

Single Integrated Metadata Structure (SIMS)

Country: Greece

Compiling agency: ELSTAT

Domain name: LABOUR FORCE SURVEY (LFS), 2022

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1. Contact		Top
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2. Introduction

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Labour Force Survey is the main source of data on employment and unemployment. It is a continuation of the former “Employment Survey” which had been conducted in the urban and semi urban areas of the country in years 1974-1980.

In 1981 Labour Force Survey was conducted covering the whole of the country for the first time. It followed the same specifications with similar surveys running in the then EEC member countries. Until 1997 the survey was conducted every year in the second quarter. From 1998 onwards the survey is carried out throughout the year and is designed to produce results on a quarterly basis. Besides data on employment and unemployment also collects information on demographic characteristics, level of education and participation in educational activities.

In 2021 there were significant changes in the survey due to the adoption of the new Integrated Social Statistics Framework Regulation, (EU) 2019/1700. The changes concerned the design of the research, the way data was collected, the definitions and the information collected.

3. Metadata update

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3.1 Metadata last certified	September 2023
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3.2 Metadata last posted	September 2023
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3.3 Metadata last update	September 2023
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4. Statistical presentation

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4.1 Data description

The main statistical objective of the Labour Force Survey is to divide the population of working age (15 years and above) into three mutually exclusive and exhaustive groups - persons in employment, unemployed persons and inactive persons. In addition, Labour Force Survey collects information on: demographic characteristics, main job characteristics, the existence and characteristics of a second job, educational attainment, participation in education, previous working experience and on search of job.

4.2 Classification system

Economic activity, until 2007, was classified according to STAKOD 03 (ΣΤΑΚΟΔ 03) which is the Greek version of NACE Rev1.1. From 2008 onwards STAKOD 08 (ΣΤΑΚΟΔ 08) is used, which is identical (at 3 - digit level) to NACE Rev2. The classification is based on the 3-digit level for the main job, and on the 2-digit level for the second and previous job.

Occupation, until 2011, was classified according to STEP-92 (ΣΤΕΠ-92), which is the Greek version of the International Standard Classification of Occupations - ISCO-88 (Com). From 2011 onwards, ISCO-08 is used. Classification is based on the 3-digit level for the main, second and previous job.

Nationality and **Country of birth** are classified according to according to the Eurostat Standard Code list (SCL) GEO which is largely based on the International Organization for Standardization (ISO) 3166

Level of education is classified according to a specific classification used for the Labour Force Survey, which allows for the classification of educational level according to International Standard Classification of Education (ISCED-A-2011).

Field of education is classified according to International Standard Classification of Education: Fields of Education and Training 2013 (ISCED-F-2013), 3 digits.

Geographical areas are classified according to NUTS classification.

4.3 Sector coverage

LFS is a household survey

4.4 Statistical concepts and definitions

Employed: comprise persons aged 15 to 89 (in completed years at the end of the reference week) who, during the reference week, were in one of the following categories:

a) persons who during the reference week worked for at least 1 hour for pay or profit, including contributing family workers

b) persons with a job or business who were temporarily not at work during the reference week but had an attachment to their job, where the following groups have a job attachment:

- persons not at work due to holidays, working time arrangements, sick leave, maternity or paternity leave;
- persons in job-related training;
- persons on parental leave, either receiving and/or being entitled to job-related income or benefits, or whose parental leave is expected to be 3 months or less;
- seasonal workers during the off-season, where they continue to regularly perform tasks and duties for the job or business, excluding fulfilment of legal or administrative obligations;
- persons temporarily not at work for other reasons where the expected duration of the absence is 3 months or less.

Note: contributing family workers, persons in own-use production work, voluntary workers, unpaid trainees and individuals involved in other forms of work are defined in the 19th International Conference of Labour Statisticians (ICLS) Resolution concerning statistics of work, employment and labour underutilisation, adopted on 11 October 2013.

Unemployed are persons aged 15-74 who were without work during the reference week (they were not classified as employed), were currently available for work and were either actively seeking work in the past four weeks or had already found a job to start within the next three months.

Inactive are those persons who neither classified as employed nor as unemployed.

Self-employed with employees are persons who work in their own business, professional practice or farm for the purpose of earning a profit, and who employ at least one other person.

Self-employed person without employees are persons who work in their own business, professional practice or farm for the purpose of earning a profit, and who employ no other persons.

Employees are defined as persons who work for a public or private employer and who receive compensation in the form of wages, salaries, fees, gratuities, payment by results or payment in kind.

