Single Integrated Metadata Structure (SIMS v2.0)

Country: **Greece**

Compiling agency: **ELSTAT**

Domain name: **Annual Survey of Production and Sales of Manufactured Products (PRODCOM), 2016**

ELSTAT metadata
Reference metadata
1. Contact
2. Metadata update
3. Statistical Presentation
4. Unit of measure
5. Reference period
6. Institutional mandate
7. Confidentiality
8. Release policy
9. Frequency of dissemination
10. Accessibility and clarity
11. Quality management
12. Relevance
13. Accuracy and reliability
14. Timeliness and punctuality
15. Coherence and comparability
16. Cost and burden
17. Data revision
18. Statistical processing
19. Comment

1. Contact	Top
1.1 Contact organisation	Hellenic Statistical Authority (ELSTAT)
1.2 Contact organisation unit	Secondary Sector Statistics Division Production Statistics Section
1.3 Contact name	Adamantia GEORGOSTATHI
1.4 Contact person function	Head of the Section
1.5 Contact mail address	Pireos 46 & Eponiton str. 18510 Piraeus, Greece
1.6 Contact email address	prodcom@statistics.gr; a.georgostathi@statistics.gr
1.7 Contact phone number	(+30) 213 135 2043
1.8 Contact fax number	(+30) 213 135 2454

2. Metadata update	Top
2.1 Metadata last certified	May 2018
2.2 Metadata last posted	May 2018
2.3 Metadata last update	May 2018

3. Statistical presentation — Top

3.1 Data description

The statistical outputs for each industrial product are:
- The physical volume of total production manufactured (in units of measurement as defined in the PRODCOM list) for the reference year.
- The physical volume of production sold (in units of measurement as defined in the PRODCOM list) for the reference year, regardless the time of production.
- The value of production sold (in euros) for the reference year.

Within the PRODCOM framework the following are also recorded:
- Contract processing, per PRODCOM heading (only quantity of production and contractor's payment).
- Industrial services (treatment, repairs and maintenance and assemply work)

3.2 Classification system

The classification of industrial products is based on each year's PRODCOM list. More specifically, the classification of the 2016 PRODCOM survey was based on the PRODCOM list for 2016 (Commission Regulation (EU) 2016/1872, of 06 October 2016) which includes 3,836 headings.

The basic building blocks of the PRODCOM list are the European Classification of Economic Activities (NACE Rev. 2), as well as the European Classification of Products by Activity (CPA). More specifically, the 8-digit PRODCOM headings correspond to NACE Rev.2 at 4-digit level and to CPA at 6-digit level. In other words, each heading takes its first 4 digits from NACE Rev.2 and digits 5 and 6 from CPA. An example of the hierarchy of the Prodcom list is depicted below:

- **NACE Code: 10.32** – Manufacture of fruit and vegetable juice
  - **CPA Code: 10.32.12** – Orange juice
    - **PRODCOM Code: 10.32.12.10** – Frozen unconcentrated orange juice
    - **PRODCOM Code: 10.32.12.20** – Unconcentrated orange juice (excluding frozen)
    - **PRODCOM Code: 10.32.12.30** – Orange juice n.e.c.

The PRODCOM list is usually updated annually. Nevertheless, there is on-going discussion for revising the list every five years, for increasing comparability over time.

Revisions could include:
- improving the descriptions of some product codes,
- merging of some product codes into a new code,
- deletion of some product codes,
- creation of new codes or introduction of headings to cover new product types,
- change in the Prodcom code structure as a result of changes in an industry.

3.3 Sector coverage

The survey covers the divisions of the Statistical Classification of Economic Activities in the European Community (NACE Rev. 2) under sections B (Mining and Quarrying) and C (Manufacturing), as they are presented in Table 1.

Table 1: 2-digit sections of economic activity covered by the PRODCOM survey

Classification of Economic Activity NACE Rev.2	*Economic Activity*
07	Mining of metal ores
08	Other mining and quarrying
10	Manufacture of food products
11	Manufacture of beverages
12	Manufacture of tobacco products
13	Manufacture of textiles
14	Manufacture of wearing apparel
15	Manufacture of leather and related products
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing and reproduction of recorded media
19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
22	Manufacture of 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
27	Manufacture of electrical equipment
28	Manufacture of machinery and equipment n.e.c.
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment
31	Manufacture of furniture
32	Other manufacturing
33	Repair and installation of machinery and equipment

3.4 Statistical concepts and definitions

The basic variables recorded for each industrial product are:

- **Quantity of production,** which is the physical volume of actual production during the survey period, including any production which is incorporated into the manufacture of other products by the same undertaking. The surveyed production is only the production actually carried out on the Greek territory. The production carried out outside Greece's territory on behalf of some of its enterprises is not included.

- **Quantity of sales,** which is the physical volume of production sold during the survey period, regardless the time of production.

- **Value of sales,** which is the value of production sold during the survey period. The value of production sold should be calculated on the basis of the ex-works selling price obtained during the reporting period. Packaging and freight costs that are made by the enterprise's own means, should be included.

  However, the following are not included:
  - o   any consumer tax charged and Value Added Tax (V.A.T.)
  - o   separately charged freight costs
  - o   any discounts granted to customers and refunds

  The value of service (i.e. the fee paid) rather than the value of any associated physical goods is recorded for industrial services.

