



QUALITY REPORT FOR STATISTICAL SURVEYS

LABOUR FORCE SURVEY

FOR 2016



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Date: 15. September 2017.

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1. STATISTICAL PROCESS AND STATISTICAL OUTPUTS

1.1 The purpose of the survey

The Labor Force Survey is a survey that measures the economic activity of the population over a short period of seven days. The Labour Force Survey represents research conducted to gather data on the basic characteristics of a working-age population, based on which the total labour force in the country is reviewed, together with data on demographic and educational characteristics of household members by sex. The survey provides information on employment, unemployment, underemployment, the characteristics of the main and additional job and the work that the person has done in the past, then data on occupation, activity, time of work, duration of employment, education and further training, job search etc.

The main goal of the survey is to gather data on the three main, mutually exclusive segments of population: the employed, the unemployed and the inactive. Collected data allows the calculation of the most important indicators of the labor market situation and the state of the economy of a country, namely the activity rate, employment rate and unemployment rate.

The Labor Force Survey is conducted in accordance with the recommendations and definitions of the International Labor Organization (MOR) and the European Union Statistical Office (EUROSTAT), which enables the international comparability of the obtained results as well as the time comparability of the data with the previous year. Survey data is not methodologically correct to compare with data obtained from other statistical or administrative sources.

The Labour Force Survey is carried out since 2006, once a year in spring, and its implementation on field lasts two weeks.

1.2 Legal basis and responsibility of statistical institutions

The Labor Force Survey is conducted in accordance with the following national legal regulations:

- Law on Statistics of Bosnia and Herzegovina (BiH Official Gazette no. 26/04 and 42/04);
- Law on Statistics in the Federation of BiH (FBiH Official Gazette No.63 / 03 and 9/09);
- Law on Statistics of the Republic of Srpska (RS Official Gazette 85/03);
- Multi-annual statistical programs and annual work plans of BiH and the Entities.

The Labor Force Survey is conducted in accordance with the following EU regulations:

- Council Regulation (EC) no. 577/98 of 9th March 1998 on the organization of the Labour Force Survey in the EU (OJ No L 77/3);
- Regulation (EC) no. 1372/2007 of the European Parliament and of the Council of 23th October 2007 amended by Council Regulation (EC) no. 577/98 on the organization of the labor force survey in the Community;

- Regulation (EC) no. 2257/2003 of the European Parliament and of the Council of 25th November 2003, amended by Council Regulation (EC) no. 577/98 on the organization of the Labour Force Survey in the Community and adapting the list of survey variables (OJ No L 336/6);
- Regulation (EC) no. 1991/2002 of the European Parliament and of the Council of 8th October 2002 amended by Council Regulation (EC) no. 577/98 on the organization of the Labour Force Survey in the Community (OJ No L 308/1):
- Regulation (EC) br.1897 / 2000 of 7th September 2000;
- Other set of regulations for the implementation of LFS.

This survey is a joint project of three statistical institutions in Bosnia and Herzegovina (Agency for Statistics of Bosnia and Herzegovina, Federal Institute for Statistics and Republika Srpska Institute of Statistics), that worked as a team on the development of instruments for the implementation of the Labour Force Survey (methodology, instructions, questionnaires, data entry and processing program), its implementation on the field, treatment (every statistical institutions for their area) and data analysis.

1.3 Classifications used

The classifications used are in accordance with international and EU standards. In the encoding and processing of data gathered in this Survey, the following classifications were used:

- Classification of activities KDBiH 2010, that is comparable to the classification of activities by the United Nations (ISIC Rev.4) and the classification by the European Union (NACE Rev.2),
- Classification of occupations KZBiH-08, that is comparable to the International classification of occupations (ICSO-08),
- Classification of the levels of education, that is comparable to the International standard classification of education (ISCED 2011),
- Classification of the professional status of the employed, that is comparable to the international classification of employment statuses (ICSE).

1.4 Reporting unit

The reporting unit is a member of an selected household in the sample, which is each person who lives and feeds in a household as well as a person temporarily absent from the household at the time of the survey:

- student or pupil supported by parents regardless of the length of their absence,
- went on a tourist trip or visiting relatives or friends or on a business trip eg. a railway worker, a merchant, a sailor, etc.,
- detained or placed in a specialized institution (psychiatric clinic, asylum, sanatorium, nursing home, etc.) with a stay of less than 12 months,
- absent from the household for 12 or more months for employment within the borders of BiH or employment with a domestic employer outside the borders of BiH.

Household members are not considered:

- guests, whether they are cousins or not, who have a second permanent place of living (the guest is a member of another household)
- persons who work as a home help, if they live separately,
- persons in custody and persons in special institutions (psychiatric clinic, asylum, sanatorium, nursing home, etc.) with a stay longer than 12 months.

A household member is not considered to be a person born after the end of the reference week. A household member is considered a person who was alive in the reference week and who subsequently died.

