

## Single Integrated Metadata Structure (SIMS v2.0)

**Country:** Greece

**Compiling agency:** ELSTAT

**Domain name:** Import Price Index in Industry (MPI)

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1. Contact <a href="#">Top</a>	
1.1 Contact organisation	Hellenic Statistical Authority (ELSTAT)
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<b>2. Metadata update</b>		<a href="#">Top</a>
<b>2.1 Metadata last certified</b>	16/04/2021	
<b>2.2 Metadata last posted<sup>24</sup></b>	16/04/2021	
<b>2.3 Metadata last update</b>	16/04/2021	

<b>3. Statistical presentation</b>		<a href="#">Top</a>
<b>3.1 Data description</b>		
<p>The <u>Import Price Index in Industry</u> was first compiled and published in its present form, with 2000=100.0 as base year, with October 2005 as the first reference month of the data. It has been subsequently revised and rebased with base years 2005 and 2010. The latest revision took place with base year 2015 (2015=100.0), where the newly calculated indices replaced the previous time series of the indices.</p> <p>The Import Price Index in Industry (MPI) is compiled on a monthly basis as an independent index and with the distinction into two sub-indices, namely the <u>Import Price Index of Eurozone countries</u> and the <u>Import Price Index of Non-Eurozone countries</u>.</p> <p>Until the year 2004, the Index Foreign Final Products Price Index i.e., one of the components of the Final Products Wholesale Price Index (since 1963), measured the change in the prices of imported industrial products. The later was abolished at the beginning of 2005 and the Producer Price Index (PPI) in Industry replaced it.</p> <p>It should be noted that the coverage of the Foreign Final Products Price Index, was very limited, thus it covered only the final products (i.e. only the products distributed to the domestic market without including their processing by domestic industry) and not the total of industrial products, which are imported.</p> <p>The purpose of the Import Price Index in Industry (MPI) is to measure the monthly rates of change in the prices of industrial products that are imported from abroad and are transferred, through purchase, to domestic units-enterprises, irrespective of the industrial grouping where these units belong.</p> <p>Based on the distinction of countries of origin into two purchase zones (Euro-zone countries and Non-Eurozone countries), the corresponding sub-indices are compiled, which compose the Import Price Index in Industry for total imports.</p> <p>The collected prices of imported products are <u>CIF prices (Cost, Insurance, Freight)</u> at the Greek border, excluding all taxes and duties payable by the import enterprises. This means that the prices include product transport (freight) and insurance costs incurred by the enterprise for their importation.</p> <p>On a monthly basis, the Import Price Index in Industry is compiled and released as follows:</p> <ul style="list-style-type: none"> <li>- Indices</li> <li>- Monthly rates of change,</li> <li>- Annual rates of change.</li> </ul>		
<b>3.2 Classification system</b>		
<p>For the compilation of the revised indices the following classifications were used:</p> <ul style="list-style-type: none"> <li>- Statistical classification of economic activities NACE Rev.2 of EU (pursuant to Regulation (EC) No 1893/2006 of the European Parliament and of the Council), at 4-digit level.</li> <li>- Classification of products, CPA 2008 of EU (pursuant to Regulation (EC) No 451/2008 of the European Parliament and of the Council), at 6-digit level.</li> <li>- At the level of main industrial groupings, the allocation of 2-digit and 3-digit NACE Rev. 2 headings to categories of aggregate classification is effected in compliance with Council Regulation No 656/2007.</li> </ul>		
<b>3.3 Sector coverage</b>		
<p>The Import Price Index in Industry covers the divisions of economic activities listed in Sections B: Mining and quarrying, C: Manufacturing, D: Electricity, gas, steam and air conditioning supply, as defined in the statistical classification NACE Rev. 2, and more specifically divisions 05-35 and the main industrial groupings and all the levels of the branches of economic activity, as well as the imported products.</p>		

### 3.4 Statistical concepts and definitions

The purpose of the Import Price Index in Industry is to measure the monthly rates of change in the prices of products in the sectors of mining, quarrying, manufacturing and electricity that are imported from abroad and are transferred, through purchase, to domestic units-enterprises, irrespective of the industrial grouping where these units belong. Service imports are not covered by the index, since the external trade survey, which is the basis for price monitoring, covers only goods, and the products that are selected for price collection must remain comparable in the course of time (comparable goods).

