications. Therefore, R&D data for Greece are considered to be comparable with international R&D data.

#### 16.1.2. Business Enterprise sector (BES)

*Please describe issues of international comparability specific to the individual sectors/surveys, if any (example: certain institutions included in a different than the usual sector, military R&D excluded, sector consistently over or underestimated).*

No deviations from FM recommendations and classifications.

16.1.3. Government sector (GOV)

*Please describe issues of international comparability specific to the individual sectors/surveys, if any (example: certain institutions included in a different than the usual sector, military R&D excluded, sector consistently over or underestimated).*

No deviations from FM recommendations and classifications.

16.1.4. Higher Education sector (HE)

*Please describe issues of international comparability specific to the individual sectors/surveys, if any (example: certain institutions included in a different than the usual sector, military R&D excluded, sector consistently over or underestimated).*

No deviations from FM recommendations and classifications.

16.1.5. Private non-profit sector (PNP)

*Please describe issues of international comparability specific to the individual sectors/surveys, if any (example: certain institutions included in a different than the usual sector, military R&D excluded, sector consistently over or underestimated).*

No deviations from FM recommendations and classifications.

**16.2. Comparability - over time**

Breaks in series

*Please indicate the break years (years for which data are not fully comparable to the previous period) and nature of the breaks.*

### 16.2.1. Breaks in time series (BES)

	Break years	Nature of the breaks (brief description, and if possible, quantitative evaluation of impact on the indicators' values)
R&D personnel (HC)	2011, 1983	<p>2011: A new frame population has been created to cover exhaustively all enterprises that possibly had R&amp;D activities in recent years. Moreover, better measurement has been achieved as a result of the actions taken for adequate comprehension of the R&amp;D concept by the respondents.</p> <p>1983: The methodology for identifying R&amp;D personnel was brought into line with the recommendations of the Frascati Manual, resulting in changes to personnel cost.</p>
Occupation	N/A	N/A
Qualification	N/A	N/A
R&D personnel (FTE)	2011, 1983	<p>2011: A new frame population has been created to cover exhaustively all enterprises that possibly had R&amp;D activities in recent years. Moreover, better measurement has been achieved as a result of the actions taken for adequate comprehension of the R&amp;D concept by the respondents.</p> <p>1983: The methodology for identifying R&amp;D personnel was brought into line with the recommendations of the Frascati Manual, resulting in changes to personnel cost.</p>
Occupation	N/A	N/A
Qualification	N/A	N/A

R&D expenditure	2011	2011: A new frame population has been created to cover exhaustively all enterprises that possibly had R&D activities in recent years. Moreover, better measurement has been achieved as a result of the actions taken for adequate comprehension of the R&D concept by the respondents.
Source of funds	N/A	N/A
Type of costs	N/A	N/A
Type of R&D	N/A	N/A
Other	1991	Some activities included previously under "office machinery and computers" (and hence in the corresponding subtotal "Machinery equipment, instruments and transport equipment") in manufacturing were reclassified in services under "computer and related activities" (and hence in the corresponding subtotal "real estate, renting and business activities") in services.

### 16.2.2. Breaks in time series (GOV)

	Break years	Nature of the breaks (brief description, and if possible, quantitative evaluation of impact on the indicators' values)
R&D personnel (HC)	2011, 1983	2011: Coverage of GOV has been extended to also cover public hospitals as well as all institutions administered by the Ministry of Culture (mainly archaeological and cultural institutions). 1983: The methodology for identifying R&D

		personnel was brought into line with the recommendations of the Frascati Manual, resulting in changes to personnel cost.
Occupation	N/A	N/A
Qualification	N/A	N/A
R&D personnel (FTE)	2011, 1983	2011: Coverage of GOV has been extended to also cover public hospitals as well as all institutions administered by the Ministry of Culture (archaeological and cultural institutions). 1983: The methodology for identifying R&D personnel was brought into line with the recommendations of the Frascati Manual, resulting in changes to personnel cost.
Occupation	N/A	N/A
Qualification	N/A	N/A
R&D expenditure	2011	2011: Coverage of GOV has been extended to also cover public hospitals as well as all institutions administered by the Ministry of Culture (archaeological and cultural institutions).
Source of funds	N/A	N/A
Type of costs	N/A	N/A
Type of R&D	N/A	N/A
Other	N/A	N/A