1.5 Statistical observation unit

The observation unit of the survey is a household living in a housing unit randomly selected to the sample. A household is considered to be each family or other union of persons who state that they live together and spend their income together to pay for the basic living expenses, regardless of whether all members are permanently present at the dwelling or some of them reside temporarily away from the address, in a different dwelling, or in a foreign country for reasons of employment, education or for other reasons.

A household may be the following:

- two or more individuals, regardless of their age, who share the same living area and who usually buy and consume food together (a multi-member household) and
- one person living in a housing unit alone, or living with other people without taking part in purchase and consumption of food with them (a single-member household).

Demographic data are collected for all household members, while data on activity are collected for all household members aged 15 and over. The determining criterion for which persons age 15 and over the data on labor activity should be collected is the presence of household members in the last 12 months in relation to the reference week.

Members, who are absent from the household 12 months and longer due to:

1. education,
2. employment in BiH,
3. employment for local employer outside BiH,

are giving answers to the questions about activity.

For persons, who were absent from the household for 12 months and longer due to reasons:

1. employment for foreign employer outside BiH,
2. illness / treatment,
3. other reasons,

we do not collect data on activity, ie. these people do not pass filter to continue to participate in the survey.

The survey does not include collective households (home or hotel for singles, student and pupil's home, a home for children and youth with special needs, home for vulnerable children, home for pensioners, old and vulnerable, second homes and nursing, monasteries, monasteries, boarding schools, etc.).

1.6 Coverage

Due to massive demographic changes in the population, data from 1991 census in BiH were not used as a sample frame for LFS. In order to carry out household-based survey, households were listed in the selected census areas during 2003. The result of this activity is a frame of households, called the Master sample, used for sampling the Labor Force Survey and for all other household-based surveys.

The sample frame for sampling encompasses 1,417 enumeration areas with 67,947 households who agreed to respond after direct contact. Sample for the Labour Force Survey 2016 was selected from the Master Sample. The sample size for the Labour Force Survey 2016 covers 10,616 households, of which 6,121 households in the Federation of Bosnia and Herzegovina, 3,442 households in Republika Srpska and 1,053 households in Brcko District BiH. The sample includes private households. The survey does not include collective households (home or hotel for singles, student and pupil's home, a home for children and youth with special needs, home for vulnerable children, home for pensioners, old and vulnerable, second homes and nursing, monasteries, monasteries, boarding schools, etc.).

Sample design for the Labor Force Survey is a two-stage stratified cluster pattern. In the first stage were selected enumeration areas from the Master sample by a simple random sample within the stratum. Stratification was done by entities (including the Brcko District of BiH) and type of settlements (urban and other). In the second phase, within the selected enumeration areas, a selection of households was made. That is why we say that the sample is designed as a stratified two-stage random sample with 6 strata.

1.7 Statistical concepts and definitions

The working-age population includes all persons aged 15 and over and is divided into two categories: economically active population or labor force (employed and unemployed persons) and economically inactive population.

Employed persons are persons aged 15 years and over who worked at least one hour for a salary or fee during the reference week, regardless of their formal status or did not work during the reference week and have the job to which they intend to return.

According to the EU definitions, applied in the survey, people have a job to come back if their absence from work lasts up to 3 months (including 3 months), or if it lasts longer than 3 months, and during that time they receive a salary in the amount of 50% or more. Those persons are considered as employed. Absent from work due to illness, pregnancy or maternity leave are included in the employed persons, regardless of the length of absence from work.

The contingent of employed persons consists of: *employees* (employed persons who perform work for a wage or salary), *self-employed* (employers who are owners of a business enterprise and employ one or more employees and the persons self-employed without employee/employees and work for their own account) and *unpaid family members* (household members working in the family business and for their work do not receive a salary).

The underemployed persons are the persons who work less than full time and would like to work more and are willing to accept more work in the next two weeks (within their present work, with additional work or other-a new job).

The unemployed are persons of 15 years or more and who did not performed any work for wage or salary in the reference week, nor did they have a job to return to, who were actively seeking job during four weeks (the reference and three preceding weeks) or who were not seeking job because they found a job which will start work in a period not exceeding three months, are available for work, ie. could begin work during the next two weeks if they are offered a job.

Inactive population includes all persons aged 15 years and over who are not classified as employed or unemployed. These are people who in the reference week did not work (performed activity), and that during the four weeks (the reference and three preceding) did not seeking job, as well as people who are not ready to start work in the next two weeks, if the job was offered.

Discouraged inactive persons are persons who are not seeking for job during the reference week, because they are convinced that they can not find a job, even though they want to work and are ready to start work in the next two weeks if they are offered a job.

The above-mentioned statuses are the statuses of the interviewed persons under the definitions of the International Labour Organisation (ILO) and the working status of the interviewed persons under their own opinion is subjective working status.