Family workers are persons who help another member of the family to run a farm or other business, provided they are not classified as employees (they are not receiving a salary, and they have not a direct profit from the business).

Part-time job , Full-time job. The distinction between these two forms of job is based on the spontaneous response of the respondent to a relevant question.

Temporary job. A job may be considered temporary if the employer and the employee agree that the termination of the job is determined by objective conditions such as a specific date, the completion of a task or the return of another employee who has been temporarily replaced. This agreement is not necessarily based on a written work contract.

Duration of unemployment is defined as the duration of search for a job, or the length of the period since the last job was held (if this period is shorter than the duration of search for a job).

Persons in education. A person is considered in education if he/she is following any educational program, including initial education, additional education, vocational education, continuing or additional training, training in enterprises, apprenticeships, on-the-job training, seminars and workshops, distance education, evening classes, self-learning, etc. Also are included courses for personal interest only, which may cover all forms of learning, and training in subjects such as languages, computer studies, business studies, art and culture, health and medicine.

4.5 Statistical unit

Households, persons

4.6 Statistical population

Population residing in private households, and staying (or intend to stay) at least 1 year in Greece.

Individuals who permanently reside in collective houses (i.e. hospitals, hotels, asylums, homes for the elderly, orphanages, etc) are not covered by the survey.

4.7 Reference area

All NUTS 3 areas of Greece, with the exception of Mount Athos area

4.8 Time coverage

Labour Force Survey has been producing results since 1981 on a yearly basis (spring quarter). From 1998 onwards it is a continuous survey, providing quarterly results.

4.9 Base period

There is no base period in Labour Force Survey

5. Unit of measure

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Number of persons, %, mean, years (age), hours (of work, education)

6. Reference period

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The Labour Force Survey's sample is spread uniformly in the 13 (or 14) weeks of the quarter. Every sampled household corresponds to a particular week, namely the reference week (from Monday to Sunday).

- For employment, the reference period is the reference week.
- For job search, working time arrangements, and participation in education, the reference period is the four-week period, ending with the reference week.
- For availability to start, or resume, a job the reference period is the two-week period after the reference week.

For monthly estimates, the sample used is the sample that is allocated in the four (or five) reference weeks of the particular month. When the days of a week belong to two different months, this week is considered to belong to the month that includes that Thursday of the particular week

7. Institutional mandate

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7.1 Legal acts and other agreements

Hellenic Statistical Authority is an independent authority responsible for the production and dissemination of official statistics.

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 Hellenic Statistical Authority*”.
- 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 Hellenic Statistical Authority 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 Hellenic Statistical Authority*”.

Labour Force Survey is harmonized with European legislation. The principal legal act is the Council Regulation (EC) 2019/1700 which is further specialised:

- in (EE) 2019/2240, which specifies the technical items of the data set, and establishes the technical formats for transmission of information and specifying the detailed arrangements and content of the quality reports of LFS
- in (EE) 2019/2181, which specifies technical characteristics as regards items common to several datasets pursuant to Regulation (EU) 2019/1700
- in (EU) 2019/2180, which specifies the detailed arrangements and content for the quality reports pursuant to Regulation (EU) 2019/1700
- in (EU) 2020/256, which establishes the multiannual rolling planning for the collection of data under Regulation (EU) 2019/1700 from 2021 to 2028.

7.2 Data sharing

A bilateral agreement is signed on the provision of anonymised EU LFS data to the National Statistical Institutes of other participating EU countries.

8. Confidentiality

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8.1 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

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 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.

For more information, refer to the website of the Hellenic Statistical Authority:

[Provision of anonymized microdata of statistical surveys](#)

[Access to confidential data for scientific purposes](#)

9. Release policy

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9.1 Release calendar

At the end of December of each year ELSTAT publishes a release calendar announcing the precise release dates for the next year. The calendar is distributed to the press and is available free of charge to all interested parties.

9.2 Release calendar access

The calendar is disseminated on ELSTAT's website (<http://www.statistics.gr>) at the link: "*Press Releases Calendar*".

9.3 User access

The data are released simultaneously to all interested parties through the Press Release entitled "*Labour Force*" which is made available to the media at 12:00. At the same time, the press release is distributed electronically to the subscribers. The press release is subsequently posted on the website of ELSTAT (<http://www.statistics.gr>).

There is no internal government access to the data before their release to the public.

10. Frequency of dissemination

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Monthly results are announced, up to 40 days after the end of the reference month, for all 12 months of the year. The complete (quarterly) survey results are disseminated on a quarterly basis, up to 12 weeks after the end of the last week of the reference quarter. Data are disseminated at 12.00 on the predefined date of the press release.