### 16.2.3. Breaks in time series (HES)

	Break years	Nature of the breaks (brief description, and if possible, quantitative evaluation of impact on the indicators' values)
R&D personnel (HC)	2011, 1995, 1989, 1983	<p>2011: Coverage of HES has been extended to also cover all Technological Educational Institutes (TEI) and post-secondary establishments.</p> <p>1995, 1989: Following the revision of research coefficients used to evaluate resources devoted to R&amp;D by higher education, national totals for R&amp;D expenditure and personnel are not comparable to those for previous years.</p> <p>1983: The methodology for identifying R&amp;D personnel was brought into line with the recommendations of the Frascati Manual, resulting in changes to personnel cost.</p>
Occupation	N/A	N/A
Qualification	N/A	N/A
R&D personnel (FTE)	2011, 1995, 1989, 1983	<p>2011: Coverage of HES has been extended to also cover all Technological Educational Institutes (TEI) and post-secondary establishments.</p> <p>Moreover, FTEs have been calculated by the reporting units applying coefficients that were determined by the reporting units.</p> <p>1995, 1989: Following the revision of research coefficients used to evaluate resources devoted to R&amp;D by higher education, national totals for R&amp;D expenditure and personnel are not comparable to those for previous years.</p> <p>1983: The methodology for identifying R&amp;D personnel</p>



		was brought into line with the recommendations of the Frascati Manual, resulting in changes to personnel cost.
Occupation	N/A	N/A
Qualification	N/A	N/A
R&D expenditure	2011, 1995, 1989	2011: Coverage of HES has been extended to also cover all Technological Educational Institutes (TEI) and post-secondary establishments. Moreover, coefficients to isolate the R&D component of expenditures have been determined by the reporting units. 1995, 1989: Following the revision of research coefficients used to evaluate resources devoted to R&D by higher education, national totals for R&D expenditure and personnel are not comparable to those for previous years.
Source of funds	N/A	N/A
Type of costs	N/A	N/A
Type of R&D	2011, 1983	2011: Coefficients to determine the type of R&D activity have been determined by the reporting units. 1983: The methodology for evaluating resources devoted to R&D in HE was changed based on a survey which established a system of research coefficients.
Other	N/A	N/A

#### 16.2.4. Breaks in time series (PNP)

	Break years	Nature of the breaks (brief description, and if possible, quantitative evaluation of impact on the indicators' values)
R&D personnel (HC)	1983	The methodology for identifying R&D personnel was brought into line with the recommendations of the Frascati Manual, resulting in changes to personnel cost.
Occupation	N/A	N/A
Qualification	N/A	N/A
R&D personnel (FTE)	1983	The methodology for identifying R&D personnel was brought into line with the recommendations of the Frascati Manual, resulting in changes to personnel cost.
Occupation	N/A	N/A
Qualification	N/A	N/A
R&D expenditure	N/A	N/A
Source of funds	N/A	N/A
Type of costs	N/A	N/A
Type of R&D	N/A	N/A
Other	1993	The PNP sector is included in the survey.

## 17. Coherence

-

### 17.1. Coherence - cross domain

*[Not requested, available in the Quality Report]*

### **17.2. Coherence - internal**

*[Not requested, available in the Quality Report]*

## **18. Cost and Burden**

*[Not requested, available in the Quality Report]*

## **19. Data revision**

-

### **19.1. Data revision - policy**

*[Not requested]*

### **19.2. Data revision - practice**

[Please see 13.3. Completeness]

## 20. Statistical processing

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### 20.1. Source data

Several separate activities are used for the collection of raw data or pre-compiled administrative data and statistics related to R&D. For simplicity we call them surveys irrespective of whether they are sample surveys, censuses, collections of administrative data/ pre-compiled statistics. This section presents the names of the surveys by sector of performance as well as methodological information for each survey. Depending on the type of survey and sector of performance, only the sections corresponding to that survey and sector are filled in.

