HELLENIC REPUBLIC

HELLENIC STATISTICAL AUTHORITY

PRESS RELEASE

LABOUR FORCE SURVEY: June 2019

The Hellenic Statistical Authority (ELSTAT) announces the seasonally adjusted unemployment rate for June 2019.

- The **seasonally adjusted unemployment rate** in June 2019 was **17.0**% compared to the downward revised 19.2% in June 2018 and to the downward revised 17.1% in May 2019. The number of employed in June 2019 amounted to 3,928,036 persons. The number of unemployed amounted to 805,115 while the number of inactive to 3,199,815. The corresponding figures for June 2014 to 2019 are presented in Table 1.

- The **number of employed persons** increased by 80,061 persons compared with June 2018 (a 2.1% rate of increase) and by 5,752 persons compared with May 2019 (a 0.1% rate of increase).

- The **number of unemployed persons** decreased by 110,078 persons compared with June 2018 (a 12.0% rate of decrease) and by 6,039 persons compared with May 2019 (a 0.7% rate of decrease).

- The **number of inactive persons,** i.e., persons that neither work nor look for a job, decreased by 13,592 persons compared with June 2018 (a 0.4% rate of decrease) and decreased by 3,644 persons compared with May 2019 (a 0.1% rate of decrease).

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. Users should take into account the fact that seasonal adjustment procedure requires data for many months in order to remove the seasonal component from a time series. As a result, several "observations" (that is a sufficient number of monthly results) are necessary so that the time series reflect a significant change in the trend of employment and unemployment.

The monthly estimates for the number of employed, unemployed and unemployment rate can be subject to revisions in the following months caused by updates to the seasonally adjusted series whenever new monthly data are added, inclusion of the most recent quarterly Labour Force Survey (LFS) data and 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 with the collected and processed at the time of the press release survey data, which do not coincide with the finally collected and processed sample of the survey. For that reason monthly estimates are revised when the final quarterly estimates are known.

Information:
Population, Employment and Cost of Living Statistics Division
Employment Statistics Section
*Dimitris Vatikiotis*
Tel: +30 213 135 2173
Fax: +30 213 135 2948
E-mail : *lfs@statistics.gr*

Table 1: Employed, unemployed, economically non-active persons and unemployment rate, June 2014 – 2019

	June					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Employed	3,535,377	3,585,103	3,687,077	3,774,287	3,847,975	3,928,036
Unemployed	1,284,424	1,195,891	1,129,952	1,022,909	915,193	805,115
Inactive	3,317,067	3,306,768	3,231,797	3,215,849	3,213,407	3,199,815
Unemployment Rate	26.6	25.0	23.5	21.3	19.2	17.0