Basic indicators that are derived from the Labour Force Survey are:

- Activity rate: is the percentage of labour force in the total population of working age.
- Employment rate: is the percentage of the employed persons in the total population of working age.
- Unemployment rate: is the percentage of the unemployed persons in the labour force.

2 RELEVANCE

2.1 Users of statistical survey data

The Labor Force Survey meets the needs of data users because it is prepared in accordance with EU standards and recommendations of the International Labor Organization (ILO). The survey data are comparable at international level.

2.1.1 Key users of statistical survey data

The key users of the survey data are:

- Internal users: statisticians from other statistical domains;
- National beneficiaries: governments at all levels, ministries, other state institutions, economic institutes, faculties, scientists, labor market analysts, media;
- International users: Statistical Office of the EU (EUROSTAT), World Bank, International Labor Organization (ILO), UNDP, UNESCO, UNECE, OECD, European Training Foundation (ETF), USAID, Embassy.

2.1.2 Assessment of users needs

The Labor Force Survey is prepared in line with international standards and recommendations and meets the needs of domestic and international users. The academic community and the scientific research institutes use the data from the survey for scientific research projects and papers in order to develop and implement the recommendations of relevant institutions to improve the position of the labor force, especially the unemployed in Bosnia and Herzegovina. Government institutions that work on labour market projections, employment agencies and ministries of all levels of government dealing with civil society issues, human rights and employment policies use the data from the survey to identify the necessary improvements in their labor market performance. International users use data from the survey for systemic and user-oriented overview of internationally comparable LFS indicators and for international research projects aimed at developing and improving the labour market position.

The Labor Force Survey 2016 includes all the required variables and the available statistics rate is 100%. The disagreement refers only to the survey period, where according to the regulations, the survey should be conducted on a continuous basis with a quarterly and annual publication of the results, while the survey in the BiH is conducted once a year.

2.1.3 Assessment of the perception and user satisfaction

One of the key elements in securing the quality of statistical data is monitoring users satisfaction. The first User Satisfaction Survey was conducted in 2011 and the second in 2014. They were given a rating of users satisfaction, among other statistical areas, and for the area of employment statistics.

According to the results of the last User Satisfaction Survey, the largest number of respondents were interested for statistics on the area of employment and salaries (in which also belongs the Labor Force Survey), up to 71%. More detailed results of the user satisfaction surveys can be checked at the following link: http://www.bhas.ba/ankete/azk/AZK_2014_BOS.pdf

2.2 Completeness of data

2.2.1 Data completeness rate (R1)

The Labor Force Survey has been prepared on the basis of regulations of the European Commission No. 377/2008. According to the regulation number 377/2008 rate of available statistics is 100%, which means that it covers all mandatory variables on which statistics are calculated.

The mismatch applies only to the periodicity of the survey. According to regulations it is required continuous conduction of the survey during the year, with quarterly production of results, while in BiH survey is conducted once a year.

3 THE ACCURACY AND CLARITY

3.1 Sampling errors

3.1.1 Sampling error (A1)

Coefficients of variation and confidentiality intervals are calculated and published for the following statistics and/or variables: total population, working age population, labour force, employed persons, unemployed persons, inactive persons, persons under the age of 15, persons aged 15-64, activity rate, employment rate and unemployment rate.

1. Confidentiality intervals for principal characteristics of the population by activity, LFS 2016, BiH

	Estimation (000)	Standard deviation	Lower 95% CL	Upper 95% CL	Coeff of Variation %
1. Total population (3+6+7)	2.840	72	2.700	2.980	2,5
2. Working-age population	2.489	62	2.368	2.610	2,5
3. Labour Force (4+5)	1.074	31	1.013	1.135	2,9
4. Employed persons	801	24	754	848	3,0
5. Unemployed persons	273	12	250	296	4,3
6. Inactive	1.415	35	1.347	1.483	2,4
7. Persons under 15 year of age	351	13	326	376	3,6
8. Persons age 15-64	1.941	53	1.837	2.045	2,7
Rates %					
Activity rate	43,1	0,5	42,2	44,1	1,1
Employment rate	32,2	0,5	31,3	33,1	1,4
Unemployment rate	25,4	0,7	24,0	26,8	2,8

Sampling error occurs as the fact that the survey is not carried out to full coverage, i.e. on the entire target population, which in case of survey includes all persons in B&H aged 15 and more. Conducting surveys on the full coverage would require a lot more time, as well as significantly greater financial resources for implementation. The survey is conducted on a sample, or on the part of households.

Also, it is known that it is possible for one survey to choose a large number of samples, where each sample would give a certain evaluation of key indicators that were more or less different. Only sampling errors, which are measurable, indicate of how reliable our obtained indicators are. As a test of the reliability of the indicators, the coefficient of variation (CV) and the confidence interval are used.

