

Single Integrated Metadata Structure (SIMS)

Country: Greece

Domain name: Labour Cost Indices

| ELSTAT metadata |
|--|
| Reference metadata |
| 1. Contact |
| 2. Introduction |
| 3. Metadata update |
| 4. Statistical presentation |
| 5. Unit of measure |
| 6. Reference period |
| 7. Institutional mandate |
| 8. Confidentiality |
| 9. Release policy |
| 10. Frequency of dissemination |
| 11. Dissemination format |
| 12. Accessibility of documentation |
| 13. Quality management |
| 14. Relevance |
| 15. Accuracy and reliability |
| 16. Timeliness and punctuality |
| 17. Comparability |
| 18. Coherence |
| 19. Cost and burden |
| 20. Data revision |
| 21. Statistical processing |
| 22. Comment |

| 1. Contact | | Top |
|-------------------------------|--|---------------------|
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2. Introduction [Top](#)

2.1 Introduction

The Labour Cost Index is a quarterly index with base year 2016=100.0 and refers to sections B-S of economic activities of Nace Rev.2.

ELSTAT is compiling the following four indices:

1. Index of total labour costs
2. Index of wages cost
3. Index of other labour costs (employers' contributions minus subsidies received by the employer)
4. Index of total labour costs excluding bonuses, exceptional payments.

3. Metadata update [Top](#)

3.1 Metadata last certified

October 2022

3.2 Metadata last posted

October 2022

3.3 Metadata last update

October 2022

4. Statistical presentation [Top](#)

4.1 Data description

The survey for the compilation of the Labour Cost Indices is part of the European Labour Market Statistics and measures the impact of "labour" on costs. The data covered by the survey refer to the total average hourly labour costs, the average hourly remuneration (wages and salaries - wages cost) and the average hourly cost of employers' social contributions. The above indices are compiled by one-digit codes for sections B-E, B-F, B-N, G-J, G-N, K-N, O-S, P-S, and B-S of economic activities of Nace Rev. 2. In addition, the indices are compiled without seasonal adjustment, with seasonal adjustment and with working-days adjustment.

The indices are Laspeyres quarterly indices with base year 2016.

The indices for the years 2000-2004 were produced on the basis of National Accounts data, while from 2005 onwards the indices are compiled on the basis of the Survey on Labour Cost Indices.

4.2 Classification system

Economic activity

All sections B-S of economic activities of Nace Rev.2 are covered.

More specifically:

- For the years 2000-2008 the indices were compiled in accordance with Nace Rev.1.1
- From 2009 onwards, the survey conducted is in line with Nace Rev.2.

In 2009, the indices of the years 2000-2008 were revised according to Nace Rev.2

Geographical coverage

Greece, total.

4.3 Sector coverage

The indices for the years 2000-2008 were compiled in accordance with Nace Rev.1.1 and covered the sections C-K. They were compiled by one-digit code of economic activity and by the following groups of sections: C-E, C-K, G-I, G-K, J-K.

From 2009 onwards the indices are compiled in accordance with Nace Rev.2 and cover sections B-S. They are produced by one-digit code of sections of economic activities and by the following groups of sections: B-E, B-F, B-N G-J, G-N, K-N, O-S, P-S, and B-S.

In 2009, the indices of the years 2000-2008 were revised according to Nace Rev.2

Therefore, there are two different timeseries:

- Indices for the years 2000-2008, compiled in accordance with Nace Rev.1.1
- Indices from 2000 onwards, compiled in accordance with Nace Rev.2.

4.4 Statistical concepts and definitions

The concepts and definitions of the basic variables used for the compilation of the Labour Cost Indices are laid down in Commission Regulation (EC) 1737/2005 amending Regulation (EC) No 1726/1999 as regards the definition and transmission of information on labour costs.

In the framework of the LCI, **total labour costs** mean the total expenditure borne by employers in order to employ staff. Labour costs include compensation of employees with wages and salaries in cash or in kind and employers' social contributions and any taxes relating to employment regarded as labour costs. They do not include any subsidies received by the employer. In addition, any expenditure borne by the employer for vocational training, recruitment costs and any expenditure on working clothes provided by the employer are not included.

