CIS 2014 Quality Report - GREECE

Content

1 Contact

1.1 Contact organisation

National Documentation Centre (EKT) / National Hellenic Research Foundation (NHRF)

1.2 Contact organisation unit

Registers, Indicators and Services for Research & Innovation

1.5 Contact mail address

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Athens - Greece

2 Statistical presentation

2.1 Data description

The purpose of this report is to get an overview of the quality of the Community Innovation Survey (CIS) carried out in each Member State, EFTA, Candidate or Associated country. The quality report is therefore to be established for the each CIS wave.
This quality assessment will be based on different quality dimensions and indicators. The quality dimensions are based on the standard ones as defined in the Eurostat standard statistical quality framework. Also the indicators themselves are in line with the recommendations. All the information requested in this quality reporting refers to enterprises with 10 or more employees included in the Core NACE coverage as described in the Commission Regulation 995/2012 on innovation statistics (i.e. market activity enterprises in the NACE Rev. 2 sections B, C, D, E, H, J, K and in the NACE Rev. 2 divisions 46, 71, 72 and 73).
Furthermore, national CIS questionnaire is asked to be annexed to this report (national languages and/or in English).

Annotation: Please consider CIS t to be the survey that refers to the same year of the quality report and CIS t-2 to be the previous survey e.g. CIS 2014= CIS t then, CIS t-2=CIS 2012

2.2 Classification system

CIS indicators are classified by economic activity (NACE Rev. 2), size class (10-49, 50-249, 250 or more employees) and by type of innovation activity, as requested in the CIS tabulations.

2.3 Coverage - sector

Following the EC Regulation 995/2012, all core NACE 2014 sections and divisions are covered in CIS 2014. The specific sections/divisions are NACE Rev. 2 B, C, D, E, 46, H, J, K, 71, 72, 73.

2.4 Statistical concepts and definitions

The statistical concepts and definitions used in the CIS 2014 survey, and presented to respondents and users of CIS data, are in line with the model questionnaire and the Oslo Manual (3rd edition).

2.5 Statistical unit

In accordance with EC Regulation 995/2012, the statistical unit for CIS survey is the enterprise, as defined in the Council Regulation 696/1993.

2.6 Statistical population

The CIS 2014 statistical population is all enterprises with 10 or more employees in the core NACE Rev.2 sections and divisions (B, C, D, E, 46, H, J, K, 71, 72, 73).

2.7 Reference area

The reference area for the national CIS survey is Greece, covering all 13 regions at NUTS-2 level.

2.8 Coverage - Time

For CIS 2014, the time period covered by the survey is the 3-year period from the beginning of 2012 to the end of 2014.

2.9 Base period

Not applicable.

3 Statistical processing

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3.1 Source data

12.1.1. Target population

12.1.1.1. NACE Rev.2

In accordance with Commission Regulation 995/2012 on innovation statistics, the following industries and services are included in the core target population and form the breakdowns :
All NACE - Core NACE (NACE Rev. 2 sections & divisions B-C-D-E-46-H-J-K-71-72-73)
Core Industry (excluding construction) (NACE Rev. 2 sections B_C_D_E)
B MINING AND QUARRYING
C MANUFACTURING
10-12 Manufacture of food products, beverages and tobacco
13-15 Manufacture of textiles, wearing apparel, leather and related products
16-18 Manufacture of wood, paper, printing and reproduction
20: Manufacture of chemicals and chemical products
21: Manufacture of basic pharmaceutical products and pharmaceutical preparations
19-22 Manufacture of petroleum, chemical, pharmaceutical, rubber and plastic products
23: Manufacture of other non-metallic mineral products
24: Manufacture of basic metals
25: Manufacture of fabricated metal products, except machinery and equipment
26: Manufacture of computer, electronic and optical products
25-30 Manufacture of fabricated metal products (except machinery and equipment), computer, electronic and optical products, electrical equipment, motor vehicles and other transport equipment
31-33 Manufacture of furniture; jewellery, musical instruments, toys; repair and installation of machinery and equipment
D ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY
E WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES
36: Water collection, treatment and supply
37-39 Sewerage, waste management, remediation activities
Core Services (NACE Rev. 2 sections & divisions 46-H-J-K-71-72-73)
46: Wholesale trade, except of motor vehicles and motorcycles
H TRANSPORTATION AND STORAGE
49-51 Land transport and transport via pipelines, water transport and air transport
52-53 Warehousing and support activities for transportation and postal and courier activities
J INFORMATION AND COMMUNICATION
58: Publishing activities
61: Telecommunications

62: Computer programming, consultancy and related activities
63: Information service activities
K FINANCIAL AND INSURANCE ACTIVITIES
64: Financial service activities, except insurance and pension funding
65: Insurance, reinsurance and pension funding, except compulsory social security
66: Activities auxiliary to financial services and insurance activities
71: Architectural and engineering activities; technical testing and analysis
72: Scientific research and development
73: Advertising and market research
71-73 Architectural and engineering activities; technical testing and analysis; Scientific research and development; Advertising and market research

Please indicate if there were some national particularities hereon (e.g. more detailed breakdowns or also NACE activities not covered)
All core NACE 2014 sections and divisions have been covered with no deviations from the Commission Regulation 995/2012.

