**HELLENIC REPUBLIC**

**HELLENIC STATISTICAL AUTHORITY**

Piraeus, October 8, 2015

# PRESS RELEASE

## LABOUR FORCE SURVEY: July 2015

The Hellenic Statistical Authority announces the seasonally adjusted unemployment rate for July 2015.

The seasonally adjusted unemployment rate in July 2015 was 25.0% compared to 26.3% in July 2014 and the downward revised 25.0% in June 2015. The number of employed amounted to 3,591,407 persons. The number of unemployed amounted to 1,196,736 while the number of inactive to 3,296,289. The corresponding figures for July 2010 to 2015 are presented in Table 1.

The number of employed increased by 33,506 persons compared with July 2014 (a 0.9% rate of increase) and decreased by 508 persons compared with June 2015 (a negligible change).

Unemployed decreased by 71,421 persons (a 5.6% rate of decrease) compared with July 2014 and by 1,984 persons compared with June 2015 (a 0.2% rate of decrease).

Inactive persons –that is, persons that neither worked neither looked for a job– decreased by 10.248 persons (a 0.3% rate of decrease) compared with July 2014 and by 1,984 persons compared with June 2015 (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 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.

**Unemployment rate by month (July 2013 – July 2015)**
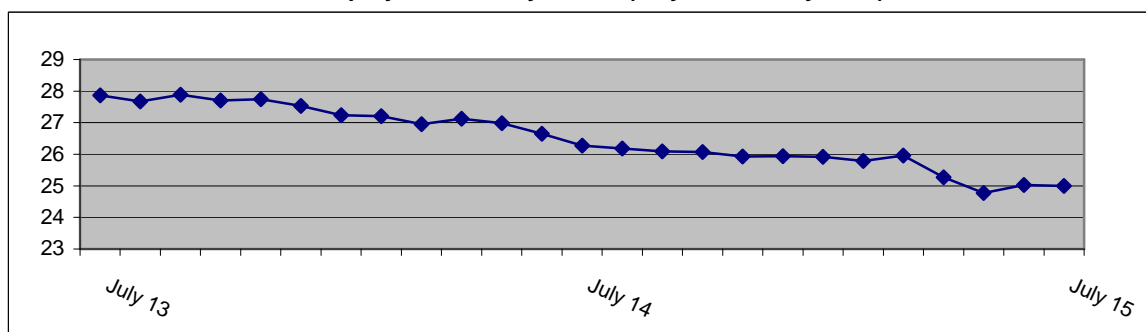
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Tables 2 and 3 illustrate unemployment rate by gender and age groups from July 2010 to 2015. Table 4 presents the evolution of unemployment rate during last 15 months by Decentralized Administrations. The complete time series for employed, unemployed and inactive are available on ELSTAT's website.

**Table 1. Employed, unemployed, economically non-active and unemployment rate: July 2010-2015**

|  | July | | | | | |
|---|---|---|---|---|---|---|
|  | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** |
| Employed | 4,386,295 | 4,037,455 | 3,655,714 | 3,497,862 | 3,557,902 | 3,591,407 |
| Unemployed | 637,688 | 874,090 | 1,234,083 | 1,351,187 | 1,268,157 | 1,196,736 |
| Inactive | 3,339,647 | 3,393,238 | 3,353,746 | 3,332,654 | 3,306,528 | 3,296,280 |
| **Unemployment Rate** | **12.7** | **17.8** | **25.2** | **27.9** | **26.3** | **25.0** |

**Table 2. Unemployment rate by gender: July 2010-2015**

| Gender | July | | | | | |
|---|---|---|---|---|---|---|
|  | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** |
| Males | 10.1 | 15.1 | 22.3 | 25.0 | 23.3 | 21.5 |
| Females | 16.1 | 21.4 | 29.0 | 31.6 | 30.0 | 29.4 |
| **Total** | **12.7** | **17.8** | **25.2** | **27.9** | **26.3** | **25.0** |

**Table 3:  Unemployment rate by age groups: July 2010-2015[1]**

| Age Group | July | | | | | |
|---|---|---|---|---|---|---|
|  | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** |
| 15-24 years old | 32.2 | 43.9 | 56.3 | 58.7 | 49.5 | 48.6 |
| 25-34  » | 16.7 | 24.7 | 32.1 | 36.6 | 35.1 | 32.2 |
| 35-44  » | 10.6 | 14.4 | 21.7 | 24.3 | 22.7 | 22.5 |
| 45-54  » | 8.7 | 12.1 | 18.5 | 21.1 | 20.3 | 19.7 |
| 55-64  » | 6.0 | 8.4 | 14.0 | 15.3 | 16.6 | 17.8 |
| 65-74  » | 1.5 | 3.2 | 3.9 | 9.7 | 11.3 | 11.4 |
| **Total** | **12.7** | **17.8** | **25.2** | **27.9** | **26.3** | **25.0** |