Based on the distinction of countries of origin between two purchase zones two sub-indices are compiled: the Import Price Index for eurozone countries and the Import Price Index for non-eurozone countries, which compose the total Import Prices Index in Industry for all the corresponding purchase zones and for the total imports.

The index is particularly useful because it allows for monitoring the evolution of prices in the different categories or groups of products and at the same time it offers the possibility, as a deflator, to calculate the changes in the imports volume in External Trade and National Accounts statistics, after subtracting price changes.

### 3.5 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.

The imports prices are collected from units-enterprises, which import the products originally selected and are used for the compilation of the MPI. The prices mainly refer to transactions between units-enterprises that are established in the country and import products and units-enterprises that are established abroad and export products to Greece.

### 3.6 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, steam and air conditioning supply.

The data are collected from 880 enterprises, which import products and are located in Attica and in other 31 Regional Units of the country.

### 3.7 Reference area

The MPI index covers Greece as a total. The prices are collected in 32 Regional Units of the country.

### 3.8 Time coverage

The time series of the Import Price Index in Industry (MPI) with base year 2015=100.0 is being released on a monthly basis. Series start from January 2000.

### 3.9 Base period

From July 2019 onwards, with the announcement of the Press Release for May 2019, the base year is the year 2015 (2015=100.0).

## 4. Unit of measure

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Index. Monthly and annual changes (percentage %).

## 5. Reference period

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The reference period is the month.

## 6. Institutional mandate

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### 6.1 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>

#### EU legislation:

The legal basis for the STS indices and for MPI, in particular, is Council Regulation No 1165/98 of 19 May 1998 concerning short-term statistics (STS-R) as amended by the Regulation (EC) No 1158/2005 of the European Parliament and of the Council of 6 July 2005 concerning short-term statistics and by Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Rev.2.

The definitions of short-term statistics variables are laid down in Commission Regulation No 1503/2006 of September 2006 implementing and amending Council Regulation No 1165/98 of 19 May 1998 concerning short-term statistics.

The classification by main industrial groupings (MIGs) is defined by Commission Regulation No 656/2007.

#### **6.2 Data sharing**

The data of Import Price Index 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.

## **7. Confidentiality**

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### **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** - if data are of truly confidential nature according to article 20 of Regulation (EC) No 223/2009 of the

European Parliament and of the Council of 11 March 2009 (data which allow statistical units to be identified, either directly or indirectly), they are flagged as confidential and are not published. Eurostat is legally bound to suppress such data from publication as well.

## 8. Release policy

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### 8.1 Release calendar

Each year ELSTAT publishes a release calendar with the precise 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 the item "[Release Calendar](#)".

### 8.3 User access

In line 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 Import Price Index, which is posted on the website of ELSTAT (<http://www.statistics.gr/en/home/>) according to the release calendar. This press release is also 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.

## 9. Frequency of dissemination

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The index is disseminated on a monthly basis.

## 10. Accessibility and clarity

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### 10.1 News release

Every month, 45 days after the end of the reference month, at 12.00, a Press Release is published which presents the newly calculated Index of Import Price Index in Industry (MPI) in Greek and English. The press release is sent, free-of-charge, and mostly by email to the press and to other interested parties. The press release is also available on the website of ELSTAT (<http://www.statistics.gr/en/statistics/-/publication/DKT18/->).

In the Press Release the Import Price Index is published as following:

- index, (base year 2015=100.0),
- month-on-month growth rates,
- year-on-year growth rates.