Graph 1: Unemployment rate by month, June 2004 – 2019
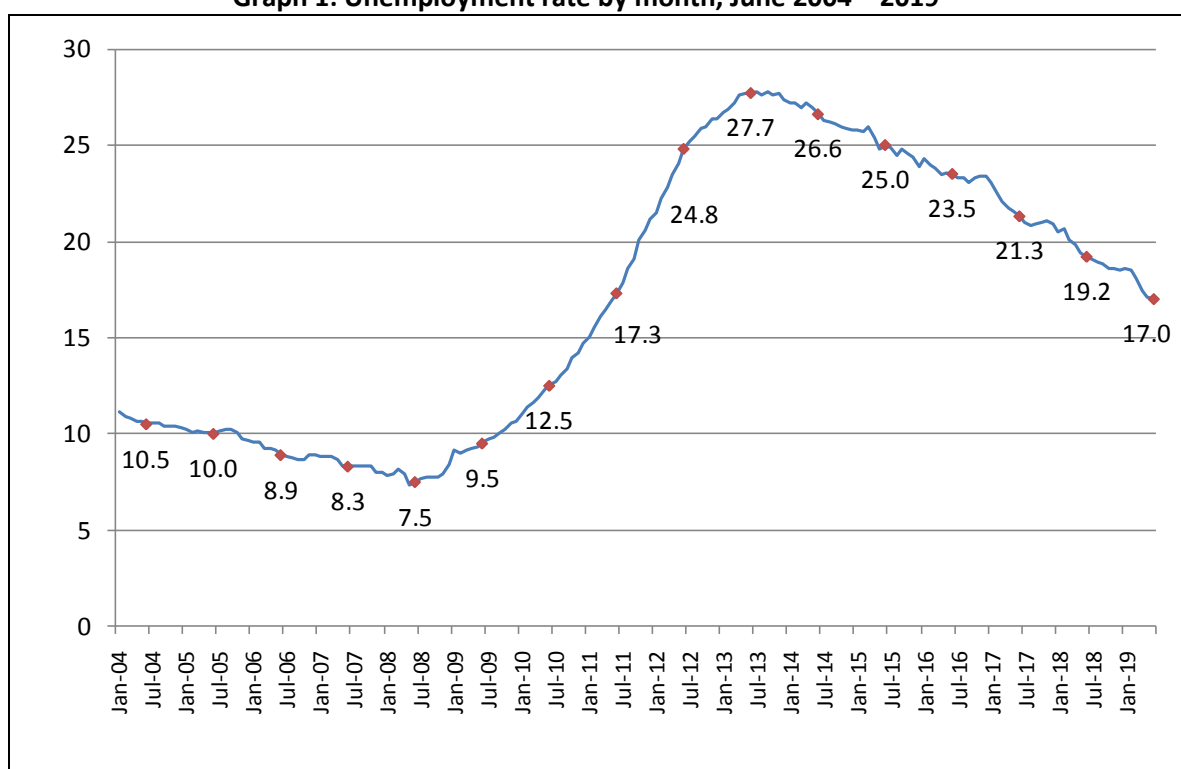
The values of the curve refer to June of each year

Tables 2 and 3 illustrate the unemployment rate by gender and age group from June 2014 to 2019. Table 4 presents the evolution of unemployment rate during the last 15 months, by Decentralized Administration. The complete time series for employed, unemployed and inactive persons as well as the unemployment rate are available on ELSTAT's website.

Table 2: Unemployment rate by gender, June 2014-2019

Gender	June					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Males	23.5	21.8	19.8	17.9	15.3	13.9
Females	30.6	29.1	28.0	25.5	24.1	20.9
Total	26.6	25.0	23.5	21.3	19.2	17.0

Table 3: Unemployment rate by age group[1], June 2014-2019

Age Group	June					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
15-24	50.2	48.4	46.7	43.5	38.5	35.5
25-34	35.6	32.3	29.6	27.4	23.6	23.4
35-44	22.9	22.8	20.1	19.0	17.5	14.9
45-54	21.5	20.1	19.4	16.8	16.1	13.9
55-64	17.4	16.6	19.5	17.1	15.4	12.9
65-74	12.9	10.5	10.2	13.1	12.5	9.0
Total	26.6	25.0	23.5	21.3	19.2	17.0

Table 4: Unemployment rate for the period April 2018 - June 2019, by Decentralized Administration[2]

Decentralized Administration	4th 2018	5th 2018	6th 2018	7th 2018	8th 2018	9th 2018	10th 2018	11th 2018	12th 2018	1st 2019	2nd 2019	3d 2019	4th 2019	5th 2019	6th 2019
Macedonia-Thrace	20.0	19.8	19.5	19.4	19.3	19.4	19.1	19.3	18.9	19.1	18.8	18.9	18.7	18.7	18.4
Epirus-Western Macedonia	24.7	23.4	23.7	23.3	23.2	22.8	21.7	21.3	21.2	21.4	21.2	20.8	20.2	19.9	19.3
Thessaly – Sterea Ellas	18.8	19.0	19.5	18.7	18.5	18.1	18.2	17.8	19.0	18.6	18.7	17.8	17.6	17.3	17.1
Peloponnese, Western Greece & Ionian Islands	19.4	18.7	18.7	18.8	19.1	18.9	18.6	18.3	18.5	18.5	18.8	18.6	18.2	17.8	17.8
Attica	20.5	20.0	19.8	19.7	19.6	19.2	19.1	19.0	18.8	18.7	18.3	17.9	17.5	17.0	16.8
Aegean Islands	19.4	18.9	16.8	18.0	18.3	19.1	19.5	20.0	20.0	20.1	18.5	16.9	13.7	13.4	13.9
Crete	12.1	13.3	12.4	12.7	12.8	12.3	11.3	14.3	9.4	11.6	15.5	12.4	11.8	9.4	10.1
Greece, Total	19.8	19.4	19.2	19.1	18.9	18.8	18.6	18.6	18.5	18.6	18.5	18.1	17.4	17.1	17.0

