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Country: Greece

Compiling agency: ELSTAT

Domain name: Turnover Indices in the Services Sector

ELSTAT metadata

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1. Contact Top	
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2. Metadata update

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2.1 Metadata last certified	19/03/2012
2.2 Metadata last posted	19/03/2012
2.3 Metadata last update	19/03/2012

3. Statistical presentation

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3.1 Data description

The Turnover Indices in the Services Sector cover the country as a whole. These indices are compiled on a quarterly basis, as individual indices and in conformity with the new NACE Rev. 2 classification they cover the following divisions and the specific activities for each division:

- Postal and courier activities (Division 53) include:
 - Postal activities under universal service obligation
 - Other postal and courier activities
- Publishing activities (Division 58) include:
 - Publishing of books, newspapers, periodicals, telephone and any other type of directories and other publishing activities including on line publications
 - Software publishing and publishing of computer games.
- Telecommunications (Division 61) include:
 - Wired telecommunications activities
 - Wireless telecommunications activities
 - Satellite telecommunications activities
 - Other telecommunications activities
- Computer programming, consultancy and related activities (Division 62) include:
 - Computer programming activities, hardware-software consultancy activities and related activities such as designing the structure and content of data bases, day to day management and operation of data processing facilities owned by third parties, hardware-software installation
- Data processing and information activities (Division 63) include:
 - Data processing, hosting and related activities, web portals
 - News agency activities and other information service activities
- Legal and accounting activities (Division 69) include:
 - Legal activities
 - Accounting, bookkeeping and auditing activities; tax consultancy
- Management consultancy activities (Division 70.2) include:
 - Business and other management consultancy activities
- Architectural and engineering activities and related technical consultancy activities (Division 71) include:
 - Architectural and engineering activities and related technical consultancy activities
 - Technical testing and analysis
- Advertising, market research and public opinion polling activities (Division 73) include:
 - Advertising
 - Market research and public opinion polling

- Other professional, scientific and technical activities (Division 74) include:
 - Specialised design activities (including the activities of graphic designers, decorators, fashion and exhibition stand designers)
 - Photographic activities, aerial photography
 - Translation and interpretation activities
 - Other professional, scientific and technical activities n.e.c. [including business brokerage and appraisal activities (excluding real estate brokers and appraisal services for insurance), the activities of artistic agents, the activities of consultants (excluding technical consultants and engineers) weather forecasting, placement of books services, etc.]
- Employment activities (Division 78) include:
 - Activities of employment placement agencies and artists employment agencies
 - Temporary employment agency activities
 - Other human resources provision and management
- Security and investigation activities (Division 80) include:
 - Security patrol, security guard and other protective activities
 - Installation of alarm systems, remote monitoring of electronic security and protection systems
 - Private detective activities

Cleaning activities (Division 81.2) include:

- General cleaning of buildings of all types, vehicles and other spaces, as well as disinfection and pest extermination activities
- Office administrative, office support and other business support activities (Division 82) include:
 - Secretarial support services, mailbox rental
 - Activities of call centres
 - Organisation of conventions and trade shows
 - Other business support service activities (including packaging activities, collection agency and credit reporting on the ratings of persons or businesses, the activities of self-employed auctioneers and meter readers, stenotype activities and document transcription services or issuing of driving licenses, etc.)

No geographical breakdown is made for the above data. Data is collected quarterly and is presented in the form of indices and growth rates. The indices are calculated quarterly for each one of the above activities, adjusted for working days and published as:

- Indices with base year : 2005=100.0
- A period on previous period growth rate
- A period on same period of previous year growth rate

3.2 Classification system

The statistical classification of economic activities **NACE Rev.2**, is applied, in conformity with Regulation (EC) 1893/2006 of the Council and the European Parliament.

3.3 Sector coverage

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

3.4 Statistical concepts and definitions

The Turnover Indices in the Services Sector are indices of the enterprise's economic cycle showing the evolution of the goods and services market

evolution of the goods and services market.

Their purpose is to measure in value terms the activity of the services sectors, which are surveyed. 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 588/2001 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 reporting unit is the enterprise.

3.6 Statistical population

The survey for the compilation of the Turnover Indices in the Services Sector for the abovementioned divisions of the NACE Rev. 2 was conducted on 2,535 services enterprises included in these divisions with an annual turnover equal to or higher than 600,000 Euros, according to the Business Register of the Ministry of Economy and Finance for the year 2005.