### 10.2 Publications

There are no publications concerning Import Price Index.

### 10.3 On-line database

There is no on-line database for the MPI.

#### 10.3.1 Data tables - consultations

Users' consultation as regards the survey on MPI Index amounts to 141,323 webpage's hits for 2020. There is no potentiality to distinct consultations between data tables and metadata.

### 10.4 Micro-data access

Micro-data are made available to users after submitting a request to the:

Statistical Information and Publications Division

46, Pireos & Eponiton Str, PO Box 80847

18510 Piraeus

Tel: +30 213 135 2022

Fax: +30 213 135 2312

e-mail: [data.dissem@statistics.gr](mailto:data.dissem@statistics.gr)

For confidential reasons, access to micro-data is granted to users only under strict conditions and by always adhering to the relevant procedure. More information is available in the following link:

[https://www.statistics.gr/en/scientific\\_provision\\_data](https://www.statistics.gr/en/scientific_provision_data).

#### 10.5 Other

Users can have access to ELSTAT publications, even for previous years, where they can find data on the MPI, which are posted on the digital library of ELSTAT, through:

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

Data are sent to Eurostat and published in Eurostat online database

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

The results of the Import Price Index are posted on the website of ELSTAT, at the link:

<http://www.statistics.gr/en/statistics/-/publication/DKT18/->.

Users can be given data or further analysis, usually by fax or e-mail after submitting a request, describing the requested data, at the following link:

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

Users can also contact the Data Dissemination Section, at the following e-mail address:

[data.dissem@statistics.gr](mailto:data.dissem@statistics.gr) and [data.supply@statistics.gr](mailto:data.supply@statistics.gr).

##### **10.5.1 Metadata – consultations**

See 10.3.1 above.

#### 10.6 Documentation on methodology

The methodology for the compilation of the index is laid down by ELSTAT, taking into account international practices and in particular Eurostat's recommendations, guidelines and standards.

The Methodology of Short-term Business Statistics, Interpretation and guidelines, 2006, contains a comprehensive set of recommendations on the compilation of the STS statistics. It is available at the link:

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

A special methodological paper on the compilation of the MPI in Greece is available on the website of ELSTAT (<http://www.statistics.gr/en/home/>) containing detailed information on the sources and the methodology used through the link:

<http://www.statistics.gr/en/statistics/-/publication/DKT18/->.

##### **10.6.1 Metadata completeness – rate**

Metadata on the compilation of the MPI Index are available on the webpage of ELSTAT (<http://www.statistics.gr/en/home/>), therefore metadata completeness is 100%.

#### 10.7 Quality documentation

A user oriented quality report and a Single Metadata Structure (SIMS) report is available at the link:

<http://www.statistics.gr/en/statistics/-/publication/DKT18/->.

## 11. Quality management

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### 11.1 Quality assurance

The Hellenic Statistical Authority (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 which is posted on the

website of ELSTAT and is available at the following link:

<http://www.statistics.gr/en/policies>.

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).
- Replacement of products/units: 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 import indices of the group where they are classified. Accordingly when a unit / enterprise discontinues to import/merchandise a specific product, it is replaced by another unit / enterprise.
- Quality adjustments: In the case where a variety is replaced, the new product has a new base price adjusted to the relevant price of the variety of the product, thus not affecting the calculation of the sub-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.
- New units/enterprises and new products: New products are added only during the revision of the Import Price Index in Industry. The Index is fully revised every five years, when the base year is changed and new weights are adopted. New units/enterprises are added in order to ensure representativeness of the sample of selected units/enterprises 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 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 the 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.

## 11.2 Quality assessment

The Import Price Index in Industry is considered to be a highly reliable index.

Until the year 2004, the Foreign Final Products Price Index, i.e., one of the components of the Final Products Wholesale Price Index (since 1963), measured the change in the prices of imported industrial products. The later was abolished at the beginning of 2005 and the Producer Price Index (PPI) in Industry replaced it.