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[1] Estimates of "rare" characteristics, that is estimates of characteristics that refer to 10,000 persons or less are accompanied by large sampling errors, as for example in the case of unemployment rate in the age group of 65 – 74 years old

[2] Decentralized Administrations are the lowest geographical areas for which the Labour Force Survey (LFS) publishes estimates. LFS results are not published at lower level (i.e. NUTS 2 or NUTS 3) because, due to small population and sample size, estimates in these areas have large sampling errors. It should be noted that the same problem of small populations and sample sizes exist also in certain Decentralized Administrations and as a result, estimates in these areas have large sampling errors

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

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

Table 5 presents the change in monthly estimates of employed and unemployed because of seasonal adjustment for the period April 2018 – June 2019 while Graphs 2, 3 and 4 present adjusted and unadjusted time series for employed persons, unemployed persons and the rate of unemployment for the same period.

Table 5: Change in monthly estimates of employed and unemployed persons due to seasonal adjustment

	Estimated number of employed without seasonal adjustment (in thousands)	Change due to seasonal adjustment (in thousands)	Change (%)	Estimated number of unemployed without seasonal adjustment (in thousands)	Change due to seasonal adjustment (in thousands)	Change (%)
April 2018	3,801.0	10.0	0.3	941.3	-0.3	0.0
May 2018	3,840.1	-6.0	-0.2	913.1	10.2	1.1
June 2018	3,919.7	-71.7	-1.8	862.5	52.7	6.1
July 2018	3,885.3	-36.9	-1.0	877.1	29.5	3.4
August 2018	3,860.7	-12.6	-0.3	895.9	2.5	0.3
September 2018	3,932.3	-79.0	-2.0	837.1	55.8	6.7
October 2018	3,883.1	-23.4	-0.6	862.4	17.1	2.0
November 2018	3,793.6	37.8	1.0	914.3	-37.2	-4.1
December 2018	3,831.0	9.3	0.2	853.8	19.0	2.2
January 2019	3,785.5	62.8	1.7	924.9	-45.5	-4.9
February 2019	3,758.9	89.1	2.4	928.0	-55.3	-6.0
March 2019	3,846.3	25.4	0.7	844.0	12.6	1.5
April 2019	3,884.3	33.0	0.8	852.6	-28.2	-3.3
May 2019	3,957.8	-35.5	-0.9	795.7	15.5	2.0
June 2019	3,989.3	-61.3	-1.5	743.0	62.1	8.4

Graph 2: Unemployment Rate - Adjusted and Non-adjusted Estimates
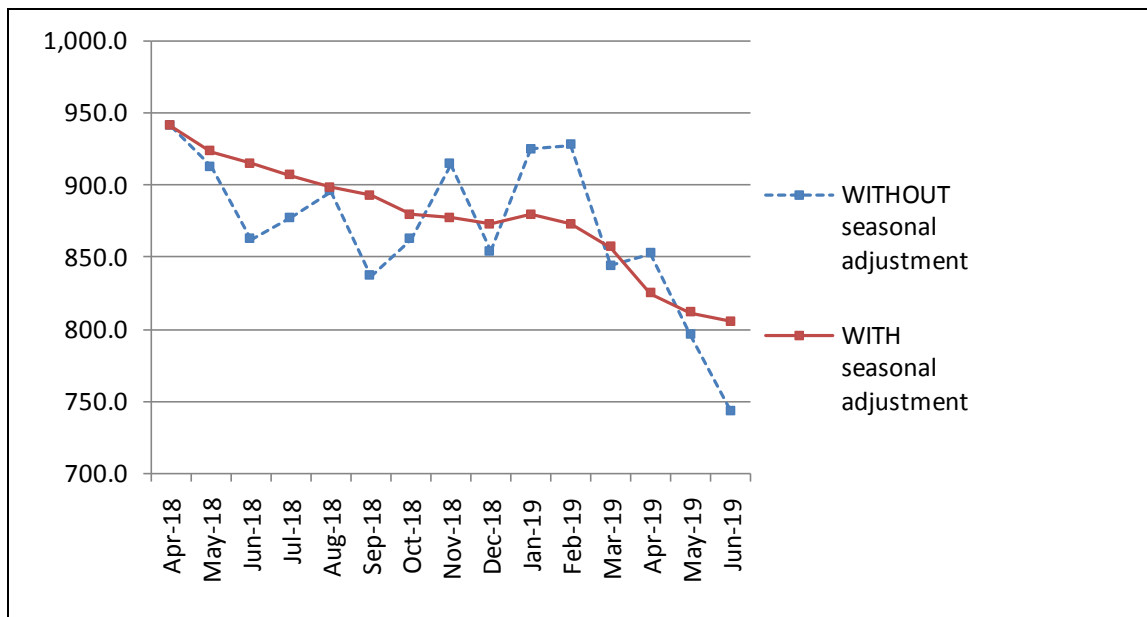

