

Single Integrated Metadata Structure (SIMS v2.0)

Country: Greece

Compiling agency: ELSTAT

Domain name: Turnover index in Transport 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 Trade and Services Indices Section
1.3 Contact names	Argyro Dalli
1.4 Contact person function	Employee of Section
1.5 Contact mail address	46 Pireos & Eponiton, 185 10 Piraeus, Greece
1.6 Contact email address	a.ntalli@statistics.gr
1.7 Contact phone number	(+30) 213 135 2499

2. Metadata update

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2.1 Metadata last certified	2/6/2023
2.2 Metadata last posted	2/6/2023
2.3 Metadata last update	2/6/2023
3. Statistical presentation	Top
3.1 Data description	
The Turnover Indices in Transport Sector cover the whole country and are compiled for divisions 49-land transport and transport via pipelines, 50-water transport, 51-air transport, 52-warehousing and support activities for transportation and 79-travel agency, tour operator reservation services and related activities of NACE Rev.2 statistical classification.	
3.2 Classification system	
The NACE Rev.2 Statistical Classification of Economic Activities in the European Community is used for the STS indicators (in compliance with the Regulation EC-1893/2006).	
3.3 Sector coverage	
The Turnover Index in Transport Sector covers the whole country, for the activities of Section I of the statistical classification NACE Rev.2. It covers the divisions 49, 50, 51, 52 and 79.	
3.4 Statistical concepts and definitions	
<p>The turnover indices in Transport services are important business indicators which show the evolution of the services market. The objective of these indices is to calculate the activity of the surveyed sectors in value terms.</p> <p>Turnover comprises the totals invoiced by the observation unit during the reference period (quarter) and corresponds to the market sales of goods and services supplied to third parties. Any subsidies on goods or services are also included. Turnover excludes 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 observation unit. Income classified as other operating income, financial income and extraordinary income in company accounts is also excluded from turnover.</p>	
3.5 Statistical unit	
The sampling unit is the enterprise.	
3.6 Statistical population	
For the Turnover Index in Transport Sector (div.49, 50, 51, 52, 79) the population encompasses 10,065 enterprises from the Business Register of ELSTAT with annual turnover in year 2015, equal to or higher than 70,000 euros for division 49, equal to or higher than 830,000 euros for division 50, equal to or higher than 730,000 euros for division 52, equal to or higher than 380,000 euros for division 79 and by census (all the enterprises) for division 51 of Nace Rev.2.	
3.7 Reference area	
All regions of Greece.	
3.8 Time coverage	
The time series of the Transport sector with base year 2015=100.0 is being released on a quarterly basis from the first quarter of 2000 onwards.	
3.9 Base period	
The base year is the year 2015 (2015=100.0).	
4. Unit of measure	Top
Index, percentage changes (%) (quarterly and annual).	
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>

The legal framework concerning Eurostat legislation:

The legal basis for the index in Transport sector is the Council Regulation No 1165/98 of 19th 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 6th July 2005 concerning short-term statistics (STS). The definitions of short-term statistics variables are laid down in Commission Regulation No 1503/2006 of 28th September 2006.

In addition, it is the new Regulation (EU) No 2019/2152 of the European Parliament and of the Council on European business statistics. as well as Commission Implementing Regulation (EU) No 2020/1197 laying down technical specifications and arrangements pursuant to Regulation (EU) No 2019/2152.

6.2 Data sharing

The index in Transport sector is transmitted to Eurostat according to the Council Regulation No 1165/98 concerning short-term statistics as amended by the Regulation (EC) No 1158/2005, also by Regulation (EU) No 2019/2152 of the European Parliament and of the Council on European business statistics. as well as Commission Implementing Regulation (EU) No 2020/1197 laying down technical specifications and arrangements pursuant to Regulation (EU) No 2019/2152.

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

A release calendar is available on the website 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 the website of the ELSTAT (www.statistics.gr) under the link: "Announcements 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 are released simultaneously to all interested parties and users through the Announcement on the Turnover Index in Transport sector, which is posted on the website of ELSTAT (www.statistics.gr) and specifically under the link: <http://www.statistics.gr/en/statistics/-/publication/DKT48/>-according to the release calendar. This Announcement is also available by e-mail to all interested parties. In addition, data are transmitted to Eurostat on a predefined date, concomitantly with their national publication.

9. Frequency of dissemination

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The index in Transport sector is disseminated on a quarterly basis.

10. Accessibility and clarity

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10.1 Announcements

Every quarter, 63-67 days after the end of the reference quarter, at 12.00, an Announcement is published which presents the newly calculated Index in Transport sector in Greek and English. The Announcement is sent, free-of-charge, and mostly by email to the press and to other interested parties. It is also available on the website of ELSTAT:

<http://www.statistics.gr/en/statistics/-/publication/DKT48/-.>

10.2 Publications

Data of the index in Transport sector are used in several publications of ELSTAT such as specific publications:

- "The Greek Economy" (<http://www.statistics.gr/en/the-greek-economy>)
- "Greece in figures"(<http://www.statistics.gr/en/greece-in-figures>)

10.3 On-line database

Data of the index have not been published at the on-line database.

