

Metadata in Euro-SDMX format (ESMS)

Country: Greece

Compiling agency: ELSTAT

Domain name: Services Producer Price Indices (SPPI)

ELSTAT metadata

[Reference metadata](#)

- [1. Contact](#)
- [2. Metadata update](#)
- [3. Statistical presentation](#)
- [4. Unit of measure](#)
- [5. Reference period](#)
- [6. Institutional mandate](#)
- [7. Confidentiality](#)
- [8. Release policy](#)
- [9. Frequency of dissemination](#)
- [10. Dissemination format](#)
- [11. Accessibility of documentation](#)
- [12. Quality management](#)
- [13. Relevance](#)
- [14. Accuracy and reliability](#)
- [15. Timeliness and punctuality](#)
- [16. Comparability](#)
- [17. Coherence](#)
- [18. Cost and burden](#)
- [19. Data revision](#)
- [20. Statistical processing](#)
- [21. Comment](#)

1. Contact Top	
1.1 Contact organisation	Hellenic Statistical Authority (ELSTAT)
1.2 Contact organisation unit	Economic and Short-Term Indicators Division (G7) Wholesale Prices & Price Indices Section (G71)
a. Contact name	a. Thomas Konstantinos (Mr) b. Kossova Theodora (Mrs)
b. Contact person function	a. Head of the Wholesale Prices and Price Indices Section b. Employee in the Wholesale Prices and Price Indices Section
c. Contact mail	Pireos 46 & Eponiton Str. 18510 - Piraeus

address	
d. Contact email address	k.thomas@statistics.gr , t.kossova@statistics.gr
1.3 Contact phone number	(+0030) 213135 2126 , (+0030) 213135 2745
1.4 Contact fax number	(+0030) 213135 2714

2. Metadata update Top	
2.1 Metadata last certified	25/11/2016
2.2 Metadata last posted	25/11/2016
2.3 Metadata last update	25/11/2016

3. Statistical presentation Top	
--	--

3.1 Data description

Data are disseminated for the following activities of Sections H, M και N of the statistical classification NACE Rev. 2 of Eurostat at 2-digit, 3-digit and 4-digit level:

- freight transport services by road and removal services (industry 494)
- air transport services (industry 51)
- warehousing and storage services (industry 5210)
- cargo handling services (industry 5224)
- postal services and courier services (industry 53)
- accounting, bookkeeping, auditing and tax consulting services (industry 692)
- technical testing and analysis services (industry 712)
- media representation services (industry 7312)
- market research and public opinion polling services (industry 732)
- security and investigation services (industry 80)
- cleaning services (industry 812)

Data in new branches of services are announced with first reference quarter, the 3rd quarter 2014 and retrospectively for the 1st and 2nd quarters of 2014, for the following activities of the H, J, M, N Sections:

- sea and coastal passenger and freight water transport services (industry 50: 501 & 502)
- total telecommunications services (industry 61)
- computer programming, consultancy and related services (industry 62)
- information service on computers and related services (industry 63)
- legal services (industry 691)
- management consulting services (industry 702)
- architectural and engineering services, related technical consulting services (industry 711)
- services provided by advertising agencies (industry 7311)
- employment services (industry 78)

No geographical breakdown is made for the data. Data is monthly or quarterly at their collection and is presented in the form of indices and percentage changes of indices. The indices are calculated on a

quarterly basis for everyone of the above branches and are published as following:

- indices with base year 2010=100.0,
- quarterly changes,
- annual changes

3.2 Classification system

Eurostat's classification NACE Rev.2 is used at 4-digit level of analysis, as required by Regulation (EC) 1893/2006 of the European Parliament and of the Council, along with the Eurostat's classification CPA 2008 at product level, at 6-digit level of analysis, as required by Regulation (EC) 451/2008 of the European Parliament and the Council.

3.3 Sector coverage

The Services Producer Price Indices (2010=100.0) cover part of Sections H, M and N as defined in NACE Rev. 2 classification, i.e., branches: 494, 51, 5210, 5224, 53, 692, 712, 7312, 732, 80, 812 and from 3rd quarter 2014 cover part of Sections H, J, M and N in new branches: 50, 61, 62, 63, 691, 702, 711, 7311, 78.