The following notation is accepted in the LFS:

1. () the data are less certain if the coefficient of variance (CV) is less than 0.20 but equal to or more than 0.10 or expressed in percentages $10\% \leq CV < 20\%$
2. (()) the data are uncertain if the coefficient of variance (CV) is less than 0.30 but equal to or more than 0.20 or expressed in percentages $20\% \leq CV < 30\%$
3. · the data are extremely uncertain if the coefficient of variance (CV) is equal to or more than 0.30 or expressed in percentages $CV \geq 30\%$

3.1.2 Activities to reduce the sampling errors

Sampling errors for key indicators (employment rate, unemployment rate, activity rate at the BiH and entity levels) are quite acceptable, except, perhaps, for Brcko, which is a small territory (although the sample was enlarged). A higher reliability of other indicators or of those key ones, on more detailed levels though, is possible in the present situation only if the sample size is increased (as it is not possible to conduct a reliable and more precise selection of a sample). On the other hand, it will not be necessary to increase the sample size in a situation in which the census data, which will enable a different sample design and a targeted selection of population, will be used as a sampling frame.

3.2 Non-sampling errors

3.2.1 Non-sampling errors - Coverage errors

3.2.1.1 Over-coverage rate (A2)

In this survey over-coverage rate is not calculated.

3.2.1.2 Joint units share (A3)

This survey does not combine data from two or more sources.

3.2.1.3 Errors of under-coverage

One of the reasons for under-coverage is the time difference between updating the Master Sample and sample selection. In this way, households living in dwellings that are formed after the Master Sample update or are not listed for any reason during the Master sample update in 2009, which should be within the sample selection frame.

3.2.1.4 Measures to reduce coverage errors

Basic measures to reduce coverage errors involves regular updating the Master Sample, using data from the Population Census for a sample selection, as well as the use of administrative registers relating to population.

3.2.2 Non-sampling errors - Errors of measurement

For the Labour Force Survey 2016, the data were collected using the PAPI method, through paper questionnaires where there is no possibility of automatic control and verification of questions or answers. Therefore, there are possible errors due to the work of the interviewer. The resulting errors are reduced to an acceptable minimum by taking actions such as regular instructing. Before accessing the data entry, the paper forms are visually checked and if some irregularities are detected in the data, which cannot be corrected by other data, the person in charge of this control establishes a telephone contact with the household and takes the information to correct the data in the questionnaire.

Controls are implemented in the Blaise program for data entering, which reduces errors caused by data entry. When data is entered into the electronic database, the data are controlled for the second time and the logical and computational controls are included. If the data that does not meet the pre-defined control is entered, the entry is disabled until a corrected data is entered (so-called "Hard" control). If necessary at this stage is again contacted household by phone in order to correct the data. There are only a small number of controls that are warning bud do allow the entry of data which are not in accordance with the defined control (so-called "Soft" control).

At the very beginning of the data entry from the questionnaire, it is verified whether is the household included in the survey sample is. It is not possible to enter data for a household which is not selected in the sample. Also, it is not possible to enter one and the same questionnaire twice.

During data processing, detailed logical-computational control of all responses is performed. Within the form, there are certain links between the data defined by the control. In addition to the data collected about individuals who provided data (data on response to LFS 2017), data on non-response are also collected. These are data relating to households which are not provided data and these data are entered through separate software in a separate database. The sum of households from these two databases (response and non-response) must match the total number of households selected in the sample for the LFS 2017.

3.2.2.1 The reasons for the occurrence of errors of measurement

The reasons for the occurrence of measurement errors can be:

- the design of the instruments of the survey (questionnaire, instructions, a list of households),
- rejection of data providers,
- the influence of interviewers on a respondents.

Measurement errors are possible at the stage of data collection due to lack of understanding of questions by respondents, particularly the elderly or for giving responses by another household member. Respondents most often do not understand the reference period to which the questions are related, lack of understanding of the ILO concept of the current status of the activities (making statements formally regardless of the instructions and notes) and the like. The most common errors appearing on the following issues: year of graduation, hours of work, economic activity, occupation and income.

The most common mistake which was made by interviewers is filling in the wrong column, ie. fill in data for particular respondent in the second column. This error occurs due to jumps (filters) which skips a certain set of questions. Although the columns are nuanced for the purpose of to distinguish and on the training it is emphasized the obligation of entering the ordinal numbers of respondents in the appropriate column to the end of the questionnaire, errors can still occur.

3.2.2.2 Measures to reduce the number of errors of measurement

Specialized training of interviewers is an important phase in this survey, as it allows interviewers to properly treat all the questions on the form which results in fewer incorrect responses. Training is held every year, before the start of fieldwork.

On the training interviewers get a full methodological material with all the explanations. During the fieldwork each interviewer has its own controller that can help him in all situations in which requests assistance. The connection between controller and interviewer continues after the fieldwork. Special attention on the training and during field work is given to interviewers who work for the first time on implementation of the survey.

