



## LABOUR FORCE SURVEY: September 2023

The Hellenic Statistical Authority (ELSTAT) announces the seasonally adjusted estimates of employment and unemployment for September 2023.

- The **seasonally adjusted unemployment rate** in September 2023 amounted to **10.0%** compared to the upwards revised 12.1% in September 2022 and to the downwards revised 10.6% in August 2023.
- The **number of employed persons** amounted to 4,226,711 persons, increased by 70,724 persons as compared with September 2022 (1.7%) and by 55,173 persons compared with August 2023 (1.3%).
- The **number of unemployed persons** amounted to 467,804, decreased by 104,240 persons as compared with September 2022 (-18.2%) and by 24,549 persons compared with August 2023 (-5.0%).
- The **number of persons outside the labour force**, i.e., persons under the age of 75, that neither work nor look for a job, amounted to 3,100,098, increased by 4,184 persons as compared with September 2022 (0.1%) and decreased by 32,923 persons compared with August 2023 (-1.1%).

Graph 1 shows the evolution of the above figures as of January 2009.

The monthly estimates are subject to revisions due to the updates of the seasonally adjusted series whenever new monthly data are added, as well as to the update of seasonal adjustment model with complete annual data. Users should also take into account that **the first estimates of the most recent monthly unemployment rates are likely to be revised as they are produced on the basis of the survey data collected and processed at the time of the press release publication, which do not coincide with the finally collected and processed data**. For this reason, the monthly estimates are revised when the final quarterly estimates are made available.

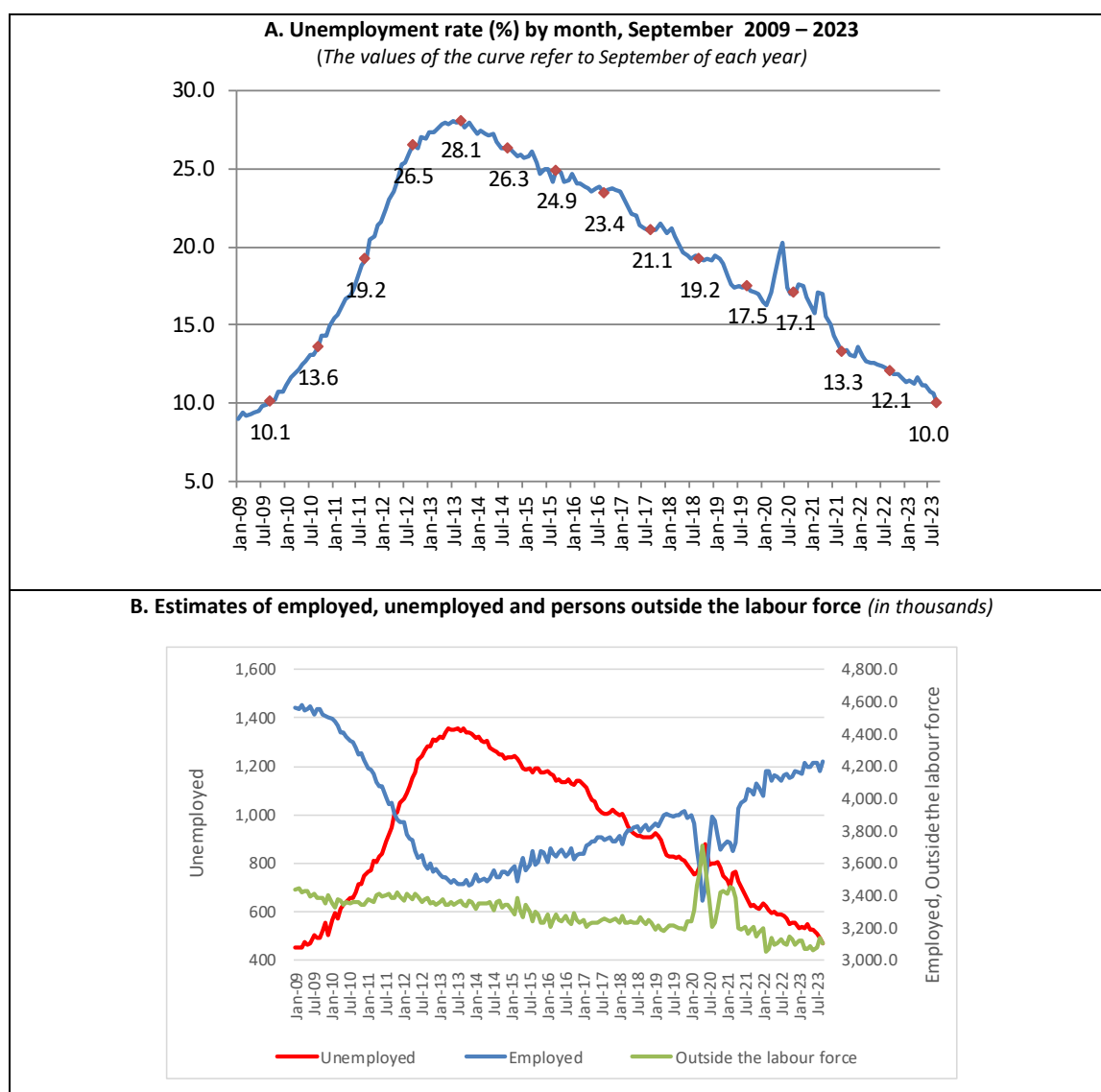
**Information on methodological issues**