It should be noted that the coverage of the Foreign Final Products Price Index, was very limited, thus it covered only the final products (i.e. only the products distributed to the domestic market without including their processing by domestic industry) and not the total of industrial products, which are imported.

The monitoring of the Wholesale Price Index, only of the final products, led to the reduction of interest in this index and the shift of users to the Import Price Index, which includes all the industrial products, final and intermediate products. The discontinuation of the aforementioned index and its replacement by the Import Price Index in industry was considered necessary also 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.

## 12. Relevance

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### 12.1 User needs

The Import Price Index in Industry meets national needs as well as needs to fulfil obligations arising from the implementation of European Regulations. More specifically:

- Generally, the Import 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 for the different groups of categories of products, but also to calculate the real rates of change in the volume of imports in external trade statistics and in national accounts, as a deflator, after subtracting price changes. Furthermore, import 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, etc.

### 12.2 User satisfaction

The Manufacture – Construction Indices and Industrial Products 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, something that is acknowledged by users.

Moreover, ELSTAT conducts a user satisfaction survey every six months. Comments on media are also positive. More information about the results of the survey is available at the following link:

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

Furthermore, ELSTAT organises a Users Conference, on an annual basis, in which representatives of private and public sector, educational and research institutions participate. The conferences provide a significant opportunity for ELSTAT to collect comments and suggestions from users relative to the dissemination and the accessibility of the statistical data and the gaps in the production of statistics. The users conferences help significantly ELSTAT to draw useful conclusions on the areas where the statistical products and services can be improved in order to meet the increasing users needs. These conclusions are incorporated in the annual and medium term statistical programs of ELSTAT. The most recent Users Conference was held in 23 December 2019. More information on the conference is available at the link:

<http://www.statistics.gr/en/user-conference-2019>.

### 12.3 Data completeness

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

## 13. Accuracy and reliability

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### 13.1 Overall accuracy

The index is characterised by high accuracy. Nevertheless, sampling errors are not taken into consideration because the sampling method used is not random sampling but a cut-off sampling method (directed sampling). As regards non-sampling errors, these are mostly due to erroneous counting and to the non-response of some enterprises. The efforts are mostly focused on identifying and correcting as many errors as possible during the revision of data.

The Import 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.

### **13.2 Sampling error**

Sampling errors are not calculated because of the sampling method used (purposive sampling).

In order to compile the Import Price Index in Industry a survey is carried out. The sampling frame is the annual import data from the survey of external trade statistics for the year 2015. For calculating the weights at all levels (product, economic activity, group, main industrial grouping, etc.) and for the zones of origin, the import values at corresponding levels are taken into consideration, both as a total and in the individual zones of origin in 2015.

The external trade survey includes the imports value for 2015 for all industrial products, with breakdown into euro zone countries and non-euro zone countries and the classification used is the combined nomenclature, CN8, which is also correlated with PRODCOM 2015.

The main criteria for choosing the products of the sample are the volume of the imports value (purchases) in the branch of economic activity where they belong and the possibility to collect their prices in the course of time. At a first stage the products of the index at 6-digit level are selected and at a second stage the enterprises are selected.

Prices are collected from approximately 880 enterprises that import products with head offices in Regional Unit of Attica and in another 31 Regional Units of the country. The index covers the country as a whole, since the main criterion for selecting the units-enterprises, from which import prices are collected, is the enterprises' imports during base year 2015, without taking into account the location of their head office.

The observation unit is the enterprise/activity unit (KAU) which imports 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 that are selected is based on a cut-off method. The selection of enterprises is based on the value of imports (purchases), so that the selected units cover about 70% of the total imports value (turnover) of 2015 for each 4-digit branch of economic activity (NACE rev.2).