Employees are all the employed persons who work and receive remuneration in the form of wages or salaries and have a direct employment contract with the enterprise and are remunerated on the basis of the number of hours worked (full-time or part-time) and the duration of the contract (fixed or indefinite). The following are not included: management personnel whose remuneration wholly takes the form of a share in profits, unpaid family workers, sales representatives who are not included in the payroll, that is they are self-employed.

Gross wages and salaries: the total remuneration in cash or in kind payable by an employer to employees (all the persons included in the payroll, including those working from their home) in return for work during the economic year, calculated on the basis of time worked, output or piecework and irrespective the fact they are paid on a regular basis or not. Gross wages and salaries include basic and regular remuneration and additional payments for overtime, night work, working on Sundays and public holidays and shift work, as well as social contributions paid by the employees (even if they are withheld and paid by the employer to the SSF) and all benefits and allowances (maternity leave, children benefits, workplace bonuses for noise, risk, difficult work, shift or continuous work, night work) Christmas and Easter bonuses, individual performance bonuses, bonuses for output/productivity, severance payments commissions and tips.

Total hours actually worked: represent the sum of all periods spent on direct and ancillary activities to produce goods and services during the reference quarter. This variable includes hours of work during the regular working hours, hours of overtime work, hours of night work and work on Sundays and holidays. In addition, time spent at the place of work during which no work is done owing to, for example, machine stoppages, and accidents. Total hours actually worked does not include hours paid but not worked, for example: paid holidays/vacation, public holidays, absence due to sickness, maternity leave, etc.

Employer's social contributions: are the total of the social security contributions paid by the employer, including actual and statutory contributions, collectively-agreed contractual, voluntary and imputed social security contributions paid by the employer.

Subsidies received by the employer: These are all amounts received in the form of subsidies of a general nature intended to refund part or all of the cost of direct remuneration but not intended to cover social-security or vocational-training costs. They do not include refunds paid to the employer by social-security institutions or supplementary insurance funds.

Vocational training costs paid by the employer (excluded from total costs):

These include: expenditure on vocational-training services and facilities (also those for apprentices but not their wages and salaries), small repairs and maintenance of buildings and installations, excluding staff costs; expenditure on participation in courses; the fees of instructors from outside the enterprise; expenditure on teaching aids and tools used for training; sums paid by the enterprise to vocational-training organisations, etc. Subsidies linked to vocational training should be deducted.

Other expenditure paid by the employer: recruitment costs (these are the sums paid to recruitment agencies), expenditure on job advertisements in the press, travel expenses paid to candidates called for interview, installation allowances paid to newly recruited staff, etc. This does not include administrative

running costs (office expenses, staff wages, etc.).

Division of economic activity of the enterprise. Due to the fact that an enterprise may belong to more than one economic activity, it is classified on the basis of employment, that is the activity in which the biggest share of its employees is employed.

Quarterly Index of total Labour Costs (LCI_Total): it reflects the short-term trend of the average hourly labour costs. It is defined as the quotient of the (total) labor costs during the reference quarter and the total number of hours actually worked during the same period.

Apart from the total LCI, the following indices for the other components of labour costs are also compiled:

Quarterly Index of Wages Cost (LCI_Wages): it reflects the short-term trend of the average hourly wages cost. It is defined as the quotient of the total remuneration in cash and in kind payable to employees (gross wages and salaries) during the reference quarter and the total number of hours actually worked during the same period.

Quarterly Index of other labour costs (LCI_Other): it reflects the short-term trend of the average hourly social contributions of the employers' cost. It is defined as the quotient of the total labour costs less wages and salaries costs during the reference quarter and the total number of hours actually worked during the same period.