11. Dissemination format

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11.1 News release

- Labour Force Survey Monthly results

- Labour Force Survey Quarterly results

Published in ESLTAT website, path: Population and Social Conditions > Labour Market > Employment – Unemployment, <http://www.statistics.gr/en/statistics/pop> .

11.2 Publications

Labour Force estimations are included in the following editions, accesibe at ELSTAT’s website www.statistics.gr

- The Greek Economy (fortnight edition, “e-publications” link)
- Living Conditions in Greece (bimonthly edition, “e-publications” link)
- Greece in Figures (quarterly edition, “e-publications” link)

Labour Foce Statistics (special edition for Thessaloniki International Fair, “in Greece” link)

11.3 On-line database

No exists

11.3.1 Data tables - consultations

No data for data table views is collected.

11.4 Micro-data access

Micro-data are available to users for free upon request to the Hellenic Statistical Authority, Statistical Information and Publications Division. Path: Products and Services>Statistical data request

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

Confidentiality of the data is assured by the implementation of anonymization criteria (see 8.2).

11.5 Other

A number of tabulated data are available to users on the website <http://www.statistics.gr/en/statistics/pop> .

Also, statistical data are provided to users by on-line application in ELSTAT, Statistical Information and Publications Division (see 11.4).

11.5.1 Metadata – consultations

Annual “User satisfaction survey” after having collected information from the User Satisfaction Questionnaire, filled by users to whom data was provided after a request, presents annual data on the number of users,in combination with other indicators, such as the response level to users’ requests, the kind of requested data,as well as the dissemination mode of statistical information.

Path: Products and Services> User satisfaction survey, <http://www.statistics.gr/en/user-satisfaction-survey>

12. Accessibility of documentation

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12.1 Documentation on methodology

The following scientific publications available only in the Greek language:

- *Ανασχεδιασμός του δείγματος της Έρευνας Εργατικού Δυναμικού από το έτος 1998 και εξής* Ν. Πανταζίδης .
- *Αποτελεσματικότητα των εκτιμήσεων της Έρευνας Εργατικού Δυναμικού από το έτος 1998 και εξής* Ν. Πανταζίδης

Documents are available in pdf format (only in the Greek language), upon request

Short methodological notes and survey questionnaires are available at ELSTAT website, path Population and Social Conditions > Labour Market > Employment – Unemployment, <http://www.statistics.gr/en/statistics/pop> .

For the assesment of break in labour force surveys' timeseries due to (EU) 2019/1700 the relevant methodological note is available:

<https://www.statistics.gr/en/statistics/-/publication/SJO02/> .

12.1.1 Metadata completeness - rate

Does not exist

12.2 Quality documentation

A "User oriented quality report" is available at ELSTAT website <http://www.statistics.gr/en/statistics/-/publication/SJO01/2022-Q4>.

13. Quality management

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13.1 Quality assurance

Labour Force Survey complies with Eurostat standards concerning the selection and the size of the sample, the design of questionnaires, the survey's frequency and the information collected.

Collected questionnaires are checked for completeness and quality of information. The final data base is checked for data validity by ELSTAT and Eurostat.

Since 2021 data are collected exclusively by electronic means (CAPI), thus helping to significantly accelerate the production of research results.

Under consideration is also the use of a call center for repeated household interviews, a change in data collection, which will also improve the timely production of survey results and interview quality.

13.2 Quality assessment

Labour Force Survey is considered a reliable source of information with a methodology that meets high standards. Nevertheless, Labour Force Survey is a sample survey and as a result, the results are accompanied by sampling errors.

Basic quality indicators of Labour Force Survey, (sampling errors, response rates) are computed quarterly and annually and included in a standard quality report submitted to Eurostat.

14. Relevance

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14.1 User needs

The main users of the Labour Force Survey data are international organizations (European Commission, OECD, European Central Bank, Unesco, IMF, etc) and a large number of national authorities and institutions (Ministries, Banks, Universities, Institutes) but also the press, researchers and the general public.

The main indicators produced by the Labour Force Survey describe the evolution in main labour market (changes in the level of employment, unemployment), provide information on the allocation of working population in different sectors of economy and on the characteristics of labour force (age, educational level, participation in education, etc.)

14.2 User satisfaction

ELSTAT does not carry out a user satisfaction survey specifically for the users of the Labour Force Survey. However, there is continuous communication with the main users of survey results and their opinion and remarks are taken in to account in the development of Labour Force Survey and the production and dissemination of its results.

14.3 Completeness

Labour Force Survey collects information on all variables that are included in the relevant Council Regulations and additionally on a small set of characteristics that are surveyed only at national level.