3.2.3 Non-sampling errors – Non-response errors

3.2.3.1 Units non-response rate (A4)

The non-response rate in the Labor Force Survey 2016 is 23.1%.

1. Non-response rate by type of settlement

Type of settlement	Non-response rate (%)	Number of households who responded	Number of households who did not responded	Total sample
Urban	30,1	3.214	1.381	4.595
Other	17,8	4.951	1.070	6.021
Total BiH	23,1	8.165	2.451	10.616

2. Reasons for unsuccessful interviewing

Reasons for unsuccessful interviewing	BiH	% share in non-response	Rate according to type of non-response (%)
Address does not exist in the field	112	4,6	1,1
Empty apartment	806	32,9	7,6
Devastated apartment	47	1,9	0,4
The apartment is used for business	20	0,8	0,2
Absent household	669	27,3	6,3
The household refuses to be questioned	721	29,4	6,8
Other	76	3,1	0,7
Total BiH	2.451	100,0	

3.2.3.2 Item non-response rate (A5)

The Labor Force Survey 2016 is designed in such a way that questions in the survey questionnaire, from which key variables are derived, have to be fulfilled. Reporting units have to provide data for variables and that's why the variable non-response rate is not calculated. This is provided by the filters/ jumps that the majority of questions in the questionnaire contain and which disable further interviewing if there is no answer to any of the questions.

3.2.3.3 Procedures in the case of non-response

In case of the non response by household (either the household was not found at the address or refused to participate in the survey for any reason) no missing values are imputed. Rather, correction is introduced by weighing (correction of the initial non-response weights). If the data is missing, ie there is no answer on some questions (about certain variables), a telephone connection with the household member is established and missing values are entered. Exceptionally, if you fail to establish a telephone connection, the value of the variable is estimated based on historical data.

The survey was designed in a way that (with regard to the use of filter-jumps in most questions) there is no possibility of non-response on some of the questions. Inadequate response values appear on certain questions and in this case imputation is made. In the case of inadequate answers to the question imputation is made depending on the type of questions. According to that, imputation is only made on questions relevant to the variables for publication such as: length of job search, work hours, etc. Continuous variables usually apply the average or medium process in the observed groups eg for a particular age, a certain school A degree of interest, etc. For categorical variables, either historical data (previous year survey) or logical conclusion (if these are a few) or hot-deck method are used.

3.2.3.4 Methods for reducing the rate of non-response

In order to reduce the rate of non-response for subsequent surveys, it is needed to use a more up-to-date sample frame - either a population census base or a regular and updated Master Sample.

Also, writing more precise methodological explanations relating to a specific question (variable), better training of interviewers, public awareness about the Survey etc. can contribute to reducing the rate of non-response.

3.2.4 Imputation

3.2.4.1 Imputation rate (A7)

The share of imputed data is very small, about 0.1%. In the current procedures, it is not possible to see which variables are imputed, meaning that quality indicators such as imputation cannot be calculated directly but can only be estimated.

3.2.5 Revisions

3.2.5.1 Average size of data revisions (A6)

The Labor Force Survey in BH has so far had no major revisions. In 2012, a new Classification of Activities of Bosnia and Herzegovina (KDBiH 2010), comparable to the UN Classification of Activities (ISIC Rev. 3) and the EU Classification of Activities (NACE Rev.2), was introduced and several minor modifications were done introducing modalities for several variables. For the purpose of introducing a new classification of activities, the activities are double-coded. The results of the surveys have shown no major differences in the three main groups of activities (agriculture, industry, services).

So far, no major errors have been made in published releases of the Labor Force Survey. If errors occur, they will be corrected according to the Error Correction Procedures.

4 TIMELINESS AND PUNCTUALITY OF PUBLISHING

4.1 Timeliness

4.1.1 Time lag of first results (TP1)

Reference period	04.-10.04.2016.
Date of publishing of the first results	20.07.2016.
Time gap (number of months)	T+3 dana

4.1.2 Time lag of final results (TP2)

Reference period	04.-10.04.2016.
Expected date of publishing	Oktobar 2016.
Actual date of publishing	Oktobar 2016.
Time gap (number of days)	T+6

4.2 Publishing punctuality

4.2.1 Publishing punctuality (TP3)

T+0. There were no delays in publishing the results of the Labor Force Survey 2016.

4.3 The reasons for the major delays and measures to improve the timeliness and punctuality

In publication of the LFS 2016 results there was no delay.

5 COHERENCE AND COMPARABILITY

5.1 Coherence

5.1.1 *Coherence between different sources, coeff.(CH1)*

Data on the number of employed persons from the Labor Force Survey can be compared with data on the number of employed persons who are collected by conducting a Monthly statistical survey on employees and their wages RAD-1 and statistical survey on individuals - self-employed persons and persons which are employed by them (RAD-15).

