QUALITY REPORT
FOR STATISTICAL SURVEY

LABOUR FORCE SURVEY
2014

Bosnia and Herzegovina

BHAS
Agency for Statistics of
Bosnia and Herzegovina

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Content

1 Introduction to statistical process and its outputs – survey methodology

1.1 Purpose of the survey

Labour Force Survey (LFS) is a survey focused on the household and is designed to provide data on the basic characteristics of the working age population, based on which the total labour force in the country is reviewd, together with the data on demographics, educational, socio - economic and other characteristics of the population. The survey provided data on employment, unemployment, underemployment, data on occupation, working hours, duration of employment, additional employment, training and further training, job search, etc.

The main objective of this survey is to obtain data on three basic, mutually exclusive, segments of population: employed, unemployed and inactive persons. The collected data allow the calculation of the most important indicators of conditions in labor market and the main indicators of country's economy, and that the rates are: activity, employment and unemployment. Labour Force Survey gives details of changes in the labor market - on the size, structure and characteristics of active and inactive population of Bosnia and Herzegovina.

The Labour Force Survey (LFS) is conducted in accordance with the recommendations of the International Labour Organisation (ILO) – which were adopted at the Thirteen Conference of Labour Statisticians – and in accordance with the requirements of the Statistical Office of the European Union (Eurostat) which refer to the harmonised the Labour Force Survey of the European Union. This enables the comparability with other states which implement this survey and ensures comparability of data over time, more specifically comparability of data with the LFS of last year.

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

Data obtained from the Labour Force Survey are based on the concept of the labor force (Labour Force Concept) and are not methodologically comparable with the data obtained from other statistical or administrative sources.

1.2 Legal basis and responsibility statistical institutions

- Law on Statistics of Bosnia and Herzegovina (B&H Official Gazette no. 26/04 and 42/04);
- Law on Statistics in the Federation of BiH (FB&H 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 B&H and the Entities;
- Recommendations of the ILO and EC regulations related to the Labour Force Survey:

• 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. Note: This legislation changes the status of the LFS variable "income" from voluntary to mandatory;

• 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). Note: This regulation introduces six new variables and allows access to a set of structural variables;

- 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). Note: This regulation sets a timeline for the transition from annual to the continued implementation of the Labour Force Survey;
- 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). Note: This is the main regulation with provisions on the organization and implementation of the survey, the characteristics to be collected, the frequency of conducting research, observation units, sample, and the method of preparation and delivery of results;
- Regulation (EC) br.1897 / 2000 of 7th September 2000;
- Other set of regulations for the implementation of LFS - Core survey description.

Labour Force Survey in 2014 is part of the annual work program of statistical institutions in B&H. 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 Observation units and reporting (survey) units

The observation unit of the survey is a household living in a housing unit randomly selected to the sample, while the survey unit is a member of the household selected to the survey 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 B&H
3. employment for local employer outside B&H,

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 foregin employer outside B&H
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.

A survey unit is a member of sampled households, and it is every person who lives and feeds in the household as well as the person who, at the time of the survey, is temporarily absent from the household because she/he:

- is a student or a pupil who is served by parents regardless of the length of the absence,
- went on a tourist trip or visiting relatives or friends or on a business trip eg. A railway worker, salesman, sailor, etc.,
- is in custody or placed in a specialized institution (psychiatric clinic, asylum, sanatorium, nursing home etc.) less than 12 months,
- is absent from the household 12 or more months due to employment within the borders of Bosnia and Herzegovina or employment with local employer outside of BiH.

Household members are not considered:

- guests, whether they are concerned relatives or not, who have another permanent place of living (guest is a member of other household),
- persons who work as a home assistance, if they live separately,
- persons in custody and persons who are in specialized institutions (psychiatric clinic, asylum, sanatorium, nursing home etc.) longer then 12 months.

Household member is not considered to be a person born after the end of the reference week, or member of the household is considered to be the person who was alive during the last week, and who after that period died.

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.).

1.4 Data collection

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 2014 was from 07 to 13 April 2014 and was preceded by a period of fieldwork. The survey interviews were conducted in a period between 14 April and 27 April 2014.

Field work, as well as involvement of interviewers and supervisors, was organized in cooperation with branch of the Agency for Statistics of B&H in Brcko District and the entity statistical offices. For data collection in Brcko District were deployed 14 interviewers and 2 controllers, while the data entry was obtained in Agency for Statistics of Bosnia and Herzegovina in Sarajevo and one operator worked on it.