- **Contract processing** takes place when an enterprise (the principal) outsources the production of products to another enterprise (the subcontractor), and supplies the subcontractor with the raw material needed for the production. The finished goods are received and sold by the principal, who pays a fee to the subcontractor for the processing of the products.

  The survey reports the subcontracting operations that take place within the Greek territory.

- An enterprise might produce a product in order to use it as an input to the manufacture of another product. In the case the two products are classified under different PRODCOM codes, data for both products are recorded.

  On the contrary, if the manufacturing process does not lead to the changing of the code in which the product (input) is classified, then only the data for the final product are recorded, in order to avoid double counting.

3.5 Statistical unit

The business unit to which the PRODCOM questionnaires are sent is called the reporting unit. The response from the reporting unit can cover the enterprise as a whole, or parts of the enterprise identified by lists of local units. Other than for a minority of larger businesses which have a complex structure, the reporting unit is usually the same as the enterprise. For these larger businesses, the reporting unit is the relevant part of the enterprise that reports on manufacturing the product.

More specifically, in the 2016 PRODCOM survey, 5,928 local units or 5,614 enterprises were surveyed.

3.6 Statistical population

In accordance with article 3, paragraph 3 of Council Regulation (EEC) 3924/91, all enterprises employing at least 20 persons are surveyed. This threshold is reviewed in the light of the requirement of representativeness, referred to in paragraph 2 of the same article, according to which 90% of national production per NACE class should be covered.

In the PRODCOM survey, carried out in our country, the surveyed population are all the active enterprises in sections B (mining) and C (manufacturing) of NACE Rev.2, with an average annual employment of 10 persons and more. However, in some cases, depending on the representativeness of the product and of the turnover, enterprises that employ less than 10 persons are surveyed as well.

The frame used for determining the surveyed units is based on the **Business Register of ELSTAT**.

Data for the business register of ELSTAT are mainly derived from administrative sources. The main sources are the Ministry of Finance and the Social Insurance Institute (SII).

More specifically, the Ministry of Finance is the data source of registry and financial data on the enterprises which are obliged by law to submit an annual VAT return statement.

Data regarding employees are obtained from IKA.

Finally, the business register of ELSTAT is updated through the results of the Structural Business Surveys conducted by ELSTAT.

3.7 Reference area

The survey covers the whole of the coutry.

3.8 Time coverage

The suvrey is conducted since 1993.

3.9 Base period

Not applicable.

4. Unit of measure	Top

The quantity of production and the quantity of sales is recorded in units (kg, g, m^2, etc.), according to the Prodcom headings on the PRODCOM list for 2016.
The value of sales is reported in euros.

5. Reference period	Top

Calendar year.

6. Institutional mandate	Top

6.1 Legal acts and other agreements

1. The legal framework concerning the organization and operation of ELSTAT is as follows:
   - ➤ **Law 3832/2010** (Government Gazette No 38, Issue A): *"Hellenic Statistical System Establishment of the Hellenic Statistical Authority (ELSTAT) as an Independent Authority",* as amended and in force
   - ➤ **Regulation on the Operation and Administration of the Hellenic Statistical Authority** (ELSTAT), 2012, (Government Gazette No 2390, Issue B, 28-8-2012)
   - ➤ **Regulation (EC) No 223/2009 of the European Parliament and of the Council**, on the European statistics (Official Journal of the European Union L 87/164).
   - ➤ **Article 14 of the Law 3470/2006** (Government Gazette No 132, Issue A): *"National Export Council, tax regulations and other provisions"*.
   - ➤ **Article 3, paragraph 1c, of the Law 3448/2006** (Government Gazette No 57, Issue A): *"For the further use of information coming from the public sector and the settlement of matters falling within the responsibility of the Ministry of Interior, Public Administration and Decentralization"*.
   - ➤ **European Statistics Code of Practice**, adopted by the Statistical Programme Committee on 24 February 2005 and promulgated in the Commission Recommendation of 25 May 2005 on the independence, integrity and accountability of the national and Community statistical Authorities, after its revision, which was adopted on 28 September 2011 by the European Statistical System Committee.
   - ➤ **Presidential Decree 226/2000** (Government Gazette No 195, Issue A): *"Organization of the General Secretariat of the National Statistical Service of Greece"*.
   - ➤ **Articles 4, 12 , 13, 14, 15 and 16 of the Law 2392/1996** (Government Gazette No 60, Issue A): *"Access of the General Secretariat of the National Statistical Service of Greece to administrative sources and administrative files, Statistical Confidentiality Committee, settlement of matters concerning the conduct of censuses and statistical works, as well as of matters of the General Secretariat of the National Statistical Service of Greece"*.

   The Legal Framework is detailed in the following link: http://www.statistics.gr/en/legal-framework

2. Legal framework for PRODCOM statistics consists of the following Regulations:
   - ➤ Council Regulation (EEC) No 3924/91 of 19 December 1991 on the establishment of a Community survey of industrial production (PRODCOM)
   - ➤ Commission Regulation (EC) No 912/2004 of 29 April 2004 implementing Council Regulation (EEC) No 3924/91 on the establishment of a Community survey of industrial production.
   - ➤ Regulation (EC) No 1893/2006 of the European Parliament and the Council of 20 December 2006, establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90 as well as certain EC Regulation on specific statistical domains.
   - ➤ Commission Regulation (EU) 2016/1872, of 6 October 2016 establishing for 2016 the "PRODCOM list" of industrial products.