As the collection of the necessary statistical data from such a large number of enterprises was not considered feasible, a representative sample of **394** enterprises throughout the country was selected instead.

3.7 Reference area

All regions of Greece are covered

3.8 Time coverage

The time series of the Turnover Indices in the Services Sector (2005=100,0), are published on a quarterly basis, covering the period from 2000 onwards.

3.9 Base period

Base year : 2005=100.0

4. Unit of measure

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Indices

Percentage change on the same period of the previous year (rates)

Percentage change on the previous period (rates).

5. Reference period

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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 by article 90 paragraphs 8 and 9 of the Law 3842/2010 (Government Gazette No 58, Issue A): "*Restoration of fiscal justice, confrontation of tax evasion and other provisions*", by article 10 of the Law 3899/2010 (Government Gazette No 212, Issue A): "*Urgent measures for the implementation of the assistance program of the Greek Economy*", by article 45 of the Law 3943/2011 (Government Gazette No 66, Issue A): "*Combating tax evasion, staffing of auditing services and other provisions falling within the competence of the Ministry of Finance*", by article 22 paragraph 1 of the Law 3965/2011 (Government Gazette No 113, Issue A): "*Operations Reform of the Consignment and Loan Fund, Public Debt Management Agency, Public Enterprises and Government bodies, the establishment of the General Secretary of Public Property and other provisions*" and by article 51 of the Law 4021/2011 (Government Gazette No 218, Issue A): "*Enhanced measures for the supervision and restructuring of Credit Institutions – Regulation of issues of financial nature – Ratification of the European Financial Stability Facility (EFSF) Framework-Agreement and its amendments and other provisions.*"
- 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, 8, 9, 10, 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*”.

Additionally:

[Council Regulation No 1165/98 of 19 May 1998 concerning short-term statistics](#), amended by the [Regulation No 1158/2005 of 6 July 2005](#) concerning short-term statistics and by the [Regulation \(EC\) No 1893/2006 of 20 December 2006](#) establishing the statistical classification of economic activities NACE Revision 2.

The definitions of short-term statistics variables are laid down in [Commission Regulation No1503/2006](#) of 28 September 2006 implementing and amending Council Regulation N° 1165/98 of 19 May 1998 concerning short-term statistics as regards the **definition of variables**.

6.2 Data sharing

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 6, 7 and 8 of the Law 3832/2010, as amended by article 90 paragraph 8 of Law 3842/2010 and by article 10 of Law 3899/2010, as well as by article 8 of Law 2392/1996, which was brought back into force, in accordance with article 90 paragraph 8 of Law 3842/2010.

Furthermore, 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.

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.
- 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 recommend 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.

8. Release policy

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8.1 Release calendar

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 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 the ELSTAT (<http://www.statistics.gr>) under the item “Calendar of Press Releases”.

8.3 User access

No users or anyone else outside ELSTAT have prior access to the data before its general release. Data are released simultaneously to all interested parties and users with a 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 days of release. According to the release calendar data is transmitted to Eurostat at the same time as national publication.

9. Frequency of dissemination

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Turnover Indices in the Services Sector are produced and disseminated quarterly.

10. Dissemination format

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10.1 News release

Data concerning Turnover Indices in 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. The press release is also available on Elstat’s website : www.statistics.gr

10.2 Publications

The data are presented and published in the ELSTAT regular issues: the Monthly Statistical Bulletin, the Concise Statistical Yearbook and the Statistical Yearbook of Greece.

10.3 On-line database

None

10.4 Micro-data access

None

10.5 Other

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

11. Accessibility of documentation

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11.1 Documentation on methodology

The methodology of the Turnover Indices is based upon the [Methodology of Short-term Business Statistics, Interpretation and guidelines](#), 2006, which contains a comprehensive set of recommendations on the compilation of the STS statistics.

A special methodological paper is available on the ELSTAT website :www.statistics.gr, containing detailed information on the sources and the methodology used.

11.2 Quality documentation

12. Quality management

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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 indices, 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. Moreover, 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.

12.2 Quality assessment

Turnover Indices in the Services Sector are considered to be credible and sufficiently accurate indices.

