

## Single Integrated Metadata Structure (SIMS)

**Country:** Greece

**Compiling agency:** ELSTAT

**Domain name:** Producer Price Index in Industry (PPI)

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1.1	<b>Organization</b>	HELLENIC STATISTICAL AUTHORITY (ELSTAT)
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## 2. Introduction [Top](#)

The Producer Price Index (PPI) in Industry, in its current form, is being released since February 2005, when it replaced the Wholesale Price Index which was compiled since 1963. The purpose of the PPI is to measure the monthly rates of change in the prices of goods which are produced and sold in the domestic market or are exported.

## 3. Metadata Update [Top](#)

<b>3.1 Metada last certified</b>	28/11/2016
<b>3.2 Metadata last posted</b>	28/11/2016
<b>3.3 Metadata last updated</b>	28/11/2016

## 4. Statistical Presentation [Top](#)

### 4.1 Data description

The Producer Price Index in Industry is a monthly index compiled on the basis of other sub-indices, namely the Producer Price Index for the domestic market and the Producer Price Index for the non-domestic market. The Producer Price Index for the non-domestic market is compiled on the basis of the Producer Price index for Eurozone countries and the Producer Price index for non- Eurozone countries, according to the destination country of exports.

The purpose of the Producer Price Index in Industry is to measure the monthly rates of change in producer prices of industrial goods, which are produced in the country and sold in the domestic market or are exported.

The collected prices for products sold in the domestic market are the basic selling prices, i.e., prices excluding VAT and other similar deductible taxes directly linked to turnover and also, excluding duties and other taxes on products. Moreover, subsidies on products are included in basic prices. The prices collected for products sold in the non-domestic market are FOB prices (Free on board) and they include any additional charges until the loading of the goods on the transportation means.

On a monthly basis, the Producer Price Index in Industry is compiled and released as follows:

- Monthly rates of change,
- Annual rates of change.

### 4.2 Classification system

For reasons pertaining to the structure of the index, and for the purpose of aggregating the prices of products into categories, the following classifications have been used:

- a. at product level, the Eurostat classification CPA 2008 , pursuant to Council Regulation No 451/2008.
- b. at the level of branches of economic activity (classes, groups, divisions, sub-sections, sections), the Eurostat classification NACE Rev.2, in accordance with Regulation No 1893/2006 of the European Parliament and of the Council.
- c. at the level of main industrial groupings, the 2-digit and 3-digit NACE Rev. 2 headings are allocated to categories of aggregate classification in compliance with Council Regulation No 656/2007.

### 4.3 Sector coverage

The selected classes (4-digit level) represent approximately 99% of the total turnover for 2010 of the classes of industry (sections B–Mining and Quarrying, C–Manufacturing, D–Electricity, gas and steam, E - Water supply, of NACE Rev. 2). The rest 1% of the turnover was duly allocated among the other classes of the same 3-digit level, thus having no impact on the total turnover..

### 4.4 Statistical concepts and definitions

The purpose of the Producer Price Index in Industry is to measure the monthly rates of change in the prices of industrial goods which are produced and sold in the domestic market or are exported. The measurement of monthly rates of the index satisfies the need for information on short and medium-term economic activity at national and European level. It makes it possible to follow the monthly changes in the prices during the various stages of the manufacturing process. Moreover, it helps calculating the real rates of change in economic activities, since it eliminates the effect of price fluctuations. Furthermore, the PPI provides the business community with data concerning the performance of markets and of the various branches of economic activity.

### 4.5 Statistical unit

The observation unit for data collection is the enterprise/unit by kind of activity - KAU. Consequently, the products within the scope of the survey are included even if they are part of a secondary activity of the observation unit. The selection of the sample of products and units is based on a cut-off method. According to this method, the selection of enterprises is based on their size in terms of turnover, so that the selected units cover about 70% of the total sales value (turnover) for each class (4-digits level) for the year 2010.