According to the Labor Force Survey 2016, the number of employed persons was 801.084, while the number of employed persons collected by conducting a Monthly statistical survey on employees and their wages RAD-1 and statistical survey on individuals - self-employed persons and persons which are employed by them (RAD-15), in April 2016 was 724.456 persons. The number of employed persons as a result of the LFS is 10.6% higher than the number of employed persons as a result of a reference related statistical survey RAD-1 and RAD-15 for the month of April 2016.

The number of unemployed persons as a result of the survey conducted in 2016 was 272,871, while the number of unemployed persons collected on the basis of official records of unemployed in the employment bureaus, amounting to 524,061 persons, indicating that the number of unemployed persons in the Labor Force Survey 2016 is lower by 47.9% of the number of unemployed people obtained as a result of a reference related research.

5.1.2 *The reasons for the major delays*

The definition of the labor force in the Labour Force Survey is based on the objective, the actual inclusion in the labor market, while the definition on data from administrative records is based on the formal (registered) status of labour force. This implies that the administrative data include only registered employees, while survey covers total of employment, which is based on the status of persons in the activities in the observed week (the last week). More precisely, the Labour Force Survey includes, in addition to formally employed persons, the categories of employees that are not covered by administrative sources, such as: self-employed in agriculture, unpaid family members, employees of contractors, temporarily or occasionally employed and employed in the informal economy.

Comparability of data from administrative sources and the Labour Force Survey is limited due to:

- **Source of data:** administrative data are based on the collection of data on employment, based on the personnel records of legal persons and registered as unemployed who are registered within employment offices. While survey data are based on the estimated data obtained by survey of persons within households selected randomly in the sample.

- **Reporting unit:** the reporting unit for the collection of administrative data is a business entity, while the survey reporting unit is each member of randomly selected household.
- **Observation period:** administrative data are extracted on the last day of the month, while survey data refer to the activity of persons in the reference week.
- **Method of collection:** data from administrative sources are obtained through reports submitted by business entities, while survey data are collected by interview of persons who are members of household that is selected in the sample.
- **Period of collection:** Administrative data are collected monthly, while the survey data are collected once a year.
- **The definitions of employment and unemployment:** Administrative data include only those that are stated in the official records and survey data in employed persons include all persons who performed any work in the reference week for which they have been paid, regardless of their formal status. In addition to formally employed persons, this category includes owners of farms and unpaid family members and persons who performed any work for payment (in cash or in kind), profit etc. in a reference week. Unemployed persons, according to the Survey, include all persons who meet criteria defined by the International Labour Organisation (ILO) for their classification to be unemployed, regardless of whether they are at the same time registered to Unemployment office. According to these criteria, unemployed persons are persons who in the reference week did not work - did not perform any work for pay, profit or family gain, then those who have actively sought employment in the previous four weeks and are available to work - is prepared to accept a job in the next two weeks, and who were not seeking a job in the previous four weeks because they have already found employment, but have not yet started to work, but will start to work soon after the survey.
- **Release of results:** Administrative data are publicized on a monthly basis in First Releases, and the results from the Survey are released only annually (after the end of survey).

5.2 Comparability

5.2.1 *Asymmetry for mirror flows statistics, coeff. (CC1)*

The coefficient of asymmetry (discrepancies) is not calculated for the Labour Force Survey.

5.2.2 *Length of comparable time series (CC2)*

The length of comparable time series for the Labor Force Survey is 11 years, since the survey is conducted once a year in the spring since 2006.

5.2.3 *Interruptions in the time series*

There were no breaks in time series.

5.3 Geographical comparability

5.3.1 Comparability with other members of the European Statistical System

The comparability of data from the Labour Force Survey in the other European countries is provided, because the LFS 2014 was made on the basis of Regulation EC No 577/98, 377/2008 and 1897/2000. However, in EU member states a survey is carried out continuously throughout the year, with the development of quarterly and annual results, while in Bosnia and Herzegovina survey is conducted once a year due to resource constraints, and the non-compliance relates only to the periodicity of implementation.

6 ACCESSIBILITY AND CLARITY, DISSEMINATION FORMAT

6.1 Press releases with published data

The preliminary results of the Labor Force Survey 2016 have been published in a press release, which can be found on the BHAS's web site at the following link:

http://www.bhas.ba/ankete/LFS_saopcenje%20BOS.pdf

6.2 Publications with published data

The final results of the Labor Force Survey 2016 are published in a publication that can be found on the BHAS's web site at the following link:

http://www.bhas.ba/tematskibilteni/TB_ARS%202016_BS_ENG_.pdf

Also, Labor Force Survey 2016 data were published in the publication "BiH in figures 2016", which can be found on the BHAS's web site at the following link:

http://www.bhas.ba/tematskibilteni/TB_BiH%20in%20Figures%202016_www.pdf

6.3 On – line data base

The on-line database for the Labour Force Survey 2016 is not available.