Quarterly Index of total labour costs excluding bonuses and benefits (LCI_TXB): it reflects the short-term trend of the average hourly labour costs excluding bonuses and benefits. It is defined as the quotient of the labour costs (excluding bonuses and exceptional payments) during the reference quarter and the total number of hours actually worked during the same period.

For the calculation of the quarterly aggregate Labour Cost Index (LCI) of a group of Sections B-E, B-F, B-N, G-J, G-N, K-N, O-S, P-S and B-S, the LCI of each section is weighted on the basis of the contribution of the annual labour cost of employees of this section to the total labour cost of employees of all sections of the group.

4.5 Statistical unit

The statistical unit is the enterprise employing at least 5 employees and belongs to sections B-S of Nace Rev.2.

4.6 Statistical population

The statistical population is the total of the enterprises employing at least 5 employees and belong to sections B-S of Nace Rev.2.

4.7 Reference area

Greece, total.

4.8 Time coverage

The data are available from the 1st quarter 2000 until the 4th quarter 2008 according to Nace Rev.1.1 and from the 1st quarter 2000 onwards according to Nace Rev.2.

4.9 Base period

From reference quarter 2019A the base year is 2016.

5. Unit of measure

[Top](#)

Indices compiled on a quarterly basis.

6. Reference period

[Top](#)

The reference period of the Labour Cost Indices is one calendar quarter.

7. Institutional mandate

[Top](#)

7.1 Legal acts and other agreements

The Hellenic Statistical Authority (ELSTAT) is an independent authority which is responsible for the production and dissemination of the official statistics of Greece.

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*", by article first of the Law 4047/2012 (Government Gazette No 31, Issue A): "*Ratification of the Act of Legislative Content "Very urgent measures for the implementation of the Medium-term Fiscal Strategy 2012-2015 and of the State Budget for 2011" and of the Act of Legislative Content "Regulation of very urgent issues for the implementation of law 4024/2011 "Pension provisions, uniform pay scale - grading system, labour reserve and other provisions for the implementation of the Medium-term Fiscal Strategy Framework 2012-1015" and of issues falling within the competence of the Ministries of Administrative Reform and E-Governance, Interior, Finance, Environment, Energy and Climate Change, and of Education, Lifelong Learning and Religious Affairs and related to the implementation of the Medium-term Fiscal Strategy Framework 2012-2015" and other provisions*", by article 323 of the Law 4072/2012 (Government Gazette No 86, Issue A): "*Improvement of the business environment New corporate form - Trade Marks - Realtors - Regulating maritime, port and fishing matters and other provisions*" and by article 7 paragraph 1 of the Act of Legislative Content dated 18/11/2012 (Government Gazette No 228, Issue A): "*Financial rules and other provisions*", by Article 93 of the Law 4182/2013 (Government Gazette No 185, Issue A): "*Code of charitable estate, inheritances in abeyance and other provisions*", by Article 6 paragraph 8 of the Law 4244/2014 (Government Gazette 60, Issue A): "*Integration in Greek law of the Council Directive 2013/1/EU of 20 December 2012 amending Directive 93/109/EC as regards certain detailed arrangements for the exercise of the right to vote and stand as a candidate in elections to the European Parliament for citizens of the Union residing in a Member State of which they are not nationals and amendment of law 2196/1994 (A` 41) and other provisions*", by Article first subparagraph C.3 of the Law 4254/2014 (Government Gazette No 85, Issue A): "*Measures for the support and development of the Greek economy, in the context of the implementation of Law 4046/2012, and other provisions of law*" and by Article 33, paragraphs 5a and 5b of the Law 4258/2014 (Government Gazette No 94, Issue A): "*Demarcation process and arrangements of matters for streams - arrangements of Urban Planning legislation and other provisions*".
- 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 Survey on Labour Cost Index is fully in line with European legislation. The main legal act governing the design, characteristics of the survey and the relative decision-making is Regulation (EC) No 450/2003 of the European Parliament and of the Council of 27 February 2003 concerning the labour cost index and Commission Regulation (EC) No 1216/2003 of 7 July 2003, implementing the above Regulation.

