

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

**Country:** Greece

**Compiling agency:** ELSTAT

**Domain name:** Turnover Indices for Specific Activities of the Services Sector

### ELSTAT metadata

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### 1. Contact

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1.1 Contact organisation	Hellenic Statistical Authority (ELSTAT)
1.2 Contact organisation unit	Business Statistics Division Section of Trade and Services Indices
1.3 Contact name	Konstantinos Paschalidis
1.4 Contact person function	Employee of Section of Trade and Services Indices
1.5 Contact mail address	46 Pireos & Eponiton str. 18510, Piraeus Greece
1.6 Contact email address	<a href="mailto:k.paschalidis@statistics.gr">k.paschalidis@statistics.gr</a>
1.7 Contact phone number	(+30) 213 135 2713
1.8 Contact fax number	(+30) 213 135 2714

## 2. Metadata update

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2.1 Metadata last certified	15/7/2021
2.2 Metadata last posted	15/7/2021
2.3 Metadata last update	15/7/2021

## 3. Statistical presentation

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### 3.1 Data description

The Turnover Indices for Specific Activities of the Services Sector refer to the whole country and they cover the divisions **53, 58, 61, 62, 63, 69, 70.2, 71, 73, 74, 78, 80, 81, 81.2 and 82** of economic activity, according to NACE Rev.2 (Statistical Classification of Economic Activities in the European Community).

For the compilation of the indices, turnover data are collected quarterly from a sample of companies with economic activity in the above sectors. The indices are compiled quarterly for each division, with working-day adjustment (actual number of working days).

### 3.2 Classification system

The statistical classification of economic activities NACE Rev.2 is applied, in accordance with Regulation (EC) No 1893/2006 of the Council and the European Parliament.

### 3.3 Sector coverage

The Turnover Indices for Specific Activities of the Services Sector are compiled as individual indices, and in accordance with the new NACE Rev.2 classification they cover the following divisions and the specific activities for each division:

**Division 53:** Postal and courier activities. The following 3-digits groups are covered:

- 53.1: Postal activities under universal service obligation
- 53.2: Other postal and courier activities

**Division 58:** Publishing activities. The following 3-digits groups are covered:

- 58.1: Publishing of books, periodicals and other publishing activities
- 58.2: Software publishing

**Division 61:** Telecommunications. The following 3-digits groups are covered:

- 61.1: Wired telecommunications activities
- 61.2: Wireless telecommunications activities
- 61.3: Satellite telecommunications activities
- 61.9: Other telecommunications activities

**Division 62:** Computer programming, consultancy and related activities

**Division 63:** Information service activities. The following 3-digits groups are covered:

- 63.1: Data processing, hosting and related activities; web portals
- 63.9: Other information service activities

**Division 69:** Legal and accounting activities. The following 3-digits groups are covered:

- 69.1: Legal activities
- 69.2: Accounting, bookkeeping and auditing activities; tax consultancy

**Division 70.2:** Management consultancy activities. The following 4-digits classes are covered:

- 70.21: Public relations and communication activities
- 70.22: Business and other management consultancy activities

**Division 71:** Architectural and engineering activities; technical testing and analysis. The following 3-digits groups

are covered:

- 71.1: Architectural and engineering activities and related technical consultancy
- 71.2: Technical testing and analysis

**Division 73:** Advertising and market research. The following 3-digits groups are covered:

- 73.1: Advertising
- 73.2: Market research and public opinion polling

**Division 74:** Other professional, scientific and technical activities. The following 3-digits groups are covered:

- 74.1: Specialized design activities
- 74.2: Photographic activities
- 74.3: Translation and interpretation activities
- 74.9: Other professional, scientific and technical activities n.e.c.

**Division 78:** Employment activities. The following 3-digits groups are covered:

- 78.1: Activities of employment placement agencies
- 78.2: Temporary employment agency activities
- 78.3: Other human resources provision

**Division 80:** Security and investigation activities. The following 3-digits groups are covered:

- 80.1: Private security activities
- 80.2: Security systems service activities
- 80.3: Investigation activities

**Division 81:** Services to buildings and landscape activities. The following 3-digits groups are covered:

- 81.1: Combined facilities support activities
- 81.2: Cleaning activities
- 81.3: Landscape service activities

In particular, the Turnover Index is compiled and published for 3-digit group 81.2. The following 4-digits classes are covered:

- 81.21: General cleaning of buildings
- 81.22: Other building and industrial cleaning activities
- 81.29: Other cleaning activities

**Division 82:** Office administrative, office support and other business support activities. The following 3-digits groups are covered:

- 82.1: Office administrative and support activities
- 82.2: Activities of call centers
- 82.3: Organization of conventions and trade shows
- 82.9: Business support service activities n.e.c.