10.3.1 Data tables - consultations

Users' consultation regarding the survey on the index in Transport sector amounts to 4,625 webpages hits for the year 2022.

10.4 Micro-data access

Data are available after submitting a request to ELSTAT, Division of Statistical Information and Publications, Peiraios 46 & Eponiton, 18510, Piraeus, tel. (+30) 213 135 2022, e-mail: 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.

10.5 Other

Users can be given data or further analysis, usually by 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, data.supply@statistics.gr και 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/DKT48/>

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

10.5.1 Metadata – consultations

Users' consultation regarding the survey on the index in Transport sector amounts to 4,625 webpages hits for the year 2022.

It is not possible to distinguish between users' consultations on data tables and users' consultation on metadata.

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, included in:

<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

Metadata for the compilation of the index in Transport sector are available on the website of ELSTAT: <http://www.statistics.gr/en/statistics/-/publication/DKT48/>, so the completeness rate is 100%.

10.7 Quality documentation

A user oriented short quality report is available at the link:

<http://www.statistics.gr/en/statistics/-/publication/DKT48/>.

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 checks 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.

First of all, well-trained and experienced staff deals with all the stages of the compilation of the indices, that is: 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 long-standing experience with the enterprises under survey.

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 looked into, in cooperation with the enterprises, in order to confirm that it is an error or it is just an unusual value. At the same time, data are checked for completeness, accuracy and consistency of the correlating variables.

The index is 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 on comparing the percentage changes of the corresponding quarters.

11.2 Quality assessment

The Transport Index is considered to be a highly reliable index. It is an index that is being compiled in Greece since 2005, so the personnel have acquired a lot of experience in its compilation. Moreover, its concepts and methodology have been developed according to international standards and guidelines.

12. Relevance

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12.1 User needs

The index in Transport sector meets national needs and the needs of European users. Generally, the index provides statistical information necessary to improve the competitiveness and performance of the business community.

The main national users of the Index are the Government, other public agencies, the Central Bank of Greece, other Hellenic Banks and private researchers, etc., while at international level, the Index is used by Eurostat and other international Organizations (ECB, IMF, OECD) etc.

12.2 User satisfaction

a. User satisfaction survey:

ELSTAT conducts an annual user satisfaction survey. The comments on the media are positive. More information about the latest results of user research, for the annual periods per semester, is available in the Library Information Bulletin, on the website of ELSTAT (www.statistics.gr), "Products and Services" at the link:

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

b. Conference of statistical data users

According to its annual statistical program, ELSTAT has been conducting a user conference since 2010 on an annual basis, attended by representatives of private and public sector bodies, as well as educational and research institutions. Information about user conferences at the link:

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

12.3 Data Completeness

The compilation of The Turnover Index in Transport sector and the data provided are in line with the relevant EU Regulations.

13. Accuracy and reliability

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13.1 Overall accuracy

The sources of errors that affect the accuracy of the index are a) sampling errors and b) non-sampling errors.

Sampling errors are due to the fact that not all target population enterprises are surveyed to compile the index, but a sample of them. The size of the index's enterprises sample provides high-precision estimates for the general index, as well as for most categories of grouped sectors of economic activity.

The non-sample errors of the index mainly concern the data measurement errors and the non-response errors of the enterprises in the sample. The measurement errors made when collecting the data are detected by performing quality checks and then corrected. With regard to non-response errors, every effort is made to communicate by telephone or other communication with the enterprises that did not send data, in order to cooperate and provide the requested information.

Therefore, the overall accuracy of the index is generally considered high.

13.2 Sampling error

The research in Turnover index in Transport sector is sampled survey and therefore the estimates of every index in Divisions show sampling errors.

The sampling errors, expressed as coefficient of variation (CV quarterly change %) for the 3rd quarter 2022 is shown:

Divisions	CV (%)
49	4.0
50	1.8

52	3.3
79	6.3

No sampling error is calculated in division 51, as the collected data from enterprises is by census.

13.3 Non-sampling error

There are no errors, which have to do with inconsistent use of definitions. 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 the enterprises during the previous years and these errors are corrected after telephone communication with the accountants.

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 in Transport sector was designed.

13.3.1.1 Over-coverage – rate

No over-coverage errors are observed.

13.3.1.2 Common units – proportion

The same (common) sample of enterprises is used every quarter for the compilation of the index. The sample is revised when the base year changes and remains the same for as long as the base year is the same.

13.3.2 Measurement error

Any measurement errors during the process of data collection are detected by means of quality checks and are duly corrected.

13.3.3 Non response error

The weighted variable used is turnover where the size-weighed response rate 3rd quarter 2022 for each division is as follows:

Divisions	Rrs w (%)
49	100.00
50	100.00
51	100.00
52	100.00
79	100.00

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

13.3.4 Processing error

Processing errors are minimized because all the relevant tasks are performed by using a special software application and logical checks are performed.