1.5 Coverage

Demographic data are collected for all household members who live in the selected housing units, and the data on economic activity are collected for the household members aged 15 and over.

The criterion used to identify the persons for whom data on economic activity would be collected is the presence of a household member over the last 12 months relative to the reference week and the reasons for absence.

The survey covered 10.555 households in Bosnia and Herzegovina, as follows: 5.964 in the Federation of B&H, 3.565 in the Republic of Srpska and 1.026 in Brcko District. The sample did 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, elderly and infirm senior citizens, second homes and nursing, convents, monasteries , boarding, etc.).

The sample was designed as a stratified two-stage random sample. In the first stage were selected enumeration areas. In the second stage, within the selected enumeration areas were selected households.

1.6 Definitions

Working age population comprises all persons aged 15 and over.

Labour force or economically active population consists of employed and unemployed persons.
Employed persons are persons aged 15 years and over who are:

- during the reference week worked at least one hour for a salary or fee, 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. 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),
- 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 in the reference week performed any work for wage or salary, nor did they have a job to return to,
- actively seeking job during four weeks (the reference and three preceding weeks) or 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.

1.7 Data processing

Data entry, analysis and data processing are done separately in the Agency for Statistics of B&H (material from the Brcko District) and the entity institutes.

There are three types of non-responses in this survey: a non-response by household (unit non-response), a non-response by a household member (partial non-response) and a non-response to some questions (an item non-response).

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 2014). 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. The last census in B&H 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 B&H.

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) and type of settlement (urban and other) were selected 10.555 households in Bosnia and Herzegovina, of which 1.002 for BD. That's why we say that the pattern is designed as a two-stage stratified random sample where we had six strata.

1.8 Release of results

Previous results and analysis of Labour Force Survey 2014 data were published in a First release on September 11th 2014, or 150 days after the end of the reference period.

http://www.stat.gov.ba/saopstenja/LFS%202014%20Preliminarni%20bos.pdf

Thematic Bulletin Labour Force Survey 2014 provides an analysis of annual data from the Labour Force Survey conducted in 2012, 2013 and 2014, for the level of B&H, entities and Brcko District. Data are presented in absolute and relative values (absolute numbers, percentages) in the tables and graphical form.

http://www.stat.gov.ba/tematskibilteni/LFS_2014_001_01_bh.pdf

1.9 Key variables

- Activity during the reference week (employed, unemployed and inactive)
- Temporary absence from work
- The reason for absence from work
- Working age population
- The labor force or economically active population
- Inactive
- The age groups of the population
- The level of education of the population
- Economic activity
- Occupation
- Number of hours worked
- Professional status
- Reasons for not seeking job
- Length of job search
- Previous working status

1.10 Key statistics

- Unemployment rate
- Employment rate
- Economic activity rate
- Number and structure of employed persons (according to employment status, activity groups, age groups, highest level of education, duration of working time)
- Number and structure of unemployed persons (by age, highest level of education, duration of unemployment)
- Number and structure of the active population (the highest level of educational attainment)
- Number and structure of the inactive population (the highest level of educational attainment)
- Number of discouraged inactive persons

1.11 Questionnaire

The questionnaires used in the Labour Force Survey are:

- Questionnaire for the Labour Force Survey - questionnaire on the answer/response (LFS1),
- Questionnaire on non-response (LFS2),
- Instructions for completing the questionnaire (LFS3),
- List of housing units selected in the sample (LFS4),
- A report on the survey (LFS5 and LFS5a).

Questionnaire on the answer/response (LFS1) consists of two parts: LFS1 and LFS1b. These two questionnaires are technically different. In part LFS1 demographic information for all household members are collected and entered horizontally (one line for one member of the household), while in part LFS1b data on working characteristics of the population age 15 and over are collected and entered vertically (one column for one member household).

The part of the questionnaire ARS1b is divided into chapters on the topics addressed:

- **Part A** Work activity in the reference week,
- **Part B** Characteristics of the main job,
- **Part C** second-additional job,
- **Part D** Previous work experience,
- **Parts E and F** Search for employment and Methods used during thr last four weeks to find job,
- **Part G** Education,
- **Part H** Situation one year before the survey,
- **Part I** Income.

