

# LABOUR FORCE SURVEY

## 1. Purpose and use

The main purpose of the Labour force survey is to provide information on the main characteristics of employment and unemployment in the Republic of Bulgaria. Results from the surveys are published in the Bulgarian statistical publications and are periodically sent to analytical and informative units of international organizations such as EUROSTAT, OECD, ILO, UNESCO, etc. and are published in corresponding international issues.

Since 2003 ad hoc modules, providing more detailed information on characteristics of the labour force, have been included in the Labour force survey - lifelong learning, work organization and working time arrangements, reconciliation of work and family life, transition from work into retirement, accidents at work and work related health problems etc.

## 2. Main definitions

**Labour force (Currently economically active population)** - Persons of 15 years of age and over, who furnish the supply of labour for the production of goods and services. Labour force comprises employed and unemployed persons.

**Employed** - Persons of 15 years of age and over who during the reference period:

- Performed some work for at least one hour for payment in cash or in kind or other income;

- Did not work but had a job or an enterprise, business from which they were temporarily absent due to leave, illness, full-paid maternity leave, bad weather, strike or other similar reasons.

Persons on unpaid leave initiated by the employer are considered as employed if the duration of this leave does not exceed three months.

According to the professional status employed persons are classified in the following categories:

- Employers - persons who by themselves or in co-operation with other people manage their own enterprise, firm, farm, work on lease or perform other work, and who employ at least one person;
- Self-employed - persons who by themselves or in co-operation with other people work in their own business, practice or farm, work on lease or perform other work, and who do not employ any other people;
- Employees - persons who work for public or private employer and receive remuneration in cash or in kind as wage or salary (including persons, working with permanent and temporary labour contract, on full-time and part-time job), remuneration by civil contract as well remuneration without contract;
- Unpaid family workers - persons who work without payment, in a firm, enterprise or farm, owned and operated by a relative person of the same household.

**Unemployed** - Persons aged 15 to 74 who did not work at all during the reference period, were actively seeking work within the preceding four weeks, including the reference and were available to start working within two weeks following the reference one.

As active methods of job search are considered the following:

- having been in contact with a public employment office to find work, whoever took the initiative (renewing registration for administrative reasons only is not an active step);
- having been in contact with a private firm or agency intermediating to find a job;
- applying to employers directly;
- asking among friends, relatives, unions, etc., to find work;
- placing or answering job advertisements;
- studying job advertisements;
- taking a recruitment test or examination or being interviewed;
- looking for land, premises or equipment;
- applying for permits, licenses or financial resources.

As unemployed are classified persons who were not actively looking for work but have found a new job or business that expected to start within 3 months following the reference period.

Persons on unpaid leave over a three months are classified as unemployed if they were actively looking for work and were available to start working.

**Persons not in the labour force (Current economically inactive population)** - Persons who were neither employed, nor unemployed during the reference period.

Persons on leave for taking care of a child up to 2 years of age are always considered as not being in the labour force.

**Discouraged persons** - Persons of 15 years of age and over who want to work but who are not seeking a job, because do not believe they will find one.

Criteria used in the Labour force survey for classifying persons according their labour status are different than those used by other sources of employment and unemployment data and should be taken into account:

- Data obtained from the Labour force survey are average quarterly estimates and the reference period for sample units is a calendar week;
- As unemployed are considered not only persons having been in contact with a public (or private) employment office to find a job but those used other methods - placing or answering job advertisements, applying to employers directly, asking among friends, relatives, etc;
- Students, homemakers, pensioners and others are considered as unemployed during the reference period if they meet the above definition of unemployment;
- Upper age limit for classifying persons as unemployed according to the Labour force survey is 74.

### **3. Object and coverage**

The Labour force survey is a sample survey and its objects are non-institutional households. All persons of 15 years of age and over, members of the selected households are interviewed.