#### 20.1.1. Surveys which contribute to R&D statistics, by sector.

Please provide survey name

BES	GOV	HES	PNP
BES R&D survey – Personnel engaged and Expenditure spent on R&D activities	GOV R&D survey – Personnel engaged and Expenditure spent on R&D activities	HES R&D survey – Personnel engaged and Expenditure spent on R&D activities	PNP R&D survey – Personnel engaged and Expenditure spent on R&D activities
N/A	GBAORD detailed data at institution level and additional	GBAORD detailed data at institution level and additional	N/A

	administrative information from Ministries or other public sources	administrative information from the Ministry of Education	
N/A	Monitoring Information System (M.I.S.) including information about projects co financed under the National Strategic Reference Framework (NSRF)	Monitoring Information System (M.I.S.) including information about projects co financed under the National Strategic Reference Framework (NSRF)	N/A
N/A	eCORDA database with information about signed grants/beneficiaries with regards to a specific Framework Programme for Research (FP7)	eCORDA database with information about signed grants/beneficiaries with regards to a specific Framework Programme for Research (FP7)	N/A

## 20.1.2. BES

### 20.1.2.1. General information about surveys contributing to R&D statistics - BES

Survey name
BES R&D survey – Personnel engaged and Expenditure spent on R&D activities

Type of survey

*Sample surveys, census, collection of administrative information/precompiled statistics. Combinations are reported as separate surveys. Surveys of enterprises where census is used for some enterprise categories and sampling for the rest, are reported as sample surveys*

Census survey to all known or supposed to perform R&D activities combined with sampling to all other enterprises.

Variables the survey contributes to

*The variable-dimension combination (e.g. R&D expenditures by socio-economic objectives) to whose production contributes the survey*

All R&D variables requested by the Commission Regulation No 995/2012 and additional variable-dimension combinations.

Survey timetable-most recent implementation

2011 survey: EKT took over the collection and production of R&D and GBAORD statistics in spring 2012. The GBAORD collection preceded the R&D survey. Within this limited time frame, the BES survey started in the beginning of 2013 and ended end of July 2013.

2013 survey: The BES survey started in end April 2014 and ended end of October 2014.

**20.1.2.2. Sample/census survey information - BES**

*The following tables are to be filled in when sample survey is used as source of the data*

**Survey design information**

*If the survey is a multi-stage sample one, this section's information must be given for each stage separately*

	Stage 1	Stage 2	Stage 3
Sampling unit	Enterprise	N/A	N/A
Stratification variables (if any - for sample surveys only)	Census survey to known R&D performers from previous survey. In addition, the sample of enterprises drawn for the needs of the CIS 2010 – 2012 were also surveyed to complement the R&D census survey. Stratification variables used were NACE, size, region.	N/A	N/A
Stratification variable classes (not needed for standard classifications)	2-digit NACE rev 2 and standard size-classes (0, 1-9, 10-49, 50-249, 250-500), NUTS2 level	N/A	N/A
Population size (total size, for both censuses and sample surveys - per stratum if applicable)	Census: 1020 enterprises Sampling: 14773 enterprises	N/A	N/A
Planned sample size (per stratum. "Census" means complete enumeration.)	Census: 1020 Sampling: 3998	N/A	N/A
Sample selection mechanism (for sample surveys only)	Stratified random sampling	N/A	N/A
Survey frame (Information content for identification and contact of institutions; information for	Census: Enterprises included in the National Business Register that is maintained by ELSTAT	N/A	N/A

<p>identification of R&amp;D performers; information used for data processing/analysis)</p>	<p>(Greek Statistical Authority) with the following characteristics: participated with a response in the 2011 survey. The initial, 2011 register that had been composed by EKT included enterprise with the following characteristics: participation in European or/and research projects, recorded R&amp;D expenses in the company's balance sheet, recorded R&amp;D expenses in the SBS conducted by ELSTAT, participation in innovation clusters, tax incentives for the R&amp;D activities, etc. Sampling: Enterprises included in the National Business Register that is maintained by ELSTAT with the characteristics of the survey frame of the CIS 2010 – 2012.</p>		
<p>Survey frame quality (Coverage of the reference population afforded by the frame; extent of double entries of institutions; extent of entries which correspond to institutions outside the reference pop.)</p>	<p>Overall assessment is good.</p>	<p>N/A</p>	<p>N/A</p>



### 20.1.2.3. Information on collection of administrative data or of pre-compiled statistics - BES

*The following tables are to be filled in when administrative data or pre-compiled statistics are used*

Sources

*Names and short descriptions of the organisations which provide the information – includes the organisation conducting the present survey if the collected information are statistics compiled by the organisation in other surveys*

Not applicable

Description of collected data / statistics

*e.g. for the HE sector could be: employment contracts, job descriptions, common coefficients for countries of similar education systems or other auxiliary information – see FM Annex II*

N/A

Reference period, in relation to the variables the survey contributes to

N/A

### 20.1.3. GOV

#### 20.1.3.1. General information about surveys contributing to R&D statistics - GOV

Survey name

GOV R&D survey – Personnel engaged and Expenditure spent on R&D activities

Type of survey

*Sample surveys, census, collection of administrative information/precompiled statistics. Combinations are reported as separate surveys. Surveys of enterprises where census is used for some enterprise categories and sampling for the rest, are reported as sample surveys*

Census to all known or potential R&D performing units in the GOV.