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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*

**Table 4. Unemployment rate during May 2014 - July 2015, by Decentralized Administration[1]**
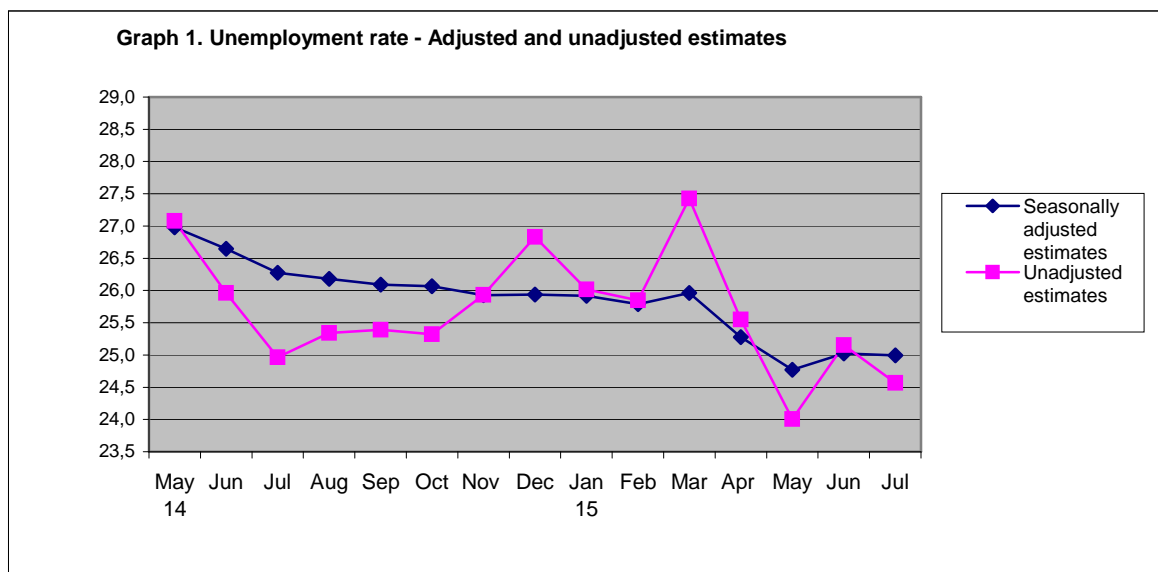
| Decentralized Administration | 5th 2014 | 6th | 7th | 8th | 9th | 10th | 11th | 12th | 1st 2015 | 2nd | 3rd | 4th | 5th | 6th | 7th |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Macedonia-Thrace | 28.3 | 27.6 | 27.1 | 27.2 | 27.2 | 27.5 | 26.7 | 26.8 | 26.0 | 26.3 | 25.9 | 25.6 | 25.0 | 25.2 | 24.7 |
| Epirus-Western Macedonia | 27.6 | 27.2 | 27.0 | 26.4 | 26.0 | 25.8 | 26.4 | 26.7 | 26.7 | 26.6 | 27.1 | 26.4 | 26.8 | 26.8 | 27.1 |
| Thessaly – Sterea Ellas | 27.2 | 25.9 | 26.0 | 25.6 | 26.2 | 26.3 | 26.1 | 26.3 | 26.4 | 26.5 | 26.4 | 25.5 | 26.3 | 26.3 | 26.2 |
| Peloponnese. Western Greece and Ionian Islands | 26.3 | 26.4 | 25.6 | 25.1 | 24.7 | 24.7 | 24.9 | 25.6 | 25.8 | 25.5 | 26.1 | 25.6 | 24.8 | 25.3 | 26.6 |
| Attica | 27.3 | 27.4 | 27.0 | 27.5 | 26.9 | 26.9 | 26.6 | 27.0 | 26.9 | 26.6 | 26.2 | 25.7 | 25.1 | 24.9 | 24.8 |
| Aegean | 23.2 | 18.0 | 20.8 | 21.9 | 20.8 | 20.7 | 19.2 | 16.3 | 17.5 | 16.4 | 23.3 | 16.4 | 15.7 | 17.7 | 18.4 |
| Crete | 24.0 | 25.9 | 23.5 | 23.7 | 24.8 | 22.5 | 26.5 | 24.1 | 23.5 | 24.6 | 23.9 | 23.8 | 23.6 | 24.2 | 24.7 |
| **Greece, Total** | 27.0 | 26.6 | 26.3 | 26.2 | 26.1 | 26.1 | 25.9 | 25.9 | 25.9 | 25.8 | 26.0 | 25.3 | 24.8 | 25.0 | 25.0 |