### 3.4 Statistical concepts and definitions

The Turnover Indices for Specific Activities of the Services Sector are indices of the enterprise's economic cycle showing the evolution of the services market. Their purpose is to measure the activity of the services sectors in value terms. The turnover is calculated without VAT and includes the total amounts invoiced by the enterprise during the reference period (quarter). The following definitions are used, in accordance with Commission Regulation (EC) No 1503/2006 on the implementation of Council Regulation (EC) No 1165/98 "concerning short-term statistics":

*Turnover comprises the totals invoiced by the observation unit during the reference period, which correspond to sales of goods or services supplied to third parties. It also includes any other charges (transport, packaging, etc.) charged to the customer, even if these expenses are listed separately in the invoice.*

*Turnover does not include VAT and other similar deductible taxes directly linked to turnover, as well as all duties and taxes on the services invoiced by the enterprise. Price reductions and discounts, as well as the value of returned packaging must be deducted. Price reductions, rebates and bonuses conceded later to clients, for example at the end of the year, are not taken into account. Income classified as other operating income, financial income and extraordinary income in company accounts are excluded from turnover.*

According to this definition, the following items are mainly included:

- ◆ sales of manufactured products;
- ◆ sales of products manufactured by subcontractors;
- ◆ sales of goods purchased for resale in the same condition as received;
- ◆ invoiced services provided;
- ◆ sales of by-products;
- ◆ invoiced charges for packaging and transport;
- ◆ hours worked invoiced to third parties for labour-only subcontracting;
- ◆ invoiced mounting, installation and repair services;
- ◆ invoiced instalments (stage payments);
- ◆ invoiced software development and software licenses;
- ◆ sales of supplied electric power, gas, heat, steam and water;
- ◆ sales of waste and scrap materials;
- ◆ subsidies on products.

Depending on the treatment of the income classified as 'other operating income, financial income and extraordinary income' in the company accounts, the following items are generally not included:

- ◆ VAT and other similar deductible taxes directly linked to turnover, as well as all duties and taxes on the goods or services invoiced by the unit;
- ◆ commissions;
- ◆ leases and rentals;
- ◆ leases for own production units and machines if used by third parties;
- ◆ leases of company-owned buildings;
- ◆ income from license fees;
- ◆ income from staff facilities (for example from a factory canteen);
- ◆ the supply of products and services within the observation unit;
- ◆ sales of own land and fixed assets;
- ◆ sales or leases of own properties;
- ◆ sales of shares;
- ◆ income from interest and dividends;
- ◆ other extraordinary income.

The above items can be included if they generate turnover for the observation unit's main field of activity.

### 3.5 Statistical unit

The research unit (observation unit) used for the collection of the survey data is the business.

### 3.6 Statistical population

Concerning the survey of the Turnover Indices for Specific Activities of the Services Sector for the abovementioned divisions of the NACE Rev.2, the population of enterprises is the units with annual turnover in 2015 equal or higher than:

- 50,000 euro for division 74,
- 75,000 euro for divisions 69 & 71,
- 100,000 euro for divisions 63, 70.2, 81 & 81.2
- 300,000 euro for divisions 58, 62, 73, 78 & 82,
- 400,000 euro for division 80,
- 29,500,000 euro for division 53 and
- 315,000,000 euro for division 61.

The above thresholds are selected so that the total turnover of the enterprises included in the reference population of each division represents about 70% of the total turnover of the division. According to the Business Register of ELSTAT with reference year 2015, the population is 12,857 enterprises.

### 3.7 Reference area

The Indices cover the entire Greece, as data are collected by enterprises established in all regions of the country. There is not any information to distinguish turnover from any activities produced outside the country and included in the data of the business.