15. Accuracy and reliability

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15.1 Overall accuracy

The size of the Labour Force Survey sample allows for the production of estimates with high accuracy at t country level and at the most of NUTS 2 areas of Greece.

15.2 Sampling error

Standard error estimation

The variance of the estimation of a characteristic is calculated on the basis of the variance of the estimations of the particular characteristic from every final stratum, by using the following formula:

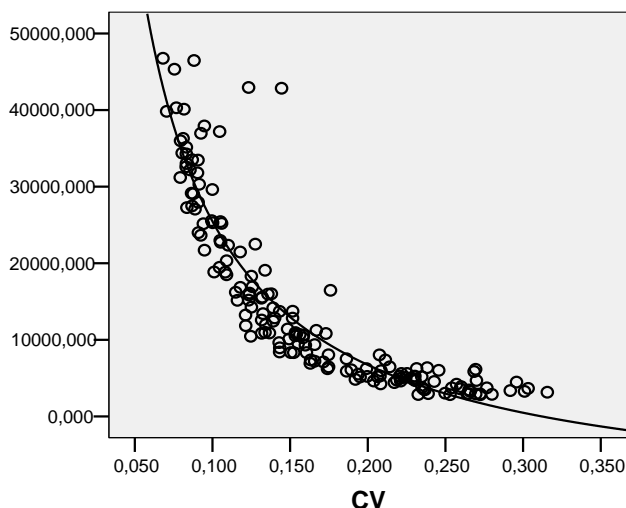
$$\hat{V}(\hat{Y}) = \lambda^2 \left(\frac{n_{hi}}{n_{hi} - 1} \right) \cdot \left[\sum_j y_{hij}^2 - \frac{1}{n_{hi}} \left(\sum_j y_{hij} \right)^2 \right]$$

where λ are the weights, n_{hi} is the number of primary sampling units in a final stratum, and $\sum y_{hij}$ the total of the characteristic in a primary sampling unit.

In general, there is a strong correlation between the magnitude of an estimate and the standard error of the estimate. The next graph presents the results of regressing the coefficient of variation of an estimate and the estimate. For the regression, a sample of 160 estimates was used. The fit of the model is satisfactory (R square = 0, 849).

From the fitted model we see that for estimations no less than 10.000 (for the total of country) we can expect a CV less than 15%.

Estimation



Coefficient of variation for certain characteristics for year 2022

Sampling error - indicators - Coefficient of variation (CV), Standard Error (SE) and Confidence Interval (CI)

	Employment rate	Percentage of unemployed over the total population	Youth unemployment rate
	Age group: 15-74	Age group: 15-74	Age group: 15-24
CV	0.96	3.93	8.80
SE	0.005	0.003	0.028
CI (**)	[0.518-0.538]	[0.069-0.081]	[0.260-0.368]

(*) Refers to main job.

(**) The value is based on a CI of 95%.

Region (NUTS-2)	Coefficient of variation (CV), Standard Error (SE) and Confidence Interval (CI) for unemployment rate estimation		
	CV	SE	CI
EL30 Attiki	0,084	0,009	[0,084 - 0,118]
EL41 Voreio Aigaio	0,204	0,026	[0,077 - 0,18]
EL42 Notio Aigaio	0,276	0,034	[0,057 - 0,191]
EL43 Kriti	0,118	0,013	[0,087 - 0,139]
EL51 Anatoliki Makedonia, Thraki	0,108	0,016	[0,119 - 0,182]
EL52 Kentriki Makedonia	0,079	0,011	[0,116 - 0,158]
EL53 Dytiki Makedonia	0,206	0,04	[0,115 - 0,271]
EL54 Ipeiros	0,137	0,018	[0,093 - 0,162]
EL61 Thessalia	0,178	0,028	[0,104 - 0,216]
EL62 Ionia Nisia	0,262	0,048	[0,089 - 0,275]
EL63 Dytiki Ellada	0,125	0,016	[0,098 - 0,162]
EL64 Sterea Ellada	0,135	0,019	[0,102 - 0,175]
EL65 Peloponnisos	0,145	0,017	[0,084 - 0,15]

15.3 Non-sampling error

15.3.1 Coverage error

Refers to deviations between sampling frame and target population (see 4.6). The sampling frame is based on the current census results. The primary sampling units consist of a number of building blocks.. The design and selection of the primary sampling units is based on the number of private households residing permanently in these areas at current census. The secondary sampling units (that is households and dwellings) are selected after the selection of the primary sampling unit and after the compilation of a complete list of the private household dwellings in the PSU. The list is updated every 6 quarters (when a new systematic sample of dwellings is selected in the primary sampling unit). The main issues pertaining to the frame quality are:

- The more the time interval elapsed since the census, the less accurately the probabilities of selection reflect the “real size” of the selected primary sampling units.
- Sample size can be different, and even significantly different from the expected size, due to considerable changes in the “size” (that is, the number of household dwellings) of a PSU.
- It is difficult to control the way listings are updated. Over-coverage and under-coverage can be both present.