3.4 Statistical concepts and definitions

The Producer Price Indices for Services are output price indices for the production of services from domestic producers and show the evolution of prices for the services that are provided to customers which are enterprises or persons that represent enterprises, in other words, they refer to services that are used as intermediate use (Business to Business-B2B), without differing significantly from the overall index (Business to All-B2All). Particularly in the group of indices of: the air transport index and the sea and short sea shipping index (of the new branches of services) have already been compiled as overall index (B2All) and the two indices for postal and courier services and the telecommunication services (of the new branches of services), which are compiled as overall indices (B2All) and as sub-indices for businesses (B2B) and for consumers (B2C).

The purpose of these indices is to measure the quarterly changes in producer's prices in services and to record the trend of prices that reflect supply and demand in the services markets in order to analyze the actual changes in the economy and to monitor inflation pressures.

3.5 Statistical unit

The sampling unit for the collection of data of the survey used is the enterprise.

3.6 Statistical population

Purposive sample of enterprises that are activated at the corresponding branch of economic activity is taken from the business register, based on a turnover cut-off.

3.7 Reference area

Greece total.

3.8 Time coverage

The time series of the Services Producer Price Indices are released quarterly, retrospectively from first quarter 2007 (while, data for the new branches of services are announced with first reference quarter, the 3rd quarter 2014).

3.9 Base period

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

4. Unit of measure

[Top](#)

Indices, percentage changes (%).

5. Reference period

[Top](#)

The reference period is the quarter.

6. Institutional mandate

[Top](#)

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>

6.2 Data sharing

The SPPI data are disseminated to Eurostat pursuant to Regulation (EC) 1165/98 of the Council on short-terms statistics, as amended by the Regulation (EC) No 1158/2005.

7. Confidentiality

[Top](#)

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>

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.

8. Release policy

[Top](#)

8.1 Release calendar

Release dates are fixed in advance for a calendar year. At the end of each year the ELSTAT publishes a release calendar with the precise release dates for the following year.

8.2 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>

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 is released simultaneously to all interested parties and users by the industrial production index press release, which is released at the official ELSTAT website (www.statistics.gr) according to the release calendar schedule. This press release is also available by fax or e-mail to all interested parties. In addition data is transmitted to Eurostat on the pre-announced dates of release, at the same time as national publication.

No users or anyone else outside ELSTAT have prior access to the data before its general release.

9. Frequency of dissemination

[Top](#)

The Services Producer Price Indices are calculated and disseminated on a quarterly basis.

10. Dissemination format

[Top](#)

10.1 News release

Every quarter, 90 days after the end of the reference quarter, at 12.00, a press release is released on presentation of the newly calculated indices, in two versions in Greek and in English. This 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 website (www.statistics.gr) at: [http://www.statistics.gr/en/statistics/-/publication/DKT59/-](http://www.statistics.gr/en/statistics/-/publication/DKT59/)

10.2 Publications

There are no publications for the Services Producer Price Indices.

10.3 On-line database

There is no on-line database for the Services Producer Price Indices.

10.4 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.

10.5 Other

In addition to transmitting data to Eurostat, users have the potential to obtain access to additional, unpublished but non-confidential, data or special analysis, upon request.

Users are obliged to send a fax or email to the Economic and Short-term Indicators Division – Wholesale Prices & Price Indices Section or to the Statistical Information and Publications Division requesting the data of interest. The contact email addresses are:

k.thomas@statistics.gr, t.kossova@statistics.gr, data.dissem@statistics.gr, data.supply@statistics.gr and data.source@statistics.gr.

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

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

More links for data dissemination:

<http://www.statistics.gr/en/statistics/-/publication/DKT59/>

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

11. Accessibility of documentation

[Top](#)

11.1 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 issue that includes a set of guidelines for the preparation of short-term statistics is available:

[Methodology of short-term business statistics - Interpretation and Guidelines](#)

While the methodological manual on Services Producers Price Indices (SPPi) by Eurostat, is available:

[Services producer price index \(2010\)](#)

Moreover, the information note on the compilation of the Services Producers Price Indices in Greece, which includes the methodology that is implemented for the compilation of the indices in every individual branch of the services sector is available at the following link:

<http://www.statistics.gr/en/statistics/-/publication/DKT59/>

11.2 Quality documentation

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

<http://www.statistics.gr/en/statistics/-/publication/DKT59/>

12. Quality management

[Top](#)

12.1 Quality assurance

Quality checks and validation of data are done through the whole process.