### 3.8 Time coverage

The time series of the Turnover Indices for Specific Activities of the Services Sector (2015=100.0) is published quarterly, covering the period from 2000 onwards, with the exception of the index of division 81, that was published for first time in the 1<sup>st</sup> quarter 2016 (with base year 2015=100.0) and the published time series begins since the 1<sup>st</sup> quarter 2010.

### 3.9 Base period

Base year is the year 2015 (2015=100.0.)

## 4. Unit of measure

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Indices, quarter and annual rates of change (%).

## 5. Reference period

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The reference period is the quarter.

## 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>

The legal basis for the index in Transport sector is the Council Regulation No 1165/98 of 19<sup>th</sup> May 1998 concerning short-term statistics (STS) as amended by the Regulation (EC) No 1158/2005 of the European Parliament and of the Council of 6<sup>th</sup> July 2005 concerning short-term statistics (STS).

The definitions of short-term statistics variables are laid down in Commission Regulation No 1503/2006 of 28<sup>th</sup> September 2006.

## 6.2 Data sharing

The Turnover Indices for divisions of Services Sections are transmitted to Eurostat according to the Council Regulation No 1165/98 concerning short-term statistics as amended by the Regulation (EC) No 1158/2005.

## 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>

### 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

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### 8.1 Release calendar

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

### 8.2 Release calendar access

The release calendar is distributed to the press and is available free of charge to all interested parties. The calendar is also available on the official website of ELSTAT under the item “Releases Calendar” ([www.statistics.gr/en/calendar](http://www.statistics.gr/en/calendar)).

### 8.3 User access

In compliance with the Community’s legal framework and the “The European Statistics Code of Practice”, ELSTAT disseminates national statistics on its website, with respect to the professional independence, with objectivity, professionalism and transparency, where all users are treated equitably. In this content, data are released simultaneously to all interested parties and users through the Press Release on the Turnover Indices for Specific Activities of the Services Sector, which is posted on the website of ELSTAT ([www.statistics.gr/en/statistics/-/publication/DKT54/-](http://www.statistics.gr/en/statistics/-/publication/DKT54/-)), according to the Release Calendar. The 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 in any way.

## 9. Frequency of dissemination

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The Turnover Indices for Specific Activities of the Services Sector are produced and disseminated quarterly.

## 10. Accessibility and clarity

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### 10.1 News release

The Turnover Indices for Specific Activities of the Services Sector are released on a quarterly basis in a standardized press release, within specified deadlines, 75 days after the end of the data reference quarter at 12:00. The Press Release presents the recently calculated indices available in both Greek and English language. The Press Release can be sent, mainly by e-mail, to the press and any other users or parties interested in the indices free of charge. It can be reached easily by the website of ELSTAT: <http://www.statistics.gr/en/statistics/-/publication/DKT54/->.

On the Press Release, the Turnover Indices for Specific Activities of the Services Sector are reported as follows:

- ◆ indices with base year 2015=100.0;
- ◆ percentage changes (rates) of quarter compared with the previous quarter and
- ◆ percentage changes (rates) of quarter compared with the same quarter of previous year.

### 10.2 Publications

The Turnover Indices for Specific Activities of the Services Sector, except of the quarterly Press Release, are also included in publication of "Greek Economy", with quarterly and annual average indices in two-digit level of the economic activity of Nace Rev.2, available in the link: <http://www.statistics.gr/en/the-greek-economy>.

### 10.3 On-line database

There is no on-line database for the Turnover Indices for Specific Activities of the Services Sector.

#### 10.3.1 Data tables - consultations

Users' consultation regarding the survey on the index in Turnover Indices for Specific Activities of the Services Sector amounts to 28,523 webpage hits for the year 2020.

### 10.4 Micro-data access

Data are available after submitting a request to ELSTAT, Division of Statistical Information and Publications, Pireos 46 & Eponiton, 18510, Piraeus (τηλ. (+30) 213 135 2022, Fax: (+30) 213 135 2312, e-mail: [data.dissem@statistics.gr](mailto:data.dissem@statistics.gr)

Access to microdata is only permitted under strict conditions and always with due process.

More information are available on the website link: [http://www.statistics.gr/en/scientific\\_provision\\_data](http://www.statistics.gr/en/scientific_provision_data).