13. Relevance

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13.1 User needs

The Turnover Indices in the Services Sector meet national needs and the needs of European Users. The main national users are the government, other public agencies, the Central Bank of Greece, other Hellenic banks, 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).

13.2 User satisfaction

Generally there is a smooth cooperation, through prompt response to users requests. Users comments are positive. Moreover, ELSTAT conducts a user satisfaction survey every six months. More information about the results of the survey for the period January – June 2010 is available on the Library Newsletter.

(http://www.statistics.gr/portal/page/portal/ESYE/BUCKET/General/library_news_letter.pdf)

13.3 Completeness

Data are in full compliance with the relevant European Regulations

14. Accuracy and reliability

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14.1 Overall accuracy

The accuracy of Turnover Indices in the Services Sector is generally considered to be high.

14.2 Sampling error

The method of single-stage stratified random sampling was used for the selection of the enterprises to be included in the sample. Sampling errors are <5%.

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. In order to further reduce this rate, direct communication with the enterprises is taking place in order to persuade them to provide the necessary data even in the form of some estimation. Non-response is treated by using results of previous periods along with the evolution of the enterprise and the branch. Efforts are made in the direction of tracing and diminishing as many as possible of these errors, through data

15. Timeliness and punctuality

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15.1 Timeliness

The Turnover Indices in the Services Sector are published through a press release 75 days after the end of the reference quarter

15.2 Punctuality

The Turnover indices in the Services Sector are published on the pre-announced release dates.

16. Comparability

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16.1 Comparability - geographical

The STS Regulation and the STS methodological guidelines are applied for the compilation of the Indices. This fact insures a good comparability with the European indices, taking into account the special conditions that apply to each country, which may dictate minor methodological deviations.

16.2 Comparability over time

The first compilation of the above indices was according NACE Rev.1 classification (Statistical Classification of Economic Activities in the European Community) and covered the period 2005-2008. During the year 2009 the indices were recompiled according to the new classification NACE Rev.2 and with back data from the first quarter 2000.

17. Coherence

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17.1 Coherence cross-domain

Regular crosschecks are made with information from other surveys. The indices are been compared with the available results of the Annual Structural Survey on enterprises.

17.2 Coherence - internal

18. Cost and burden

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No data available

19. Data revision

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19.1 Revision policy

Pursuant to Regulation No 1165/98, the Turnover Indices in the Services Sector, like other short-term

statistics variables, are updated every five years in years ending in 0 or 5.

19.2 Revision practice

Data is provisional when first released. Data become final as soon as all data gathered become definite. More specifically the data released for the most recent quarter is provisional and is published together with revised data of the previous quarter. Quarterly correction is made due to late reporting of respondents.

20. Statistical processing

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20.1 Source data

The survey for the compilation of the new Turnover Indices in the Services Sector for the abovementioned divisions of the NACE Rev. 2 was conducted on 2,535 services enterprises included in these divisions with an annual turnover equal to or higher than 600,000 Euros, according to the Business Register of the Ministry of Economy and Finance for the year 2005.

As the collection of the necessary statistical data from such a large number of enterprises was not considered feasible, a representative sample of 394 enterprises throughout the country was selected instead.

Single-stage stratified random sampling was used for the selection of the enterprises for the sample. For each of the two-digit economic activity divisions, the enterprises included in the survey were stratified in 6 size classes, based on their turnover during 2005 as follows:

Turnover (in Euros)

Class	Turnover
1	600000-1300000
2	1300001-2700000
3	2700001-5300000
4	5300001-10000000
5	10000001-20000000
6	20000001-and more

The sample's size distribution is shown in the following table

NACE Rev.2 Division Code	Number of enterprises	Size of enterprises surveyed by two-digit division
53	53	8
58	385	50
61	160	18
62	191	46
63	22	8
69	72	28
70.2	268	20
71	558	49
73	395	73
74	133	9
78	17	6
80	51	24
81.2	111	28
82	119	27
Total	2535	394

20.2 Frequency of data collection

Data collection is carried out quarterly.

20.3 Data collection

Data is collected by a statistical questionnaire. The questionnaires are sent by post and their collection is done with the following ways:

- via post
- via fax
- via e-mail

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

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.