12.1.1.2. Size-classes

In accordance with Commission Regulation 995/2012 on innovation statistics, the following size classes are included in the core target population of the CIS:

- 10 - 49 employees
- 50 - 249 employees
- 250 or more employees

Please indicate if there were some national particularities (e.g. different grouping or exclusion of some size classes).
No deviations from the size classes defined in the Commission Regulation 995/2012.

12.1.1.3. Statistical units

In accordance with Commission Regulation 995/2012 on innovation statistics, it is required that Member States set up and maintain a register of enterprises, as well as associated legal units and local units.

Please indicate if there were some deviations

No deviations.

12.1.1.4. The reference period

The reference period to be covered by the survey is t-2 - t inclusive i.e. the three-year period from the beginning of t-2 to the end of t. Some questions are only related to one year, the opening or the closing year of the reference period.

Please indicate if there were some deviations from these rules (in particular a higher national frequency for the surveys or the production of results)

No deviations.

12.1.2. Sampling frame (or census frame)

Please describe the sampling frame used (e.g. the national business register or other national frames)

The national business register, maintained by the Hellenic Statistical Authority, was used as sampling frame.

Please provide in 12.1.4. the size of the sampling frame (population size), i.e. the number of units included in the sampling frame.

12.1.3. Sampling design

[*to be filled in only when sampling was used*]

Please describe the sampling and allocation scheme used for CIS (number of strata, number of samples).

A stratified random sampling was applied for the selection of the CIS 2014 sample. The strata in the sampling frame were defined based on the following three variables:
- The economic activity (in accordance with NACE Rev.2 classification specifications)
- Enterprise size class according to the number of employees
- Region (NUTS 2 level)

Sample selection was carried out by the Hellenic Statistical Authority using random sampling techniques applied to strata. In total, there were 5,201 enterprises selected from the sampling

frame belonging in 719 strata.

12.1.4. Sample size (or indication of census)

[*to be filled in only when sampling was used*]

Please describe the national sample sizes used for the CIS t (Core target population: enterprises in CORE Nace with 10 or more employees).

Sample/census indicator	**Number of enterprises**
Target population	13843
Sample	5496
In case of combination sample/census:	
Sampled units	5201
Enumerated units	295

Comments

Overall sample rate

[*to be filled in only when sampling was used*]

The overall sample rate is the ratio of the sample size over the target population size.

Please indicate the overall sample rate for CIS t if available
39.7%

3.2 Frequency of data collection

[*Not requested*]

3.3 Data collection

12.3.1 Survey participation

Please indicate whether the survey is mandatory or voluntary
Mandatory survey

12.3.2 Survey type

Data are collected through a census, sample survey or a combination of both. Please indicate the survey type used
Combination of census and sample survey

In case of combination of both, please, provide the criterion to conduct a census (e.g. size class, specific sector)
The criteria used for the complete enumeration were the size class and the performance of R&D.

12.3.3 Combination of sample survey and census data

Please indicate the population classes which are covered by sampling and those which are covered by complete enumeration (census) if applicable
- Census for enterprises over 500 employees and R&D 2013 performers - Sampling from the national business register for enterprises in the remaining size classes of the target population

12.3.4 Data collection method

Please indicate the data collection method used (e.g. face-to-face interview, telephone interview, postal or electronic questionnaires, other). Please specify whether interview data collection was computer-assisted or not.
Online survey supported by intensive telephone contacts and on-site visits by experienced interviewers.

3.4 Data validation

[*Not requested*]

3.5 Data compilation

Weights calculation method (short description) only for sample surveys

Please select the weight calculation method used with a simple cross in the column vis-a-vis

	Select the applied method with a cross	Comments
Inverse sampling fraction	x	
Non-respondent adjustments	x	
Other		

Please indicate the data source used for deriving population totals (universe description).
Number of enterprises by NACE section, size class and NUTS2 region as provided in the national business register.

Please indicate the variables used for weighting.
Number of enterprises in each stratum of the population.

3.6 Adjustment

Please describe the calibration method and the software used.
No calibration method used.

4 Quality management

4.1 Quality assurance

The quality of CIS at national level is assessed via the quality indicators and concepts, as described in the present quality report. These indicators are monitored at a regular basis, during data collection and data processing, to ensure high quality of CIS results. In addition to the quality report, the National Documentation Centre has been developing a handbook with specific guidelines and indicators that serves in monitoring the quality of the survey and documenting the procedures followed each time. The handbook for the national CIS is still in progress and is organised following the GSBPM structure.