### 10.5 Other

Users can be given data or further analysis, usually by fax or e-mail after submitting a request, describing the requested data to the Section of Statistical Dissemination (the Trade and Services Indices Section will be informed), at the following e-mail addresses: [data.dissem@statistics.gr](mailto:data.dissem@statistics.gr), [data.supply@statistics.gr](mailto:data.supply@statistics.gr) και [data.source@statistics.gr](mailto: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/DKT54/->

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

#### 10.5.1 Metadata – consultations

Users' consultation regarding the survey on the index in Turnover Indices for Specific Activities of the Services Sector amounts to 28,523 webpage hits for the year 2020.

It is not possible to distinguish data consultations and metadata consultations.

### 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:

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

The Methodology of Short-term Business Statistics, contains a comprehensive set of recommendations on the compilation of the STS statistics.

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

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

The metadata for the compilation of Turnover Indices for Specific Activities of the Services Sector are available on the website of ELSTAT ([www.statistics.gr/en/statistics/-/publication/DKT54/-](http://www.statistics.gr/en/statistics/-/publication/DKT54/-)). Therefore, the metadata completeness rates amounts to 100%.

#### **10.7 Quality documentation**

A concise oriented for users quality report is available on the website: [www.statistics.gr/en/statistics/-/publication/DKT54/-](http://www.statistics.gr/en/statistics/-/publication/DKT54/-).

## **11. Quality management**

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### **11.1 Quality assurance**

The Hellenic Statistical Authority (ELSTAT) aims to assure and improve the quality of any produced statistics and maintain the confidence of users to them. This can be achieved by the application of "Quality Policy of ELSTAT", which is available on the link <http://www.statistics.gr/en/policies>. Quality control and data validation are carried out throughout the whole process of the indices compilation, specifically from data collection to the final calculation of the indices.

First of all, efficiently trained and experienced staff is utilized in all stages of the indices compilation, such as data collection, which includes communication with companies, initial checks, data entry and the final verification, which is conducted after the calculation of the indices. This practice offers to personnel the opportunity for a comprehensive and enduring image of the companies under their responsibility.

The data are validated either before, or after their admission, using logical checks. Data processing includes proper research in order to identify possible errors and eventually correct them. After the identification of possible errors, further investigation is conducted in collaboration with the enterprise, in order to be confirmed that it is a true error or an unusual price, while data are checked for completeness, accuracy and consistency of the correlating variables.

For the needs of indices calculation, specialized software is necessary, demonstrating automated procedures "routines" for all necessary calculations, eliminating any errors to the final results. Nevertheless, even during this stage, consistency checks are carried out to the final results, mainly by comparing the change rates of each index.

### **11.2 Quality assessment**

The Turnover Indices for Specific Activities of the Services Sector are considered to be reliable and sufficiently accurate indices, as:

- a. the concepts, definitions, and methodology applied in compilation of the Turnover Indices follow European and international standards and guidelines,
- b. the accuracy of data used is accomplished by quality controls for their validation and
- c. the indices are compiled since the year 2006 and therefore experience and know-how to deal with enterprises data has been acquired.

## **12. Relevance**

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### **12.1 User needs**

The Turnover Indices for Specific Activities of the Services Sector meet national needs, as well as needs of European and other users. The main national users are the government, other public agencies, the Central Bank of Greece, other Hellenic banks, Hellenic Confederation of Trade and Enterprise (ESSE) several financial institutions, economic analysts, media and public, while at the international level, the main user is Eurostat and other international

organisations (ECB, IMF, OECD etc).

The users' needs vary. For the domestic market, indices are used as a tool to provide useful information for the evolution of the services market, in order to define government economic policy and to facilitate business or other decision-making. At a European level, there is a need to provide completely comparable statistics, in order to define European economic policy.

### 12.2 User satisfaction

The users' needs are monitored on a regular basis in order to secure the satisfaction level. Moreover, ELSTAT conducts a survey, in order to monitor the satisfaction of each user every six months. Further information concerning the results of Users' Satisfaction Survey is available at the following link: [www.statistics.gr/en/user-satisfaction-survey](http://www.statistics.gr/en/user-satisfaction-survey).