Undercoverage (the percentage of persons that are not covered by the sampling frame) is estimated at about 1.5%. These are mainly persons residing in collective households and persons residing in houses outside builded areas.

15.3.1.1 Over-coverage – rate

Refers to the percentage of dwellings that are not used by households and are included in the sampling frame of Labour Force Survey. It is estimated at about 7.0%.

15.3.1.2 Common units – proportion

Refers to the proportion of units covered by both the survey and the administrative sources in relation to the total number of units in the survey. LFS survey does not uses any administrative sources, and therefore estimations are entirely derived from LFS sample.

15.3.2 Measurement error

Measurement errors are distinguished into:

a) response errors, i.e. when respondents provide untrue or incorrect information, caused, among others, by the following :

- Sensitive questions (like the existence of a second job, income, receiving unemployment allowances, etc)
- Proxy answering, mostly for questions about the motives or wishes of a person
- Repeated interviewing of the same household for 6 consecutive waves imposes a serious burden on the interviewed households
- Cases involving false data registration due to responses. For example, it may be the case of incorrect or incomplete description of the occupation, incorrect number of hours worked during the reference week, false salary etc.

b) interview errors, i.e. all cases of false data registration caused by mistakes made by the interviewer . For example, the interviewer may formulate a question incorrectly, or incompletely record open-ended answers (eg. profession description).

15.3.3 Non response error

Non response errors are due to non-contacts (failure to come into contact with the household) or to the refusal of the household to provide information.

Non-response error rate for 2022 LFS were as follows:

<i>Quarter</i>	<i>Non response rate (%)</i>	<i>Refusals (%)</i>	<i>Non contacts (%)</i>	<i>Other reasons (%)</i>
1	46.1	8.7	26.1	11.3
2	45.8	8.2	26.6	11.0
3	44.4	7.5	26.8	10.1
4	47.3	7.9	26.3	13.1
Yearly	45.9	8.05	26.5	11.4

NUTS-2 area	Yearly non-response rate (%)
EL30 Attiki	54.4
EL41 Voreio Aigaio	42.3
EL42 Notio Aigaio	64.6
EL43 Kriti	28.2
EL51 Anatoliki Makedonia, Thraki	38.8
EL52 Kentriki Makedonia	37.8
EL53 Dytiki Makedonia	43.4
EL54 Ipeiros	48.4
EL61 Thessalia	57.8
EL62 Ionia Nisia	61.6
EL63 Dytiki Ellada	38.5
EL64 Sterea Ellada	37.0
EL65 Peloponnisos	43.4

Unit non response is adjusted at primary unit level (design weights are multiplied by the factor $a = \text{eligible household in sample/households interviewed}$). Nevertheless, it is not clear whether this adjustment "removes" the whole bias attributed to non-response.

15.3.4 Processing error

The number of records with errors is about 12% (with a mean number of 3 errors per record). There is no information on the source of these errors (that is, codification, data capture or editing). These errors are eventually corrected after the application logic controls.

15.3.5 Model assumption error

No models for estimation of non-sampling errors are applied.

16. Timeliness and punctuality

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16.1 Timeliness

Survey results are available 80 days after the end of the reference period

16.2 Punctuality

There were no delays in the publication of results

17. Comparability

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17.1 Comparability - geographical

The definitions of the variables used in the Greek Labour Force Survey are fully in line with Eurostat Regulations

17.1.1 Assymetry for mirror flows statistics – coefficient

Refers to the estimation of differences of inbound and outbound flows between a pair of countries (e.g. labour force mobility). Does not concern LFS estimations.

17.2 Comparability over time

Consistency of time series and comparability of the estimates over time are affected by changes in key parameters of the survey as sample design, population estimates, the questionnaire, definitions of characteristics surveyed and classification systems. Most noticeable changes concern the following:

- Until 1997, the Labour Force Survey had been producing estimates on a yearly basis (spring quarter). From 1998 onwards the Labour Force Survey is a continuous quarterly survey.