### 4.6 Statistical population

The statistical population refers to all the enterprises classified in the following NACE Rev.2 sections: B - Mining and Quarrying, C - Manufacturing, D – Electricity, Gas and Steam, E - Water supply. The data are collected from a large number of enterprises (approximately 1,000) and the total number of observations (prices) is approximately 2,500.

### 4.7 Reference area

The index covers Greece total and prices are collected in Attiki and in 41 Prefectures (NUTS 3) of Greece.

### 4.8 Time coverage

From January 2000 onwards, the time series for the Producer Price Index in Industry, with base year 2010 (2010=100.0), are available on a monthly basis

### 4.9 Base period

The base year is the year 2010 (2010=100.0).

## 5. Unit of measure

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Indices, rates of change (%).

## 6. Reference period

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The reference period is the month.

## 7. Institutional mandate

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### 7.1 Legal acts and other agreements

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>

## 7.2 Data sharing

The data of PPI in Industry are transmitted to Eurostat, according to Council Regulation (EC) No.1165/1998 "concerning short-term statistics", as amended by Regulation (EC) No 1158/2005 of the European Parliament and of the Council. Furthermore, data are transmitted on a monthly basis to international organizations: IMF, OECD and UN.

## 8. Confidentiality

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### 8.1 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>

## 8.2 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.

## 9. Release policy

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### 9.1 Release calendar

At the end of September of each year ELSTAT publishes a release calendar with the precise release dates of statistics for the following year.

### 9.2 Release calendar access

The press releases calendar is disseminated to the media and it is available to users for free. The release calendar is also posted on the web page of ELSTAT, "Press Releases" / "Release Calendar":  
<http://www.statistics.gr/en/calendar>

### 9.3 User access

In compliance with the Community legal framework and the European Statistics Code of Practice, ELSTAT disseminates national statistics on ELSTAT's website respecting professional independence and in an objective, professional and transparent manner in which all users are treated equitably.

In this content, data are released simultaneously to all interested parties and users through the press release on the Producer Price Index in Industry, which is released on the official website of ELSTAT ([www.statistics.gr](http://www.statistics.gr)) according to the release calendar schedule. This press release is also made available by fax or e-mail to all interested parties. In addition, data are transmitted to Eurostat on a predefined date, concomitantly with their national publication. Neither users nor the government have access to the data prior to their publication.

Neither users nor the government have access to the data prior to their publication.

## 10. Frequency of dissemination

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The Producer Price Index in Industry is disseminated on a monthly basis.

## 11. Dissemination Format

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### 11.1 News release

The Producer Price Index in Industry (PPI) is released on a monthly basis through the corresponding Press Release, approximately 27-30 days after the end of the reference month. Every month, at 12:00, the press release on the PPI is published, presenting all recently compiled data in Greek and English. This press release is disseminated to the media and to other users, free of charge, through e-mail.

This press release is also available on the website of ESLTAT at:

<http://www.statistics.gr/en/statistics/-/publication/DKT15/>

### 11.2 Publications

Data on the Producer Price Index in Industry can be found in the following publications of ELSTAT:

- "Monthly Bulletin":  
[http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p\\_cat=10007366&p\\_topic=10007366](http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007366&p_topic=10007366)
- "Statistical Yearbook of Greece":

[http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p\\_cat=10007369&p\\_topic=10007369](http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007369&p_topic=10007369)

- "Concise Statistical Yearbook of Greece":

[http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p\\_cat=10007372&p\\_topic=10007372](http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p_cat=10007372&p_topic=10007372)

as well as in specialized publications of Eurostat.

### 11.3 On-line database

There are no available data on the Producer Price Index in Industry on the on-line database of ELSTAT.

#### 11.3.1 Data tables - consultations

In 2013, total access to the website as regards the PPI amounted to 9,180 hits. There is no possibility to make the distinction between users' consultations on data tables and users' consultations on metadata.

### 11.4 Micro-data access

Microdata are made available to users after their submitting a request to the:

Division of Statistical Information and Publications

46, Peiraios and Eponiton Str.,

18510 Piraeus

Tel: +30 213 135 2022

Fax: +30 213 135 2312

<http://www.statistics.gr/en/provision-of-statistical-data>

For confidentiality reasons access to microdata is granted to users only under strict conditions and by always adhering to the relevant procedure.