(in thousands)

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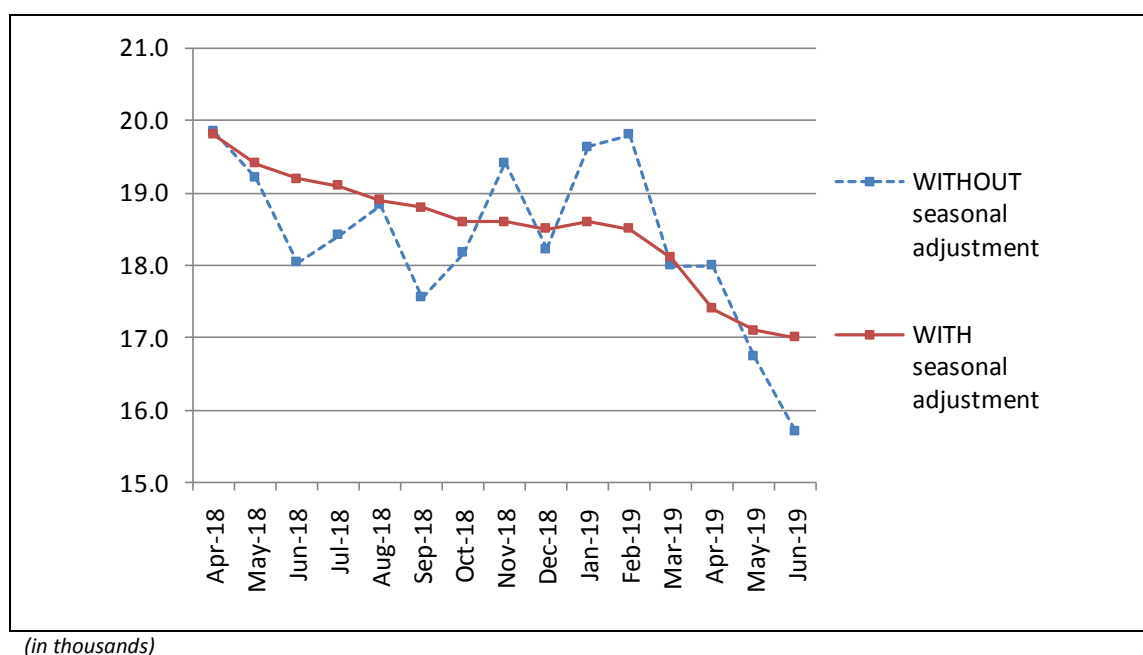
Graph 3: Number of Employed Persons - Adjusted and Non-adjusted Estimates
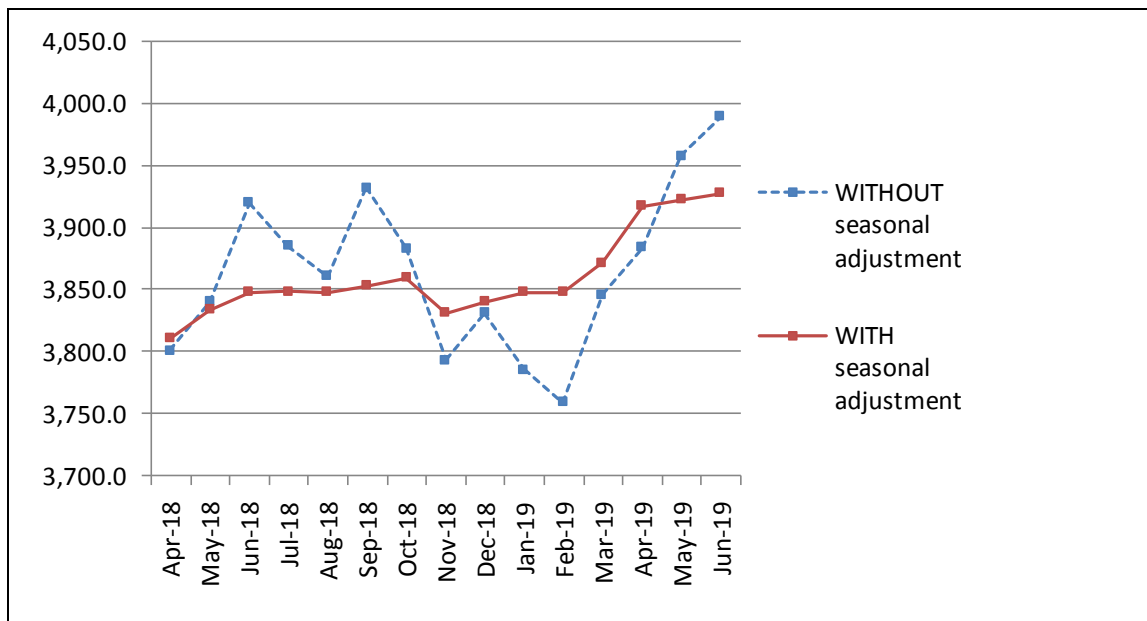
(in thousands)