The frame of the survey is subject to amendments pursuant to the following Regulations:

- Commission Regulation (EC) No 224/2007 amending Regulation (EC) No 1216/2003 as regards the economic activities covered by the labour cost index
- Regulation (EC) No 1893/2006 of the European Parliament and of the Council establishing the statistical classification of economic activities NACE Rev.2
- Commission Regulation (EC) No 973/2007 amending certain EC Regulations on specific statistical domains implementing the statistical classification of economic activities NACE Rev.2
- Corrigendum to Commission Regulation (EC) No 1216/2003

7.2 Data sharing

On the basis of a bilateral agreement between the IMF and ELSTAT, ELSTAT makes available to the IMF data on the Labour Cost Index (LCI_Wages) on a quarterly basis.

8. Confidentiality

[Top](#)

8.1 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.

8.2 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 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.

More specifically, as regards the dissemination of LCI data, the rules for ensuring non-authorized notification are implemented at the following levels:

- Greece total
- One-digit code of Nace Rev.2

9. Release policy

[Top](#)

9.1 Release calendar

In December of each year, ELSTAT publishes a Press Releases Calendar which lists the exact dates for the release of all the statistics planned for next year.

9.2 Release calendar access

The press releases calendar is disseminated to the press and it is available for free to every interested party. The release calendar is also posted on the website of ELSTAT at the link: "Announcements Calendar" <http://www.statistics.gr>

9.3 User access

Data for the Index of Wages Cost are released simultaneously to all users through the publication of the Press Release entitled "Index of Wages Cost", which is posted on the portal of ELSTAT at 12:00 on the predefined data. The Press Release is concomitantly transmitted electronically to the subscribers and posted on the portal of ELSTAT.

10. Frequency of dissemination

[Top](#)

Data for the Index of Wages Cost are disseminated on a quarterly basis.

11. Dissemination format

[Top](#)

11.1 News release

Quarterly results of the Index of Wages Cost.

11.2 Publications

There are no publications.

11.3 On-line database

There is no online database for the results of the Labour Cost Indices

11.3.1 Data tables - consultations

11.4 Micro-data access

Microdata, if not confidential, are made available to users after their submitting a request to the: Division of Statistical Information and Publications

46, Peiraios and Eponiton Str.,
18510 Piraeus
Tel: +30 213 135 2022
e-mail: data.dissem@statistics.gr

For confidential reasons, users can have access to micro-data, only under a confidentiality contract and with respect to the valid process.

11.5 Other

Tabulated data on the Labour Cost Index concerning the years 2000 onwards are made available through the digital library of ELSTAT, at the following link: <http://dlib.statistics.gr/portal/page/portal/ESYE/>

12. Accessibility of documentation

[Top](#)

12.1 Documentation on methodology

The methodology concerning the compilation of the indices is laid down in Regulation (EC) No 450/2003 of the European Parliament and of the Council.

From the 2nd quarter 2013 up to 4th quarter 2015, the survey was conducted on a sample of enterprises and services (amounting to 3,642) and covers sections B-S of Nace Rev.2.

From the 1st quarter 2016 up to 4th quarter 2017, the survey was conducted on a sample of 4,308 enterprises/services.

From 1st quarter 2018 and onwards, the sample was redesigned, the new enriched sample amounts to 5,282 enterprises/services.

12.2 Quality documentation

This is the fourth user-oriented quality report on the Labour Cost Indices and it is available on the portal of ELSTAT at:

[https://www.statistics.gr/en/statistics/-/publication/DKT08/-](https://www.statistics.gr/en/statistics/-/publication/DKT08/)

13. Quality management

[Top](#)

13.1 Quality assurance

Correctness and completeness checks, as well as quality checks are carried out during the whole process of the compilation of the indices: from the data collection stage to the final compilation of the indices.