6.2 Data sharing

None.

7. Confidentiality

7.1 Confidentiality - policy

The issues concerning the observance of statistical confidentiality by the Hellenic Statistical Authority (ELSTAT) are arranged by articles 7, 8 and 9 of the Law 3832/2010 as in force, by Articles 8, 10 and 11(2) of the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System and by Articles 10 and 15 of the Regulation on the Operation and Administration of ELSTAT.

More precisely:

ELSTAT disseminates the statistics in compliance with the statistical principles of the European Statistics Code of Practice and in particular with the principle of statistical confidentiality.

http://www.statistics.gr/en/statistical-confidentiality?inheritRedirect=true

7.2 Confidentiality - data treatment

➢ ELSTAT protects and does not disseminate data it has obtained or it has access to, which enable the direct or indirect identification of the statistical units that have provided them by the disclosure of individual information directly received for statistical purposes or indirectly supplied from administrative or other sources. ELSTAT takes all appropriate preventive measures so as to render impossible the identification of individual statistical units by technical or other means that might reasonably be used by a third party. Statistical data that could potentially enable the identification of the statistical unit are disseminated by ELSTAT if and only if:

a) these data have been treated, as it is specifically set out in the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System (ELSS), in such a way that their dissemination does not prejudice statistical confidentiality or

b) the statistical unit has given its consent, without any reservations, for the disclosure of data.

➢ The confidential data that are transmitted by ELSS agencies to ELSTAT are used exclusively for statistical purposes and the only persons who have the right to have access to these data are the personnel engaged in this task and appointed by an act of the President of ELSTAT.

➢ ELSTAT may grant researchers conducting statistical analyses for scientific purposes access to data that enable the indirect identification of the statistical units concerned. The access is granted provided the following conditions are satisfied:

a) an appropriate request together with a detailed research proposal in conformity with current scientific standards have been submitted;

b) the research proposal indicates in sufficient detail the set of data to be accessed, the methods of analyzing them, and the time needed for the research;

c) a contract specifying the conditions for access, the obligations of the researchers, the measures for respecting the confidentiality of statistical data and the sanctions in case of breach of these obligations has been signed by the individual researcher, by his/her institution, or by the organization commissioning the research, as the case may be, and by ELSTAT.

➢ Issues referring to the observance of statistical confidentiality are examined by the Statistical Confidentiality Committee (SCC) operating in ELSTAT. The responsibilities of this Committee are to make recommendations to the President of ELSTAT on:

- the level of detail at which statistical data can be disseminated, so as the identification, either directly or indirectly, of the surveyed statistical unit is not possible;
- the anonymization criteria for the microdata provided to users;
- the granting to researchers access to confidential data for scientific purposes.

➢ The staff of ELSTAT, under any employment status, as well as the temporary survey workers who are employed for the collection of statistical data in statistical surveys conducted by ELSTAT, who acquire access by any means to confidential data, are bound by the principle of confidentiality and must use these data exclusively for the statistical purposes of ELSTAT. After the termination of their term of office, they are not allowed to use these data for any purpose.

> ➢ Violation of data confidentiality and/or statistical confidentiality by any civil servant or employee of ELSTAT constitutes the disciplinary offence of violation of duty and may be punished with the penalty of final dismissal.
> ➢ ELSTAT, by its decision, may impose a penalty amounting from ten thousand (10,000) up to two hundred thousand (200,000) euros to anyone who violates the confidentiality of data and/or statistical confidentiality. The penalty is always imposed after the hearing of the defense of the person liable for the breach, depending on the gravity and the repercussions of the violation. Any relapse constitutes an aggravating factor for the assessment of the administrative sanction.

Confidentiality rules for PRODCOM statistics

Before publishing or transmitting the PRODCOM statistics to Eurostat, the data of a heading that derive from one to two enterprises are flagged as confidential. Eurostat is legally bound to suppress such data from publication.

In accordance with the above mentioned rules, 915 out of a total of 1,716 headings (53.3**%**) were flagged as confidential for the reference year 2016.

The rules on data confidentiality of ELSTAT also apply when providing statistical data to users.

8. Release policy   Top

8.1 Release calendar

Each year ELSTAT publishes a release calendar with the exact release dates of statistics for the following year.

8.2 Release calendar access

The calendar is distributed to the press and is available to all interested parties, free of charge. This calendar is also posted on ELSTAT's website (http://www.statistics.gr/en/home/) under item "Press Releases Calendar".

8.3 User access

PRODCOM statistics are accessible through ELSTAT's website (http://www.statistics.gr/en/home/), as well as through Eurostat's database at: http://ec.europa.eu/eurostat/web/prodcom/data/excel-files-nace-rev.2.