### 11.5 Other

In addition to transmitting data to Eurostat, users can be given data or other statistical analysis, through fax or e-mail, upon request, after submitting an application to the Division of Economic and Short-term Indices Division / Wholesale Prices and Price Indices Section or to the Statistical Information Dissemination Section. Users can submit their requests to the following e-mail addresses: [k.thomas@statistics.gr](mailto:k.thomas@statistics.gr), [e.vlachokosta@statistics.gr](mailto:e.vlachokosta@statistics.gr), [data.dissem@statistics.gr](mailto:data.dissem@statistics.gr), [data.supply@statistics.gr](mailto:data.supply@statistics.gr) and [data.source@statistics.gr](mailto:data.source@statistics.gr).

Users can also submit their requests electronically, through the portal at:

<http://www.statistics.gr/statistical-data-request>

More links for data dissemination:

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

[http://www.statistics.gr/en/statistics/-/publication/DKT15/-](http://www.statistics.gr/en/statistics/-/publication/DKT15/)

<http://ec.europa.eu/eurostat/web/short-term-business-statistics/>

#### 11.5.1 Metadata - consultations

In 2013, total access to the website as regards the SPPI amounted to 9,180 hits.

## 12. Accessibility of documentation

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### 12.1 Documentation on methodology

The methodology on the compilation of the Index is set out by ELSTAT, by fully taking into consideration international practices and more specifically instructions, guidelines and standards of Eurostat.

The methodological manual [Methodology of short-term business statistics - Interpretation and Guidelines](#), includes a comprehensive set of guidelines for the compilation of short-term statistics.

The manual: [Handbook on industrial producer price indices \(PPI\)](#) 2012 focuses on methodological aspects

of PPIs in industry. It includes guidelines methodology for short-term statistics, best practices and methods used in other Member States, etc.

In addition, users can find further details on sources and methodology used for the compilation of the index in the methodological publication of ELSTAT on the Producer Price Index in Industry, which is available on the webpage of ELSTAT at “Methodology”:

<http://www.statistics.gr/en/statistics/-/publication/DKT15/>

#### **12.1.1 Metadata completeness (percentage)**

The metadata of the PPI are posted on the webpage of ELSTAT at the link:

[www.statistics.gr](http://www.statistics.gr) , with metadata completeness amounts to 100%.

#### **12.2 Quality documentation**

A concise user-oriented quality report is available on the website of ELSTAT at “Methodology”:

<http://www.statistics.gr/en/statistics/-/publication/DKT15/>

### **13. Quality management**

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#### **13.1 Quality assurance**

Quality controls and validation of data are carried out during the whole process of the compilation of the index: from the data collection stage to the final compilation of the index.

- At a first stage, for each product selected for observation, its determining characteristics (variety, weight, packaging and other qualitative attributes) as well as its transactional characteristics (usual quantity, discounts, method of payment, etc.) are set out in great detail (tight item specification).
- If certain products or varieties of products are not representative any more, or if any change occurs in their determining characteristics, they are replaced by new products or varieties. In these cases, their prices, for the base year, are calculated on the basis of the producer indices of the group where they are classified.
- Introduction of new products and units: new products are added in the Producer Price Index (PPI) in industry when the index is revised. The index is fully revised every five years with the change of the base year and the adoption of the new weightings coefficients. New enterprises /units are added (or those that don't exist anymore are deleted), in order to maintain the representativeness of the sample of the selected enterprises/units for the specific products.
- Well-trained and experienced staff is utilized for all the stages of the compilation of the index, that is for data collection (including communication with the producers and enterprises), initial checks, data entry and final checks, which are conducted after the calculation of the index. This way, the personnel have a comprehensive and longitudinal image of the producers and enterprises under their responsibilities.
- Data are validated either before or after data entry by means of logical checks. During data processing the data are checked in order to identify and correct any errors. When an error is identified, data are further investigated, in cooperation with producers and enterprises in order to confirm that it is an error or it is just an unusual price. At the same time, data are checked for completeness, accuracy and consistency of the correlating variables.
- The indices are calculated by means of specialised software, through computation routines, thus eliminating any errors to the final results. Nevertheless, even during this stage, consistency checks are carried out to the final results, mainly by means of comparing the percentage changes of the sub-indices and their impact on the overall index.