4.2 Quality management - assessment

Please give a short overall assessment of the quality of the CIS methodology. Indicate perceived strengths and weaknesses and describe any plans, and their schedule, you have for relevant improvements.
Overall, the quality of the CIS 2014 has improved, compared to CIS 2012. Improvements are noticed in response rate of the survey, coefficients of variation and measurement errors. The survey was carried out as a combination of a complete enumeration of big enterprises and R&D performers and a sample of enterprises taken from the national business register. Data were collected via an online survey that allowed the introduction of filters and validation rules on the questionnaire. This minimised measurement and processing errors and had a positive impact on the quality of the data collected by the enterprises. The collection was supported by an online help-desk and well-trained interviewers responsible for the follow up and the assistance to enterprises during completion of the questionnaire. The participation of interviewers was made under the framework of our cooperation with the Hellenic Statistical Authority for the needs of the CIS survey. CIS was conducted for the second time in Greece, after the long break of not collecting and providing data. Given the experience gained from the implementation of CIS 2012, both for data producers and mostly for respondents and interviewers involved in the data collection, the quality of the CIS 2014 has clearly improved. The familiarity of enterprises with the survey

concepts and the mode of data collection (online questionnaire) in addition to the involvement to data collection of many interviewers that had also worked in CIS 2012, facilitated data collection and improved the length of the fieldwork period and the response rate of the survey.

5 Relevance

Relevance is the degree to which statistics meet current and potential users' needs. It includes the production of all needed statistics and the extent to which concepts used (definitions, classifications etc.) reflect user needs. The aim is to describe the extent to which the statistics are useful to, and used by, the broadest array of users. For this purpose, statisticians need to compile information, firstly about their users and their needs.

The CIS is based on a common questionnaire and a common survey methodology, as laid down in the 3rd edition of Oslo Manual (2005 edition), in order to achieve comparable, harmonised and high quality results for EU Member States, EFTA countries, Candidates and Associated countries.

5.1 Relevance - User Needs

Users and users' needs at national level (an example is given in the table)

[*Please add as many rows as needed, using the Insert row after button in the ribbon above*]

Users class	Classification of users	Description of users	Users' needs
1	European level	The European Commission	Innovation Union Scoreboard, Regional Innovation Scoreboard, European Semester
1	European level	Eurostat	Dissemination in Eurobase and in publications, such as the pocketbook on Science, Technology and Innovation, article in "Statistics Explained"
1	International organisations	Other international organisations (e.g. OECD, UNU-MERIT)	Publications, data comparisons, policy-making reviews, review of the Oslo manual concepts, improvement of the CIS survey

1	National level	General Secretariat for Research & Technology / General Secretariat for Industry / Regional Authorities	Policy making at national, sectoral and regional level, monitoring of indicators for assessment of the Framework Programmes and the strategic planning of funding
2	Social actors	Business associations / Innovation clusters	Performance of enterprises in specific NACE sections, comparisons with other countries
3	Media	National media	Country performance in relation to other European countries, interest on the publication of CIS results
4	Researchers	Researchers and students	Analysis of CIS indicators for specific studies and research purposes
5	Enterprises	Private enterprises in the business sector	Sectoral reviews, market analysis and benchmarking with enterprises at same NACE/Size class

Eurostat recommends the following user classes. However you may report by user class defined for national purposes, even if different from the recommended ones:

1- Institutions:

European level: Commission (DGs, Secretariat General), Council, European Parliament, ECB, other European agencies etc.

I*n Member States, at the national or regional level*: Ministries of Economy or Finance, Other Ministries (for sectoral comparisons), National Statistical Institutes and other statistical agencies (norms, training, etc.), and

International organisations: OECD, UN, IMF, ILO, etc.

2- Social actors:

Employers association, trade unions, lobbies, among others, at the European, national or regional level.

3- Media

International, national or regional media specialized or for the general public interested both in

figures and analyses or comments. The media are the main channels of statistics to the general public.

4- Researchers and students

Researchers and students need statistics, analyses, ad hoc services, access to specific data.

5- Enterprises or businesses

Either for their own market analysis, their marketing strategy (large enterprises) or because they offer consultancy services
Main users are consulted regularly (at hearings, task forces, ad hoc meetings) for their needs and are involved in the process of the development of the model questionnaires at a very early stage. User needs are considered throughout the whole discussion process of the model questionnaires aiming at providing relevant statistical data for monitoring and benchmarking of European policies.

Please add information concerning the involvement of users at national level in the final national questionnaire (if available):
The questionnaire was finalised taking into consideration the feedback received from key stakeholders and the Hellenic Statistical Authority. Comments received by enterprises, during completion of the CIS 2012 questionnaire and in the interviews for cognitive testing of the CIS 2014 questionnaire, were also taken into account for the improvement of the survey questionnaire and the accompanied material provided to respondents (instructions for the completion of the questionnaire, examples & clarifications of the survey concepts).

5.2 Relevance - User Satisfaction

To evaluate if users' needs have been satisfied, the best way is to use user satisfaction surveys.

Please describe the national user satisfaction survey, if it has been undertaken, and provide a summary of the feedback received by users (e.g. request for more detailed breakdowns/statistics, better timeliness, accessibility of CIS data, etc.).
There was no extensive user satisfaction survey carried out. Feedback received from regular meetings with key stakeholders and personal interviews with significant R&D performers provided information on their needs for innovation statistics to be published and expressed great interest in analysing indicators at regional and sectoral level. Users' satisfaction with the survey questionnaire and the data collection method was also monitored via the online questionnaire. Results of this assessment show a high satisfaction with the structure of the questionnaire, its development in the online platform and the support provided by interviewers and EKT staff during completion.