Initially, the staff involved to the different phases of the compilation of the index, such as data collection, initial checks, data entry and final checks following the computation of the index, is adequately trained and experienced. This fact gives the opportunity to the staff to obtain a spherical and historical view of the enterprises of their responsibility.

Moreover, data editing and validation takes place either during or after data entry, by performing regular logical checks. Data control refers to the continuous study of data reported from respondents with the aim of identifying errors, especially those that have significant influence on the results. After identifying errors, further investigation takes place in collaboration with the enterprise in order to determine the erratic data as that. Through editing and validating procedure, ELSTAT performs checks for completeness, checks that values are within given ranges and that values for related variables are coherent.

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>

12.2 Quality assessment

The Services Producer Price Indices were developed gradually during the last five-year period and were announced for the first time in March of 2010. Consequently there is no cumulative experience in their compilation. In spite of these, European and international norms and instructions are followed truly as regards the concepts and the definitions as the methodology.

13. Relevance

[Top](#)

13.1 User needs

The Services Producer Price Indices cover national needs and the needs of European and other users. The main national users of SPPI are the government, other public agencies, the Central Bank of Greece, other Hellenic banks, the Hellenic Federation of Enterprises (SEV), the Foundation for Economic and Industrial Research (IOBE), the Centre for Planning and Economic Research, chambers, etc., while at the international level, it is used by Eurostat, the International Monetary Fund (IMF), the United Nations (UN) etc.

Users needs vary. At national level, SPPI are used as a tool offering up to date and reliable information for the observation of the trend of prices and as deflators for the corresponding branches of economic activity of the services sector, so as the government would be able to define the monetary policy, and the enterprises or other institutions to facilitate the decision-making for undertaking initiatives in order to enhance growth. At European level, there is the need for reliable statistics, such as SPPI, which would be comparable at all levels, in order for the European monetary policy to be defined.

13.2 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, something that is acknowledged by users.

In addition to that, ELSTAT carries out a survey on users' satisfaction every six months. The comments made in the media are positive. 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>

13.3 Completeness

The data provided cover completely the requirements of the relevant Regulations.

Data for the following new branches of services are announced since 3rd quarter 2014 as the first reference quarter:

- sea and coastal water transport services (passenger and freight) (50: 501 & 502)
- telecommunications services (61)
- information technology services (computer programming, consultancy and related services)(62)
- data processing, hosting and related services (631)
- legal services (691)
- management consulting services (702)
- architectural and engineering services and related technical consulting services (711)
- services provided by advertising agencies (7311)
- employment services (78).

14. Accuracy and reliability

[Top](#)

14.1 Overall accuracy

The accuracy of SPPI is generally considered to be high. ELSTAT does not calculate sampling errors for SPPI due to the purposive sampling technique, which is applied, instead of the random sampling technique. Concerning the non-sampling errors, there are, mainly, some measurement or non-response errors. Efforts are made in the direction of tracing and diminishing as many as possible of these errors, through data revision.

Moreover, 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. On this framework, major revisions of the SPPI take place every five years, with a shift in the base year and implementation of new weighting scheme.

14.2 Sampling error

ELSTAT does not calculate sampling errors for SPPI due to the purposive sampling technique, which is applied.

For the compilation of SPPI a special statistical survey is conducted, which provide results on the turnover of enterprises during the base year 2010 at 6-digit level analysis of CPA 2008, from a sample of 517 enterprises, selected from the 2010 business register of ELSTAT. The weights are based on the results of this survey and are used for the calculation of the indices in the corresponding branches of economic activity of the services sector.

The data are collected from a sample that contains 355 enterprises, while the total number of observations (prices) is approximately 2500. The selection of the enterprises of the sample was based on the purposive sampling method so as the enterprises: a) provide the services that were selected for and b) their turnover, as regards the services provided exceeds 70% of the total turnover of the corresponding branch of economic activity, according to the data of the structural survey in the services sector.

14.3 Non-sampling error

There are neither errors related to the inconsistent implementation of definitions nor errors regarding the processing procedure. There are some measurements errors, such as errors in reported data by enterprises. These errors are usually traced easily by making crosschecks with reported data of the same enterprises of the previous periods and are corrected after telephone contacts. There are, also, errors due to non-response of enterprises with the non-response rate being less than 5% of the total sample. Non-response is treated by estimating missing values according to the prices trend from other enterprises that provide the same or similar services.