Variables the survey contributes to

*The variable-dimension combination (e.g. R&D expenditures by socio-economic objectives) to whose production contributes the survey*

All R&D variables requested by the Commission Regulation No 995/2012 and additional variable-dimension combinations.

Survey timetable-most recent implementation

2011 survey: EKT took over the collection and production of R&D and GBAORD statistics in spring 2012. The GBAORD collection preceded the R&D survey. Within this limited time frame, the GOV survey started in the beginning of 2013 and ended in May 2013.

2013 survey: The GOV survey started in July 2014 and ended end of October 2014.

### 20.1.3.2. Sample/census survey information - GOV

*The following tables are to be filled in when sample survey is used as source of the data*

#### Survey design information

*If the survey is a multi-stage sample one, this section's information must be given for each stage separately*

	Stage 1	Stage 2	Stage 3
Sampling unit	Government institutions (public research centres, archaeological and cultural institutions, public hospitals, agricultural institutions, etc)	N/A	N/A
Stratification variables (if any - for sample surveys only)	No stratification – census survey	N/A	N/A
Stratification variable classes (not needed for standard classifications)	Not applicable	N/A	N/A
Population size (total size, for both censuses and sample surveys - per stratum if applicable)	258 institutions	N/A	N/A

Planned sample size (per stratum. "Census" means complete enumeration.)	258 institutions	N/A	N/A
Sample selection mechanism (for sample surveys only)	Not applicable	N/A	N/A
Survey frame (Information content for identification and contact of institutions; information for identification of R&D performers; information used for data processing/analysis)	Survey frame comprises institutions included in the statistical Register of General Government Entities that is maintained by ELSTAT (Greek Statistical Authority) that are known (from previous survey) to perform or potentially perform R&D activities.	N/A	N/A
Survey frame quality (Coverage of the reference population afforded by the frame; extent of double entries of institutions; extent of entries which correspond to institutions outside the reference pop.)	Overall assessment is very good. This register is maintained by ELSTAT and updated annually to reflect the continuous recent changes in the perimeter of General Government, such as the inclusion of new entities, which are classified into General Government according to the ESA95 criteria as well as with the deletion of entities that either are abolished or cease to fulfill the criteria for remaining in the General Government sector.	N/A	N/A

### 20.1.3.3. Information on collection of administrative data or of pre-compiled statistics - GOV

*The following tables are to be filled in when administrative data or pre-compiled statistics are used*

#### Sources

*Names and short descriptions of the organisations which provide the information – includes the organisation conducting the present survey if the collected information are statistics compiled by the organisation in other surveys*

The following sources are used to impute non-respondents known to perform R&D: a) GBAORD detailed data at institution level and additional administrative information from Ministries or other public sources, b) Monitoring Information System (M.I.S.) including information about projects co-financed under the National Strategic Reference Framework (NSRF), c) eCORDA database with information about signed grants/beneficiaries with regards to specific Framework Programme for Research (FP7), d) information provided by units that administer research projects (ELKEA) inside the six Health Region Administrations that operate in Greece for monitoring and managing private funding of clinical trials (primarily coming from pharmaceutical companies) conducted in public hospitals.

#### Description of collected data / statistics

*e.g. for the HE sector could be: employment contracts, job descriptions, common coefficients for countries of similar education systems or other auxiliary information – see FM Annex II*

R&D expenditure, where available. Total expenditures and total personnel where coefficients have been applied to isolate the R&D component.

Reference period, in relation to the variables the survey contributes to

2012, 2013

#### 20.1.4. HES

##### 20.1.4.1. General information about surveys contributing to R&D statistics - HES

Survey name

HES R&D survey – Personnel engaged and Expenditure spent on R&D activities

Type of survey

*Sample surveys, census, collection of administrative information/precompiled statistics. Combinations are reported as separate surveys. Surveys of enterprises where census is used for some enterprise categories and sampling for the rest, are reported as sample surveys*

Census survey.

Variables the survey contributes to

*The variable-dimension combination (e.g. R&D expenditures by socio-economic objectives) to whose production contributes the survey*

All R&D variables requested by the Commission Regulation No 995/2012 and additional variable-dimension combinations.