Furthermore, the Hellenic Statistical Authority operates a Users Conference annually, in which representatives from institutions of private and public sector, as well as representatives from educational and research institutions take part in. These conferences provide to ELSTAT the opportunity to collect comments and further suggestions from users relative to the dissemination and the accessibility of statistical information and the gaps in the production of statistics. More information about conference is available at the link [www.statistics.gr/en/user-conference](http://www.statistics.gr/en/user-conference).

### 12.3 Data completeness

The compilation of the Turnover Indices for Specific Activities of the Services Sector is in full compliance with the relevant European Regulations.

## 13. Accuracy and reliability

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### 13.1 Overall accuracy

The accuracy of indices is influenced by: a) sampling errors and b) non-sampling errors. Sampling errors occur due to the fact that for the indices compilation, the whole target population of enterprises is not investigated, but a sample of them is used instead. Non-sampling errors of indices refer mainly to data errors and non-response errors of the sample enterprises. Measurement errors during data collection are identified by quality checks and then they are corrected. Regarding non-response errors, every effort is made so as the units that have not responded to provide the requested data.

### 13.2 Sampling error

The survey of the indices are sampled surveys and therefore the estimates in every index in Divisions show sampling errors.

The sampling errors, expressed as coefficient of variation (quarterly change %) for the 3<sup>rd</sup> quarter 2020 is shown:

#### 3<sup>rd</sup> quarter Coefficient of Variation

Divisions	% CV RATIO
58	4,3%
62	6,5%
63	9,1%
69	5,4%
70	6,4%
71	4,6%
73	4,2%
74	6,8%
78	1,6%
80	5,9%
81	2,9%
82	1,1%

The sampling error of the divisions: 53 and 61 is nought as, the surveillance of their financial turnover is by census.

### 13.3 Non-sampling error

Non-sampling errors are possible to appear as described analytically below. However, every effort is focused on detection and correction of errors, as well as with the revision of data where necessary.

#### a. Unit non – response

The non-response of enterprises is treated with telephone contacting, reminders via fax or e-mail and personal visits to businesses in order to achieve the collection of the requested information or the best estimation when data are not possible. The cases, in which the companies have not responded despite all efforts, are dealt with estimations based on administrative data and previous year data, taking into account the evolution of the enterprise or market division of economic activity.

#### b. Item non - response

Non response to a demanded item is treated with telephone or e-mail communication. Administrative data are also taken into account for validation or estimation.

#### 13.3.1 Coverage error

##### 13.3.1.1 Over-coverage – rate

The percentage of closed and out-of-scope companies is less than 5% of the sample, which derived from the ELSTAT Business Register, on which the design of the survey was based.

##### 13.3.1.2 Common units – proportion

The percentage of units covered by both the survey and administrative sources, relative to the total number of units surveyed, is approximately 93%.

#### 13.3.2 Measurement error

Some measurement errors are observed, such as errors in reported data by enterprises surveyed. These errors are usually traced easily by making crosschecks with reported data in the previous periods and are corrected after telephone or e-mail contacting.

#### 13.3.3 Non response error

The weighted variable used is turnover where the size-weighted response rate 3<sup>rd</sup> quarter 2020 for each division is as follows:

<u>Divisions</u>	<u>Rrsw%</u>
53	100.00
58	100.00
61	100.00
62	100.00
63	100.00
70	100.00
71	100.00
73	100.00
74	100.00
78	100.00
80	100.00
81	100.00
82	100.00

In case of non-response, the surveyed enterprise is contacted by telephone, or is sent a reminder by fax or e-mail.

#### 13.3.4 Processing error

After the collection of data, the processing is made using a specific software program, which ensures the data correctness in a high level in various stages of processing, from data entry to the compilation of the Turnover Indices. Additionally, the conduction of logical controls and the comparison of the corresponding annual changes ensure tracking and correction of every error of this kind.

#### 13.3.5 Model assumption error

No model is used for the compilation of the index.

## 14. Timeliness and punctuality

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<b>14.1 Timeliness</b>
The Turnover Indices for Specific Activities of the Services Sector are published through a press release 72-75 days after the end of the reference quarter.
<b>14.2 Punctuality</b>
The Turnover Indices for Specific Activities of the Services Sector are published on the pre-announced release dates.