### **4. Sample design and sample size**

The sample used for the survey is a stratified two-stage cluster sample. The stratification is done by districts and urban/rural areas, i.e. the sample consists of 56 strata. Clusters on the first stage are enumeration districts (established during Population Census) and clusters on the second stage are households. The sample consists of 2 438 clusters (enumeration districts) and 19 504 households. Clusters on the first stage are chosen with probability proportional to the size of district's population. For each quarter 8 households are systematically selected within each enumeration district.

The sample is rotational. A 2-(2)-2 rotation pattern is used. Respondents are interviewed in two consecutive quarters, then are temporarily removed for the next two quarters and entered again for the following two quarters, i.e. each household is interviewed four times.

## **5. Weighting procedure**

The weights are calculated in three steps:

- initial weights are obtained as the inverse of the inclusion probabilities of any household within a strata;
- the initial weights are multiplied by correction factor for households' non-response which is calculated as ratio between the total number of selected households in a strata and the number of interviewed households from the same strata;
- in final step the intermediate (corrected for non-response) weights are calibrated to the population estimates by the following variables: at national level - by age group (0-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over), sex and type of place of residence (urban/rural); at districts level (NUTS 3) - by sex and type of place of residence (urban/rural).

For calculation of weights the latest available population estimates (excluding the population, living in institutional households) are used.

## **6. Stochastic reliability of data**

Due to the sampling approach used in the labour force survey, the estimation of the parameters obtained from the labour force survey could vary from those in the population. Standard errors, coefficients of variation and confidence intervals are calculated for assessment of stochastic reliability of the estimation for main indicators.

## **7. Sources of information**

The data for persons, members of the selected households, are collected by face-to-face interview using the questionnaire. The survey collects data on economic activity of the interviewed persons by age, sex, education, urban/rural areas, marital status and occupation. For the unemployed information on the duration of unemployment, methods of job search, existence of previous work experience, etc. is also recorded.

## **8. Work organization**

Interviewers from the Regional Statistical Offices visit the selected households and interview persons living in these households. Filled in questionnaires are coded and data entry is done on PC at the Regional Statistical Offices. Primary data are sent to the National Statistical Institute, where are weighted at national level. Weighted data are broken down by different characteristics: total, by sex, age, urban/rural areas, level of education, professional status, occupation, by statistical regions and districts. Data are tabulated for dissemination and publishing.

## **9. Periodicity**

Labour Force Survey was conducted for the first time in September 1993. From 1994 until the end of 1999, it was conducted two or three times a year, and during the period 2000 - 2002 - four times a year (in March, June, September and December). The reference period is a fixed calendar week running from Monday to Sunday and is the same for all households.

Since the beginning of 2003 quarterly continuous Labour force survey is implemented. In case of the continuous survey all households, covered in the sample, are surveyed within three months, the sample being evenly spread throughout the quarter. The reference period is a calendar week and it is not the same for separate groups of households.

## **10. Main statistical indicators**

Main analytical indicators calculated from the Labour force survey data are the following:

- **Activity rate** - ratio between economically active population and the total population of the same age.
- **Employment rate** - ratio between employed population and the total population of the same age.
- **Unemployment rate** - ratio between unemployed persons and the economically active population (labour force).

## **11. Publicity and transparency**

- Access to the methodology used in the Labour force survey.

All issues of the National Statistical Institute published LFS data contain short methodological notes about main definitions, used in the survey, and calculated analytical indicators. The survey instruments are available at Labour Market Statistics Division and at the 28 NSI Regional Statistical Offices.

- Timeliness and dissemination

Data from the Labour force survey are available 52 days after the end of the reference period. Data are disseminated to the public through Bulgarian News Agency that releases data to the Media (agencies, newspapers, radio and television).

After data are disseminated they are available for all users from the NSI Division "User Services". From the same division additional tabulations may be obtained against payment.

- Publications

Results from the Labour force survey are published in the following NSI specialized and general publications:

- "Employment and unemployment - annual data" - specialized annual electronic publication on CD, NSI;
- "Labour Force Survey" (leaflet) - annually advertising edition, NSI;
- "Statistical Reference book" - annual edition, NSI;
- "Statistical Yearbook" - annual edition, NSI;
- "Bulgaria" (brochure) - annual edition, NSI.