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 SPPI 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 SPPI 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. The enterprises which stop their activity, replaced immediately by the Business Register, so that the percentage of common enterprises of the sample among the quarters to be at 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. There are, also, errors due to non-response of enterprises, yet non-response rate is less than 5% of the sample, with the overall response to be about 95%. Non-response is treated by estimating missing values according to the prices trend from other enterprises that provide the same or similar services.

15.3.4 Item non response error

Item non-response errors are not observed in key variables for estimating.

15.3.5 Processing error

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.

15.3.6 Model assumption error

No model is used for the compilation of the index.

15. Timeliness and punctuality

[Top](#)

15.1 Timeliness

The indices are published 90 days (t+90) after the end of the reference quarter, particularly at the end of the next quarter.

15.2 Punctuality

All the publications of the indices are done according to the pre-announced release calendar. By any chance overdue publications are due exclusively to extraordinary events such as strikes of personnel, etc.

16. Comparability

[Top](#)

16.1 Comparability – geographical

The STS Regulations and the STS basic methodological guidelines are applied for the compilation of the indices. This fact ensures a good comparability between the Greek SPPI and the other national and European indices, taking always into account the special conditions that apply to each country, which may dictate minor methodological deviations.

16.2 Comparability over time

Time series of the revised SPPI includes the indices of the previous time series from January 2007 to December 2013, compiled as a simple reduction in the base year 2010=100.0, without recalculation of the indices with new weights 2010=100.0. The indices from March 2014 onwards have been calculated with the new data on prices of services and with new weights of the revision 2010=100.

The back casting calculation of indices is a simple reduction in the base year 2010=100.0. Backdated calculations for the quarterly producer price indices for services in the period January 2007–December 2013 (and annual since 2006), were calculated using the mean individual annual price index of every product-service in year 2010, according to the following type:

$$R_{i(2010)}^{(t)} = R_{i(2006)}^{(t)} * \frac{100}{R_{i(2006)}^{(2010)}}$$

where:

$R_{i(2010)}^{(t)}$: is the individual index of product-service i in the current period (quarter, year) t
with 2010 as base year,

$R_{i(2006)}^{(t)}$: is the individual index of product-service i in the current period (quarter, year) t
with 2006 as base year and

$\bar{R}_{i(2006)}^{(2010)}$: is the mean individual annual index of product-service i in 2010, with 2006 as base year.

17. Coherence

[Top](#)

17.1 Coherence cross-domain

Regular crosschecks are made with information from other surveys. Comparisons are made mainly with the subindices of the consumer price index that have to do with corresponding branches of services sector.

The discrepancy with these subindices is that the latter include taxes in the prices as well as that the services in the CPI may be provided from non-domestic producers.

17.2 Coherence - internal

SPPI are internally coherent. Higher-level aggregates are derived from detailed indices according to well-defined procedures.

18. Cost and burden

[Top](#)

On the basis of the results of the survey on cost and burden that was conducted by ELSTAT for the year 2012: a) the estimated cost, as regards the personnel of ELSTAT involved in the compilation of the SPPI, amounted to 1.720 hours and b) as regards the surveyed enterprises, the average annual burden, estimated in hours needed for the provision of the relevant information, is 0,93 hours per enterprises, or 221 hours for all the surveyed enterprises.

19. Data revision

[Top](#)

19.1 Revision policy

The Services Producer Price Indices are published 90 days ($t+90$) after the end of each reference quarter. Data is provisional when first released. Data become final as soon as all data gathered become definite. Consequently some indices are possible to be changed until some previous quarters.

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>

19.2 Revision practice

The data released for the most recent quarter is provisional and is published together with revised data of the previous quarters. Quarterly correction is made due to late reporting of respondents.

Moreover, 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. On this framework, major revisions of the SPPI take place every five years, with a shift in the base year and implementation of new weighting scheme.

20. Statistical processing

[Top](#)

20.1 Source data

For the compilation of SPPI a special statistical survey is conducted, which provide results on the turnover of enterprises during the base year 2010 at 6-digit level analysis of CPA 2008, from a sample of 517 enterprises, selected from the 2010 business register of ELSTAT. The weights are based on the results of this survey and are used for the calculation of the indices in the corresponding branches of economic activity of the services sector.