Moreover, in order to ensure the quality of data, all the procedures that are described in the circulars on the



Quality Policy of ELSTAT are followed: <http://www.statistics.gr/en/policies>

### 13.2 Quality assessment

- The Producer Price Index in Industry is considered as a highly reliable index. The former National Statistical Service of Greece (NSSG) started compiling the Producer Price Index of Industrial Products in 1982, with base year 1980=100.0. Until then, the evolution of the changes of the producer price index of industrial products was monitored by the Wholesale Price Index (WPI) of Finished Products; this index did not include all the domestic industrial products, but only the finished products.
- The fact that the Wholesale Price Index (WPI) included only the finished products resulted to a limited interest expressed by users for this index. On the contrary, users preferred the Producer Price Index of industrial Products, which included not only the finished, but the intermediate products as well, i.e., all the products of industry.
- After the publication of the Producer Price Index in industry, with base year 2000=100.0 (in March 2005 with first reference date, January 2005) the Wholesale Price Index of Finished Products was discontinued (with last reference period December 2004). The former NSSG had been compiling the WPI since 1963. The discontinuation of the latter and its replacement by the Producer Price Index in industry was considered necessary in order to bring the Greek statistical system into line with international and European practice. It should be noted that the users of the index had been notified in advance of that change.
- In addition, concepts and definitions of variables, as well as relevant methodology for the compilation of the Index follow European and international standards and guidelines.

## 14. Relevance

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### 14.1 User needs

- Generally, the Producer Price Index in Industry provides statistical information, which is necessary for improving competitiveness and productivity of the business sector.
- The monitoring of the monthly rates of change of the index covers the need for information on the short and medium-term evolution of the economic activity, both at national and European level. It makes it possible not only to follow the monthly fluctuations of prices at various stages of the manufacturing process, but also to calculate the real rates of change in economic activities, since it eliminates the effect of price fluctuations by applying deflators. Furthermore, producer prices provide the business community with valuable information on the performance of markets and the sectors of economic activity.
- At European level, there is the need for fully comparable statistics in order to draw the European economic policy.
- Among the main national users are: the government, public services, the Bank of Greece, other banks, universities, enterprises, the Public Power Corporation S.A., the Centre for Planning and Economic Research, (KEPE), the Foundation for Economic and Industrial Research (IOVE), etc. and at international level Eurostat, IMF, OECD, UN, IEA, ILO, etc.

### 14.2 User satisfaction

The Wholesale Prices and Price Indices Section monitors on a regular basis users' needs in order to satisfy them. More generally, there is a smooth cooperation resulting to the best possible response to user's requests, and comments made by users are positive.

In addition, ELSTAT conducts:

- a. A users' satisfaction survey.

Every six month, ELSTAT conducts a user's satisfaction survey. The results of this survey are published in

the “Library’s Newsletter” (in Greek and English), a publication which is issued by the Library of ELSTAT and by the Section of Statistical Information Dissemination, on the basis of information deriving from the User Questionnaire. This publication present semi-annual data on the number of users in combination with other variables, such as the degree of satisfaction of users’ requests, the kind of the requested data and the modes of statistical dissemination. These data are presented in the form of tables, absolutes values and percentage points.

b. A User Conference

In accordance with its Annual Statistical Work Programme, ELSTAT, from 2010 onwards, has been conducting a User Conference, on a yearly basis with the participation of representatives of the private and public sector, academics, researchers and research institutes. These conferences give ELSTAT the opportunity to gather comments and interventions made by the users of statistics on issues such as the dissemination of statistical information, access of users to statistics and any omissions in the statistical output. The User Conferences help ELSTAT to draw useful conclusions on how the statistical output and the services provided can be improved so as to meet user’s growing needs. These conclusions are incorporated in the annual statistical work programmes of ELSTAT.