9. Frequency of dissemination   Top

Annually

10. Accessibility and clarity   Top

10.1 News release

The Press Release for PRODCOM survey, 2016, which was published on **March 22th 2018**, is available on ELSTAT's website (http://www.statistics.gr/en/home/) in the section "Industry, Services, Trading, Transport", subsection "Manufacturing Products", "Manufacturing products (PRODCOM): Production and sales".

10.2 Publications

1. Statistical Yearbook of Greece, which is available at the following link:
   (http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007369&p_topic=10007369)
2. Concise Statistical Yearbook of Greece, which is available at the following link:
   (http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007372&p_topic=10007372)
3. Production and Sales of Industrial Goods, which is available at the following link:
   (http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007992&p_topic=10007992)

10.3 On-line database

For the reference year 2016, all statistical data have been posted on the website of ELSTAT, at: http://www.statistics.gr/en/statistics/-/publication/SIN06/2016, as well as on Eurostat's database at: http://ec.europa.eu/eurostat/web/prodcom/data/excel-files-nace-rev.2.

10.3.1 Data tables - consultations

User's consultation as regards PRODCOM statistics amounts to 7,976 webpage hits for 2017 and 2,038 for the first quarter of 2018. It is not possible to make a distinction between hits for data tables and hits for metadata.

10.4 Micro-data access

Due to confidentiality reasons, no access is granted to personal data of enterprises. Nevertheless, anonymised micro-data can be supplied, upon request to the Statistical Information and Publications Division, Statistical Data Dissemination Section, by decision of the President of ELSTAT, following the relevant opinion of the Statistical Confidentiality Committee.

10.5 Other

http://dlib.statistics.gr/portal/page/portal/ESYE/

10.5.1 Metadata – consultations

User's consultation as regards PRODCOM statistics amounts to 7,976 webpage hits for 2017 and 2,038 for the first quarter of 2018. It is not possible to make a distinction between hits for data tables and hits for metadata.

10.6 Documentation on methodology

The main methodological issues of the PRODCOM survey are determined by Council Regulation (EEC) No 3924/91 and Commission Regulation (EC) No 912/2004 on the establishment of a Community survey of industrial production.

More details on methodological issues are availabe on the Methodological Introduction of the PRODCOM list 2016.

10.6.1 Metadata completeness – rate

Metadata for PRODCOM statistics, for 2016, are available both in the Greek and English language at the following link: http://www.statistics.gr/en/statistics/-/publication/SIN06/2016.

Therefore, metadata completeness amounts to 100%.

10.7 Quality documentation

After having been transmitted to Eurostat, PRODCOM statistics are checked via a specialized software, which incorporates quality cheks. Eurostat proceeds to the validation and publication of PRODCOM statistics only after having clarified and discussed with the relevant Member State any inconsistencies, which might have been indentified during the validation process.

11. Quality management

11.1 Quality assurance

Quality checks and validation of data are carried out during the whole process of PRODCOM survey: from the data collection stage to the final compilation of the results per PRODCOM code.

More specifically:

– Well-trained and experienced staff is utilized for all stages of the PRODCOM survey, that is:
   a. data collection, either through the web application or paper questionnaire, including communication with enterprises,
   b. initial checks of data regarding their accuracy – correctness,
   c. coding of products,
   d. data entry in ELSTAT's database and
   e. final checks on product code level.

   This way, the personell have a comprehensive knowledge of the enterprises under their responsibility.

– Data are validated either before or after data entry by means of logical and quality checks.

   More specifically:
   a. Basic quality checks have been integrated in the web application and are applied during the submission of data.
   b. Both web and paper questionnaires are checked in terms of every product that is manufactured by the enterprise and in terms of the changes in production in comparison with the previous year. If differences either in volume or in value are rather big (outside of a pre-established range), the enterprise is contacted in order to confirm whether this is an erroneous value or an outlier, before approving the questionnaire.

c. Once imported in ELSTAT's database, the data undergo aggregated checks at the level of the product, in order to avoid any errors in the values or codes of the basic variables.

d. The final aggregated PRODCOM data are compared with the Turnover Price Index in Industry and the Industrial Production Index.

After the completion of all the aforementioned checks, any processing errors are minimized and in many cases reduced even to 0.

ELSTAT aims to ensure and further improve the quality of statistics produced and maintain the confidence of users in them. This is achieved through the Quality Policy of ELSTAT.

11.2 Quality assessment

PRODCOM statistics are considered to be of high quality because:

- Quality checks and validation of data are carried out during the whole process of the PRODCOM survey
- Its concepts and the definitions of variables, as well as the methodology applied follow European Standards.

12. Relevance

12.1 User needs

PRODCOM statistics are necessary in order to monitor industry and markets and develop a corresponding policy both at national and European level.

The main national users of PRODCOM statistics are:

- Central Government and public entities
- Enterprises and chambers
- Scientific community
- Press and other Media
- Hellenic Statistical Authority
- Individual users

At international level, the main user is EUROSTAT and other international organizations, such as the United Nations.

12.2 User satisfaction

http://www.statistics.gr/en/user-satisfaction-survey

12.3 Data completeness

According to Eurostat's Regulation, completeness is 100%. Nevertheless, the degree of users' satisfaction is not 100%, due to the relatively high percentage of PRODCOM headings being characterized as confidential.