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

(in thousands)

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Revisions of monthly estimates

The monthly estimates, for the number of employed and unemployed persons and unemployment rate, can be subject to revisions in the following months caused by updates to the seasonally adjusted series whenever new monthly data are added, inclusion of the most recent quarterly Labour Force Survey data and update of the seasonal adjustment model with complete annual data. In the current press release the estimation of unemployment rate for the period April 2018 – May 2019 has been revised (compared to the estimation published in the previous press-release) as follows:

Table 6: Comparison of seasonally adjusted estimates

	Estimations published in August 2019	Estimations published in the current press release
April 2018	19.8	19.8
May 2018	19.4	19.4
June 2018	19.2	19.2
July 2018	19.1	19.1
August 2018	18.9	18.9
September 2018	18.8	18.8
October 2018	18.6	18.6
November 2018	18.6	18.6
December 2018	18.5	18.5
January 2019	18.6	18.6
February 2019	18.5	18.5
March 2019	18.1	18.1
April 2019	17.4	17.4
May 2019	17.2	17.1
June 2019	-	17.0

Labour Force Survey

Labour Force Survey produces estimates since 1981 (second quarter of the year). From 1998 onwards it is a continuous quarterly survey. The main statistical objectives 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 inactive persons. 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.

Legislation

The current survey is completely harmonized with European legislation. The principal legal act is the Council Regulation (EC) No. 577/98 that stipulates the provisions on design, survey characteristics and decision-making processes.

Reference Period

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.

Coverage

For the monthly estimates, a sub-sample of the quarterly Labour Force survey's sample was used.

Definitions

Employed are persons aged 15 years or older, who during the reference week worked, even for just one hour, for pay or profit or they were working in the family business, or they were not at work but had a job or business from which they were temporarily absent.

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 are neither classified as employed nor as unemployed.

Economically active population (labour force) are persons either employed or unemployed.

Unemployment Rate is the ratio of unemployed divided by total labour force.

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 Demetra 2.0 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 25,000 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 estimates are produced by a suitable unbiased estimator which takes in to 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

Analytical description of the Labour Force Survey's methodology and definitions can be found at http://www.statistics.gr/en/statistics/-/publication/SJO02/-