More information on the results of the user’s satisfaction surveys and on the user conferences are available at:

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

### 14.3 Completeness

The compilation of the Producer Price Index in Industry and the data provided are fully inline with the relevant EU Regulations.

## 15. Accuracy and reliability

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### 15.1 Overall accuracy

The accuracy of PPI is generally considered to be high. ELSTAT does not calculate sampling errors for these indices because the purposive sampling technique is applied (instead of the random sampling technique). As regards non-sampling errors, they mostly refer to measurement or non-response errors. The efforts which are made mostly focus on identifying and eliminating, to the extent possible, these errors, through the revision of data.

The Producer Price Index in Industry is fully revised every five years (more specifically in years ending in 0 or 5) with the change of the base year and the adoption of the new weights. Regarding response, the percentage of enterprises which actually report data on time is relatively satisfying, taking into account that missing values usually refer to less significant products.

### 15.2 Sampling error

Sampling errors are not calculated because of the sampling method used (cut-off sampling).

In order to compile the Producer Price Index in Industry and for the calculation of weighting schemes at all levels of the indices (domestic and non-domestic market, in countries within and outside the eurozone area), annual data of year 2010 were used from Prodcom and the external trade survey (for manufacturing).

The results obtained from the two detailed surveys (Prodcom and external trade survey) were compared with the total annual turnover of industrial research Annual Industrial Survey (EBE) for the year 2010, which includes the variables needed for the domestic market.

The compilation of PPI for choosing the products of the sample involves: a) the weighting coefficients of the products on the basis of their sales value and b) collecting prices for these products over time. The weighting coefficients and the monthly prices refer to product level (in CPA classification). At a first stage the products of the index at 6-digit level are selected and at a second stage the enterprises.

The surveyed products are measured in domestic and non-domestic markets according to their sales value in each branch of economic activity. More specifically, the survey for the Producer Price Index (2010=100.0) covers 407 products sold in the domestic market and 174 products sold in the non-domestic market. Out of 174 products sold in the non-domestic market, 151 products are sold in the Eurozone countries and 156 in the non-Eurozone countries.

The data are collected from a large number of enterprises (approximately 1,000) and the total number of observations (prices) is approximately 2,500.

The observation unit is the enterprise/activity unit (KAU) which produces the products. Consequently, the products within the scope of the survey are included even if they are part of a secondary activity of the observation unit. The sample of products is based on a cut-off method. The enterprises of the sample cover about 70% of the total sales value (turnover) of 2010 within each branch of economic activity (4-digit level).

### **15.3 Non-sampling error**

There are not any errors related to the inconsistent implementation of definitions. For each product selected for observation, its determining characteristics (variety, weight, packaging and other qualitative attributes) as well as its transactional characteristics (usual quantity, discounts, method of payment, etc.) are set out in great detail (tight item specification).

It is not unusual for periodic breaks to occur in the flow of price data, or for prices to be unavailable, provisional or final. When a break occurs in the data flow due to seasonality, the method used during the break is "repeating of the last observed price".

If some products or varieties of products are not representative any more, or if there are changes in their determining characteristics, they are replaced by new products or varieties. In such cases, the prices of new products are calculated on the basis of the producer price indices of the group where they belong.

#### **15.3.1 Coverage error**

No coverage errors are observed in the Business Register of ELSTAT, on the basis of which the survey on the compilation of the index was designed.

##### **15.3.1.1 Over-coverage rate**

No over-coverage errors (e.g., closed enterprises, enterprises out of the scope of the survey, etc.) are observed in the Business Register of ELSTAT, on the basis of which the survey on the compilation of the index was designed.

##### **15.3.1.2 Common units (percentage)**

The index is compiled on the basis of a common sample of enterprises for each month, which is renewed with the change of the base year. Therefore, the percentage of common enterprises of the sample among the months is 100%.

#### **15.3.2 Measurement error**

Measurements errors occur during data collection. They are identified by means of quality checks and are duly corrected.