**Survey timetable-most recent implementation**

2011 survey: EKT took over the collection and production of R&D and GBAORD statistics in spring 2012. The GBAORD collection preceded the R&D survey. Within this limited time frame, the HES survey started in December 2012 and ended in June 2013.

2013 survey: The HES survey started in July 2014 and ended end of October 2014.

**20.1.4.2. Sample/census survey information - HES**

*The following tables are to be filled in when sample survey is used as source of the data*

**Survey design information**

*If the survey is a multi-stage sample one, this section's information must be given for each stage separately*

	Stage 1	Stage 2	Stage 3
Sampling unit	University, Technological Educational Institute, University Hospital, HE Research Institute	N/A	N/A
Stratification variables (if any - for sample surveys only)	No stratification – census survey	N/A	N/A

Stratification variable classes (not needed for standard classifications)	Not applicable	N/A	N/A
Population size (total size, for both censuses and sample surveys - per stratum if applicable)	64 HE institutes	N/A	N/A
Planned sample size (per stratum. "Census" means complete enumeration.)	64 HE institutes	N/A	N/A
Sample selection mechanism (for sample surveys only)	Not applicable	N/A	N/A
Survey frame (Information content for identification and contact of institutions; information for identification of R&D performers; information used for data processing/analysis)	Survey frame comprises all universities, Technological Educational Institutes (TEI), university hospitals, university research institutes (EPI) and similar establishments in the TEIs (KTE), military, theological and other academies, private colleges	N/A	N/A
Survey frame quality (Coverage of the reference population afforded by the frame; extent of double entries of institutions; extent of entries which correspond to institutions outside the reference pop.)	Overall assessment of survey frame quality is very good.	N/A	N/A



### 20.1.4.3. Information on collection of administrative data or of pre-compiled statistics - HES

*The following tables are to be filled in when administrative data or pre-compiled statistics are used*

#### Sources

*Names and short descriptions of the organisations which provide the information – includes the organisation conducting the present survey if the collected information are statistics compiled by the organisation in other surveys*

The following sources are used to impute non-respondents known to perform R&D: a) GBAORD detailed data at institution level and additional administrative information from the Ministry of Education, b) Monitoring Information System (M.I.S.) including information about projects co financed under the National Strategic Reference Framework (NSRF), c) eCORDA database with information about signed grants/beneficiaries with regards to a specific Framework Programme for Research (FP7), d) Information about PhD and Post-doc Scholarships from the State Scholarship Foundation (IKY) and other organizations offer grants and scholarships.

#### Description of collected data / statistics

*e.g. for the HE sector could be: employment contracts, job descriptions, common coefficients for countries of similar education systems or other auxiliary information – see FM Annex II*

R&D expenditure, where available. Total expenditures and total personnel where coefficients have been applied to isolate the R&D component.

Reference period, in relation to the variables the survey contributes to

2012, 2013

## 20.1.5. PNP

### 20.1.5.1. General information about surveys contributing to R&D statistics - PNP

Survey name

PNP R&D survey – Personnel engaged and Expenditure spent on R&D activities

Type of survey

*Sample surveys, census, collection of administrative information/precompiled statistics. Combinations are reported as separate surveys. Surveys of enterprises where census is used for some enterprise categories and sampling for the rest, are reported as sample surveys*

Census survey.

Variables the survey contributes to

*The variable-dimension combination (e.g. R&D expenditures by socio-economic objectives) to whose production contributes the survey*

All R&D variables requested by the Commission Regulation No 995/2012 and additional variable-dimension combinations

**Survey timetable-most recent implementation**

2011 survey: EKT took over the collection and production of R&D and GBAORD statistics in spring 2012. The GBAORD collection preceded the R&D survey. Within this limited time frame, the PNP survey started in the beginning of 2013 and ended in June 2013.

2013 survey: The PNP survey started in August 2014 and ended end of October 2014.