<b>15. Coherence and comparability</b>	<a href="#">Top</a>
<b>15.1 Comparability - geographical</b>	
The STS Regulation and the STS methodological guidelines are applied for the compilation of the Indices. This fact ensures a good comparability with the European and national indices, taking into account the special conditions that apply to each country which may dictate minor methodological deviations.	
<b><u>15.1.1 Asymmetry for mirror flows statistics – coefficient</u></b>	
There are no mirror flows statistics among EU Member States in the Turnover Indices for Specific Activities of the Services Sector.	
<b>15.2 Comparability over time</b>	
The Turnover Indices time series, with base year 2015=100.0 are available since 1 <sup>st</sup> quarter 2000 (with the exception of the index of the division 81, whose time series starts from the 1 <sup>st</sup> quarter 2010) and is comparable over time.	
<b>15.3 Coherence cross-domain</b>	
<b><u>15.3.1 Coherence – sub annual and annual statistics</u></b>	
Regular crosschecks are made on the basis of comparisons with the results of other surveys, such as with the results of the Annual Structural Business Survey (SBS) as soon as they become available and there is a consistency in the trend of the indices. The deviations observed are due to the fact that the quarterly surveys of Turnover Indices keep constant the number of the monitored companies of the sample of the base year (2015 = 100) in the sample reductions, while the SBS uses a different number of companies each year. In addition, the survey of Turnover Indices is quarterly and results are announced no later than 75 days after the end of the surveyed quarter, while SBS is annual and results are announced no later than 18 months after the end of the reference year, therefore surveyed units have finalized their financial results for the reference year.	
<b><u>15.3.2 Coherence – National Accounts</u></b>	
The Turnover Indices for Specific Activities of the Services Sector are available to the Division of National Accounts for their annual temporary estimations and the compilation of the quarterly National Accounts. Therefore, the rate of change of the index is coherent with the corresponding rate of change of GDP.	
<b>15.4 Coherence – internal</b>	
The estimation of the Indices has a high internal coherence, as a single database is used.	
<b>16. Cost and burden</b>	<a href="#">Top</a>
a) Regarding the staff of ELSTAT that is involved in the compilation of the index, the annual cost, in working hours in 2020, amounts to 1,927 hours.	
b) With regard to the surveyed enterprises, the average annual charge in working hours required to provide a response in 2020, is about 16.3 minutes per enterprise.	

<b>17. Data revision</b>	<a href="#">Top</a>
<b>17.1 Revision policy</b>	
The index is published 72-75 days after the end of the reference quarter. Moreover, in accordance with the	

requirements of the Council Regulation (EC) No 1165/98 concerning short-term statistics, the 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 revision of the base year, the renewal of the sample of the enterprises and the implementation of new weighting scheme.

The revision Policy of ELSTAT is implemented which is available at the following link:

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

## 17.2 Revision practice

Data are provisional when first released and become final as soon as all data collected become definite. More specifically, the data released for the most recent quarter is provisional and they are published along with revised data of the previous quarter. Quarterly revision is made due to late reporting of respondents.

## 18. Statistical processing

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### 18.1 Source data

For the compilation of the Turnover Indices for Specific Activities of the Services Sector with base year: 2015=100.0 a representative sample of 1,076 enterprises was selected, that belonging to groups 53, 58, 61, 62, 63, 69, 70.2, 71, 73, 74, 78, 80, 81, 81.2 and 82 of the economic activities of the statistical classification NACE Rev.2.

The enterprises of the sample were selected on the basis of one-stage stratified random sampling. For each of the 2-digit branches of economic activity the surveyed enterprises were further stratified into size classes (stratums) on the basis of their annual turnover for the year 2015, as follows:

<u>Division</u>	<u>Class (stratum)</u>	<u>Low level</u>	<u>Up level</u>	<u>Division</u>	<u>Class (stratum)</u>	<u>Low level</u>	<u>Up level</u>
				71	7	2,640,000	9,999,999
58	1	300,000	574,999	71	8	10,000,000	-
58	2	575,000	974,999	73	1	300,000	544,999
58	3	975,000	1,649,999	73	2	545,000	999,999
58	4	1,650,000	2,724,999	73	3	1,000,000	1,649,999
58	5	2,725,000	4,059,999	73	4	1,650,000	2,599,999
58	6	4,060,000	6,999,999	73	5	2,600,000	4,299,999
58	7	7,000,000	9,999,999	73	6	4,300,000	6,799,999
58	8	10,000,000	-	73	7	6,800,000	9,999,999
				73	8	10,000,000	19,999,999
62	1	300,000	436,999	73	9	20,000,000	-
62	2	437,000	659,999	74	1	50,000	93,999
62	3	660,000	964,999	74	2	94,000	169,999
62	4	965,000	1,414,999	74	3	170,000	319,999
62	5	1,415,000	2,074,999	74	4	320,000	629,999
62	6	2,075,000	3,574,999	74	5	630,000	999,999
62	7	3,575,000	6,257,999	74	7	1,000,000	1,559,999
62	8	6,258,000	19,999,999	74	8	1,560,000	2,259,999
62	9	20,000,000	-	74	9	2,260,000	-
63	1	100,000	164,999	78	1	300,000	599,999
63	2	165,000	264,999	78	2	600,000	1,299,999
63	3	265,000	454,999	78	3	1,300,000	2,699,999

63	4	455,000	774,999	78	4	2,700,000	5,299,999
63	5	775,000	1,249,999	78	5	5,300,000	9,999,999
63	6	1,250,000	2,499,999	78	6	10,000,000	-
63	7	2,500,000	4,349,999	80	1	400,000	609,999
63	8	4,350,000	-	80	2	610,000	1,019,999
69	1	75,000	119,999	80	3	1,020,000	1,569,999
69	2	120,000	214,999	80	4	1,570,000	2,599,999
69	3	215,000	419,999	80	5	2,600,000	3,659,999
69	4	420,000	869,999	80	6	3,660,000	4,759,999
69	5	870,000	1,559,999	80	7	4,760,000	7,369,999
69	6	1,560,000	3,114,999	80	8	7,370,000	-
69	7	3,115,000	9,999,999	81	1	100,000	157,999
69	8	10,000,000	-	81	2	158,000	244,999
702	1	100,000	189,999	81	3	245,000	369,999
702	2	190,000	344,999	81	4	370,000	634,999
702	3	345,000	634,999	81	5	635,000	1,019,999
702	4	635,000	1,119,999	81	6	1,020,000	1,604,999
702	5	1,120,000	1,939,999	81	7	1,605,000	2,869,999
702	6	1,940,000	3,699,999	81	8	2,870,000	6,999,999
702	7	3,700,000	7,759,999	81	9	7,000,000	-
702	8	7,760,000	19,999,999	82	1	300,000	469,999
702	9	20,000,000	-	82	2	470,000	709,999
71	1	75,000	107,999	82	3	710,000	1,174,999
71	2	108,000	179,999	82	4	1,175,000	2,049,999
71	3	180,000	319,999	82	5	2,050,000	4,084,999
71	4	320,000	584,999	82	6	4,085,000	6,664,999
71	5	585,000	1,159,999	82	7	6,665,000	12,704,999
71	6	1,160,000	2,639,999	82	8	12,705,000	-

In divisions: 53 and 61 the data collection from enterprises is by census.

## 18.2 Frequency of data collection

Data are collected on a quarter basis.

## 18.3 Data collection

Data are collected through a specially designed questionnaire. The questionnaires are sent by post and they are collected by means of the following ways:

- post
- fax
- e-mail

In case of non-response, the surveyed enterprise is contacted by telephone or is sent a reminder by fax or e-mail. Also, the administrative data of the enterprises are collected.

## 18.4 Data validation

At the national level, data processing includes checking data collected by businesses for the purpose of error detection and correction. Given the difficulty of identifying all the errors, the aim is to identify at least those with significant effect on the results and to achieve a large improvement by correcting them. Logical checks are performed to detect any abnormal values and to investigate further whether they are incorrect or outliers.

While data processing, along with completeness, it is checked whether the relevant changes (annual or quarterly) are

reasonably consistent. In more detail, the data are compared with those of the preceding quarters and when large deviations (outside a predetermined range) are detected, they are investigated. The existence of administrative data facilitates the investigation and crosscheck procedures.