#### **15.3.3 Non response error**

In case of non-response, the surveyed enterprise is contacted by telephone, or is sent a reminder by fax or e-mail or even a statistical interviewer pays a visit to the enterprise in order to obtain the required information. Total response rate of the monthly index is generally considered to be high, amounting to 95%. Missing values are treated by estimating them by "repeating the last prices" during the period of non-response.

#### **15.3.4 Processing error**

After data collection a series of processes takes place before the compilation of the index (e.g., weighting of enterprises, calculations by implementing mathematic formulae, tabulation of results, etc.) There are some processing errors, such as errors on account of erroneous information provided by the surveyed enterprises. These errors are usually easy to be identified by means of checks and cross-checks of data with the corresponding data of the previous years after contacting by phone the enterprise. There are no processing errors as regards the use of the relevant software application.

#### **15.3.5 Model assumption error**

No model is used for the compilation of the index.

## 16. Timeliness and punctuality

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### 16.1 Timeliness

The Index is published approximately 27-30 days after the end of the reference month.

### 16.2 Punctuality

The Producer Price Index in Industry is released as scheduled, in accordance with the Release Calendar of ELSTAT.

## 17. Comparability

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### 17.1 Comparability – geographical

The compilation of the index is based on relevant EU legislation and on basic methodology on short-term statistics used throughout EU Member States, thus the survey produces fully comparable results, taking always into consideration specific conditions in each country, which may require minor deviations from methodology.

#### **17.1.1 Assymetry for mirror – flows – statistical (coefficient)**

For the PPI there are no mirror-flows statistics among EU Member States.

### 17.2 Comparability – over time

The time series of the revised Producer Price Index in Industry (2010=100.0) include backcasted indices of the previous time series from January 2000 until December 2014. The indices from January 2015 onwards, are compiled on the basis of the new price data of the surveyed products and on the new weighting coefficients. The compiled indices are distinguished to producer price indices for eurozone countries and for non-eurozone countries.

Backdated calculations of the indices are the simple reduction (rescaled) in the new base year 2010=100.0. The indices of products and groups of products for the period January 2000-December 2014, calculated based on average annual individual indices in 2010, according to the following type:

$$R_{i(2010)}^{(t)} = R_{i(2005)}^{(t)} * \frac{100}{\overline{R_{i(2005)}^{(2010)}}}$$

Where:

$R_{i(2010)}^{(t)}$  is the individual index of product/group  $i$  in the current period (month, year)  $t$  with 2010 as the base year,

$R_{i(2005)}^{(t)}$  is the individual index of product/group  $i$  in the current period (month, year)  $t$  with 2005 as the base year and

$\overline{R_{i(2005)}^{(2010)}}$  is the individual mean annual index of product/group  $i$  in 2010, with 2005 as base year.

## 18. Coherence

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### 18.1 Coherence cross-domain

Checks are carried out regularly on the basis of data from other surveys. More specifically, comparisons are

made with the sub-indices of the Consumer Price Index, the Imports Price Index, Input and Output Indices in Agriculture-Livestock, with data on production and turnover from the Indices in Industry. In addition the data are compared with the results of the annual surveys on industrial production when such data are available.

#### **18.1.1 Coherence – sub annual and annual statistics**

Any small discrepancies observed in the rates of change between the PPI in industry and the turnover index of structural statistics are on account of the fact that the index is compiled on a basis of a common sample of enterprises for each month that is renewed with the change of the base year, whereas the sample used for structural statistics changes every year, except for the very big enterprise. The common sample of enterprises used for the index ensures the accurate representation of the evolution of the index during several time periods.

#### **18.1.2 Coherence – National Accounts**

The PPI are used by the National Accounts Division for the compilation of their provisional estimations and for changing the current prices to constant prices in exports..

#### **18.2 Coherence – internal**

The index is characterised by internal coherency. The indices of the higher distribution levels are based on the indices of lower levels in compliance with clearly defined procedures.