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**Graph 1: Evolution of employment and unemployment**

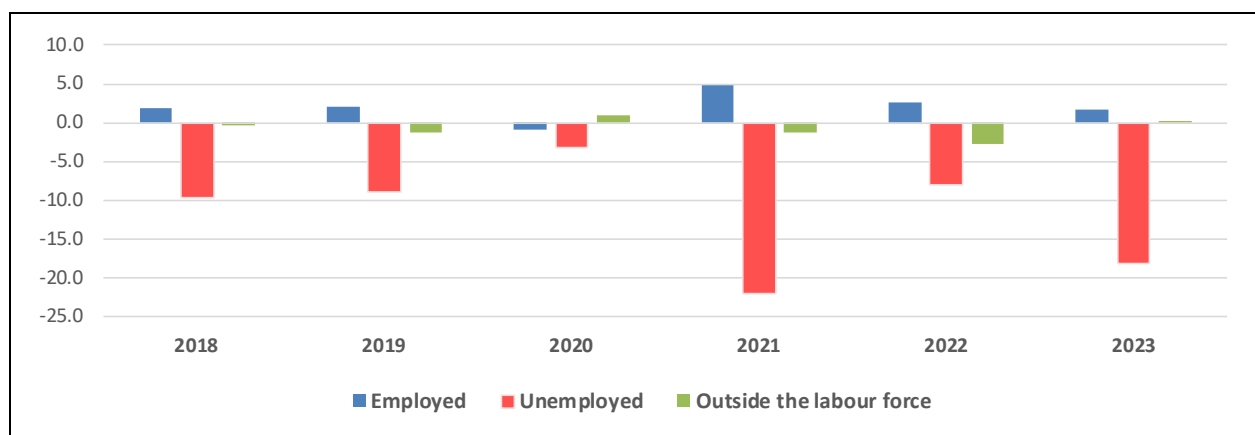


The figures and the changes of the estimates as regards the persons employed, the unemployed and the persons outside the labour force, as well as the unemployment rate for September of the years 2018-2023 are presented in Table 1. The complete data series for employed, unemployed and persons outside the labour force as well as the unemployment rate are published on ELSTAT's webpage. Graph 2 depicts the percentage changes in relation to the corresponding month of the previous year.