5.3 Completeness

Please comment in general on completeness aspects. Missingness issues due to derogation should also be reported here.
CIS 2014 results cover all mandatory sheets and variables, following the EC Regulation 995/2012. In addition, variables on the ad-hoc module (Eco-innovation) and all remaining tabulations are also provided in the requested NACE and Size breakdowns.

5.3.1 Data completeness - rate

[*Not requested*]

6 Accuracy and reliability

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6.1 Accuracy - overall

Accuracy in the statistical sense denotes the closeness of computations or estimates to the exact or true values. Statistics are not equal with the true values because of variability (the statistics change from implementation to implementation of the survey due to random effects) and bias (the average of the possible values of the statistics from implementation to implementation is not equal to the true value due to systematic effects).

6.2 Sampling error

If sampling is used (either sample survey or combination of sample and census survey), continue with the following sub-section 5.2.1; otherwise proceed with Section 5.3.

6.2.1 Sampling error - indicators

The aim of this sub-chapter is to measure the sampling errors for CIS data. The main indicator used is the coefficient of variation (CV).

Definition of coefficient of variation: Coefficient of Variation= (Square root of the estimate of the sampling variance) / (Estimated

value)

Formula:

$$CV = \frac{\hat{\sigma}}{\overline{X}}$$

where

$$\hat{\sigma} = \sqrt{\frac{\sum_{i=1}^{n} (x_i - \overline{x})^2}{n-1}}$$

$$\overline{x} = \frac{\sum_{i=1}^{n} x_i}{n}$$

Please provide the coefficient of variation as a percentage (%) in the following table.

Coefficient of variation (%) for key variables by NACE categories and for enterprises with 10 or more employees

NACE	**Size class**	(1)	(2)	(3)		
Core NACE (B-C-D-E-46-H-J-K-71-72-73)	Total	2.56	5.54	4.77		
Core industry (B_C_D_E - excluding construction)	Total	2.14	4.02	4.43		
Core Services (46-H-J-K-71-72-73)	Total	4.58	10.97	8.00		

[1] = Coefficient of variation for the percentage of innovative enterprises (ENT_POPU12/INNO) in the total population of enterprises (ENT_POPU12/TOTAL).
[2] = Coefficient of variation for the turnover of product innovative enterprises with improved products NEW to the market (NEWMAR_TURN/INPDT), as a percentage of total turnover of product innovative enterprises (TURN12/INPDT).
[3] = Coefficient of variation for percentage of product and/or process innovative enterprises (incl. enterprises with abandoned and or on-going activities) involved in any innovation co-operation arrangement (CO_ALL/INNOACT)), as a percentage of total population of product and/or process innovative enterprises (ENT_POPU12/INNOACT).

Comments

Variance Estimation Method

Please indicate the method used for variance estimation including whether the sample design (e.g. clustering) and weighting have been taken into account.
The variance and the coefficients of variation were calculated using the formulas provided in the quality report template. The application provided in SPSS for complex samples was used for these calculations.

6.3 Non-sampling error

Non-sampling errors occur in all phases of a survey. They add to the sampling errors (if present) and contribute to decreasing overall accuracy. It is important to assess their relative weight in the total error and devote appropriate resources for their control and assessment.

6.3.1 Coverage error

Coverage errors (or frame errors) are due to divergences between the target population and the frame population. The frame population is the set of target population members that has a chance to be selected into the survey sample. It is a listing of all items in the population from which the sample is drawn that contains contact details as well as sufficient information to perform stratification and sampling.

Please comment on the groups of the target population that are under covered and on any observed over-coverage in the frame population (in Core NACE: B-C-D-E-46-H-J-K-71-72-73 and enterprises with 10 or more employees)
Due to lack of recent information from administrative sources regarding the new enterprises, there is an under-coverage of enterprises in the sampling frame that was used for the design of the survey and thus, the coverage errors cannot be fully assessed.

Please indicate whether the CVs reported under 5.2.1incorporate the effects of coverage errors.

Not applicable

Misclassification rate

The approach to compute this indicator is to subtract from the total of the enterprises those that remained in the same stratum between the time the frame was last updated and the time the survey was carried out.

Definition of misclassification rate: Misclassification rate (%) = 100 (100* (Number of enterprises that remained in the same stratum / Number of enterprises in the sample that belong to the stratum)

Frame misclassification rate by size class (in Core NACE: B-C-D-E-46-H-J-K-71-72-73 and enterprises with 10 or more employees).

	Size class			
	10-49	**50 - 249**	**250+**	**TOTAL**
Number or surveyed enterprises in the stratum (according to frame)	2639	567	186	3392
Number of enterprises that remained in the same stratum (after inspection of their characteristics)	2552	519	157	3228
Misclassification rate	3.30%	8.47%	15.59%	4.83%

Comments

6.3.1.1 Over-coverage - rate

[*Not requested*]

6.3.1.2 Common units - proportion

[*Not requested*]

6.3.2 Measurement error

Measurement errors occur during data collection and generate bias by recording values different than the true ones. The survey questionnaire used for data collection may have led to the recording of wrong values, or there may be respondent or interviewer bias.