Codes and classification within the Instructions for completing the questionnaire ARS 3:

- The country code list,
- The Code List of municipalities,
- Classification of activities KDBiH 2010 in line with NACE Rev. 2,
- Classification of occupations KZBiH 2008 in line with ISCO 08.

Questionnaire on the answer/response LFS1 for 2014 is available under the Thematic Bulletin of Agency for Statistics of BiH and published on the website:

http://www.stat.gov.ba/tematskibilteni/LFS_2014_001_01_bh.pdf

1.12 Contact information

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2 Relevance

Agency for Statistics of Bosnia and Herzegovina is responsible for the aggregation of data at the state level and reporting to the Statistical Office of the EU - EUROSTAT. Except for the purpose of reporting according to EUROSTAT, survey meets the needs of data users, because it produces internationally comparable data prepared in accordance with EU standards and recommendations of the ILO, which are used for making various analysis and projects. The most important users of statistical data from the Labour Force Survey are: the Council of Ministers, the Ministry of Civil Affairs, Directorate for Economic Planning, Directorate for European Integration, Agency for Gender Equality, Gender centers etc.

2.1 Quality and performance indicator – Rate of available statistics of the European Statistical System ESS (R1)

The rate of available statistics of the European Statistical System (ESS) is the ratio between the available statistics and statistics that are required according to decrees and regulations, primarily the statutes and regulations of the European Commission and other relevant international organizations.

The Labor Force Survey has been prepared on the basis of regulations of the European Commission No. 377/2008, 577/98 and 1897/2000. According to the regulation number 377/2008 rate of available statistics is 100% [(195 / 196x100)], 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 Accuracy

3.1 Sampling errors

3.1.1 The method of calculating the sampling errors

Sampling errors are displayed for the following statistics and/or variables: total population, working-age population, labor force, employed persons, unemployed persons, inactive persons, persons under the age of 15 years, persons aged 15-64 years, the activity rate, employment and the unemployment rate.

3.1.2 Quality and performance indicator – Coefficient of variation (A1)

In panel surveys where the unit of observation is household and where the results are often presented as a proportion or percentage, it is not appropriate to display error, in the random sample, only in the form of the coefficient of variation, but also through confidence interval.

Table 1: Confidence intervals, standard deviation and coefficient of variation - LFS 2014

	Estimation (000)	Standard Deviation	Lower 95% Confidence Limit	Upper 95% Confidence Limit	Coefficient of Variation %
1. Total population (3+6+7)	**2.982**	**74**	**2.837**	**3.127**	**2,5**
2. Working age population	2.565	62	2.443	2.687	2,4
3. Labour force (4+5)	1.120	32	1.059	1.182	2,8
4. Employed	812	24	766	858	2,9
5. Unemployed	308	12	285	331	3,8
6. Inactive	1.445	35	1.376	1.514	2,4
7. Persons below 15 age	417	14	389	445	3,4
8. Persons aged 15 - 64	2.021	54	1.914	2.128	2,7
Rates (%)					
Activity rate	43,7	0,5	42,8	44,6	1,1
Employment rate	31,7	0,4	30,8	32,5	1,4
Unemployment rate	27,5	0,7	26,2	28,8	2,4

3.1.3 Explanations

Sampling error occur as the fact that the survey is not carried out to full coverage, ie. 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%≤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%≤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≥30%

3.1.4 Activities to reduce sampling errors

Sampling errors for key indicators (employment rate, unemployment rate, activity rate at the B&H 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 Coverage errors

Coverage errors include the differences between the target population and the population that is found in the sample.

3.2.1.1 Quality and performance indicator – Over-coverage rate (A2)

Since the survey does not consider the entire units of the frame, but only those selected in the sample, it is necessary to estimate the share of data on (non) relevance of units in the sample. The reason for over-coverage is the time difference between updating the master sample and sample selection. Due to this households where no one lives and empty housing units are included, which is a problem because it changes the rate of non-response that has an impact on the weights and the estimates. If people are not registered at the address where they really live, this should not be a problem, if at that address lives another household, because in this case that other household will be observed.

3.2.1.2 Under-coverage errors

One of the reasons for under-coverage is a time difference between updating the master sample and sample selection. In this way, households living in dwellings that are formed after updating the master sample are not included.