**Table 1: Employed, unemployed, persons outside the labour force and unemployment rate (%), September 2018 – 2023**

	September					
	2018	2019	2020	2021	2022	2023
Employed	3,819,281	3,897,495	3,862,170	4,051,407	4,155,987	4,226,711
Unemployed	906,665	824,910	798,790	621,683	572,044	467,804
Persons outside the labour force	3,240,352	3,198,897	3,227,331	3,183,929	3,095,914	3,100,098
<b>Unemployment Rate</b>	<b>19.2</b>	<b>17.5</b>	<b>17.1</b>	<b>13.3</b>	<b>12.1</b>	<b>10.0</b>

**Graph 2: Annual changes of persons employed, unemployed and persons outside the labour force (percentage change in relation to the corresponding month of the previous year)**



Tables 2 and 3 illustrate the unemployment rate by gender and age group, from September 2018 to 2023.

**Table 2: Unemployment rate (%) by gender, September 2018-2023**

Gender	September					
	2018	2019	2020	2021	2022	2023
Males	15.2	14.2	13.9	9.7	9.4	8.0
Females	24.2	21.6	21.3	17.8	15.5	12.4
<b>Total</b>	<b>19.2</b>	<b>17.5</b>	<b>17.1</b>	<b>13.3</b>	<b>12.1</b>	<b>10.0</b>

**Table 3: Unemployment rate (%) by aggregated age group, September 2018-2023**

Age Group	September					
	2018	2019	2020	2021	2022	2023
15-24	39.9	39.6	34.6	28.9	34.2	19.4
25-74	18.1	16.3	16.2	12.5	10.9	9.4
<b>Total</b>	<b>19.2</b>	<b>17.5</b>	<b>17.1</b>	<b>13.3</b>	<b>12.1</b>	<b>10.0</b>

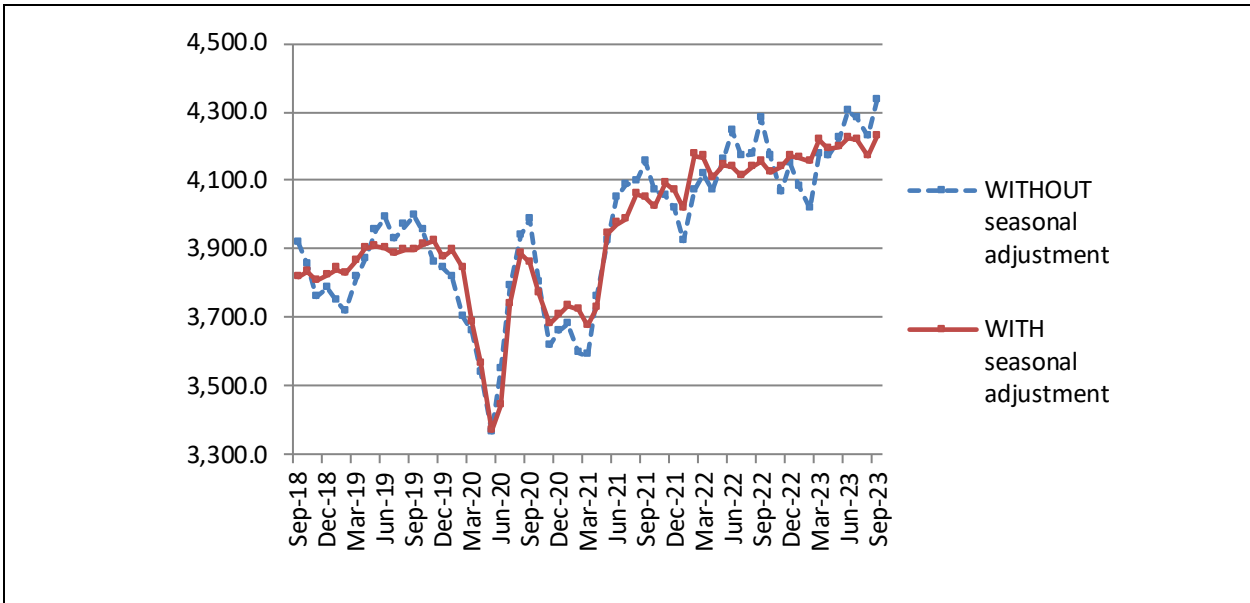
### The effect of seasonal adjustment on the estimates of Labour Force Survey

The characteristics surveyed by the Labour Force Survey (number of employed, unemployed, etc.) have large seasonal variation. For example, in Greece, employment normally increases during the summer months because of tourism (if there are no other countervailing factors).