[1]Decentralized Administrations are the lowest geographical areas for which Labour Force Survey publishes estimates. LFS results are not published at lower level (NUTS 2 or NUTS 3) because, due to small population and sample size, estimates in these areas have large sampling errors. We should note 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 because of tourism (if there are no other countervailing factors).

The following graphs (Graph 1 – 3) present adjusted and unadjusted time series for employed, unemployed and rate of unemployment for the period May 2014 – July 2015, while Table 5 presents, for the same period, the change in monthly estimates of employed and unemployed because of seasonal adjustment.
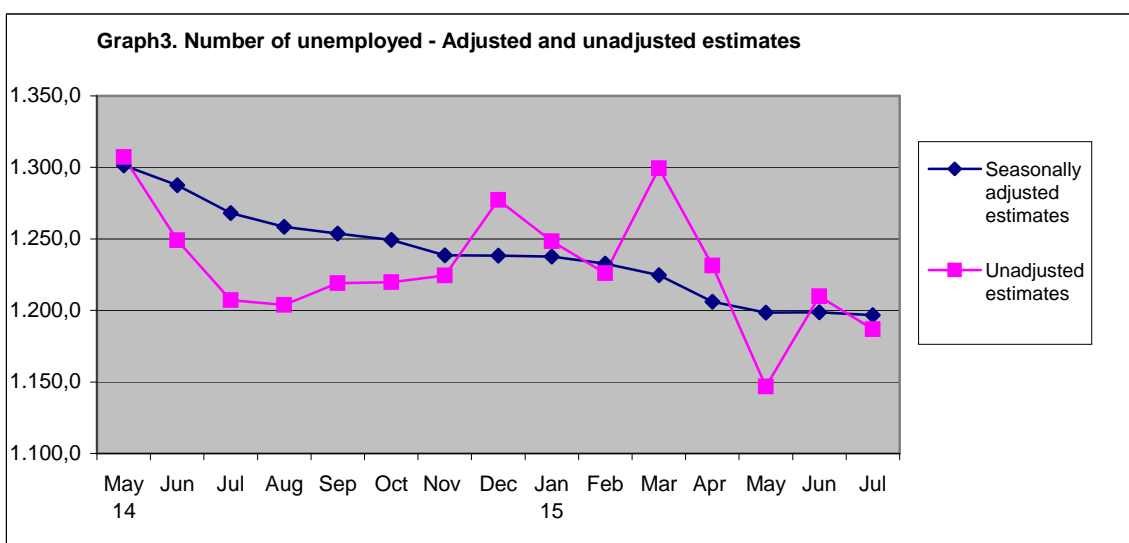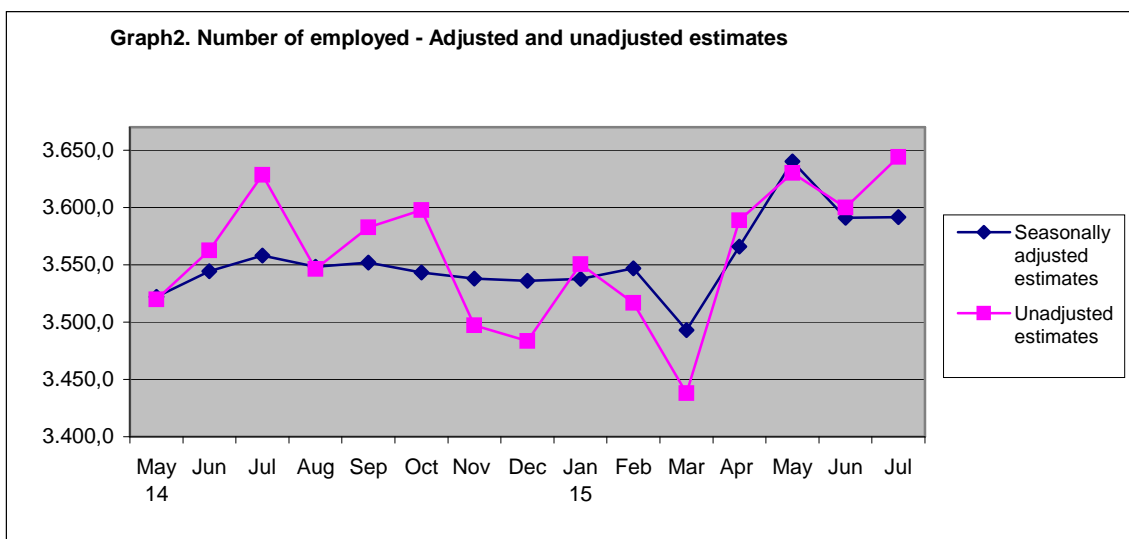