- Total sample replacement was made in 1983, 1993, 1998 and 2004. Also, the sample was gradually replaced during the 2009-2010 period as well as from the 2nd quarter of 2015 to the 3rd quarter of 2016.
- In 2004, the method of substitutions, for dealing with non-response was discontinued.
- Derivation of survey results:
 - From 1981 to 1997 the survey estimations were derived by applying a reducing factor equal to the product of the inverse of the sampling fraction for a population adjustment factor, uniform for the whole country. From 1998 the reducing factor is based on the estimated population distribution by sex and age groups in every NUTS-2 level.
 - Since 2004 a correction factor adjusting for non-response is applied.
 - The population adjustment factors are calculated using the current population estimates, which in turn are based on the results of the latest census.
- Changes in codification:
 - 2006: Codification of NACE in 3-digit level
 - 2008: Introduction of NACE Rev2 for the codification of economic sector (see 4.2)
 - 2011: Introduction of ISCO-08 for the codification of occupation (see 4.2)
 - 2021: Use of the ISCED-F-2013 for the classification of field of education in 3-digit level.
- Changes in the survey questionnaire occur almost every year with major changes in 1992, 1998 and 2006 and 2021. Changes of a lesser extent occurred in 1983, 1987, 1999, 2003, 2019 and 2020. Most important changes were:

1999	- Introduction of variables that describe relationships between household members. - Introduction of separate questions on “search-job” activities - Introduction of questions on employees salary
2003	Introduction of questions on field of studies
2011	Introduction of questions for job-related education
2019	- Introduction of questions for insurance of employees in main job - Changes in the questions concerning non-formal education
2020	Introduction of questions concerning the effect of COVID pandemic on employment situation during the reference week (if the pandemic was the reason for absence from work during the reference week, if the pandemic was the reason for stopping to work, and if the pandemic was the reason for not looking for work)
2021	- Change in data collection mode (generalized use of computers during interviews) - Change in the wording of the questions concerning the employment status of the respondent during the reference week (due to the adoption of the standard questionnaire prepared by Eurostat) - Change in the way weights are calculated (use of calibration, calculate different weights for variables with a lower frequency of collection than quarterly) - Change in the definition of employment and, in particular, the treatment of people who claim to have a job but have not worked in it for an hour - The surveyed characteristics are divided into 2 categories: characteristics that are surveyed every quarter and for which quarterly estimates are produced and characteristics that are researched with less frequency (annual, biennial and 8-year variables) and for which estimates are produced with corresponding frequency (annual, biennial). or 8-year-olds). These characteristics are surveyed only in a subset of the sample and specifically in households surveyed for the first time (1/6 of the total quarterly sample)

Main changes in Labour Force Survey since 2021 are summarized as follows:

	Up to 2020	From 2021 onwards
Data collection	Paper questionnaires	By electronic means (CAPI)
Questionnaire	The number of the surveyed characteristics and the relevant questions remained the same for every quarter of the year.	The number of the surveyed characteristics and the relevant questions changes every quarter. For specific characteristics, only annual estimates are produced.

Definition of employed	<p>Population: Persons aged 15 years and over.</p> <p>Persons who reported that they did not work in the reference week but had a job from which they were temporarily absent are classified as employed, except in the following cases:</p> <ul style="list-style-type: none"> • Employees who are non-active, are absent for more than 3 months and receive less than 50 % of their salary. • Employees who are absent from work due to seasonality. <p>Self-employed persons are employed in all cases (including family workers).</p>	<p>Population: Persons aged 15-89 years.</p> <p>Persons who reported that they did not work in the reference week but had a job from which they were temporarily absent are considered to be employed only if the duration of their absence is less than 3 months or if they continue to receive income from their work.</p> <ul style="list-style-type: none"> • Sick leave, maternity/paternity leave, and educational leave are excluded, and in these cases, persons are classified as employed. <p>Seasonal workers, regardless of professional status, who reported that they did not work in the reference week but had a job from which they were temporarily absent due to seasonality are considered to be employed only if they perform tasks related to their work (e.g. renovation, business trip) excluding legal or administrative obligations.</p>
Weighting	Population adjustment according to gender, age and NUTS-2 Region.	Sample weights are applied for all members of the same household and in addition the results of the survey are now reduced to the estimated number of households in the country.

The new European Regulation (EU) 2019/1700 for social statistics, which entered into force on 1.1.2021, brought about changes in the data collection method as well as the method of producing the estimates of the survey. The LFS data produced from 2021 onwards were no longer comparable with those up to 2020 (a “break” in the time series). According to the provisions of the implementing Regulations (EC) 2019/2240 (Art. 10) and 2019/2241 (Art. 5), in order to produce break-free timeseries, the data from 2009 to 2020 were revised. The estimates for the reference months from January 2009 to December 2020 incorporate the impact of the implementation of the Regulation (EU) 2019/1700 from reference month April 2022, <https://www.statistics.gr/en/statistics/-/publication/SJO02/> .