Seasonal adjustment is a statistical technique that removes the seasonal component of a time series, making more visible the underlying trend in the change of a characteristic. Whenever new data are added, the monthly estimates are subject to revisions due to the update of the seasonally adjusted time series.

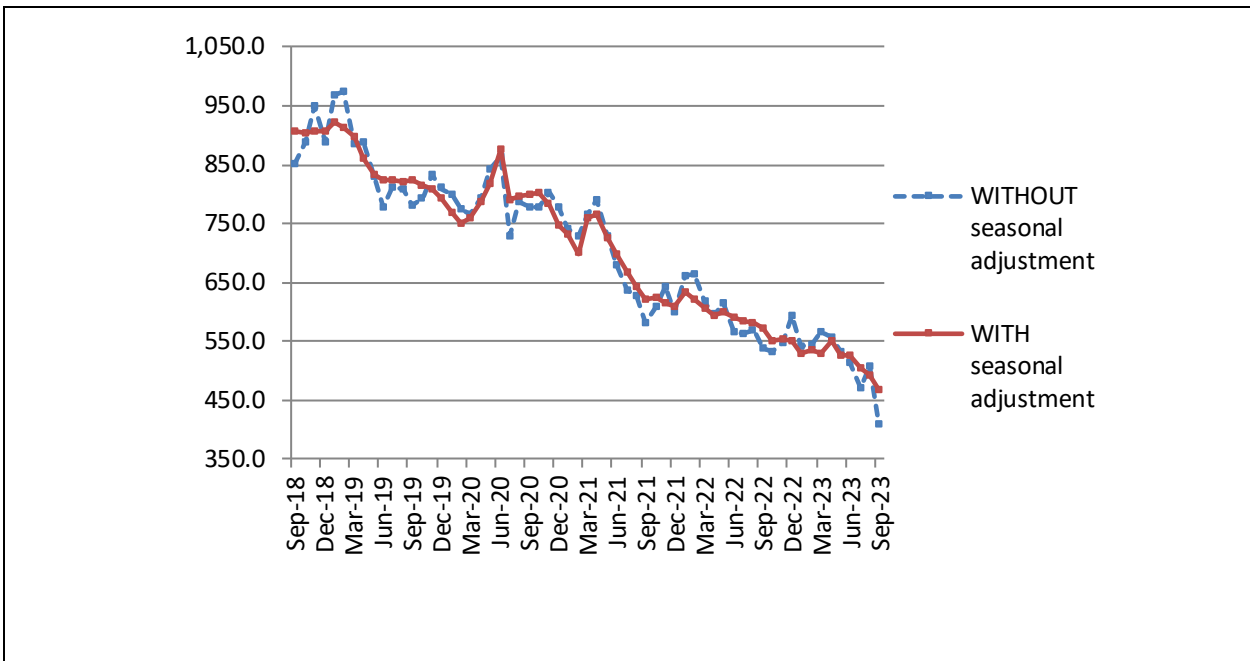
Graphs 3, 4 and 5 present the adjusted and unadjusted time series for employed and unemployed persons, and the unemployment rate as of 2018.