13.3.5 Model assumption error

No model is used for the compilation of the Index.

14. Timeliness and punctuality

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14.1 Timeliness

The index is published 63-67 days after the end of the reference quarter.

14.2 Punctuality

The turnover Index in Transport sector 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 Index and the other national and European statistics, taking always into account any special conditions prevailing in each country, which 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 turnover Index in Transport sector.

15.2 Comparability over time

The time series of the index with base year 2015=100.0, which is available from January 2000 onwards, is considered fully comparable over time.

15.3 Coherence cross-domain

Regular controls are carried out on the basis of information from other surveys. The results of the index are compared with results from the SBS survey “Structural Business Survey on transport, storage and communications”.

15.3.1 Coherence – sub annual and annual statistics

Any small differences observed in the growth rates between the STS index and the turnover of the SBS survey “Structural Business Survey on transport, storage and communications” are mostly due to the fact that for the compilation of the index a common sample of enterprises is used for every quarter, which is updated when the Index is revised with a new base year, while in the SBS survey the sample of enterprises is updated on a yearly basis, except for the very big enterprises.

15.3.2 Coherence – National Accounts

The index is used for the computation of quarterly GDP data in Transport sector. Therefore, there is a coherence.

15.4 Coherence - internal

The estimates of the index among all the variables and definitions of the survey have a high internal coherence, as a single database is used and their calculation is done by the same method.

16. Cost and burden

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- a) Regarding the staff of ELSTAT that is involved in the compilation of the index, the annual cost, in working hours in 2022, amounts to 1,688 hours.
- b) With regard to the surveyed enterprises, the average annual charge in working hours required to provide a response in 2020, is 5 minutes per enterprise.

17. Data revision

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17.1 Revision policy

The index is published 63-67 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 latest revision of the index, with base year 2015=100.0, was completed in the 3rd quarter 2018.

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

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

17.2 Revision practice

The data are provisional according to the first announcement. The data are revised once, simultaneously with the publication of the next quarter. After this revision the data are considered final. This quarterly correction is made due to late reporting of some surveyed enterprises.

18. Statistical processing

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18.1 Source data

For the compilation of the Turnover Index in Transport Sector with base year: 2015=100.0, a representative sample of 440 enterprises was selected, that belonging to groups 49, 50, 51, 52 and 79 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 (strata) on the basis of their annual turnover for the year 2015, as follows:

Size classes on the basis of the annual turnover (in euros)

Division 49

1st class: 70,000 – 124,999.9
 2nd class: 125,000 – 254,999.9
 3rd class: 255,000 – 549,999.9
 4th class: 550,000 – 1,099,999.9
 5th class: 1,100,000 – 2,499,999.9
 6th class: 2,500,000 – 5,999,999.9
 7th class: 6,000,000 – 13,999,999.9
 8th class: 14,000,000 – 49,999,999.9
 9th class: 50,000,000 – and over

Division 50

1st class: 830,000 – 1,799,999.9
 2nd class: 1,800,000 – 4,199,999.9
 3rd class: 4,200,000 – 8,699,999.9
 4th class: 8,700,000 – 17,299,999.9
 5th class: 17,300,000 – 24,999,999.9
 6th class: 25,000,000 – 59,999,999
 7th class: 60,000,000 – and over

Size classes on the basis of the annual turnover (in euros)

Division 79

1st class: 380,000 – 899,999.9
 2nd class: 900,000 – 1,999,999.9
 3rd class: 2,000,000 – 3,599,999.9
 4th class: 3,600,000 – 6,299,999.9
 5th class: 6,300,000 – 11,499,999.9
 6th class: 11,500,000 – 29,999,999.9
 7th class: 30,000,000 – and over

Division 52

1st class: 730,000 – 1,799,999.9
 2nd class: 1,800,000 – 3,799,999.9
 3rd class: 3,800,000 – 7,899,999.9
 4th class: 7,900,000 – 13,999,999.9
 5th class: 14,000,000 – 28,699,999.9
 6th class: 28,700,000 – 44,999,999
 7th class: 45,000,000 – 89,999,999.9
 8th class: 90,000,000 – and over

In division 51 the collected data from enterprises is by census.

18.2 Frequency of data collection

Data are collected on a quartely basis.

18.3 Data collection

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

- post
- e-mail.

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

18.4 Data validation

Tabular data are validated through logical checks. During data processing, the data are checked in order to identify and duly correct any errors. Efforts are oriented towards detecting all errors that may have a major impact on the results. Once identified, they are further looked into, in cooperation with the enterprise, in order to confirm that it is a simple mistake or just an unusual value.

18.5 Data compilation

The Turnover Index in Transport Sector is 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 quarter 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 α_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 \hat{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^{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 very 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 index is seasonally adjusted.

19. Comment

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None.