**20.1.5.2. Sample/census survey information - PNP**

*The following tables are to be filled in when sample survey is used as source of the data*

**Survey design information**

*If the survey is a multi-stage sample one, this section's information must be given for each stage separately*

	Stage 1	Stage 2	Stage 3
Sampling unit	Private non-profit institutions	N/A	N/A
Stratification variables (if any - for sample surveys only)	No stratification – census survey	N/A	N/A
Stratification variable classes (not needed for standard classifications)	Not applicable	N/A	N/A

Population size (total size, for both censuses and sample surveys - per stratum if applicable)	22 PNP institutions	N/A	N/A
Planned sample size (per stratum. "Census" means complete enumeration.)	22 PNP institutions	N/A	N/A
Sample selection mechanism (for sample surveys only)	Not applicable	N/A	N/A
Survey frame (Information content for identification and contact of institutions; information for identification of R&D performers; information used for data processing/analysis)	Non-profit institutions that could not be classified into any of the other sectors are classified into PNP.	N/A	N/A
Survey frame quality (Coverage of the reference population afforded by the frame; extent of double entries of institutions; extent of entries which correspond to institutions outside the reference pop.)	Overall assessment of survey frame quality is very good.	N/A	N/A

### 20.1.5.3. Information on collection of administrative data or of pre-compiled statistics - PNP

*The following tables are to be filled in when administrative data or pre-compiled statistics are used*

Sources

*Names and short descriptions of the organisations which provide the information – includes the organisation conducting the present survey if the collected information are statistics compiled by the organisation in other surveys*

N/A

Description of collected data / statistics

*e.g. for the HE sector could be: employment contracts, job descriptions, common coefficients for countries of similar education systems or other auxiliary information – see FM Annex II*

N/A

Reference period, in relation to the variables the survey contributes to

N/A

**20.2. Frequency of data collection**

BES	GOV	HES	PNP
Every two years.	Every two years.	Every two years.	Every two years.

### 20.3. Data collection

*The following tables are to be filled in when sample survey is used  
This information refers to the last stage of multi-stage surveys*

#### BES

Realised sample size (per stratum)
------------------------------------

1020 (census) + 3998 (sample) = 5018 enterprises
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Mode of data collection (face-to-face interviews; telephone interviews; postal surveys, etc.)
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Since 2012 (reference year 2011 onwards), this is an online survey. Every enterprise received, via e-mail, its 'personal' log-in details to access the online questionnaire. Enterprises have the possibility to preview the questionnaire before completion. In case of undelivered e-mails, enterprises were contacted by phone to provide the correct e-mail.
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Occasionally, questionnaires have also been filled-in via telephone interview. In exceptional cases, questionnaires were returned in hard-copy (fax or email).
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#### Incentives used for increasing response

A letter explaining the purpose and mandatory nature of the survey has been attached to the e-mail invitations. A link to the 2011 publication has also been included in the letter for data providers to better understand the use of the provided data. Letters informing the enterprises about the survey have also been forwarded to enterprises by the Hellenic Federation of Enterprises (SEV) and other business associations. The survey has also been promoted through specific publications in the website of National Information System for Research and Technology ([www.epset.gr](http://www.epset.gr)), the e-newsletter "Research and Innovation", published by EKT and distributed to 8000 persons, the "Innovation, Research and Technology" magazine, distributed to 5000 persons, etc. Finally, supportive/promoting actions have also been made by the General Secretariat for Research and Technology.

The 2011 questionnaire contained a dedicated section about incentives, where responding enterprises had the possibility to express their interest about the following supporting services: a) access to EKT's infrastructure and archives to look up information about researchers, research teams, research outputs, b) information about research projects (both national and European) and other funding opportunities, c) support for international research/business/technological collaborations through the Enterprise Europe Network, d) publication, upon their consent, of company's profile promoting its R&D activities, e) preparation of customized reports to benchmark the enterprise's R&D intensity with that of other enterprises in the same size class and NACE group (anonymization and confidentiality issues will be ensured), d) inclusion, upon the enterprise's consent, on the ranking list of the biggest (in terms of R&D expenditure) R&D performers. This question about incentives was dropped from the 2013 questionnaire to reduce overall questionnaire size.

#### Follow-up of non-respondents

Two email reminders. Intensive follow-up by phone, especially to those enterprises that are known to be important R&D performers.

#### Replacement of non-respondents (e.g. if proxy interviewing is employed)

No replacement.

Response rate (ratio of completed "interviews" over total number of eligible enterprises or enterprises of unknown eligibility)

67% for census, 43% for sample survey

Non-response analysis (if applicable -- also see section 20.5. Data compilation - Weighting and Estimation methods)

Non response analysis is not carried out. Weighting for the sampling part and imputation using 2011 or 2012 data for known R&D performers were used to impute unit non-response for R&D performers.

## GOV

Realised sample size (per stratum)

258 institutions.