**Graph 3: Number of Employed Persons - Adjusted and Non-adjusted Estimates**



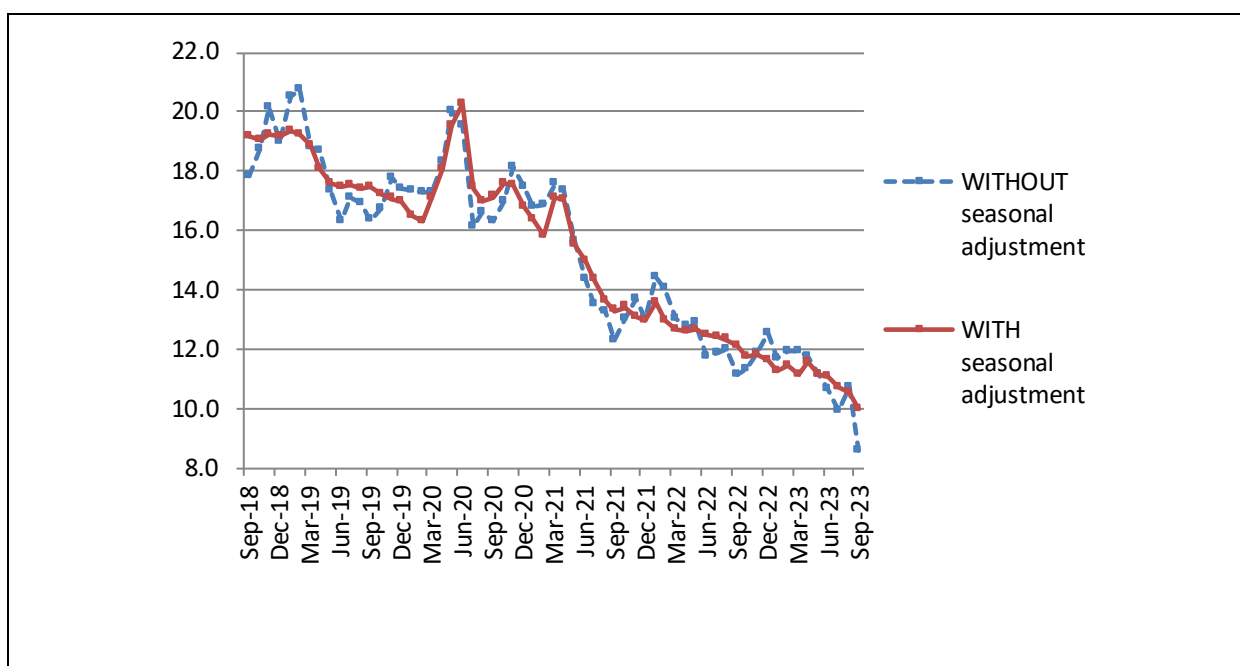
(in thousands)

**Graph 4: Number of Unemployed Persons - Adjusted and Non-adjusted Estimates**



(in thousands)

**Graph 5: Unemployment Rate (%) - Adjusted and Non-adjusted Estimates**



**Revisions of monthly estimates**

The monthly estimates for the number of employed and unemployed persons and the unemployment rate can be subject to revisions in the following months due to the updates to the seasonally adjusted series whenever new monthly data are added, to the inclusion of the most recent quarterly Labour Force Survey data, and the update of the seasonal adjustment model with complete annual data. In this press release the estimation of unemployment rate for the period July 2022 – August 2023 has been revised (compared to the estimation published in the previous press-release) as follows:

**Table 4: Comparison of seasonally adjusted estimates**

	Estimations published on October 2, 2023	Current estimations
July 2022	12.5	12.4
August 2022	12.3	12.3
September 2022	12.0	12.1
October 2022	11.7	11.8
November 2022	11.7	11.8
December 2022	11.6	11.6
January 2023	11.2	11.3
February 2023	11.4	11.4
March 2023	11.2	11.2
April 2023	11.6	11.6
May 2023	11.2	11.1
June 2023	11.0	11.1
July 2023	10.9	10.7
August 2023	10.9	10.6
September 2023	-	10.0