Please describe those errors if existing.
Measurement errors were only few in the CIS 2014 survey and mainly concerned question 13.2 of the ad-hoc module for eco-innovation. This question concerned types of innovation related to the environmental benefits. There were some enterprises that selected in 13.2 types of innovation that were not reported in the respective previous sections of the questionnaire. Such cases were detected and corrected, following clarifications/corrections received by these enterprises during follow-up.

Please describe measures taken for reducing measurement errors (i.e. minimum standards for interviewer experience, training, questionnaire testing etc.).
The survey questionnaire was the model questionnaire proposed by Eurostat and the Member States for CIS 2014, translated in Greek. Given that the data collection was made electronically the questionnaire was built online using Lime Survey. This software allowed the introduction of filters to questions/sections of the questionnaire and most importantly supported the use of control rules and checks for the values reported therein. The latter improved the quality of data collected as it allowed validation in real time while respondents were answering the questions. The system also offered the option of saving and previewing their answers in any part of completion and before final submission. All operations were thoroughly tested before running the survey. In addition to the questionnaire a glossary of terms and examples related to the survey concepts and an online helpdesk were offered to respondents for further assistance. All respondents selected in the sample or covered by census were contacted by email for participating in the survey, in which they received their identical credentials for connecting to the questionnaire and a copy of the questionnaire in pdf for quick preview. The collection was supported by experienced interviewers, provided by the Hellenic Statistical Authority (ELSTAT), the national authority responsible for maintaining the register of interviewers for official statistical surveys. Interviewers were responsible for the telephone follow-up and any

assistance needed for the enterprises.

A special training was held for the interviewers and a handbook was offered to them explaining the survey and the mode of data collection. The training was shown in live streaming so that interviewers in all regions could watch it and ask questions. The whole operation was constantly monitored by the EKT staff and the regional statistical offices of ELSTAT for checking the progress of fieldwork and the quality of the data collected.

6.3.3 Non response error

Non response occurs when a survey fails to collect data on all survey variables from all the population units designated for data collection in a sample or complete enumeration.

There are two types of non-response:

- Unit non-response, which occurs when no data (or so little as to be unusable) are collected about a population unit designated for data collection.
- Item non-response, which occurs when only data on some, but not all survey data items are collected about a population unit designated for data collection.

6.3.3.1 Unit non-response - rate

In this part, the main interest is to judge if the response from the target population was satisfying by computing the weighted and un-weighted non-response rate.

Definition of un-weighted unit non-response rate:
Un-weighted unit non-response rate (%) = 100*(Number of units with no response or not usable response) / (Total number of in-scope (eligible) units in the sample)

Definition of weighted unit non-response rate:
Weighted unit non-response rate (%) = 100*(Number of weighted units with no response or not usable response) / (Total number of in-scope (eligible) units in the sample)

Please note that the number of eligible units is the number of sample units which indeed belong to the target population.

Un-weighted and weighted unit non-response rate by NACE categories and for enterprises with 10 or more employees

NACE	Breakdown	[1]	[2]	[3]	[4]
Core NACE (B-C-D-E-46-H-J-K-71-72-73)	Total	2132	5524	38.60%	40.13%
Core industry (B_C_D_E - excluding construction)	Total	1284	3333	38.52%	39.92%
Core Services (46-H-J-K-71-72-73)	Total	848	2191	38.70%	40.31%

(1) = Number of eligible units with no response
(2) = Total number of eligible units in the sample
(3) = Un-weighted unit non-response rate
(4) = Weighted unit non-response rate

NB: The weight to be taken is the sampling weight

Please indicate the maximum number of recalls/reminders before coding an enterprise as non-responding.
Three e-mail reminders were sent to the enterprises followed by intensive telephone contacts, personal e-mails and close follow-up by interviewers before coding them as non-responding.

6.3.3.2 Item non-response - rate

Definition:
Un-weighted item non-response rate (%) = 100*(Number of units with no response at all for the item) / (Total number of eligible, for the item, units in the sample i.e. filters have to be taken into account)

Item non response rate Turnover (in Core NACE: B-C-D-E-46-H-J-K-71-72-73 and enterprises with 10 or more employees).

	Item non-response rate (un-weighted)	Imputation (Y/N)	If imputed, describe method used, mentioning which auxiliary information or stratification is used
Turnover	2.27%	Y	Imputation was based on information from

			balance sheets and administrative data, only for those enterprises that did not provide the missing figures during follow-up.