6.4 Access to microdata

Access to micro-data for research purposes is enabled and data is provided exclusively through protocols that imply that users must indicate the purpose of using micro-data and sign a memorandum of understanding. Micro data for Labor Force Survey 2016 have not been submitted to Eurostat, except for a set of basic indicators in predefined tables upon the request.

6.5 Accessibility of methodological documentation

Files with metadata are not available. The basic information on this survey is an integral part of each publication. Also, more detailed survey information can be found in the document "Report on the sector review of the Labor Force Survey in Bosnia and Herzegovina", which is available on the BHAS's website at the following link:

http://www.stat.gov.ba/dokumenti/1231052_SR_Report_LFS_BiH_18.12.2014.pdf

6.6 *Measures to improve the user-friendliness*

The results are clearly disseminated.

6.7 *Data set consultations (AC1)*

We have no information on the number of user consultations in 2016.

6.8 *Metadata consultations (AC2)*

We do not have information on the number of metadata (SMIS) in 2016.

6.9 *Metadata completeness rate (AC3)*

Metadata completeness rate (SIMS) is 93,6%.

7 COSTS AND BURDEN ON RESPONDENTS

7.1 Costs of statistical survey conduction

We do not have accurate information on annual operating costs by major cost components.

Number of labor hours	-
Material costs (printing and sending the questionnaires to the field)	-
The annual number of forms sent to the reporting units	-

7.2 Respondents burden

We have no precise information on the annual respondents burden.

Number of respondents that completed form	-
The time required to complete a questionnaire (hours)	-
Total used time (hours)	-

7.3 Measures to reduce costs and burdens

The measures that should be taken to reduce the cost and burden of the reporting units are as follows:

- Reduce the number of contacts with the reporting unit
- Use of Census of population, households and dwellings database as a sample selection frame, which would reduce the frequency of participation of the same households in surveys
- Use of administrative data.

8 CONFIDENTIALITY

8.1 Confidentiality – policy

Confidentiality of statistical data is regulated by law and the personnel conducting statistical surveys has the legal obligation to protect confidentiality. Law on Statistics of BiH (Off. Gazette of BiH 26/04 and 42/04 - Chapter XI - Article 23.-29.) establishes the principle of confidentiality as one of the main principles. Agency for statistics of BiH distributes statistics in line with statistical principles of the European Statistics Code of Practice and in particular with the principle of statistical confidentiality.

8.2 Confidentiality – Data treatment

By signing the Memorandum of Understanding, data users having access to individual data are obliged to:

- treat individual anonymized data as confidential in accordance with the rules, regulations and procedures,
- ensure adequate protection of individual data in accordance with the rules, regulations and procedures,
- protect the transfer of microdata and destroy the media where the data are, as well as the accompanying documentation, five days after the publication of the results.

9 STATISTICAL PROCESSING

9.1 Data source

Survey is based on a sample of selected households as observation units. Population census bases or population registers are usually used for the sample frame of households. The last census in BiH was conducted in 2013 and still is not used for the sample frame. The sample frame used for the survey is a household database updated in 2009. With the help of UNDP, the Sample Frame Enhancement Project in BiH was completed and implemented, for which funding was provided by the UK Government through the Department for International Development (DFID).

With this project data on all households in 1.499 randomly selected enumeration areas were collected. Data on 80.069 households in BiH are collected. Those households comprise the Updated Master Sample which is the base for sampling of all households surveys on the territory of BiH.

Međutim, kao okvir za Anketu o radnoj snazi korišten je dio Ažuriranog master uzorka i to 67.974 domaćinstva koja su bila direktno kontaktirana i pristala dati podatke. Iz ovog okvira, koji je u svom dizajnu bio stratificiran po entitetima (uključujući Brčko distrikt BiH) i tipu naselja (gradsko i ostalo) izvršen je izbor 10.616 domaćinstava za BiH. Zato se kaže da je uzorak dizajniran kao stratificirani dvoetafni slučajni uzorak u kojem ima 6 stratumata (po dva za entitete i dva za Brčko distrikt BiH).

However, as sample frame for the Labor Force Survey, a part of the Updated Master Sample was used, 67,974 households who were directly contacted and agreed to provide the data. From this frame, which was stratified in its design by entities (including the Brcko District of BiH) and type of settlement (urban and other), a selection of 10,616 households for BiH was made. Therefore, it is said that the sample is designed as a stratified two-stage random sample with 6 strata (two for entities and two for Brcko District BiH).

9.2 Frequency of data collection

Data on Labor Force Survey are collected once a year in the spring in the month of April.

9.3 Data collection

Data on the Labor Force Survey are collected through the PAPI method via paper form questionnaires. The data are collected directly from all household members in the household selected in the survey sample via interviews. The survey responses are given by every household member separately, for himself or herself, and for children below 15 years of age by the child's parent or guardian. One member, a head of the household or the most knowledgeable household member, may give responses for all members of the observed household. The participation in the survey is voluntary, and the questionnaire used for the Survey emphasized the confidentiality of individual data.