18. Coherence

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18.1 Coherence cross-domain

18.1.1 Coherence – sub annual and annual statistics

Consistency between LFS quarterly and annual statistics

For all data collected each quarter, and based on the full sample of the survey, the annual estimates emerge as a simple arithmetic mean of the 4 quarterly estimates.

For the data collected only in the 1st wave of the survey, the estimates are derived from the weighting of the total annual sample, which is a subset of the complete sample.

The weightings for the annual estimates are calculated so that the estimate of the number of employed, unemployed, and non-employed persons by sex and age groups based on the annual sample is consistent with the estimate of these figures based on the full sample.

Coherence of LFS data with registered unemployment: There are differences between these estimates due to differences both in measurement and definitions. LFS is using the ILO concept of unemployment while Unemployment register includes a person if he has contacted the unemployment office and declared him of herself as unemployed. As a consequence, persons with "small" jobs or part-timers, can be included in registered unemployment. At the same time, it is not always the case that someone who is LFS unemployed is registered at the unemployment office. There are relatively small differences (register unemployment is higher) but both estimates show same trends at country level.

Estimates of LFS and registered unemployment (average) for the fourth quarters of 2022.

	2022A	2022B	2022C	2022D
Persons registered in public employment office (LFS estimate)	830.458	710.828	700.075	766.229
Persons registered in public employment office (official data)	1.104.900	948.804	927.661	1.029.341
% Difference	33,0	33,5	32,5	34,3

18.1.2 Coherence – National Accounts

Coherence of LFS data with National Accounts: There are differences between the two estimates that are due to different definitions, concepts and coverage. National Accounts cover all population while LFS covers only population living in private households. National Accounts use LFS as the main source of data on employment but in certain cases, Business Surveys are also used. The National Accounts estimation for the number of persons in employment is slightly higher than the LFS estimation.

18.2 Coherence – internal

The LFS estimates have full internal coherence, as they are all based on the same set of microdata and they are calculated using the same estimation methods

19. Cost and burden

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Persons working for Labour Force Survey

Number of staff involved in central and regional offices, excluding interviewers (Full-time equivalents)

Total	22.2
- of which professional and managerial	15.5

Number of surveyed households

	<i>Total</i>	Households surveyed for the first time	Households surveyed for the 2nd, 3rd, ..6 th time
Surveyed households in 2022	88,663	14,129	74,534
Surveyed persons in 2022	182,594	29,263	153,331

Total cost for data collection (by not permanent staff of ELSTAT): 524,000 euros

20. Data revision

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20.1 Revision policy

Survey estimates are based on the latest census data. When the latest census data are available, data weights are revised to reflect the new information on population totals.

20.2 Revision practice

Data weights are revised for the 4 years before the census and for the years between the census and the first year when the latest census results are available.

In June 2004 the results of the period from 1998 to 2003 were revised in accordance with the results of the 2001 census. In June 2014 the results of the period from 2001-2013 were revised in accordance with the results of the 2011 census. Initially, results for the period from 1998 to 2003 were based on the 1991 census, whereas results for the period from 2004 to 2013 were based on the 2001 census.

Following the introduction of the new Social Statistics Framework Regulation, (EU) 2019/1700, and due to the change it brought to the survey estimates, break-free time series were calculated for the number of employed, unemployed and persons outside labour force by sex and age groups for the period 2009-2020, <https://www.statistics.gr/en/statistics/-/publication/SJO02/>.

21. Statistical processing

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21.1 Source data

Labour force survey is a sample survey covering the population living in private households. The selection of households to be surveyed follows a two stage stratified sampling scheme.

Total country is stratified in 206 strata. These strata are formed by allocating municipalities and communes of every NUTS 3 in three different groups (Agglomerations and Municipalities with 10.000 inhabitants or more, Municipalities and Communes with 2.000 to 9.999 inhabitants, and Communes up to 1.999 inhabitants). The exceptions are Athens and Thessaloniki agglomerations, which are divided into 31 and 9 strata, respectively.

From the second quarter of 2015, the sampling frame was undergoing a total renewal process that was completed in the third quarter of 2016 (ie, the rate of renewal was 1/6 per quarter). The final sample, after full renewal, now consists of 2820 surface units.