Comments

Item non-response rate New questions in CIS t (in Core NACE: B-C-D-E-46-H-J-K-71-72-73 and enterprises with 10 or more employees)

	Type of innovators	Item non response rate (un-weighted)	Comments
New questions			
12.3 Importance of barriers to innovation for non-innovators	NON_INNO	0.00%	
13.1 During the three years 2012 to 2014, did your enterprise introduce a product (good or service), process, organisational or marketing innovation with any of the following environmental benefits?	INNOS	0.00%	
13.2 Were any of these environmental benefits due to the following types of your enterprises innovations?	INNOS	0.00%	
13.3 During 2012 to 2014, how important were the following factors in driving your enterprises decisions to introduce innovations with environmental benefits?	INNOS	0.00%	
13.4 Does your enterprise have procedures in place to regularly identify and reduce your enterprises environmental impacts?	TOTAL	0.00%	

14. Share of turnover from sales to clients outside	TOTAL	0.00%	

5.3.3.2.1 Reasons for item non-response

Please specify possible reasons (such as sensitive information at a national level, a sensitive question, for a sector)
Not applicable

5.3.3.2.2 Information about the non-response survey

Please describe the main characteristics, results and the impact of the non-response survey if such as survey was done.
Following the CIS 2014 methodological recommendations, a non-response survey was carried out to a simple random sample of around 10% of non-responding units, given that the unit non-response rate exceeded 30%. Since non-response was equally distributed across strata, there was no need for a stratified non-response sample. The non-response questionnaire included the questions proposed in the survey guidelines, including also one question for the reason of non-response. Enterprises were contacted by interviewers via telephone or via on-site visits and were asked to reply to the given questions. The non-response survey succeeded a high response rate (around 85%). The results of the non-response analysis showed that there were no statistically significant differences between non-respondents and respondents of the CIS 2014 survey. Concerning reasons for not responding to the CIS 2014 survey, the following were reported (*multiple answers allowed*):

Reasons for refusing to participate in the survey	
Lack of time	55.9%
Length of the questionnaire	10.6%
Difficulties in understanding the questionnaire	3.7%
Other reason	20.3%

6.3.4 Processing error

Between data collection and the beginning of statistical analysis on the base of the statistics produced, data must undergo a certain processing: coding, data entry, data editing, imputation, etc. Errors introduced at these stages are called processing errors. Data editing identifies inconsistencies in the data which usually represent errors.

Please indicate the data entry method (data keying, scanning/OCR, CAPI, CATI, responses through online questionnaires) applied and the respective error estimates (ratio between wrongly records to total number of records), if available.
All responses were collected via the online questionnaire, either filled in by respondents or by interviewers. In few exceptions, where enterprises submitted their questionnaire via fax/mail, data were filled in the system by experienced staff. In both cases there were no errors encountered.

Please describe the editing process and method (give the editing rates [1] if possible).
Not applicable.

Please indicate the variables for which coding was performed and the respective estimates of coding errors (ratio between wrongly coded records to total number of records) if available.
Not applicable.

Please indicate whether the CVs reported in table under section 5.2.1incorporate the effects of processing errors.
Not applicable.

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[1] Failure rates of edits are useful, as indicators of the quality of the original data (prior to correction). Editing rates for key variables should be reported. They may be higher due to measurement error (for instance, because of poor question wording) or because of processing error (for instance, data capture errors).

6.3.4.1 Imputation - rate

Imputation is the method of creating plausible (but artificial) substitute values for all those missing.

Definition of imputation rate: Imputation rate (for the variable x) (%) = 100*(Number of replaced values) / (Total number of values for a given variable)
Definition of weighted imputation rate: Weighted imputation rate= 100*(Number of total weighted replaced values) / (Total number of weighted values for a given variable)

Imputation rate for metric variables by NACE categories and for enterprises with 10 or more employees:

For metric variables:

NACE	**Size class**	(1)		(2)		(3)	
		Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Core NACE (B-C-D-E-46-H-J-K-71-72-73)	Total	0.91%	0.81%	1.46%	1.21%	6.88%	2.51%
Core industry (B_C_D_E - excluding construction)	Total	0.39%	0.47%	1.06%	1.13%	6.80%	3.19%
Core Services (46-H-J-K-71-72-73)	Total	1.71%	1.09%	2.09%	1.28%	7.00%	1.88%

(1) = Total turnover in the last year of the reference period (t) (TURN t/TOTAL)
(2) = Share of the turnover in the last year of the reference period (t) due to new or improved

product new to the market in the total turnover for product innovative enterprises (NEWMAR_TURN/INPDT)
(3) = Expenditure in intramural R&D (RRDINX/INNOACT)

NB: The weight to be taken is the weight used in estimation (e.g. after calibration)

Please indicate whether the CVs reported in the table in 5.2.1. includes the effects of non-response and any comments on the applied method of imputation of non-response unit/items.
Not applicable.

6.3.5 Model assumption error

Statistical models often need to be estimated and used in the estimation phase of a survey. They are necessary, for example, in the methods of calibration, generalized regression estimators, seasonal adjustment etc.

Please provide information on:

a. Purposes for which statistical models are used

Not applicable.

b. Potential inaccuracies arising from errors in the models assumptions

Not applicable.

c. Whether these inaccuracies are taken into account the CVs reported earlier

Not applicable.

6.4 Seasonal adjustment

[*Not requested*]

6.5 Data revision - policy

[*Not requested*]

[*Not requested*]

6.6 Data revision - practice

[*Not requested*]

6.6.1 Data revision - average size

[*Not requested*]

7 Timeliness and punctuality

Timeliness and punctuality refer to time and dates, but in a different manner.