Mode of data collection (face-to-face interviews; telephone interviews; postal surveys, etc.)

Since 2012 (reference year 2011 onwards), this is an online survey. Every institution received, via e-mail, its 'personal' log-in details to access the online questionnaire. Institutions have the possibility to preview the questionnaire before completion. In case of undelivered e-mails, institutions were contacted by phone to provide the correct e-mail.



Occasionally, questionnaires have also been filled-in via telephone interview. In exceptional cases, questionnaires were returned in hard-copy (fax or email). Face-to-face interviews have also been conducted in limited occasions.

#### Incentives used for increasing response

Communication with directors of institutions started in summer 2012, when they were asked to assign a person to complete the questionnaire. A letter has also been used to explain the purpose and mandatory nature of the survey that was attached to the e-mail invitations. A link to the 2011 publication has also been included in the letter for data providers to better understand the use of the provided data.

#### Follow-up of non-respondents

Two email reminders. Systematic follow-up by phone.

#### Replacement of non-respondents (e.g. if proxy interviewing is employed)

No replacement.

Response rate (ratio of completed "interviews" over total number of eligible enterprises or enterprises of unknown eligibility)

72% (2011) - Since this was the first time to run the survey after reference year 2005, our frame population covered exhaustively all government units that potentially have R&D activities. Most of the non-responding units (e.g. libraries) had no R&D activities and will therefore be removed from our GOV frame population in future rounds.

80% (2013)

Non-response analysis (if applicable -- also see section 20.5. Data compilation - Weighting and Estimation methods)

Non response analysis is not carried out. Administrative and GBAORD data and/or 2011 or 2012 data for known R&D performers were used to impute unit non-response for R&D performers.

## HES

Realised sample size (per stratum)

64 institutions.

Mode of data collection (face-to-face interviews; telephone interviews; postal surveys, etc.)

Since 2012 (reference year 2011 onwards), this is an online survey. Every HE institute received, via e-mail, its 'personal' log-in details to access the online questionnaire. Institutes had the possibility to preview the questionnaire before completion. In case of undelivered e-mails, institutes were contacted by phone to provide the correct e-mail.

Occasionally, questionnaires have also been filled-in via telephone interview. In exceptional cases, questionnaires were returned in hard copy (fax or email). Face-to-face interviews have also been conducted in limited occasions.

#### Incentives used for increasing response

Communication with heads of the institutes started in summer 2012, when they were asked to assign a person to complete the questionnaire. A letter has also been used to explain the purpose and mandatory nature of the survey that was attached to the e-mail invitations. A link to the 2011 publication has also been included in the letter for data providers to better understand the use of the provided data.

#### Follow-up of non-respondents

One email reminder. Systematic follow-up by phone.

#### Replacement of non-respondents (e.g. if proxy interviewing is employed)

No replacement.

Response rate (ratio of completed "interviews" over total number of eligible enterprises or enterprises of unknown eligibility)

73% (2011) - Since this was the first time to run the survey after reference year 2005, our frame population covered exhaustively all HE units that potentially have R&D activities. Most of the non-responding units (e.g. theological academies) had no R&D activities and will therefore be removed from our HES frame population in future rounds.

75% (2013)

Non-response analysis (if applicable -- also see section 20.5. Data compilation - Weighting and Estimation methods)

Non response analysis is not carried out. Administrative and GBAORD data and/or 2011 or 2012 data for known R&D performers were used to impute unit non-response for R&D performers.

## PNP

Realised sample size (per stratum)

22 institutions

Mode of data collection (face-to-face interviews; telephone interviews; postal surveys, etc.)

Since 2012 (reference year 2011 onwards), this is an online survey. Every PNP institution received, via e-mail, its 'personal' log-in details to access the online questionnaire. Institutions had the possibility to preview the questionnaire before completion. In case of undelivered e-mails, institutions were contacted by phone to provide the correct e-mail.

Occasionally, questionnaires have also been filled-in via telephone interview. In exceptional cases, questionnaires were returned in hard-copy (fax or email).

Incentives used for increasing response

A letter has also been used to explain the purpose and mandatory nature of the survey that was attached to the e-mail invitations. A link to the 2011 publication has also been included in the letter for data providers to better understand the use of the provided data.

Follow-up of non-respondents

One email reminder. Systematic follow-up by phone.

Replacement of non-respondents (e.g. if proxy interviewing is employed)

No replacement.