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, the data are further investigated, 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 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 and Quality Guidelines of ELSTAT, which are posted on the website of ELSTAT and are available at the following links:

<http://www.statistics.gr/documents/20181/2571f853-1e37-46da-9387-595bbe2a162b>

http://www.statistics.gr/documents/20181/1609796/ELSTAT_Quality_Instructions_EN.pdf/4095e67c-2fe4-450b-8a95-18bc992a83c6

13.2 Quality assessment

The Labour Cost Indices are transmitted to Eurostat on a quarterly basis, where they are assessed and validated.

14. Relevance

[Top](#)

14.1 User needs

The main users of the Labour Cost Indices are international organizations (Eurostat, OECD, European Central Bank, IMF), as well as many national authorities, services and institutions (government Ministries, banks, universities, research institutes, etc.). Furthermore, among the users are the press, researchers and the general public. Moreover, the enterprises that have the obligation to fill in the questionnaire are at the same time users of these data. They request relevant data in order to draw their remuneration policy, estimate the costs of contractual agreements and study competitiveness in the division of economic activity where they belong.

14.2 User satisfaction

User Satisfaction Survey

ELSTAT conducts a user satisfaction survey every semester. The results of this survey are published in the Library's Newsletter which is issued by the Library and the Section of Statistical Dissemination of ELSTAT, drawing information from the user's questionnaire. This publication presents data on the number of users in relation with other variables, such response rate to users' requests, the kind of requested data, as well as the dissemination mode of statistical information. These characteristics are tabulated and are presented in absolute values and percentages.

Users Conference

Pursuant to its annual statistical work programme, ELSTAT has been conducting since 2010, on a yearly basis, the Users Conference with the participation of representatives of the public and private sector, academics and research institutes.

The Users Conferences offer ELSTAT the opportunity to gather comments and proposals made by users of statistics pertaining to the dissemination of statistical information, access to statistical data and any shortcomings in the produced statistics.

The Users Conferences help ELSTAT to draw useful conclusions on the areas of statistical production that need to be improved in order to better fulfill the changing needs of users. Such conclusions are integrated in the annual and short-term statistical programmes of ELSTAT.

More information on a) the results of the User Satisfaction Survey and b) on the Users Conferences are available on the portal of ELSTAT, the following link:

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

14.3 Completeness

The survey on the Labour Cost Indices covers all the variables set out in the relevant EU Regulations.

15. Accuracy and reliability

[Top](#)

15.1 Overall accuracy

The errors that have an impact on the accuracy of the indices are: a) sampling errors and b) non-sampling errors.

Sampling errors are due to the fact that the survey is not conducted on all the enterprises of the target population but on a sample of these enterprises. The sample size ensures high accuracy estimations as regards both the general indices and the indices for the groups of sections of economic activities at the level of Greece total.

Non-sampling errors mostly refer to measurement errors and non-response errors, on account of non-response of the sample enterprises. Any measurement errors during data collection are identified by means of quality checks and are duly corrected.

As regards non-response errors, all efforts are made for contacting the enterprises that have not responded by phone or by other means of communication, in order to persuade them to cooperate and give the necessary information.

15.2 Sampling error

The survey on the Labour Cost Indices is a sample survey and therefore sampling errors are observed in the estimations of the general indices and the indices for the groups of sections of economic activities.

The CV's of quarterly change of wage cost index for Nace Rev.2: B-S are:

| Quarter | Q1 | Q2 | Q3 | Q4 |
|---------|------|------|------|------|
| 2015 | 1,29 | 1,27 | 0,95 | 1,12 |
| 2016 | 1,79 | 1,72 | 1,25 | 1,26 |
| 2017 | 1,19 | 1,17 | 0,95 | 1,39 |
| 2018 | 0,80 | 0,86 | 1,00 | 1,55 |
| 2019 | 0,85 | 0,71 | 1,33 | 1,38 |
| 2020 | 1,35 | 1,76 | 1,22 | 1,15 |
| 2021 | 2,46 | 1,85 | 1,25 | 1,69 |

15.3 Non-sampling error

Non-sampling errors are basically of 4 types:

Coverage errors: errors due to divergences existing between the target population and the sampling frame.