The timeliness of statistics reflects the length of time between their availability and the event or phenomenon they describe.
Punctuality refers to the time lag between the release date of data and the target date on which they were scheduled for release as announced officially.

7.1 Timeliness

Time lag between the end of reference period and the release date of the first/provisional results: - Indicator: (Release date of provisional/ first results) - (Date of the end of reference period for the data)

Note: It corresponds to the 3rd row of table below

Time lag between the end of reference period and the release date of the first results

Events	
End of reference period	31.12.2014
Date of first release of national data	31.03.2016
Lag (Months)	15 months

7.1.1 Time lag - first result

[*see 6.1*]

7.1.2 Time lag - final result

[*Not requested*]

7.2 Punctuality

Punctuality of time schedule of effective publication: (Actual date of the effective publication) - (Scheduled date of the effective publication)

7.2.1 Punctuality - delivery and publication

Punctuality with regard to national publication

Events	Date	Explanation in case of delays
Scheduled date of effective national publication	30.06.2016	
Actual date of effective national publication	30.06.2016	
Delay (Months)	No delay	

Punctuality with regard to data transmission to Eurostat (deadline is set 18 months from the end of the reference period)

Events	Date	Explanation in case of delays
Actual date of transmission of the data	30.06.2016	
Delay (Months) compared to the above deadline	No delay	

Comments if any

8 Coherence and comparability

Comparability aims at measuring the impact of differences in applied statistical concepts and definitions on the comparison of statistics between geographical areas, non-geographical domains, or over time.

The coherence of statistical outputs refers to the degree to which the statistical processes by which they were generated used the same concepts (classifications, definitions, and target populations) and harmonised methods. Coherent statistical outputs have the potential to be validly combined and used jointly.

8.1 Comparability - geographical

This part focuses on reporting the deviations from the harmonised CIS questionnaire.

Methodological deviations

List and comment on questions included in the Harmonised Questionnaire and not included in the national questionnaire (if any)
No deviations from the Harmonised Questionnaire, all proposed questions were included.

List and comment on questions included in the national questionnaire and not included in the Harmonised Questionnaire (if any)
We repeated two questions from the CIS 2012 ad-hoc module on strategies and obstacles, which were addressed only to innovators. We also added a question related to global value chain under section 14 for all enterprises, asking about the stages of the production process that were either implemented in another country or were part of the production process carried out in another country by other enterprises/organisations.

List and comment on changing in the filtering compared to the Harmonised Questionnaire (i.e. deviations in targeted enterprises) (if any)

No deviations in the filtering.

8.1.1 Asymmetry for mirror flow statistics - coefficient

[*Not requested*]

8.2 Comparability - over time

Definition of relative difference between CIS t and CIS t-2 data: DIFF = (CISt/CISt-2)*100

Comparison between CIS 2014 and CIS 2012 data (relative difference in points of percentage) by NACE categories and for enterprises with 10 or more employees

NACE	Size class	(1)	(2)	(3)
Core NACE (B-C-D-E-46-H-J-K-71-72-73)	Total	0.98	1.05	1.08
Core industry (B_C_D_E - excluding construction)	Total	1.04	1.16	1.07
Core Services (46-H-J-K-71-72-73)	Total	0.92	0.98	1.07

(1) Share of innovative enterprises (INNO) in total population of enterprises (ENT_POPU) - CIS t/CIS t-2
(2) Share of product and/or process enterprises (incl. enterprises with ong/aband activities) with co-operation arrangements (CO_ALL)_in total population of product and/or process enterprises (incl. enterprises with ong/aband activities/INNOACT) - CIS t/CIS t-2
(3) Total turnover of innovative enterprises (TURN/INNO) in % of total turnover for all enterprises (TURN/TOTAL) CIS t/CIS t-2

Please comment on the relative differences between CIS t and CIS t-2 data as reported in the table above

8.2.1 Length of comparable time series

[*Not requested*]

8.3 Coherence - cross domain

Coherence with Structural Business Statistics

This part compares key variables for aggregated CIS data with SBS data.

Definition of relative difference between CIS and SBS data: DIFF = (SBS/CIS)*100

Comparison between SBS and CIS data (relative difference) by NACE categories and for enterprises with 10 or more employees

NACE	Size class	Ent (1)	Emp (2)	Turn (3)
Core NACE (B-C-D-E-46-H-J-K-71-72-73)	Total	Not available	Not available	Not available
Core industry (B_C_D_E - excluding construction)	Total	Not available	Not available	Not available
Core Services (46-H-J-K-71-72-73)	Total	Not available	Not available	Not available

(1)Proportion of number of enterprises in the last year of the reference period (t)
(2)Proportion of total number of employees in the last year of the reference period (t)
(3)Proportion of total turnover in the last year of the reference period (t)

No data available for SBS 2014.

[*Not requested*]

8.4 Coherence - sub annual and annual statistics

[*Not requested*]

8.5 Coherence - National Accounts

[*Not requested*]

8.6 Coherence - internal

[*Not requested*]

9 Accessibility and clarity

Accessibility and clarity refer to the simplicity and ease for users to access statistics using simple and user-friendly procedure, obtaining them in an expected form and within an acceptable time period, with the appropriate user information and assistance: a global context which finally enables them to make optimum use of the statistics.