In particular:

- In the period between the 2nd quarter of 2015 and the 2nd quarter of 2016, some of the surface units (housing units) are selected with a probability proportional to the number of households residing in them at the 2001 census) and the remaining ones with probability proportional with the number of households staying in them at the 2011 census)
- From the 3rd quarter of 2016, all surface units were selected with a probability proportional to their size at the 2011 inventory and based on the revised sampling frames.

At the second sampling stage a systematic sample of dwellings is selected in every primary sampling unit. All households residing in selected dwellings are asked to participate in the survey. All the individuals who are members of the selected households are interviewed.

Total sample size is about 20,500 households per quarter.

21.2 Frequency of data collection

Data are collected throughout the year.

The year is divided in 4 quarters: 1st (January, February, March), 2nd (April, May, June), 3rd (July, August, September) and 4th (October, November, December).

The quarterly sample is distributed uniformly in the 13 (or 14) weeks of the quarter.

21.3 Data collection

The Labour force survey sample follows for a "rotational" pattern. Every quarter, the 5/6 of the sample remains the same, while the 1/6 is "rotated" - that is new households are interviewed. New households are interviewed by personal, face-to-face, interviews. Subsequent interviews of the same household (during the following quarters) can be carried out either by face-to-face interviews either by telephone..

From 2021 the data are collected by electronic means (CAPI). In rare cases a printed questionnaire is used.

During 2021 and for reasons of public health protection due to COVID-19, data were collected to a significant part by way of telephone interviews and electronic questionnaire.

21.4 Data validation

The recording of the interviews by electronic means allows direct control over the recorded answers and the flow of the questions.

After integrating the interviews into the database, the validation of the data is done through a series of checks that identify inconsistencies between the dates given by the respondents, between education and profession, between profession and sectors of economic activity, between answers given to different parts of the questionnaire and inconsistencies in the composition of households. The problems identified are solved either by new contact with the household or, if possible, by using previous data from the same household.

21.5 Data compilation

Labor Force Survey estimates are generated by reducing the survey results to the total population of private households. This reduction is achieved by proper weighting of the sample values.

From 2021, the Labor Force Survey calculates two different weightings:

a) Individual weighting for the production of results related to characteristics that are surveyed in a quarterly basis throughout the survey sample and for which quarterly results are published (quarterly variables). This factor is calculated in three stages.

In the first stage, each person who answers the research questions is assigned a weighting factor that reflects the chances of the individual being selected, as they result from the design of the research. This coefficient is equal to the inverse of the probability of selection of the household to which the person in question belongs.

In the second stage, the weights of the individuals included in a surface unit are modified to address the non-response to the survey. The correction is made at the level of the surface unit and the correction factor is defined as:

$$\text{Non response correction} = \text{number of eligible households in primary sampling unit} / \text{number of households that responded.}$$

In the third stage, the results resulting from the weighting of the sample values with the coefficients obtained from the first two stages are adjusted at the household level (calibration) in order to satisfy the following:

- the population estimates are consistent with the corresponding population estimates derived by Region (NUTS-2), sex and age groups from the population at the last census (2011) and which incorporate births, deaths and migration in interim period until the survey year
- the distribution of the estimated number of households by household size (1,2,3,4+ persons) are consistent with the results of the last Census (2011).

The above weighting factor is the same for each person in the same household.

b) Weightings to produce results concerning characteristics investigated for a subset of the sample (annual, two-year and 8-year variables). These coefficients are calculated so that there is consistency with the estimates produced on the basis of the quarterly coefficients in terms of the average annual survey estimates (ie the average of the four quarters): a) for the number of employed, unemployed, and persons out of the labor force by gender and age groups (annual, biennial) and b) at least for the number by gender and population group of the 8-year (ad hoc) variables.

Weighting factors are calculated per person and per household (where all members of the household have the same reduction factors).

21.5.1 Imputation – rate

Imputation is done in the variable containing the gross salary declared by the employees in the LFS. For 2022, the replacement rate was 48.4%

21.6 Adjustment

The LFS quarterly results are not adjusted

21.6.1 Seasonal adjustment

Characteristics studied by LFS (number of employed, unemployed persons etc) are subject to strong seasonal variations: for example, in Greece, employment increases in summer due to tourism (although there are countervailing factors). Therefore, seasonal adjustment is applied in monthly estimates since 2004 and for time series of employment and unemployment by sex, age groups and Decentralized Administration.

Seasonally adjusted series are produced by means of TRAMO&SEATS algorithm. It should be noted that due to seasonal adjustment the whole series with monthly estimates is recalculated every time a new month is added in time series. As a result, estimations for the previous months are often revised.

22. Comment

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