13. Accuracy and reliability

13.1 Overall accuracy

The overall accuracy of PRODCOM statistics is considered satisfactory, with main source of errors, the non-sampling errors.

13.2 Sampling error

Sampling errors result from the fact that not all the units of the population are enumerated, but only a sample of them. As the PRODCOM survey is conducted at a census basis, there are no sampling errors.

13.3 Non-sampling error

Non-sampling errors are mainly due to:

1. non-response of surveyed enterprises,
2. coverage errors,
3. measurement errors and
4. processing errors.

Measurement errors are detected by means of logical checks, which are integrated in the web application or applied on the data of the paper questionnaires and are duly corrected.

As regards non-response errors, many efforts are made to minimize non-response rate, such as sending reminder letters, which outline the scope and legal basis of the survey, as well as the obligation of the units to respond. The data of the enterprises, which even after the aforementioned efforts do not respond, are estimated by using appropriate methods. Finally, processing errors are detected and corrected by means of quality checks on the analytical and aggregated data.

Non response is the failure of a survey to collect data either for all survey variables or from all population units. There are two kinds of non-response errors:
1. errors on account of the refusal of the enterprise to fill in the questionnaire
2. errors on account of incomplete filling in of the questionnaire

The difference between the statistics compiled on the basis of the collected data and those that would be compiled if there were no missing values is the non response error.

a. Unit non – response

Unit non-response rate for the 2016 PRODCOM survey, as depicted in Table 2, amounts to 24.7%, versus 24.4% in 2015. In order to minimize non response rate, a reminder letter was sent to all the surveyed units, outlining the scope and legal basis of the survey, as well as the obligation of the units to respond.

Table 2: Non response rates for the 2016 PRODCOM survey

Classification of Economic Activity NACE Rev.2	Total Number of Local Units per Section of Economic Activity (*)	Number of Non Responded Units	Non Response Rate (%)
07	7	0	0.0
08	197	18	14.2
09	7	0	42.9
10	1,369	187	22.7
11	143	21	22.4
12	6	0	16.7
13	162	39	33.3
14	352	58	29.3
15	64	13	29.7
16	156	20	23.7
17	176	25	19.3
18	232	45	32.8
19	11	3	27.3
20	224	35	21.4
21	58	10	25.9
22	313	45	20.4
23	505	62	20.2
24	106	16	18.9
25	507	87	26.8
26	40	7	32.5
27	171	30	23.4
28	256	42	23.8
29	39	7	33.3
30	18	7	66.7
31	299	70	34.8
32	118	23	28.0
33	183	25	26.2
Total	**5,719**	**895**	**24.7**

* Units that do not belong to the target population are not included

In case an enterprise refused to respond, the missing data were estimated on the basis of:

- a. the trend of production of other enterprises manufacturing this product,
- b. the data of the previous years on the specific enterprise,
- c. the data from the enterprise's balance sheet or other administrative data and
- d. the results of the 2016 survey for Industrial Production Index and Turnover Index in Industry.

Similar practices were implemented in cases of incomplete filling in of questionnaires as regards one product or one variable. In these cases, efforts were made to calculate and estimate data on the basis of:

- a. the turnover of the unit,
- b. the unit product value,
- c. the monthly data of the Industrial Production Index and
- d. the data from the Annual Industrial Survey.

It is clear that these practices can not be implemented for enterprises which are surveyed for the first time.

b. Item non - response

It is not calculated

13.3.1 Coverage error

It is not possible to estimate the coverage of the PRODCOM survey because it is not possible to identify all enterprises which manufacture goods included in the PRODCOM list. Consequently, since the Business Register of ELSTAT does not provide information on products but only on economic activities, the coverage of the PRODCOM survey is generally assessed by using as a reference point the turnover of the enterprises. This method ensures a general assessment of coverage and it has to be treated with caution.

13.3.1.1 Over-coverage – rate

When an enterprise is found to be out of the scope of the survey , e.g. it has no productive activity, then the enterprise is no longer surveyed under the PRODCOM survey.

13.3.1.2 Common units – proportion

Not applicable.

13.3.2 Measurement error

Measurement errors by the surveyed units

The main reason of these errors is the erroneous completion of the questionnaire by the surveyed units and may concern reporting of:

1. wrong industrial product codes
2. wrong volume unit of measure
3. wrong quantities produced or sold.

In order to minimize the measurement errors by the surveyed units, guidelines are included both in the web application and in the paper questionnaire. Moreover, pre-filled web or paper questionnaires, already including the products known to be produced by the surveyed unit, are used.

Measurement errors by interviewers

The main reason of these errors is the lack of experience of statistical interviewers (inability to track down the surveyed units, not completion of all the fields, etc.) or their inability to understand questions and answers resulting to erroneous data entries.

In order to minimize the measurement errors by interviewers, written instructions were given to the statistical interviewers and a seminar took place in order to enable the interviewers to:

1. fully understand the definitions of the survey characteristics
2. correctly fill in the questionnaire
3. efficiently check for errors by applying logical and completness checks

13.3.3 Processing error

Processing errors refer to errors that may occure once the data are collected until they are available for further processing. Processing errors include errors during data codification or during data entry.