The data are collected from a sample that contains 355 enterprises, while the total number of observations

(prices) is approximately 2500. The selection of the enterprises of the sample was based on the purposive sampling method so as the enterprises: a) provide the services that were selected for and b) their turnover, as regards the services provided exceeds 70% of the total turnover of the corresponding branch of economic activity, according to the data of the structural survey in the services sector.

20.2 Frequency of data collection

Data collection is carried out on a quarterly basis.

20.3 Data collection

Specialized employees—price collectors, do data collection and for this purpose specially formed questionnaires are used for this purpose, adapted to each enterprise. The services that each enterprise provides are pre-printed in questionnaires and the disposal prices of these services are requested, at the reference quarter. The collection of prices is done with the following ways:

- with personal visits of price collectors to the enterprises
- via telephone contacts
- via fax
- via e-mail.

Missing responses are requested by telephone contacts, faxes, e-mails and personal visits of interviewers.

20.4 Data validation

Data is validated through regular checks. Data editing contains the continuous study of data reported from respondents with the aim of identifying errors, especially those that have significant influence on the results. After identifying errors, further investigation takes place in collaboration with the enterprise in order to determine the erratic data as that. Moreover, through editing and validating procedure, other checks are performed, such as checks for completeness, checks that values are within given ranges and that values for related variables are coherent. The data editing and validation takes place either during or after data entry. The responses are compared to the responses of previous quarters and inconsistencies or major deviations lead to closer investigation.

20.5 Data compilation

The indices are Laspeyres type with weights based on turnover information at 6-digit level that are produced from the specific structural survey of the year 2010.

In the case of postal and courier services, as it was stated, two subindices, a B2B and a B2C and then the overall index as a weighted average of the above two indices. The indices are constructed with successive aggregations from lower to higher levels in which every aggregation level uses the arithmetic mean of indices at the lowest level duly weighted.

The SPPI indices in any industry are 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 general index of the current period (quarter) t, at the highest level of aggregation,

$R_i^{(t)}$, is the total index of grouping level i during the current period (quarter) 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 = the weighting coefficient of grouping level i , (from the turnover of every level i during the base period 0),

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

t = current period (quarter or year)

where: p_i^0 and q_i^0 are the price and quantity of the product-service (of businesses involved in weighting) in the lowest grouping level i in base period 0, respectively,

with: $p_i^0 \times q_i^0$ = the turnover of each subcategory i , in base period 0 .

and the: $\sum_{i=1}^n p_i^0 \times q_i^0$ = the turnover in the total level of completion of each subcategory i , in base period 0 .

The successive phases of grouping from the lower to the higher level classifications are: products-services, sub-categories (6-digit level), categories (5-digit level), activities or classes (4-digit level), groups (3-digit level), divisions (2-digit level), B2B and B2C indicators, overall index.

It is also possible to have a split of some 6-digit levels in 7-digit levels, due mainly to the destination of services in domestic and external markets.

The total index of each subcategory i , is calculated as weighted mean:

$$R_i^{(t)} = \sum_{j=1}^k w_{ij} R_{ij}^{(t)}, \text{ where: } \sum_{j=1}^k w_{ij} = 1,$$

w_{ij} is the j company's turnover in the subcategory i and $R_{ij}^{(t)}$ is the index of company j in the subcategory i , with $j = 1, 2, \dots, k$, companies.

The calculation of the index $R_{ij}^{(t)}$, is done using the arithmetic mean of the relative prices of the m varieties of each product-service r , in the subcategory i , in j companies.

Then:

$$R_{ij}^{(t)} = \frac{1}{N_r} \sum_{m=1}^{N_r} \left(\frac{p_{rm}^{(t)}}{p_{rm}^{(0)}} * 100 \right),$$

where: N_r , is the number of varieties m (when exist in j companies), of the product-service r , from all sources of price collection, $m=1, 2, 3, \dots, N_r$,

$p_{rm}^{(t)}$, is the price of m variety of the product-service r , the current period t ,

$p_{rm}^{(0)}$, is the price of m variety of the product-service r , in the base period 0 .

The calculation of the annual SPPI is done using the arithmetic mean of quarterly SPPI in every sort of industry of NACE Rev. 2.

20.6 Adjustment

No statistical procedures are used for the adjustment – correction of the data. No seasonal adjustment is made for the services producer price indices.

21. Comment

[Top](#)

None