Measurement errors: errors that occur at the time of data collection. There are a number of sources for these errors such as the survey instrument of collection, the information system.

Processing errors: errors in post-data-collection processes such as data entry, keying, editing and weighting

Non-response errors: errors due to an unsuccessful attempt to obtain the desired information from an eligible unit.

15.3.1 Coverage error

The survey covers the enterprises employing more than 5 employees.

During the time between the drawing of the sample and the conduct of the survey some sampling units (enterprise) changed the designing of the strata after data collection. These units were allocated to new strata (employment size classes, division of economic activity) maintaining their initial probability of selection. This fact changed the initial variation of data, the initial allocation of the sample enterprises, thus inflating the variation of estimations. Therefore, the coefficient of variation of the produced statistics was higher than the coefficient of variation which had been calculated on the basis of the sample design.

15.3.1.1 Over-coverage – rate

Some enterprises, that had been included in the sample, had been selected in the sample and yet they did not exist during the survey conduct (closed enterprises, enterprises out of scope, e.g., enterprises employing less than 5 employees). These enterprises reduced the initial size of the sample. In addition, some enterprises, even though they satisfied the inclusion criteria, were not included in the sample because they started operating in a later stage. This resulted in under coverage and underestimation of the produced statistics.

15.3.1.2 Common units – proportion

The indices are compiled on the basis of a common sample of enterprises used for every quarter and which is, normally, renewed with the change of the base year. Therefore, the proportion of common enterprises of the sample between two quarters is 100%. In addition, in order to estimate the indices for the first quarter of the base year, the survey was also conducted on the enterprises of the new sample for the fourth quarter of the previous year. Consequently, the proportion of the common units of the sample between two successive quarters amounts to 100%.

It should be noticed that the main reason for renewing the sample is to improve data quality, because in the previous sample the share of closed, non-operating or out-of-scope enterprises was increasing and as a result the actual number of surveyed enterprises decreased. Also, several enterprises changed stratum on account of the decrease in the number of their employees.

15.3.2 Measurement error

The questionnaires are filled in through personal interview in the enterprise. The method which is used ensures high quality data, since the statistical interviewers assist the respondent to filling in the

questionnaire and they check the filled in questionnaires before leaving the enterprise.

The statistical interviewers are normally external survey workers and, if necessary, experienced permanent employees of ELSTAT. The interviewers are duly trained during training seminars before the conduct of the survey. The purpose of the training seminars is to enable the interviewers to a) fully understand the definitions and the variables of the survey, b) correctly fill in the survey questionnaire and c) check the questionnaires for any errors through logical checks.

The structure and the size of the questionnaire make it friendly to statistical interviewers and respondents. The questions are clearly stated using the appropriate language and terminology, Furthermore, the compiled guidelines cover analytically all the survey variables. All the above ensure the fact that the collected questionnaires are complete and correctly filled in, thus eliminating any measurement errors.

Any measurement errors which make take place during data collection, are identified by means of quality checks and are duly corrected.

15.3.3 Non response error

| Quarter | Q1 | Q2 | Q3 | Q4 |
|-------------------------------|-----------|-----------|-----------|-----------|
| Unit non-response rate (2019) | 41.4% | 52.7% | 45.0% | 44.1% |
| Unit non-response rate (2020) | 56.3% | 56.9% | 53.1% | 55.6% |
| Unit non-response rate (2021) | 56.1% | 57.7% | 54.5% | 57.4% |

Non-response of the enterprises is addressed by sending reminder letters via e-mail, by calling the enterprises or by paying a visit to the enterprise, in order to collect the requested data.

In the census strata, where all the population units had been included in the sample, unit response was sometimes quite high, but not 100% for all the combinations of sections and size classes, on account of non-response of some enterprises. Consequently, some census strata became sampling strata, thus increasing sampling error for the survey characteristics.

In order to address non-response, imputation was used since the compilation of indices necessitates data from consecutive quarters.

15.3.4 Processing error

Once collected, the data are processed in order to compile the indices.