### **13.3 Non-sampling error**

Non-sampling errors involve coverage errors, measurements errors, non-response errors, processing errors and model errors.

There are no errors, which have to do with inconsistent use of definitions or with data processing. For each product, which has been selected for the index sample, all its defining characteristics (variety, weight, packaging, other features) were fully and precisely determined, including those characteristics relating to its transaction (usual quantity, discounts, mode of payment, country of origin, etc.). The prices resulting from transactions of affiliated units-enterprises, such as transactions between parent and subsidiary company, are taken into consideration under certain conditions.

Some counting errors may occur, such as errors in the data provided by the surveyed enterprises. These errors are usually easy to identify, through checks and cross-checks with the data provided by enterprises in the previous years and these errors are corrected after telephone communication with the stakeholders.

It is not unusual for periodic breaks to occur in the flow of price data, or for prices to be unavailable. When a break occurs in the data flow due to absence of transactions or 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 special method of changing the base prices of substitute products is used.

#### **a. Unit non – response**

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 92%. Missing values are treated by estimating them by "repeating the last prices" during the period of non-response.

#### **b. Item non - response**

Item non-response is not relevant, as for the survey of MPI only one variable (e.g. price) is collected.

#### **13.3.1 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.

#### **13.3.1.1 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.

#### **13.3.1.2 Common units – proportion**

Not applicable.

#### **13.3.2 Measurement error**

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

#### **13.3.3 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.

#### **13.3.4 Model assumption error**

No model is used for the compilation of the Index, so this type of error is not relevant.

### **14. Timeliness and punctuality**

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#### **14.1 Timeliness**

The index is published 45 days after the end of the reference month.

#### **14.2 Punctuality**

Import Price Index in Industry is published according to the pre-announced release calendar.

### **15. Coherence and comparability**

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#### **15.1 Comparability - geographical**

The STS Regulations and the STS methodological guidelines are applied for the compilation of the index, thus ensuring a good comparability between the Greek Import Price Index and the other national and European indices, taking always into account any special conditions prevailing in each country, which may dictate minor methodological deviations.

##### **15.1.1 Assymetry for mirror flows statistics – coefficient**

There are no mirror flows statistics among EU Member States in the Import Price Index in Industry (MPI).

#### **15.2 Comparability over time**

The time series of the revised the Import Price Index in Industry (MPI) (2015=100.0) includes the indices compiled by imputation of the previous time series from January 2000 to April 2019 and the indices from May 2019 onwards have been calculated with the new data on prices, new products and the new weighting coefficients, with the distinction into two sub-indices: Import Price Index for eurozone countries and the Import Price Index for non-eurozone countries.

Therefore, the time series of the Import Price Index in Industry based on the year 2015 = 100.0 is available from January 2000 onwards.

### 15.3 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 Producer Price Index in industry, Input and Output Indices in Agriculture-Livestock, and intersections with other data, such as with the annual figures for Imports of External Trade survey, when these data become available.

#### 15.3.1 Coherence – sub annual and annual statistics

Any small discrepancies observed in the rates of change between the MPI in industry and the 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 enterprises. The common sample of enterprises used for the index ensures the accurate representation of the evolution of the index during several time periods.

#### 15.3.2 Coherence – National Accounts

The Import Price Index in Industry is available in the National Accounts Division for conversion from current prices to fixed prices in product imports.

### 15.4 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.

## 16. Cost and burden

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According to the results of the Cost survey which was carried out by ELSTAT in 2020, it can be concluded that regarding the staff of ELSTAT, the annual cost in hours worked amount to 6,200, while from the results of the Burden survey for the year 2019, it can be concluded that regarding the respondents, the annual average burden in hours worked is 3.00 hours per enterprise or totally 2,475 hours for all enterprises.

## 17. Data revision

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### 17.1 Revision policy

The general revision policy adopted for ELSTAT, which is also applied to the Import Price Index in Industry (MPI), is available at the link:

<http://www.statistics.gr/en/policies>.