9.1 Dissemination format - News release

Mean of dissemination	Yes/no	Level of access (e.g. free of charge, membership/ password is required, a part of data/statistics are provided, etc.)
Press release	YES	Publicly available, free of charge

9.2 Dissemination format - Publications

Mean of dissemination	Yes/no	Comments, links, ...
General paper publication	YES	Delivered free of charge to key stakeholders and important users and upon request (free of charge) to any other user
Specific paper publication (e.g. sectoral provided to enterprises)	YES	Short publications with analysis of key statistics by regions and NACE sectors.
Online publication	YES	Publicly available, free of charge on http://metrics.ekt.gr/
Specific online publication (e.g. sectoral provided to enterprises)	YES	Upon request, or in given time for special purposes (e.g. presentations in conferences) // Schedule for uploading short articles with key figures on frequent basis

9.3 Dissemination format - online database

Mean of dissemination	Yes/no	Comments, links, ...

On-line database	YES	Due to be published by the end of the year, free of charge, on http://metrics.ekt.gr/el/statistika-etak/datatables

9.3.1 Data tables - consultations

[*Not requested*]

9.4 Dissemination format - microdata access

Mean of dissemination	Yes/No	Comments, links, ...
SAFE centre	YES	To be delivered to ESTAT by end of October 2016
CD-ROM	NO	Not scheduled yet

9.5 Dissemination format - other

Mean of dissemination	Yes/No	Comments, links, ...
Other:		

9.6 Documentation on methodology

Please describe what type(s) of accompanying meta-information is available together with the data.
The online and paper publication of the CIS 2014 results includes a separate section on the survey methodology providing information on the target population, the NACE sections and size classes covered, the sampling method and the mode of data collection. Specific notes on data figures/tables shown in the publication are also provided where needed. Additionally, the dedicated website http://metrics.ekt.gr/statistika-etak provides a glossary of all concepts related to the CIS survey for users of these statistics. Reference material for the survey is also available in the website with links to the relevant regulations, the Oslo Manual, the NACE classification and the survey questionnaire. Finally, the database is accompanied by the survey questionnaire and the quality report for CIS 2014 statistics published thereon.

9.7 Quality management - documentation

Please comment on your users feedback on clarity and the assistance available to users
No feedback received yet.

9.7.1 Metadata completeness - rate

[*Not requested*]

9.7.2 Metadata - consultations

[*Not requested*]

10 Cost and Burden

[*This item is optional*]

10.1. Costs

The assessment of costs associated with a statistical product is a rather complicated task since there must exist a mechanism for appointing portions of shared costs (for instance the business register or shared IT resources and dissemination channels) and overheads (office space, utility bills etc). The assessment must become detailed and clear enough so that international comparisons among agencies of different structures are feasible.

For measuring the cost on statistical offices, Eurostat proposes to make use of the following very short calculation, even if Eurostat is aware of the fact that such a measure may be complicated.

Costs summary - OPTIONAL

Costs for the statistical authority	**In thousands of national currency**	**% sub-contracted**
Staff costs	Not available	Not available
Data collection costs (printing and mailing)	Not available	Not available
Other costs	Not available	Not available
Total costs	Not available	Not available

Comments

10.2. Burden under respondents

The overall cost of delivering the information depends on three components:
R = the number of respondents;
T = the typical time required to provide the information, including time spent assembling information prior to completing a form or taking part in interview and the time taken up by any subsequent contacts after receipt of the questionnaire (Re-contact time);
C = the typical hourly cost of a respondents time.

Thus, if we neglect costs such as the start-up costs of creating systems to comply with the survey, computing costs or the use of consumables, etc., the cost on businesses should be estimated as follows:

Formula: Total Cost = (R x T x C)

Burden - OPTIONAL

The Components	Innovative enterprises	Non innovative enterprises	Non-respondents
The number of respondents (R)	Not available	Not available	Not available
The time required to provide the information (T)	Not available	Not available	Not available
The typical hourly cost (C)	Not available	Not available	Not available
Total costs	Not available	Not available	Not available

11 Confidentiality

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11.1 Confidentiality - policy

CIS data are transmitted to Eurostat via EDAMIS using the following consignment: CIS_CIS_32. This safe, secure procedure guarantees a method of tracking transmission. All necessary steps will be taken to ensure that the EDAMIS system is working at national level.

Please indicate if there are some deviations.

Comments
No deviations.

11.2 Confidentiality - data treatment

Please, list the rules that have been applied to flag confidential cells (i.e. national confidentiality rules)?
Data cells have been protected for confidentiality according to the following rules: (i) Primary protection: all cell numbers =<3 (ii) Secondary protection: - in case of 2-classes aggregation (e.g. NACE classes) A = B + C, IF cell B is suppressed THEN cell C is also suppressed and total is published - in case of 3-classes aggregation A = B + C + D, IF one of the B, C or D is suppressed THEN no other cell needs to be suppressed - in case of 3-classes aggregation A = B + C + D, IF two of B, C or D are suppressed THEN the third one is also suppressed

12 Comment

Please feel free to add any comment if needed