- Electronic

Main results from the Labour force survey are available on the NSI web site.

## **12. Comparability of results**

- Since the first quarter of 2012 a new weighting procedure has been used in the labour force survey (as described in item 5), which influence should be taken into account in use of LFS data. The main differences from the procedure used until the end of 2011 are the following:

- the number of age groups at national level for which the consistence between LFS estimates and current population estimates is achieved is increased (from 4 to 14);

- population data used in LFS weighting procedure exclude population living in institutional households (which are not covered by the survey).

- The discrepancy between current population estimates as of the end of 2010 (used for LFS estimates for all quarters of 2011) and the data from the Population Census as of 1 February 2011 has also impact over the comparability between 2011 and 2012 LFS data.

- Estimation of impact

In order to make correct comparisons between 2011 and 2012 data and to obtain an approximate quantitative assessment of the impact of new weighting procedure and population data based on 2011 Population Census, revised LFS estimates for the first quarter of 2011 are calculated according to the procedure described in p.5, and population data as of 1 February 2011 (according to 2011 Census).

Table 1 shows a comparison between the original LFS data on main indicators for the first quarter of 2011 (published in 2011) and the revised data for the same quarter. The differences refer mainly to absolute values, not so much to the calculated rates.

Table 1

**Estimates of main LFS indicators for the first quarter of 2011**

Indicators	Unit	Original (Published in May 2011)	Revised (May 2012)	Difference (revised- original)
<b>Activity rate (15 - 64 years)</b>	<b>%</b>	<b>65.2</b>	<b>65.2</b>	<b>0.0</b>
<b>Employed persons - total</b>	<b>thousands</b>	<b>2890.7</b>	<b>2904.4</b>	<b>13.7</b>
Male	thousands	1508.2	1538.6	30.4
Female	thousands	1382.5	1365.9	-16.6
By age group:				
15 - 64 years	thousands	2849.4	2866.6	17.2
15 - 24 years	thousands	163.9	173.7	9.8
25 - 44 years	thousands	1474.0	1484.5	10.5
45 - 54 years	thousands	793.5	738.9	-54.6
55 - 64 years	thousands	418.0	469.5	51.5
65 years and over	thousands	41.3	37.8	-3.5
<b>Employment rate (15 - 64 years)</b>	<b>%</b>	<b>57.3</b>	<b>57.2</b>	<b>-0.1</b>
Male	%	59.9	60.0	0.1
Female	%	54.8	54.3	-0.5
Employment rate				
By age group:				
15 years and over	%	44.7	45.6	0.9
15 - 24 years	%	18.4	20.2	1.8
25 - 44 years	%	72.5	71.5	-1.0
45 - 54 years	%	73.2	73.2	0.0
55 - 64 years	%	43.5	44.2	0.7
65 years and over	%	2.8	2.8	0.0
<b>Unemployed persons - total</b>	<b>thousands</b>	<b>395.5</b>	<b>402.0</b>	<b>6.5</b>
Male	thousands	228.7	234.1	5.4
Female	thousands	166.9	167.9	1.0
By age group:				
15 - 24 years	thousands	67.3	64.8	-2.5
25 - 44 years	thousands	191.7	204.8	13.1
45 - 54 years	thousands	90.6	82.7	-7.9
55 years and over	thousands	46.0	49.6	3.6
<b>Unemployment rate</b>	<b>%</b>	<b>12.0</b>	<b>12.2</b>	<b>0.2</b>
Male	%	13.2	13.2	0.0
Female	%	10.8	10.9	0.1
By age group:				
15 - 24 years	%	29.1	27.2	-1.9
25 - 44 years	%	11.5	12.1	0.6
45 - 54 years	%	10.2	10.1	-0.1
55 years and over	%	9.1	8.9	-0.2
Persons not in the labour force	thousands	3186.2	3056.8	-129.4
of which aged 15- 64	thousands	1727.6	1742.9	15.3
Discouraged persons	thousands	256.0	253.4	-2.6