Aiming at minimizing such errors, the collected data undergo three sets of checks:

- During the first stage, every collected web or paper questionnaire is checked in terms of every product that is manufactured by the enterprise and in terms of the changes in production in comparison with the previous year. If the changes either in volume or in value are bigger than the expected average changes, the enterprise is contacted in order to confirm whether this is due to an erroneous value or an outlier value.
- During the second stage, once imported, the data undergo aggregated checks at the level of the product, in order to avoid any errors in the values or codes during data entry.
- During the third stage, the percentage change of the deflated value of production between the reference and the previous year at 2-digit level of NACE Rev. 2, occurring from PRODCOM survey, is compared with the respective percentage change of the Industrial Production Index (Table 3). Moreover, the percentage change of the sales value between the reference and the previous year at 2-digit level of NACE Rev. 2 is compared with the respective change of the Turnover Index in Industry (Table 4).

After the completion of all the aforementioned checks, any processing errors are minimized and in many cases are reduced even to 0.

13.3.4 Model assumption error

No model is used for the compilation of PRODCOM statistics.

14. Timeliness and punctuality   Top

14.1 Timeliness

PRODCOM statistics are transmitted to EUROSTAT within six months after the end of the reference year (t+6) (Council Regulation (EEC) 3924/91 – article 7).

14.2 Punctuality

The transmission of data to EUROSTAT is in accordance with the transmission programme laid down in article 7 of Council Regulation (EEC) 3924/91.

For the reference year 2016, the provisional data were transmitted on June 30th 2017.

15. Coherence and comparability   Top

15.1 Comparability - geographical

The data are comparable at the level of the Region (NUTS 2), since a common methodology is implemented throughout Greece. Moreover, data are comparable among EU Member States, since the statistics are produced following a common methodology.

15.1.1 Assymetry for mirror flows statistics – coefficient

Not applicable.

15.2 Comparability over time

PRODCOM statistics from 1993, which is the launching year of the survey, until 2007 were comparable since they were classified in compliance with the hitherto European Classification of Economic Activities (NACE Rev.1.1) From 2008 onwards, the data are compared on the basis of the new version of NACE (NACE Rev.2) which is currently implemented.

Business statistics are under a lot of changes due to the changes in the surveyed population (new or closed enterprises, enterprises currently not active, etc.) and due to changes in product classification, and as a result comparability over time is reduced.

More specifically, the surveyed units amounted to 5,928 in 2016 compared with 6,032 in 2015.

15.3 Coherence cross-domain

15.3.1 Coherence – sub annual and annual statistics

Comparability with the Industrial Production Index

The growth rates (%) of the deflated value of production occurring from the PRODCOM survey and the average annual Industrial Production Indices between 2015 and 2016 at 2-digit level of NACE Rev. 2 are presented in Table 3.

Table 3: Growth rates (%) of the deflated value of production and the average annual Industrial Production Indices between 2015 and 2016.

Classification of Economic Activity NACE Rev.2	PRODCOM[1]	Industrial Production Index
	2016/2015	*2016/2015*
07	11.6	1.7
08	-3.0	1.3
10	0.5	2.2
11	1.6	-0.2
12	5.2	2.4
13	5.5	1.9
14	1.7	-8.4
15	13.3	9.3
16	9.8	9.1
17	-13.8	-1.8
18[2]		-0.4
19	4.2	7.4
20	-13.8	7.2
21	58.3	4.4
22	4.1	-1.6
23	7.7	14.3
24	3.7	6.0
25	2.6	9.4
26	-0.6	-20.7
27	-32.8	2.8
28	-8.7	11.2
29	-33.3	30.9
30	17.4	0.8
31	10.0	8.7
32	2.3	2.1
33[2]		-6.8

The differences in some divisions between the two surveys are due to the following:

- The PRODCOM survey collects data on production for all products produced within Greece, whereas the Industrial Production Index is compiled by collecting the output quantities from a sample of products.
- The PRODCOM survey is conducted on a census basis, whereas the Industrial Production Index is compiled on the basis of a sample survey.
- The PRODCOM survey is an annual survey, whereas the survey for the Industrial Production Index is a monthly survey.

Data collected from the PRODCOM survey are limited to products for civil uses only. Products for military use are omitted. The same does not apply for the Industrial Production Index.

---

[1] The growth rates of the PRODCOM survey have been calculated on the basis of the common enterprises and the common products for years 2015 and 2016.
[2] For the products under divisions 18 and 33, no volume data is reported. Therefore, the value of production cannot be calculated.

Comparability with the Turnover Index in Insustry

The growth rates (%) of the sales value of the PRODCOM survey, as well as the growth rates (%) of the average annual Turnover Index in Industry between 2015 and 2016, are presented in Table 4.

Table 4: Growth rates (%) fo the value of sales of the PRODCOM survey and the average annual Turnover Index in Industry between 2015 and 2016.