3.2.1.3 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, as well as the use of administrative registers relating to population.

3.2.2 Measurement errors

3.2.2.1 Controls to detect measurement errors

Before starting data entry, paper forms are visually screened and case of some irregularities in the data, which can not be corrected by using other data, the person responsible for this control contacts the household by telephone and finds out the true information which he/she then uses to rectify the data in the questionnaire.

During the data entry in an electronic database (Blaise 4.7. - Software for surveys), 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 enttry 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 form, it is checked 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 form twice.

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 2014), 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 2014.

3.2.2.2 Reasons why measurement errors occur

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.

3.2.2.3 Procedure in case of measurement errors

An integral part of the form is a space for remarks that fills the interviewer. The remarks can help eliminate errors in the data on the questionnaire or the data on persons in the household. The remark is entered into an electronic database.

The person responsible for methodological support is responsible for the elimination of errors. For this purpose, other data in the questionnaire that can help to correct the wrong information are used as well as remark that the interviewer entered. If that's not enough, the household is contacted by telephone to find the correct information. If a phone number is not available the interviewer who was in charge of the household is contacted and required to re-visit the household and correct inaccurate. No data are rectified automatically.

3.2.2.4 Quality and performance indicator – Editing rate (A3)

Currently there are no accurate records of corrections at the stage of editing data. Errors that occur during the survey are corrected in paper form by the controllers, and later prior to processing during the entering data.

3.2.2.5 Measures to reduce number of measurement errors

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-response errors

3.2.3.1 Quality and performance indicator – Unit non-response rate (A4)

The non-response rate is proportion of the number of households in the sample from which the answer was not received and the total sample multiplied by 100.

Table 2: Non-response rate

	Non-response rate (%)	Respondent households	Non-respondent households	Total
Bosna and Herzegovina	**16,3**	**8.837**	**1.718**	**10.555**
Federation of B&H	16,9	4.956	1.008	5.964
Republic of Srpska	15,8	3.003	562	3.565
Brcko District	14,4	878	148	1.026

Most often no response occurs due to the wrong address in the field, the absence of household, household refusal to be interviewed, then because the apartment was empty, destroyed or used for business purposes.

3.2.3.2 Quality and performance indicator – Item non-response rate (A5)

Since the application is not resolved procedures for recording the number of non-response by individual variables, it is estimated that the rate of missing data for key variables is around 0,1%.

3.2.3.3 Procedures in case of non-response

If data are missing ie. answers to specific questions (on certain variables) were not given, a telephone connection with the reporting unit or member of the household is establishes and with his help missing values are inserted where necessary. Exceptionally, if it fails to establish a telephone connection, the variable value is estimated based on historical data.

As for the non-response to certain questions, the problem will be overcome by writing precise methodological instructions, relating to a specific question (variable).

3.2.3.4 Procedures to reduce non-response rate

In order to reduce the rate of complete non-response for the following survey, it is necessary to improve the useage of more accurate sampling frame - census or regular update of the master sample. Also, precise methodological explanations related to a specific question (variable) written, better training of interviewers, informing the public about the survey, etc. can contribute to reduce the rate of non-response.

3.2.3.5 Quality and performance indicator – Imputation rate (A6)

Imputed are the missing values of questions (or variables), to which respondents did not know or wanted to answer. The share of imputed data is very small, about 0,1%. The application is not resolved procedures for records imputed data.

3.2.3.6 Quality and performance indicator – Number of errors,by type (A7)

Since the errors are removed prior to and during data entry, follow-up revision is not performed. This indicates that the methodology is applied correct, the incorrect data are not included in the press release, presentation and analytical graphs did not provide a false picture of the published data, and correction of data is not published.

3.2.3.7 Quality and performance indicator – Average size of revision (A8)

No revision was planned or implemented.

4 Timeliness and Punctuality

4.1 Timeliness of release

4.1.1 Quality and performance indicator – Timeliness of first results (T1)

Table 3: Timeliness of first results

Reference period	07-13. April 2014.
Date of release	11. September 2014.
Time lag	T+151

The first results (date of release of first results) of the Labour Force Survey 2014 were released **151 days after the end of the reference period**.

4.1.2 Quality and performance indicator - Timeliness of final results (T2)

Table 4: Timeliness of final results

Reference period	07-13. April 2014.
Date of release	05. December 2014.
Time lag	T+236

The final results (date of release of first results) of the Labour Force Survey 2014 were released **236 days after the end of the reference period**.