Graph 1. Unemployment rate - Adjusted and unadjusted estimates

**Graph2. Number of employed - Adjusted and unadjusted estimates**



**Graph3. Number of unemployed - Adjusted and unadjusted estimates**



**Table 5. Change in monthly estimates of employed and unemployed because of seasonal adjustment**

| | Estimated number of employed without seasonal adjustment (in thousands) | Change due to seasonal adjustment (in thousands) | % of change | Estimated number of unemployed without seasonal adjustment (in thousands) | Change due to seasonal adjustment (in thousands) | % of change |
|---|---|---|---|---|---|---|
| **May 2014** | **3,519.7** | 2.2 | 0.1 | **1,307.2** | -5.8 | -0.4 |
| **June** | **3,562.5** | -18.2 | -0.5 | **1,249.2** | 38.4 | 3.1 |
| **July** | **3,628.5** | -70.6 | -1.9 | **1,207.3** | 60.9 | 5.0 |
| **August** | **3,546.3** | 2.1 | 0.1 | **1,203.8** | 54.7 | 4.5 |
| **September** | **3,582.7** | -30.7 | -0.9 | **1,219.1** | 34.7 | 2.8 |
| **October** | **3,597.7** | -54.6 | -1.5 | **1,219.8** | 29.4 | 2.4 |
| **November** | **3,497.1** | 40.8 | 1.2 | **1,224.4** | 14.1 | 1.1 |
| **December** | **3,483.5** | 52.4 | 1.5 | **1,277.3** | -39.1 | -3.1 |
| **January 2015** | **3,550.5** | -12.9 | -0.4 | **1,248.5** | -10.8 | -0.9 |
| **February** | **3,516.7** | 30.2 | 0.9 | **1,225.9** | 6.7 | 0.5 |
| **March** | **3,438.1** | 54.9 | 1.6 | **1,299.4** | -74.7 | -5.7 |
| **April** | **3,588.8** | -22.8 | -0.6 | **1,231.5** | -25.3 | -2.1 |
| **May** | **3,630.0** | 10.1 | 0.3 | **1,146.7** | 51.7 | 4.5 |
| **June** | **3,599.9** | -9.0 | -0.2 | **1,209.8** | -11.2 | -0.9 |
| **July 2015** | **3,643.9** | -52.5 | -1.4 | **1,186.9** | 9.9 | 0.8 |

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## Revisions of monthly estimates

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 LFS data and update of seasonal adjustment model with complete annual data. In the current press release, the estimation of unemployment rate for the period May 2014 – July 2015 have been revised, compared to the corresponding estimation in June 2015, as follows:

| | Seasonally adjusted unemployment rate – Estimations in June 2015 | Seasonally adjusted unemployment rate – Estimations in July 2015 |
|---|---|---|
| **May 2014** | 27.0 | 27.0 |
| **June** | 26.6 | 26.6 |
| **July** | 26.3 | 26.3 |
| **August** | 26.2 | 26.2 |
| **September** | 26.1 | 26.1 |
| **October** | 26.1 | 26.1 |
| **November** | 25.9 | 25.9 |
| **December** | 26.0 | 25.9 |
| **January 2015** | 25.9 | 25.9 |
| **February** | 25.8 | 25.8 |
| **March** | 26.0 | 26.0 |
| **April** | 25.5 | 25.3 |
| **May** | 25.0 | 24.8 |
| **June** | 25.2 | 25.0 |
| **July 2015** | - | 25.0 |

**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. We note 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. As an indication of the magnitude of survey's sampling errors, we note that estimations of characteristics that refer to 25.000 persons at the total country, are accompanied by a coefficient of variation ot at least 15% (an analysis of Labour Force Survey sampling errors can be found at the address
 http://www.statistics.gr/portal/page/portal/ESYE/PAGE-themes?p_param=A0101
at the link "Methodology"). 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 www.statistics.gr.