More specifically, once the data are gathered in the central offices of ELSTAT, the following statistical actions take place: codification, logical checks, data entry and comparison with other sources of statistical information.

After the completion of all the final checks in order to identify any non-sampling errors, the following actions take place:

- The data are compared with the data of the previous quarter and the corresponding quarter of the previous year.
- Quality checks on the collected data in order to identify any outliers. Any outliers and errors are identified and are duly corrected.

15.3.5 Model assumption error

No model is used for the compilation of the indices. As regards seasonal adjustment and working-days adjustment, the “DEMETRA” software is used.

16. Timeliness and punctuality

[Top](#)

16.1 Timeliness

The Labour Cost Indices are available 70 days after the end of the corresponding reference period.

16.2 Punctuality

The Press Release on the quarterly results of the Index of wages and salaries was published in line with the release dates stipulated in the Press Releases Calendar of ELSTAT. For 2021Q2, the Press Release was

published with 6-days delay.

17. Comparability

[Top](#)

17.1 Comparability – geographical

The collected survey variables are fully in line with the relevant definitions laid down in Regulation (EC) 450/2003 of the European Parliament and of the Council, thus ensuring comparability of statistics among Member States.

17.2 Comparability over time

The Labour Cost Indices are comparable over time. There are available data from the 1st quarter 2000 until the 4th quarter 2008 (according to Nace Rev.1.1) and from the 1st quarter 2000 onwards (according to Nace Rev.2).

18. Coherence

[Top](#)

18.1 Coherence cross-domain

The data are compared with the data of the labour cost survey. Moreover, the data on the number of employees and the hours worked are compared with the corresponding data from the Labour Force Survey. In addition, the data are also compared by Eurostat with the corresponding data from Structural Business Statistics (SBS).

18.1.1 Coherence – sub annual and annual statistics

The data are compared with the data of the Survey on Labour Cost (LCS) which is conducted every four years. In addition, the data on the number of employees are compared with the corresponding data from the Labour Force Survey on a quarterly basis.

18.1.2 Coherence – National Accounts

The data are compared with National Accounts by ELSTAT and Eurostat.

18.2 Coherence – internal

All data are checked for internal coherence by Eurostat.

19. Cost and burden

[Top](#)

The questionnaire which is used for the survey on Labour Cost Indices is a joint questionnaire also used for the Jobs Vacancy Survey and the survey on Short-Term Statistics. Therefore, the administrative burden of respondents is significantly reduced, since many of the questions are common for the three abovementioned surveys.

The total time needed for the completion of the questionnaire ranges from 20 to 60 minutes, depending on the size of the enterprise.

Efforts are made to collect the required data from administrative sources (ERGANI –EFKA), in order to reduce the administrative burden of the enterprises.

20. Data revision

[Top](#)

20.1 Revision policy

The data are not subject to revisions after their publication, since they are final and are not based on estimates. Only the data are subject to revision where, sometimes, there are estimates for a small share of enterprises that have not responded in time.

Every four years all the indices are revised as regards their base year, after the completion of the Labour Cost Survey. In 2019 the indices are revised with base year the year 2016 (reference year of the latest Labour Cost Survey).

More information on the revision policy implemented by ELSTAT is available at the following link:
<http://www.statistics.gr/en/policies>

20.2 Revision practice

In case that the Index of Wages cost is revised, users are duly informed through the relevant Press Release. In 2009, the indices for the years 2000 - 2008 were revised with base year the year 2008 and were compiled in accordance with Nace Rev.2. In 2015, the indices for the years 2000 - 2019 were revised with base year the year 2016.

21. Statistical processing

[Top](#)

21.1 Source data

The Labour Cost Indices are compiled on the basis of a sample drawn from the business register of ELSTAT.