4.2 Punctuality of release

4.2.1 Quality and performance indicator – Punctuality of release (T3)

Table 5: Punctuality of release of first results

Announced date	31. July 2014.
Date of release	11. September 2014.
Time lag	T+42

The real date of release of the first results of the Labour Force Survey 2014 was **42 days delayed** from the release date planned/announced in the annual dissemination time schedule.

Tabela 6: Punctuality of release of final results

Announced date	31. October 2014.
Date of release	05. December 2014.
Time lag	T+35

The real date of release of the final results of the Labour Force Survey 2014 was **35 days delayed** from the release date planned/announced in the annual dissemination time schedule.

4.3 Reasons for major divergences and measures to improve timeliness and punctuality

The reasons for the delay in publishing the results according to the scheduled dates are the insufficient number of statisticians working in the Department of the Labor market on the Labour Force Survey. Existing staff who are engaged in the Labour Force Survey has several different obligations that corresponds in time, and therefore it was not possible to meet the deadlines set in the calendar publishing.

5 Accessibility and Clarity

5.1 Accessibility

The users of statistical data can quickly and easily get to the data from the Labour Force Survey, since these are published on the website of the Agency for Statistics of Bosnia and Herzegovina.

5.1.1 Dissemination channels

The following dissemination channels were used to release the results of the Labour Force Survey 2014:

Table 7: Dissemination channels

Number	Dissemination channels	Used
1	Website	YES
2	Written requests	YES
3	Telephone	YES
4	Digital media	YES
5	Data presented at a press conference	NO
6	Thematic bulletin	YES
7	Special publications	YES
8	Bases, available to external users	YES
9	Statistical protected microdate	NO

5.1.2 Quality and Performance Indicator – Dissemination Channels and Means Use Rate (AC1)

The dissemination channels and means use rate is 89% (8/9X100).

5.1.3 Dissemination means

The following dissemination means were used to release the results of the Labour Force Survey 2014:

Table 8: Dissemination means

Number	Dissemination means	Used
1	Website - online release	YES
2	Websites of other institutions	YES
3	Websites of international organisations	NO
4	Thematic website	NO
5	Written requests	YES
6	Telephone	YES
7	Digital media	YES
8	Data presented at press conference	NO
9	Yearbook	NO
10	B&H in figures	YES
11	Release	YES
12	Thematic bulletin	YES
13	Special publications	NO
14	Eurostat publications	NO
15	Publications of other international organisations	YES
16	Bases, available to internal usage	YES
17	Bases, available to external users	YES

5.1.4 Quality and performance indicator – Dissemination means use rate (AC2)

The dissemination means use rate is 64,7% (11/17X100).

5.1.5 Quality and performance indicator – Number of acces on-line database (AC3)

There is no procedure for recording the number of access to data from the Labour Force Survey. This should be developed in cooperation with the IT staff.

5.2 Clarity

Publications on Labour Force Survey contain methodological notes of basic indicators and concepts.

5.2.1 Paper publications and online release

- First Release »LABOUR FORCE SURVEY 2014 - First results«,
- Thematic bulletin »LABOUR FORCE SURVEY 2014 - Final results«,
- »B&H in figures«,
- Gender publication »Women and Man in Bosnia and Herzegovina« and
- Website of Agency for Statistics of Bosnia and Herzegovina www.bhas.ba.

5.2.1.1 Disseminated outputs

Survey results are presented in tables in the form of absolute numbers, expressed in thousands and percentages. In addition to the tabular overview in a First Release data are also presented in graphs.

For all the published results checking was done by the calculation of coefficients of variation, confidence intervals and standard deviations.

5.2.1.2 Level of dissemination

Data are presented by sex, age groups, by area of Classification Activity B&H 2010 which substantially and structurally fully corresponds to the EU statistical classification of economic activities NACE Rev.2., by level of education, employment status, length of working time, length of unemployment.

5.2.1.3 Metadata

Revision of data (revision of data – policy, data revision – practice); Statistical Processing (data sources, frequency of data collection, data collection, data validation, data compilation, adjustments).