### **19. Cost and Burden**

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The survey on cost and burden conducted by ELSTAT for the year 2012 produced the following results: a) as regards the staff of ELSTAT that is involved in the compilation of the index, the annual cost concerning the hours worked is estimated at 18,792 hours, b) as regards the surveyed enterprises, the average annual burden, expressed in hours worked for filling in the questionnaire, amounts to 1.7 hours per enterprise or 2,133 hours for all the surveyed enterprises.

### **20. Data revision**

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#### **20.1 Revision policy**

The PPI is published approximately 27-30 days after the end of the reference month and the released data are final.

The data are revised, in accordance with the Revision Policy of ELSTAT, which is available at the following link: <http://www.statistics.gr/en/policies> .

Whenever the data are revised, the same revision policy is applied to data released nationally and to those transmitted to Eurostat, in order to ensure coherence.

#### **20.2 Revision practice**

According to the requirements of the Council Regulation (EEC) No 1165/98 concerning short-term statistics, short-term indices are revised every five (5) years, particularly on calendar years ending with a 0 or a 5. In this framework, major revisions of the PPI take place every five years, with the change of the base year and implementation of the new weighting scheme.

### **21. Statistical processing**

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#### **21.1 Source data**

In order to compile the Producer Price Index in Industry and for the calculation of weighting schemes at all levels of the indices (domestic and non-domestic market, in countries within and outside the eurozone area),

annual data of year 2010 were used from:

- The results of the Prodcum survey (production and sales value by product in 8-digit Prodcum code)
- The exports of the external trade survey (sales) only for manufacturing. Thus, the exports of products, which were not produced in Greece, but were imported, were not taken into account. The external trade survey is structured according to the combined nomenclature (CN8) for which there is correspondence with the Prodcum classification.
- Exports coming out from the survey of Turnover Index in Industry, which are based on a sample collected from companies and made comparisons with external trade data.
- The results of the annual Mining and Quarrying Survey for the year 2010.
- Specific calculations for the olive oil and other agricultural products, as well as the production of slaughterhouses (meat products, skin), using sales value data from economic accounts in agriculture and the producer price indices of input and output in agriculture and livestock sector.
- Water sales from the annual survey of the Water supply for the year 2010.
- Other administrative sources (data on natural gas distribution from the Public Gas Corporation SA, and sales data on electric power from the Public Power Corporation (PPC) SA, LAGHE, DEDHE, ADMHE).

The data from Prodcum and the external trade survey (for manufacturing) were used for the calculation of the weights for the total, domestic and non-domestic market.

The results obtained from the two detailed surveys (Prodcum and external trade survey) compared with the total annual turnover of industrial research (EBE) for the year 2010, which includes the variables needed for the domestic market.

The compilation of PPI involves: a) the weighting coefficients of the products on the basis of their sales value and b) collecting prices for these products in over time. The weighting coefficients and the monthly prices refer to product level (CPA classification).

More specifically, 407 products sold in the domestic market and 174 products sold in the non-domestic market were selected. Out of 174 products sold in the non-domestic market, 151 products are sold in the Eurozone countries and 156 in the non-Eurozone countries.

The data are collected from a large number of enterprises (approximately 1,000) and the total number of observations (prices) is approximately 2,500. The index covers Greece-total (Attiki and 41 Prefectures of Greece).

The observation unit is the enterprise/activity unit (KAU). Consequently, the products within the scope of the survey are included even if they are part of a secondary activity of the observation unit. The sample of products and units selected is based on a cut-off method. According to this method, the selection of enterprises is based on their size in terms of turnover, so that the selected units cover about 70% of the total sales value (turnover) of 2010 within each class (4-digit level).

## **21.2 Frequency of data collection**

The data are collected on a monthly basis.

## **21.3 Data collection**

Data are collected through a specially designed questionnaire, where figure all the products produced by each enterprise for which prices are collected.

The collected prices for products sold in the domestic market are the basic selling prices, i.e., prices excluding VAT and other similar deductible taxes directly linked to turnover and also, excluding duties and other taxes on products, yet including any subsidies on products. The prices collected for products sold in the non-domestic market are FOB prices (Free on board).