## EXPLANATORY NOTES

<b>Labour Force Survey</b>	The Labour Force Survey has been conducted since 1981. Until 1997 the results were produced on an annual basis with reference to the second quarter of each year. From 1998 onwards it is a continuous quarterly survey. The main statistical objective of the Labour Force Survey is to divide the population of working age (15 years and over) into three mutually exclusive and exhaustive groups - persons in employment, unemployed persons, and persons outside the labour force. In addition, the Labour Force Survey collects information on demographic characteristics, on main job characteristics, on the existence and characteristics of a second job, on educational attainment, on participation in education, on previous working experience and on search of job.
<b>Legislation</b>	The current survey is fully harmonized with European legislation. The basic act is Regulation (EC) No 2019/1700 of the European Parliament and of the Council establishing a common framework for European statistics relating to persons and households, which is in force since 1/1/2021 and replaced Regulation (EC) 577/98. Implementing Regulation (EU) 2019/2240 sets out the design and characteristics of the survey and Implementing Regulation (EU) 2019/2241 lays down the technical elements of the monthly unemployment data.
<b>Reference Period</b>	The sample of Labour Force Survey is equally allocated to the 4 (or 5) weeks of the month. Every selected household is assigned to a specific week, the reference week, running from Monday to Sunday.
<b>Coverage</b>	For the monthly estimates, a sub-sample of the quarterly Labour Force survey's sample is used.
<b>Definitions</b>	<p><b>Employed:</b> 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:</p> <ul style="list-style-type: none"><li>a) persons who during the reference week worked for at least 1 hour for pay or profit, including contributing family workers</li><li>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:<ul style="list-style-type: none"><li>- persons not at work due to holidays, working time arrangements, sick leave, maternity or paternity leave;</li><li>- persons in job-related training;</li><li>- 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;</li><li>- 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;</li><li>- persons temporarily not at work for other reasons where the expected duration of the absence is 3 months or less.</li></ul></li></ul> <p><i>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.</i></p> <p><b>Unemployed persons</b> comprise persons aged 15 to 74 who were, during the reference week, (a) not employed, (b) currently available for work, and (c) actively seeking work, or found a job to start within a period of at most 3 months from the end of the reference week.</p> <p><b>Persons outside the labour force</b> comprise persons who were in one of the following categories: (a) aged below 15, (b) aged above 89, or (c) aged 15 to 89 and neither employed nor unemployed during the reference week, according to the definitions of employment and unemployment described above.</p> <p><b>Economically active population (labour force)</b> are persons either employed or unemployed.</p> <p><b>Unemployment Rate</b> is the ratio of unemployed divided by total labour force.</p>

**Changes in Labor Force Survey as of 2021**

	<b>Up to 2020</b>	<b>From 2021 onwards</b>
<b>Data collection</b>	Paper questionnaires	By electronic means (CAPI)
<b>Questionnaire</b>	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.
<b>Definition of employed</b>	<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"> <li>• Employees who are non-active, are absent for more than 3 months and receive less than 50 % of their salary.</li> <li>• Employees who are absent from work due to seasonality.</li> </ul> <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"> <li>• Sick leave, maternity/paternity leave, and educational leave are excluded, and in these cases, persons are classified as employed.</li> </ul> <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>

**Seasonal adjustment** Seasonal adjustment is a statistical technique that removes the seasonal component of a time series, making more visible the underlying trend in the change of a characteristic. Hellenic Statistical Authority is using JDemetra+ for seasonal adjustment. Seasonally adjusted series are produced by 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.

**Sampling errors** The monthly results of Labour Force Survey are estimations that are based in a relatively small sample size and have large sampling errors. An indication of the magnitude of survey's sampling errors is that estimations of characteristics that refer to 10,000 persons at the total country are accompanied by a coefficient of variation of at least 15%. More accurate estimates and detailed analysis of the changes in employment can be based on the quarterly results of the survey.

**Methodology** Labour Force Survey's monthly estimates are produced by a suitable unbiased estimator which takes into account a) the probability of selection of every sampled household, b) the response rate in every primary sampling unit, c) the estimated population, for the corresponding month, allocated by NUTS II areas, gender and age group.

**References** More information about the monthly Labor Force Survey can be found on the ELSTAT website, at the link: <https://www.statistics.gr/en/statistics/-/publication/SJO02/->