Eurostat also conducts validation checks on the national indicators transmitted by the Member States and contacts the reference country, where necessary, to verify the correctness of the extreme values.

### 18.5 Data compilation

The Turnover Indices for Specific Activities of the Services Sector are compiled on the basis of the chain-linking method. Firstly, the moving-base index was calculated, by comparing the “estimated” turnover value  $\hat{Y}_q$  of the data of the sample enterprises of the current quarter with the corresponding value  $\hat{Y}_{q-1}$  of the previous quarter. The fixed-base index at each two-digit level of economic activity of the current quarter is calculated by multiplying the moving-base index by the fixed-base index of the previous quarter.

The estimate of turnover value in current month is based on a reduction in all relevant data from the enterprises sample. This is achieved by multiplying the monthly turnover value of each enterprise, with a suitable reduction factor and then summing up of the products. This factor, for each stratum  $h$  (intersection of activity and class of enterprises turnover size) is defined as the quotient of the total number of  $N_h$  enterprises, by the number of enterprises of the  $n_h$  sample, which corresponded.

The reduction factor  $a_h$  for each enterprise in stratum (class)  $h$  is given by the equation:

$$\alpha_h = \frac{N_h}{n_h}$$

where

$N_h$  is the total number of enterprises in stratum  $h$

$n_h$  is the number of enterprises that responded in stratum  $h$  of the sample.

The estimate  $\hat{Y}_q$  of the turnover value  $Y_q$  for the current quarter  $q$ , in any two-digit division of economic activity, is given by the equation:

$$\hat{Y}_q = \sum_{h=1}^l \alpha_h \sum_{i=1}^{n_h} y_{qhi}$$

where  $y_{qhi}$  is the turnover value for the current quarter  $q$  of the  $i^{\text{th}}$  enterprise in stratum  $h=1,2,3,\dots,l$ , and  $l$ , the number of strata in each two-digit level of economic activity.

The fixed-base index for each two-digit level of economic activity for the current quarter  $q$ , is thus obtained by multiplying the moving-base index by the fixed-base index of the previous quarter.

The above is a consequence of the types:

$$I_{Y_q} = I_{q,q-1} * I_{Y_{q-1}} \text{ and}$$

$$I_{q,q-1} = \frac{\hat{Y}_q}{\hat{Y}_{q-1}}$$

Where

$I_{q,q-1}$  is the moving-base index for the current quarter  $q$ , in relation to the previous quarter  $q-1$ ,

$I_{Y_q}$  is the fixed-base index for the current quarter  $q$ ,

$I_{Y_{q-1}}$  is the fixed-base index for the previous quarter  $q-1$ , and

$\hat{Y}_q, \hat{Y}_{q-1}$  are the corresponding turnover estimates for the current and previous quarters.

The time series of the indices was revised with base year 2015=100,0 by multiplying the indices calculated with base year 2010=100,0 by the following weighting coefficient:  $\frac{100}{\bar{I}_{10}^{15}}$ , where:  $\bar{I}_{10}^{15}$ , is the average of the indices of the year 2015 with base year 2010=100.0.

#### **18.5.1 Imputation – rate**

Usually, imputed values are not used to substitute turnover values in the enterprises sample. However, in few cases, imputed prices are used, the percentage of which does not exceed 0.01%. The procedure for handling missing values is to estimate them (imputed values), based on the turnover of the enterprises in previous years, taking into account the evolution of the rate of changes of the value of turnover in the economic activity sector; the class of size of the enterprise and the trend of the administrative data of the enterprise.

#### **18.6 Adjustment**

The index is adjusted to the working days of the months of the quarters.

The indices are reduced to a typical quarter by multiplying the estimated turnover values by a specific correction factor according to the number of working days of each quarter. The typical quarter refers to the actual number of working days.

The correction factor  $c_t$  is obtained by dividing the average quarterly number of working days of the current year by

the number of working days of the surveyed quarter as follows:  $c_t = \frac{\bar{x}}{x_t}$

where:

$\bar{x}$ : the average quarterly number of working days, of the current year,

$x_t$ : the number of working days in quarter t.

These weighting coefficient are reviewed annually.

#### **18.6.1 Seasonal adjustment**

The indices are not seasonally adjusted.

### **19. Comment**

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None.