For each product selected for observation, its determining characteristics (variety, weight, packaging and other qualitative attributes) as well as its transactional characteristics (usual quantity, discounts, method of payment, etc.) are set out in great detail.

Price data refer mostly to the middle of the reference month, with monthly periodicity, and in exceptional cases they may refer to the average prices of the month.

The prices are collected by means of the following ways:

-with personal visits of price collectors to the enterprises

- via telephone contacts
- via fax
- via e-mail.

Non-response is treated by telephone contacts, faxes, e-mails and personal visits of interviewers to the enterprises.

#### 21.4 Data validation

The data are validated by means of logical checks. During data processing any errors are identified and are dully corrected. Special emphasis is placed on the errors that may have major impact on the results. After identifying the errors, those are further checked and cross-checked in cooperation with the price collection sources in order to confirm that it is an error or it is just about an unusual price. At the same time, data are checked for completeness, accuracy and consistency of the correlating variables. Data processing and validation of data are carried out either during or after data entry.

The data are compared with the data of previous months and with corresponding data of previous years and if major inconsistencies are identified, further checks are carried out.

#### 21.5 Data compilation

The Producer Price Index in Industry (2010=100.0) covers all of Greece.

The PPI is calculated using a variation of the Laspeyres formula, as follows:

$$I^{(t)} = \sum_{i=1}^n R_i^{(t)} * w_i$$

$i = 1, 2, \dots, n$

where:

$I^{(t)}$ , is the overall index of the current period (month) t,

$R_i^{(t)}$ , is the individual index for the product i during the current period (month) t and the coefficient

$w_i$ :

$$w_i = \frac{p_i^{(0)} q_i^{(0)}}{\sum_{i=1}^n p_i^{(0)} q_i^{(0)}}, \quad \sum_{i=1}^n w_i = 1$$

is the corresponding weight of the product i, where  $p_i^{(0)}$  and  $q_i^{(0)}$  are the price and quantity of the product i during the base period 0, respectively,  $i = 1, 2, \dots, n$  products.

The individual index  $R_i^{(t)}$  for the product i is the simple arithmetic mean of the relevant prices of the varieties

of that product from all the reporting units (enterprises). Thus:

$$R_i^{(t)} = \frac{1}{N_i} \sum_{j=1}^{N_i} \left( \frac{p_{ij}^{(t)}}{p_{ij}^{(0)}} * 100 \right)$$

where:

$N_i$ , is the number of varieties of product i from all the reporting units,

$p_{ij}^{(t)}$  , is the price of variety  $j$  of product  $i$  during the current period  $t$

$p_{ij}^{(0)}$  , is the price of variety  $j$  of product  $i$  during the base period 0,  $j=1,2,3,.. N_i$  .

The above calculations are based on the individual indices and apply to both the domestic and non-domestic market, with breakdown in Eurozone and non-Eurozone market. The total PPI, is an aggregation of the sub-indices for the domestic and non-domestic markets and it is calculated as the weighted average of the two (2) separate sub-indices for the domestic and non-domestic market.

Further details on methodology and calculation of the Producer Price Index in Industry are available on the webpage of ELSTAT and more specifically under the link:

<http://www.statistics.gr/en/statistics/-/publication/DKT15/>

#### **21.5.1 Imputation-rate**

No imputed values are used to substitute price collection by sample enterprises.

### **21.6 Adjustment**

Adjustment to address differences in quality: In case a variety is replaced, the new item takes a new base price adjusting the relevant price of the variant of product, so as not to have an impact on the calculation of the individual index of the product. The quality adjustment methods that are mainly used are three: a) the overlap method, which is used for the cases where the periods of price collection of the old (replaced) product is the same with that of the new product, b) the quantity adjustment method (when products are sold in different quantities), and c) the comparable replacement which is used when there are changes in the name of products or enterprises (mergers, affiliations) and not in the special characteristics of the product, so a direct comparison is feasible.

#### **21.6.1 Seasonal adjustment**

No seasonal adjustment.

## **22. Comment**

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None.