Response rate (ratio of completed "interviews" over total number of eligible enterprises or enterprises of unknown eligibility)

49% (2011)

70% (2013)

Non-response analysis (if applicable -- also see section 20.5. Data compilation - Weighting and Estimation methods)

Non response analysis is not carried out. 2011 or 2012 data for known R&D performers were used to impute unit non-response for R&D performers.

#### **20.4. Data validation**

*[Not requested]*

#### **20.5. Data compilation**

##### **20.5.1. Measurement issues**

*The following items concern some 'horizontal' issues of measurement. If however the treatment of these issues differs between sectors or between surveys it is to be reported by sector / survey with clear indication of the sector(s) / survey(s) it refers to*

Method of derivation of regional data

Questionnaires for all sectors included separate questions for the regional element of R&D Personnel and R&D expenditure. Respondents are asked to distribute total R&D personnel (headcounts and FTE by sex), Researchers (headcounts and FTE by sex) and total intramural expenditure into the 13 Greek regions (NUTS2).

Coefficients used for estimation of the R&D share of more general expenditure items, in particular in the HE sector  
*see FM § 336, 471 and FM Annex II*

The coefficients used to estimate the R&D share of personnel cost in HES are those used for the determination of FTEs (3.4.2.2). Regarding other current costs, respondents have provided information about methods to isolate the R&D component. Coefficients have been used in some cases.  
Regarding other sectors and based on the information available, coefficients have been applied in cases where R&D is part of the institution's activities.

Inclusion or exclusion of VAT and provisions for depreciation in the measurement of expenditures  
*see FM § 371-373 (VAT), and FM § 375 (depreciation)*

In line with the FM, respondents were asked to exclude VAT and depreciation from R&D expenditures.

Treatment and calculation of GUF source of funds / separation from "Direct government funds" [HE sector only]  
*see FM § 405-406*

The matching between the GOV (as a source of funds) categories used and the GUF / Direct government funds classification is as follows:  
a) GUF: Funds from the Ordinary Government Budget  
b) Direct government funds: Funds from the Investment Government Budget other than the National Strategic Reference Framework (NSRF) 2007 -2013, funds from the National Strategic Reference Framework (NSRF) 2007 -2013, funds from other government source (e.g. Regional Authority, Municipalities, Special Accounts, etc.).

Differences between national and Frascati Manual classifications not mentioned above and impact on national statistics

No deviations from FM classifications.

### 20.5.2. Weighting and estimation methods

#### Weighting

*Indicate whether you use weighting for non-response adjustment, post-stratification, etc, the variables whose population totals are matched by weighted sample totals, the data sources of the population totals and the methods of calculation of the weights. Please distinguish between preliminary and final results and between sectors if necessary.*

BES: In order to reduce the bias due to unit non-response and correct for sampling selection (for the sampling part of the BES survey), we used weighting (non-respondent adjustments and inverse sampling fraction). Weights have been calculated for all the different combinations of classes of the stratification variables: NACE section, size class and NUTS2 region. Information about population totals has been provided by the Hellenic Statistical Authority that drew the sample from the National Business Register.

No weighting has been applied in GOV, HES and PNP.

#### Estimation

*Indicate the methods and assumptions used for estimation of indicators, confidence intervals, etc.*

BES: Estimations using weights were made to correct for non-response in the sampling part of the BES survey.

The formulae that apply for stratified random sampling have been used to calculate estimates and their errors. The assumption has therefore



been made that the probability an enterprises performs R&D is equal between responding and non-responding enterprises of the same stratum.

For the census part of the BES survey, we have imputed unit non-responses using 2011 or 2012 data (where available) for known R&D performers.

GOV, HES: Estimations for unit non-response were made using data from official (administrative) sources. In most of the cases these additional sources included information about expenditures data. Depending on the source, the 'type of source' and 'type of cost' breakdowns were available. In the HES sector information was also available for teaching (professors, lectures, etc.) personnel, technical and administrative staff.

If not directly available, personnel data and other expenditure breakdowns were estimated using information (distributions) from other units belonging to the same group of institutes (e.g. GOV– research centres, hospitals, subcategories of archaeological and cultural institutions, HES – universities, technological educational institutes, university hospitals, etc. ).

PNP: Unit non-response has been corrected using using 2011 or 2012 data (where available) for known R&D performers

## **20.6. Adjustment**

*[Not requested]*

## **21. Comment**

Please provide additional country-specific information.

*Please attach, using the "Annexes" button below, as many annexes as needed*