Classification of Economic Activity NACE Rev.2	PRODCOM	Turnover Index in Industry
	2016/2015	*2016/2015*
07	5.5	7.1
08	0.2	5.8
10	-0.9	-3.6
11	-1.7	2.3
12	6.1	2.2
13	5.6	3.2
14	-3.1	-4.8
15	10.3	10.1
16	4.5	2.3
17	4.4	-1.3
18	-0.6	-0.6
19	-11.3	-12.4
20	-10.4	-0.7
21	-6.8	2.3
22	2.8	-4.1
23	6.4	6.7
24	1.3	0.0
25	4.8	6.1
26	-0.4	-9.1
27	-16.2	2.4
28	-7.6	-3.1
29	-27.2	2.0
30	1.4	6.1
31	6.1	5.7
32	2.2	5.9
33	-5.3	-8.3

The differences in some divisions between the two surveys are due to the following:

- The PRODCOM survey is conducted on a census basis, whereas the Turnover Index in Industry is compiled on the basis of a sample survey.
- The different timelines of the two surveys: PRODCOM collects data after the end of the reference year, whereas the Turnover Index in Industry collects data during the reference year.
- The total value of sold products per NACE division, as derived from PRODCOM, is not always equal to the turnover per division, as the units may be active in several economic sectors that are also included in the turnover. Moreover, enterprises that are not classified as manufacturing units may be producing goods that are included in PRODCOM headings, a fact that makes the comparison difficult.

Hence, comparisons between PRODCOM and Turnover Index in Industry are just an indication for the trend of the production sold over time.

15.3.2 Coherence – National Accounts

The National Accounts Division is one of the main users of PRODCOM statistics, therefore the PRODCOM statistics are coherent with National Accounts.

15.4 Coherence - internal

PRODCOM statistics are internally coherent. Data per PRODCOM code derive by aggregating the data from all enterprises that have produced the specific PRODCOM code.

The compilation method is analytically presented in section 18.5.

16. Cost and burden   Top

Business statistics are compiled through the filling in of questionnaires, as there are no administrative sources that can supply these data. Since the conduct of surveys imposes an administrative burden on the respondents, Eurostat has already made efforts to narrow down the level of detail recorded for the manufactured products. More specifically, out of a list of 5,619 headings in 2004, the 2016 PRODCOM list has been limited to 3,836 headings.

Moreover, the survey is now conducted annually and not quarterly, as it used to.

Finally, in order to reduce the administrative burden of enterprises, ELSTAT has developed a web application, which was put in force for the first time for reference year 2016. Moreover, pre-filled web or paper questionnaires, already including the products known to be produced by the surveyed unit, are used.

For the 2016 PRODCOM survey, the annual average burden in terms of hours worked was **0.86** hours per enterprise compared to **0.98** in 2015.

More specifically, the annual average burden of enterprises by classification of economic activity is presented in the following table (Table 5).

Table 5: Annual average burden of enterprises in PRODCOM survey 2016

Classification of Economic Activity NACE Rev.2	Annual Average Burden (Hours Worked)	Classification of Economic Activity NACE Rev.2	Annual Average Burden (Hours Worked)
07	0.44	21	1.36
08	0.44	22	0.76
10	1.01	23	0.68
11	1.11	24	1.10
12	0.50	25	0.73
13	0.84	26	0.72
14	0.83	27	0.65
15	0.40	28	0.87
16	0.95	29	0.54
17	0.87	30	0.92
18	1.16	31	0.80
19	1.02	32	0.43
20	1.31	33	0.37

17. Data revision   Top

17.1 Revision policy

The Revision Policy of ELSTAT lays down standard rules and principles for data revisions, in accordance with the European Statistics Code of Practice and the principles for a common revision policy for European Statistics contained in the Annex of the European Statistical System (ESS) guidelines on revision policy.

17.2 Revision practice

Eurostat allows for the transmission of revised data at any time and republishes data in the middle of any month when new data have been received since the last publication.

For the reference year 2016, Greece transmitted data for **1,716** headings out of **3,836** headings included in the 2016 PRODCOM list. The statistical data were transmitted to Eurostat on **June 30th 2017**, and were revised and transmitted again in their final form on **21st March 2018**.

18. Statistical processing

18.1 Source data

The primary data of the PRODCOM survey refer to the basic variables of the survey (quantity of production, quantity of sales, value of sales), as described in section 3.4, per PRODCOM code and per surveyed enterprise.

18.2 Frequency of data collection

PRODCOM data are collected annually.

18.3 Data collection

At a first stage the surveyed enterprises are informed for the opening of the PRODCOM survey:

      1. via a personalized e-mail automatically generated through the web-application.

      2. via mail, including an informative letter and the pre-filled paper questionnaire.

In both cases, analytical information outlining the scope and the legal basis of the survey, as well as the obligation of the units to respond are given. Furthermore, a deadline for the submission of the PRODCOM data is set. After the above mentioned deadline, statistical interviewers are appointed, in order to communicate with the enterprises that haven't yet responded and collect the PRODCOM data.

ELSTAT staff undertakes to collect the questionnaires that were not collected by the statistical interviewers, putting emphasis on the statistically significant enterprises (e.g. enterprises with 50 or more employees, enterprises which are the sole producing specific PRODCOM codes, enterprises which produce more than 90% of the total sales value of the PRODCOM code).

Finally, in order to further increase the response rate of the PRODCOM survey, reminder e-mails or letters are send out to the enterprises that have not submitted their data.

18.4 Data validation

Data are validated by means of logical and quality checks, as these are described in section 11.1.