More specifically, for every two-digit code of economic activity a number of enterprises is selected for every one of the following size classes:

| Size classes | Annual average employment |
|--------------|---------------------------|
| 2 | 5-9.9 persons |
| 3 | 10-19.9 persons |
| 4 | 20-49.9 persons |
| 5 | 50-99.9 persons |
| 6 | 100-249.9 persons |
| 7 | 250-499.9 persons |
| 8 | 500-999.9 persons |
| 9 | 1,000+ persons |

Therefore, all the strata deriving from the combinations of the 2-digit code of economic activity with the size classes are covered.

From 2005, when the survey was first conducted, until 2008 the survey was conducted on a sample of 1,533 enterprises and was designed in accordance with Nace Rev.1.1.

In 2009 the sample was redesigned in order to implement the new Nace Rev.2 and the survey was conducted on a sample of 2,139 enterprises until the 2nd quarter 2013. From the 3rd quarter 2013 until the 4th quarter 2015, the survey was redesigned and it is conducted on a sample of 3,642 enterprises/services.

From the 1st quarter 2016 the survey was conducted on a sample of 4,308 enterprises.

From 1st quarter 2018, the sample was redesigned, the new enriched sample amounts to 5,282 enterprises. The sample size of the enterprises was defined so that the relevant standard error (co-efficient of variation CV) of the variable "annual average employment" at 2-digit code of economic activity for the whole country does not exceed 2.0%.

21.2 Frequency of data collection

Data are collected on a quarterly basis.

21.3 Data collection

The data are collected through a specially designed questionnaire. The questionnaires are delivered to external survey workers (statistical interviewers) which, once trained, visit the enterprises in order to fill in the questionnaire with the assistance of the enterprise's staff or they hand the questionnaire to be filled in by the accountant of the enterprise. Afterwards, they collect the filled in questionnaires and they deliver them

back to ELSTAT.

In cases where the enterprise refuses to cooperate with the statistical interviewers, or refuses to respond, delays or in case there are particularities, an employee from the Labour Statistics Section of ELSTAT pays a visit to the enterprise and collects the necessary information himself.

In some cases (due to lack of time) the questionnaire may be delivered and collected by e-mail

The same procedure is followed in the Regional Statistical Offices (RSO) of ELSTAT. The questionnaires are sent by post to the RSO and then the completed questionnaires are sent by the RSO to ELSTAT by post.

Non-response is addressed through telephone contact with the enterprise, reminders sent by e-mail or personal visits to the enterprise.

21.4 Data validation

The data are validated by means of a series of logical checks. During data processing, the data are checked in order to identify and duly correct any errors. For every enterprise the data are cross-checked with the data of the previous quarter and of the corresponding quarter of the previous year. In addition, the indices are checked by employment stratum and by 2-digit section of economic activity. In case big differences are observed, all the enterprises belonging in the same stratum are investigated. Once identified, the errors are further investigated in cooperation with the enterprise in order to confirm that it is an error or it is just about an unusual value.

21.5 Data compilation

The Labour Cost Indices are compiled by section of economic activity and by group of sections. For the calculation of the quarterly aggregate LCI, of a group of Sections, the LCI of each Section is weighted based on the contribution of the annual labour cost of employees of this Section to the total labour cost of employees of all Sections in the group. The same principle applies for the other types of labour cost (wages and salaries cost, other costs and total labour costs excluding bonus).

21.5.1 Imputation – rate

Given the fact that the compilation of indices necessitates enterprises data from subsequent quarters, imputation was used to address non-response of some enterprises. The share of enterprises whose values were imputed are presented below:

| Year | Imputation rate |
|-------------|------------------------|
| 2015 | 20.0% |
| 2016 | 11.0% |
| 2017 | 12.5% |
| 2018 | 9.1% |
| 2019 | 12.4% |
| 2020 | 13.0% |
| 2021 | 14.0% |

21.6 Adjustment

All the Labour Cost Indices are working-day adjusted (WDA) both at one-digit level of sections of economic activity at the level of groups of sections.

21.6.1 Seasonal adjustment

All the Labour Cost Indices are seasonally adjusted (SA) both at one-digit level of sections of economic activity at the level of groups of sections.

22. Comment

[Top](#)