20.5 Data compilation

Estimation of the turnover value

The first step for compiling each index is to estimate, from the records of the sample's enterprises, turnover value \hat{Y}_q , for the current quarter q , which will then be compared with the corresponding estimate for the previous quarter \hat{Y}_{q-1} (moving-base index).

The turnover estimate for the current quarter is calculated by reduction from the entire set of relevant data provided by the enterprises in the sample. This is achieved by multiplying the quarterly turnover value of each enterprise by an appropriate reduction factor and then finding the total of the partial products. This reduction factor for each turnover stratum h (cross-linking of the division and turnover magnitude for each enterprise) is defined as the quotient obtained by dividing the total number of enterprises N_h , by the number of enterprises in the sample n_h .

The reduction factor a_h for each enterprise in the stratum h is given by the formula:

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

where:

N_h is the total number of enterprises in stratum h

n_h is the number of enterprises in stratum h included in 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 formula:

$$\hat{Y}_q = \sum_{h=1}^6 \sum_{i=1}^{n_h} \alpha_h * y_{qhi}$$

where y_{qhi} is the turnover value for the current quarter q of the i^{th} enterprise in stratum h .

Reduction of turnover values to a typical quarter

The first turnover value estimates for the two-digit divisions refer to quarters which do not all have the same number of working days, thus, the compiled indices are not comparable. The quarterly indices for the two-digit divisions are made comparable by appropriate adjustment of the indices to equal duration indices. To this end, the turnover value estimates are multiplied by a special correction factor, which is different for each quarter of the year.

The correction factor is calculated by dividing the mean quarterly number of working days in the year t by the number of full working days in the reference quarter q of the year t , as follows:

$$c = \frac{\bar{x}_t}{x_{tq}}$$

where \bar{x}_t is the mean quarterly number of working days in the year t

$$\bar{x}_t = \frac{\sum_{q=1}^4 x_{tq}}{4}$$

and x_{tq} is the number of full working days in quarter q of the year t .

The index is reduced to a typical quarter by multiplying the turnover value estimates for the current quarter by the appropriate correction factor.

Calculation of the index

Each Turnover Index in the services sector is calculated according to the chaining method.

First, the moving-base index is calculated by comparing the 'estimated' turnover value for the current quarter with the corresponding value for the previous quarter.

The fixed-base index for each two-digit division of economic activity for the current quarter q , where $q \geq 2$, is calculated by multiplying the moving-base index by the fixed-base index for the previous quarter.

The following formulas are used:

$$I_{yq} = I_{q,q-1} * I_{Y_{q-1}}$$

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 with the previous quarter $q-1$,

I_{Yq} 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.

It should be noted that for the calculation of the first fixed-base index of the base year, i.e the index for the first quarter of 2005 ($q=1$), the following formula is used:

$$I_{Y_1} = \frac{\hat{Y}_1}{\hat{Y}_0} * 100$$

where

\hat{Y}_1 is the turnover estimate for the first quarter of 2005

\hat{Y}_0 is the mean quarterly turnover estimate for the year 2005.

That is to say:

$$\hat{Y}_0 = \frac{\sum_{q=1}^4 \hat{Y}_q}{4},$$

where:

\hat{Y}_q is the turnover estimate for quarter q of the year 2005.

If we compare the fixed-base index of the reference quarter with the fixed-base index for the corresponding quarter of the previous year, the percentage changes (+ or –) can be calculated and we thus have:

$$\left[\frac{I_{Y_q}^t}{I_{Y_q}^{t-1}} - 1 \right] * 100$$

where

$I_{Y_q}^t, I_{Y_q}^{t-1}$ are the fixed-base indices for quarter q of current year t and previous year t-1, respectively.

20.6 Adjustment

No seasonal adjustment method is applied to the collected data.

Greece applies working day adjustment to the collected data based on the proportional method. The input data/series for the working day adjustment are the turnover data collected from the sampled units and the working days of each quarter. The proportional method is used as follows. At the beginning of each year, ELSTAT calculates the length of the typical quarter of the year by summing the number of working days of each quarter of the year and dividing by 4. ELSTAT calculates the correction factor of each quarter by dividing the length of the typical quarter by the number of working days of each quarter. The adjustment of the index of each quarter to a typical quarter is done by multiplying the estimated values of turnover of the current quarter by the corresponding correction factor.

21. Comment

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