Eurostat also carries out validation checks on the national PRODCOM statistics it receives, via a specialized software, which incorporates quality checks. Eurostat proceeds to the validation and publication of PRODCOM statistics only after having clarified and discussed with the relevant Member State any inconsistencies that might have been identified during the validation process.

18.5 Data compilation

The data for each surveyed variable from all enterprises producing a PRODCOM code are aggregated in order to obtain data per PRODCOM code.

More specifically:

$$PQ_p = \sum_{i=1}^{N_p} PQ_p^i$$

$$SQ_p = \sum_{i=1}^{N_p} SQ_p^i$$

$$SV_p = \sum_{i=1}^{N_p} SV_p^i$$

where:

PQ_p: is the produced quantity of PRODCOM code p,

SQ_p: is the sold quantity of PRODCOM code p,

SV_p: is the sales value of PRODCOM code p,

PQ_p^i: is the produced quantity of PRODCOM code p of enterprise i,

SQ_p^i: is the sold quantity of the PRODCOM code p of enterprise i,

SV_p^i: is the sales value of PRODCOM code p of enterprise i and

N_p: is the number of enterprises that have produced - sold PRODCOM code p.

Imputation methods

Non-response is the failure of a sample survey (or a census) to collect data for all data items in the survey questionnaire from all the population units designated for data collection. The difference between the statistics compiled on the basis of the collected data and those that would be compiled if there were no missing values is the non-response error. The two types of on-response are:

- **Unit non-response**, which occurs when no data are collected for a population unit designated for data collection.
- **Item non-response**, which occurs when data only on some, but not all the survey data items, are collected for a designated population unit.

In order to estimate the missing values the following methods are implemented.

A. Unit non-response

In the case of unit non-response, the ratio estimator for businesses producing a specific product is used, which is calculated as follows:

$$R_p = \frac{\sum_{i=1}^{N_p} SV_{p,t}^i}{\sum_{i=1}^{N_p} SV_{p,t-1}^i}$$

where:

R_p: is the sales value growth rate of product p,

$\sum_{i=1}^{N_p} SV_{p,t}^i$: is the sum of the sales value of all enterprises $(i = 1,2,\dots,N_p)$ in the current period for product p,

$\sum_{i=1}^{N_p} SV_{p,t-1}^i$: is the sum of sales value of all corresponding enterprises in the previous year $(t-1)$ for product p.

The previous period $(t-1)$ sales value of the non-responding enterprise are then multiplied by the aforementioned growth factor R_p.

Subsequently, in order to estimate the sold quantity, the sales value is divided by the unit value of product p, of the specific enterprise during the previous period $(t-1)$. Finally, the produced quantity is estimated on the basis of the the estimated sold quantity.

B. Item non-response

If the data either on sales value or sales volume for the responding enterprise k are not available, then these data are estimated via the following methods:

I. The Unit Value method at enterprise level

The estimation of the sales volume and of the sales value of product p is based on the previous period **unit value** $\left(UV_{p,t-1}^k\right)$, of the respondent k. The unit value is calculated as follows:

$$UV_{p,t-1}^k = \frac{SV_{p,t-1}^k}{SQ_{p,t-1}^k}$$

where:

$UV_{p,t-1}^k$: is the unit value of product p of enterprise k during period $(t-1)$,

$SV_{p,t-1}^k$: is the previous period sales value of the respondent k, for product p

$SQ_{p,t-1}^k$: is the previous period sales volume of the respondent k, for product p

Then the sales volume of product p of enterprise k is calculated as follows:

$$SQ_{p,t}^{k} = \frac{SV_{p,t}^{k}}{UV_{p,t-1}^{k}}$$

Respectively, the sales value of product p of enterprise k is calculated as follows:

$$SV_{p,t}^{k} = UV_{p,t-1}^{k} * SQ_{p,t}^{k}$$

II. *The Unit Value method at product level*

This method is used when the previous year unit value of the respondent k cannot be calculated. In this case, the overall unit value of respondents making product p , with both volume and value sales figures available for the current period, is calculated as follows:

$$UV_{p,t} = \frac{\sum_{i=1}^{N_p} SV_{p,t}^{i}}{\sum_{i=1}^{N_p} SQ_{p,t}^{i}}$$

where:

$UV_{p,t-1}$: is the unit value of product p during period $(t-1)$

$\sum_{i=1}^{N_p} SV_{p,t}^{i}$: is the total sales value of all responding enterprises during period t,

$\sum_{i=1}^{N_p} SQ_{p,t}^{i}$: is the total sales volume of all responding enterprises during period t.

N_p: all the respondents making product p , with both sales volume and sales value figures available for the current period t.

It should be noted, that any outlier is removed before calculating the unit value.

The aforementioned unit value is then used to estimate either the sales value or sales volume of the respondent k, depending on the data availability.

It is clear that these practices can not be implemented for enterprises which are included in the survey for the first time.

18.5.1 Imputation – rate

The percentage of the data that are imputed is estimated at 15.9%.

18.6 Adjustment

18.6.1 Seasonal adjustment

Not applicable.

19. Comment

The questionnaire of the 2016 PRODCOM survey is available in excel and pdf format at the following link:
http://www.statistics.gr/el/statistics/-/publication/SIN06/2016 .