In accordance with the Revision Policy of ELSTAT and the ESS guidelines, the revisions are classified as planned revisions, which refer to routine revisions and major revisions, and non-scheduled revisions.

#### Routine revisions

The Import Price Index in Industry is published on a monthly basis, 45 days after the end of the reference month and the released data are final. Thus, routine revisions are not applicable in the case of MPI.

#### Major revisions

In accordance with the requirements of the Council Regulation (EC) No 1165/98 concerning short-term statistics, short-term indices are revised every five (5) years, particularly in calendar years ending in 0 or 5. In this framework, the index is fully revised every five years, with the change of the base year and the implementation of new weighting scheme. Major revisions are pre-announced to the public through a special methodological paper, named "Methodological note on the revision of the Import Price Index in Industry (MPI)", containing detailed information about the revision. This note is available at the link:

<http://www.statistics.gr/en/statistics/-/publication/DKT18/>.

In addition, a relevant text on the planned revision of the index is included in the Annual Statistical Work Programs of ELSTAT.

Major revisions are accompanied by updated data when they are published.

#### **Non-scheduled revisions**

Non-scheduled revisions may occur as a result of unforeseeable events such as errors. They are not announced in advance by definition. The users are promptly informed on significant errors identified in published statistics. The revised results are released without any delay in an open and transparent manner. The reasons for carrying out the non-scheduled revisions are also published. Non-scheduled revisions are accompanied by relevant documentation, as well as by updated back data if available.

The same revision policy for all kind of revisions is applied to data released nationally and to those transmitted to Eurostat, in order to assure coherence.

#### **Vintage databases**

Vintage databases are not available.

### **17.2 Revision practice**

In accordance with the requirements of the Council Regulation (EC) No 1165/98 concerning short-term statistics, short-term indices are revised every five (5) years, particularly in calendar years ending in 0 or 5. In this framework, the index is fully revised every five years, with the change of the base year and the implementation of new weighting scheme. The latest revision of the index, with base year 2015=100.0, was completed in 2019.

Major revisions are pre-announced to the public through a special methodological paper, named "Methodological note on the revision of the Import Price Index in Industry (MPI)", containing detailed information about the revision. This note is available at the link:

<http://www.statistics.gr/en/statistics/-/publication/DKT18/>.

In addition, a relevant text on the planned revision of the index is included in the Annual Statistical Work Programs of ELSTAT.

## **18. Statistical processing**

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### **18.1 Source data**

ELSTAT uses a statistical survey in order to calculate the Import Price Index in Industry (MPI). The sampling frame is the annual import data from the survey of external trade statistics for the year 2015. For calculating the weights at all levels (product, economic activity, group, main industrial grouping, etc.) and for the zones of origin, the import values at corresponding levels are taken into consideration, both as a total and in the individual zones of origin in 2015.

The external trade survey includes the imports value for 2015 for all industrial products, with breakdown into euro zone countries and non-euro zone countries and the classification used is the combined nomenclature, CN8, which is also correlated with PRODCOM 2015.

The main criteria for choosing the products of the sample are the volume of the imports value (purchases) in the branch of economic activity where they belong and the possibility to collect their prices in the course of time. At a first stage the products of the index at 6-digit level are selected and at a second stage the enterprises are selected.

Prices are collected from approximately 880 enterprises that import products with head offices in Regional Unit of Attica and in another 31 Regional Units of the country. The index covers the country as a whole, since the main criterion for selecting the units-enterprises, from which import prices are collected, is the enterprises' imports during base year 2015, without taking into account the location of their head office.

The observation unit is the enterprise/activity unit (KAU) which imports 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 that are selected is based on a cut-off method. The selection of enterprises is based on the value of imports (purchases), so that the selected units cover about 70% of the total imports value (turnover) of 2015 for each 4-digit branch of economic activity (NACE rev.2).