The survey reference period is the period within the data were collected. Most of the data refer to the economic activity of a person in a specific calendar week, from Monday to Sunday, which is called the reference week. Some data refer to other periods (four weeks or one year versus the reference week). The reference week of the LFS 2016 was from 04 to 10 April 2016 and was preceded by a period of fieldwork. The survey interviews were conducted in a period between 11 April and 24 April 2016.

Field work was organized in cooperation all three statistical institutions in BiH. Agency for Statistics of BiH, Federal Institute for Statistics and Republika Srpska Institute for Statistics engaged 240 accredited interviewers for the purpose of data collection.

9.4 Data validation

In order to ensure the quality of the data, prior to the publication of the data, the evaluation and verification of source and output data is performed. For the purposes of data validation, the comparison of the survey results with the previous years, the calculation of the response and non response rate is performed.

9.5 Data compilation

Data entry, analysis and data processing of the survey material was done decentralized: Agency for Statistics of BiH entered, processed and analyzed survey material from the Brcko District of BiH, while the Entities are obliged for entering information, processing and analysis of its survey material.

In case of the unit nonresponse (either the household was not found at the address or refused to participate in the survey for any reason) no missing values are imputed. Rather, correction is introduced by weighing (correction of the initial non-response weights). In case of non-response by one household member (refusal by a household member to participate in the survey, in LFS2b in particular) imputation is not done (there were no such cases in 2016). In case of an item non-response, imputation is done, depending on the type of question. Imputation is done only on the variables which are important for the purpose of developing a publication, such as the job search length, an average number of work hours, etc. In case of continuous variables, the breakdown or median procedures apply in the observed groups, for example, for a certain age group, certain qualifications, certain professions, etc.

In case of categorical variables, either historical data (if any, e.g. from the survey conducted last year) or a logical conclusion (if such cases are rare) or a hot-deck method are used. Sometimes a subsequent telephone contact is made once the data processing stage has been reached as the field work ended over a month ago.

The first step to be taken in order to estimate the unknown parameters of the population is to calculate initial weights. An initial weight represents a reciprocal value of probability of the selection of the given unit in the sample. In case of a stratified random sample, in which in stratum h n_h units were selected to the sample, while there is a total N_h units in the stratum, the probability of the selection of a unit of that stratum is equal to n_h / N_h , and an initial weight is equal to N_h / n_h . Bearing in mind that in every statistical survey, no matter how carefully it is carried out, non-sampling errors of different types occur, it is necessary to calculate corrective factors of initial weights.

The corrective factors are used, for example, to increase selectively initial weights of the units which belong to a response within the survey, so that they represent also the units in the population which are classified as non-response. The basic assumption of this kind of correction is that the non-responding units of the sample are, under the key survey parameters, similar to the responding ones within the survey. If in case of a stratified sample there is a response m_h out of a total of n_h selected in the sample, in stratum h , then the initial weight correction factor is equal to n_h/m_h .

In the LFS an initial weight for a household in one of the six strata, is, in fact, a reciprocal value of the product of three factors: probability of the selection of the primary sampling unit (enumeration areas), the probability of selection of a secondary sampling unit (households) and the rate of selection of the type of sample (because instead of the entire Master Sample, only the portion of households which were directly contacted and agreed to answer questions was taken). Correction for non-response is done at each of the six strata.

Additional corrections, such as calibration, post-stratification, are not done as there are no good external sources to be used for that purpose. Controls which prevent entries of computationally and logically erroneous data into the database are built into the survey data entry software programme. Those are mainly "HARD" controls which are warning and disabling the entry until correct data are entered. This way of entering the data ensures a base with logically and computationally clean data following the data entries.

The Survey was based on a sample of selected households as unit of observation. For the sample frame is usually used the base of population census or population register. The last Census in BiH was carried out in 2013, but it is still not implemented as a sample frame. For the sample frame updated database of households in 2009 was used. With the support of UNDP, it was prepared and implemented the project named Updating Sample Frame in B&H, for which funding was provided by the UK government, through its Department for International Development (DFID). This project was done by collecting data on all households that were located in 1.499 selected enumeration areas. Data were collected on about 80.069 households that make up an Expanded Master Sample and serves as a basis for selecting a sample for all household - based surveys carried out within the territory of BiH. However, a part of the Expanded Master Sample was used as a frame for the LFS, or more precisely, all the households which were contacted directly and agreed to provide data - 67.974 households. From this framework (which was in its design stratified by entities and Brcko District BiH) and type of settlement (urban and other) were selected 10.616 households in Bosnia and Herzegovina, of which 1.002 for Brcko District BiH. That's why we say that the pattern is designed as a two-stage stratified random sample where we had six strata.

9.6 Adjustments

9.6.1 Seasonal adjustment

As the Labor Force Survey is conducted once a year, seasonal adjustment is not done.