### **18.2 Frequency of data collection**

Data are collected on a monthly basis.

### 18.3 Data collection

The monthly data are collected through a specially designed questionnaire, where all the imported products for which prices are collected are preprinted.

The collected prices of imported products are CIF (Cost Insurance Freight) prices at the Greek border, free of all taxes and duties payable by the import enterprises. This means that they include the product transport (freight) and insurance costs incurred by the enterprise for their importation.

Transactions between units belonging to the same enterprise (e.g. parent and subsidiary company) are taken into consideration for the time period during which the prices are based on the market or affected by it and their differences compared to market prices are minimal.

Prices refer to actual transaction prices and not to price list prices and therefore discounts have been deducted from the prices.

In order for the index to reflect more accurately the real evolution (change) of prices, all the characteristics of the products are taken into consideration, which have to do with their price, thus aiming at correcting any quality changes and at maintaining their comparability over time.

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, country of origin, etc.) are set out in great detail.

The information regarding prices mainly refer to the middle of the reference month, with a monthly periodicity while, in exceptional cases, they refer to the average prices of this monthly period. The index, however, needs to reflect the comparison of the current period's average price level compared to the corresponding period of its base period and this can be seen more clearly in the case of products with significant price fluctuations during the monthly period.

When collected product prices are indicated in foreign currency, they are converted to euros using the Euro-foreign currency exchange rate, according to the average monthly fixing rates of the Bank of Greece.

The prices are collected by means of:

- visits paid by ELSTAT's statistical interviewers who interview the surveyed units,
- telephone communication,
- sending the questionnaire by fax
- sending the questionnaire by e-mail.

In case of non-response, the surveyed enterprise is contacted by telephone, or is sent a reminder by fax or e-mail, or even the competent staff may pay a visit to the enterprise.

### 18.4 Data validation

The data are validated by means of logical checks. During data processing any errors are identified and are fully 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.

Eurostat also carries out validation checks on the national aggregated indices received, using validation rules implementing in the data feeding software. In case any inconsistencies are identified in the validation process, further clarifications may be needed by the Member States. Then Eurostat proceeds to the validation and publication of data.

### 18.5 Data compilation

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

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

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,

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

$w_i$  = 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 calculated as the simple arithmetic mean of the relevant prices of the product's variation from all the reporting units (enterprises).

That is:

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

where:

$N_i$  , is the count of product i variations from all the reporting units,

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

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

The above calculations are used for the compilation of the Overall Import Price Index, as well as for the compilation of the two individual import price indices for eurozone and non-eurozone countries. The overall Overall Import Price Index in Industry (MPI), as a composite index of the individual indices, is calculated as the weighted average of the above two distinct price indices: Import Price Index for eurozone countries and the Import Price Index for non-eurozone countries.

#### Back casting of time series

The back casted monthly and annual Import Price Indices in Industry, for the period January 2000 – April 2019, were calculated using the individual annual price index of every product in 2015 year, according to the following type:

$$R_{i(2015)}^{(t)} = R_{i(2010)}^{(t)} * \frac{100}{\overline{R_{i(2010)}^{(2015)}}}$$

where:

$R_{i(2015)}^{(t)}$  : is the individual index of material i in the current period (month, year) t with 2015 as base year,

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

$\overline{R_{i(2010)}^{(2015)}}$  : is the mean individual annual index of material i in 2015, with 2010 as base year.

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

<http://www.statistics.gr/en/statistics/-/publication/DKT18/>

#### **18.5.1 Imputation – rate**

In cases where prices were no longer available, because of the absence of transactions or seasonality, the imputation

method “repeating the last prices” is used for the intermission period. The percentage of the data that are imputed is about 8%.

## **18.6 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.

### **Calendar adjustment**

The data of the index are not calendar adjusted.

#### **18.6.1 Seasonal adjustment**

The data of the index are not seasonally adjusted.

## **19. Comment**

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None