5.2.1.4 Measures to improve clarity of disseminated outputs

Podaci su tabelarno jasno prikazani, ali bi povećano korištenje grafikona u saopćenju i tematskom biltenu, te prikazivanje podataka po grupama zanimanja poboljšalo jasnoću diseminiranih podataka.

5.2.2 Quality and performance indicator – Rate of completeness of metadata (AC4)

Not subject to specific analysis of the Labour Force Survey 2014.

6 Comparability and Coherence

6.1 Comparability over time

6.1.1 Quality and performance indicator – Lengths of comparable time series (CC1)

From 2006 to 2014 Labour Force Survey is conducted once a year in April. Currently there is a time series of nine years, which means that the indicator value is 9.

6.1.2 Breaks in time series

There were no breaks in annual time series.

6.1.3 Other factors which affect comparability over time

New questions included in the questionnaire LFS 2010 on the length of absence from work and receiving compensation during absence from work have been applied since 2011 in the syntax for calculating the number of employed persons, as well as the determination of total unemployed person. The introduction of these changes may have some impact on the comparability of data.

6.2 Geographic comparability

6.2.1 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.

6.2 Seasonal adjustment

Since the survey is carried out once a year, data from the Labour Force Survey are not seasonally adjusted.

6.4 Coherence between provisional and final results

6.4.1 Provisional dissemination policy

We use dissemination policy of the first results of the Labour Force Survey primarily due to the data users needs for data on the rate of activity, employment and unemployment in our country.

6.4.2 Quality indicator – Coherence between first and final results (CC2)

The first results of the Labour Force Survey 2014 are the same as the final results and the indicator is not callculated.

6.4.3 Reasons for major differences between first and final data

There are no differences between first and final data.

6.5 Coherence with the benchmark survey results

6.5.1 Brief description of the benchmark survey

The number of employees from the Labour Force Survey can be compared with data on the number of employees that are collected by conducting regular Monthly survey on employment and wages (RAD-1) in legal entities, and Survey on persons - owners who are self - employed and of their employees (Rad-15).

The number of employees working in legal entities is the result of the processing of data from the Monthly survey (RAD-1) questionnaire which the legal entities complete with the data from legally required records and registers.

The surevey covers all legal entities with all forms of ownership structures, public authorities at all levels, institutes and other organisations. The data on the people employed in arts and crafts and free professions are the result of processing the RAD-15 survey and are taken from the Health insurance Fund. The data on employed persons include the employees (including the employees in defence and police) and owners of crafts and free professional practices. The survey of employment in legal entities covers the persons employed on the basis of an employment contract regardless of the type of employment or the number of work hours. The survey of the employees who work for private employers – self-employed owners –covers the owners and employees registered with the Health Insurance Fund.

6.5.2 Quality and performance indicator – Coherence with reference data (CC3)

Employed: $CC3 = \frac{X-Y}{Y}$ **= (812.031 –700.797)/700.797 = 0,16**
The number of employees, which is the result of the survey, is 16% higher then the number of employees obtained in related benchmark survey.

Unemployed: $CC3 = \frac{X-Y}{Y}$ **= (308.277 – 546.977)/546.977 = -0,44**
The number of the unemployed persons, which is the result of the survey, is 44% lower than the number of the unemployed persons obtained in a related benchmark survey i.e. official records of the number of unemployed in the employment agencies.

6.5.3 Reasons for major deviations

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 annualy (after the end of survey).

7 Trade-offs Between Output Quality Components

Neither one trade-off between the output quality component is analyzed in this survey.

8 Assessment of User Needs and Perceptions

8.1 User classification and understanding

Thematic Bulletin Labour Force Survey 2014 contains data tables for the last three years, the definition of used concepts and indicators, notes on methodology, questionnaire that was used for the LFS 2014, an explanation of comparability between survey and administrative data. Through convened by certain user groups, users are informed with the purpose and the desired results of this survey.

Key users of the Labour Force Survey by main groups of segmentation are:

- the public sector (the Council of Ministers, Entities Government and Government of BD, Ministries of Labor and Social Welfare, Directorate for Economic Planning, Directorate for European Integration, Agency for Labour and Employment of B&H and entity level Employment Offices, Gender Equality Agency and Entity Gender Centers),
- economic operators,
- science, research and education (universities and research centers),g
- eneral public,
- media (broadcasters and print media),
- international users (Eurostat, World Bank, IMF, UNDP, embassies of foreign countries, foreign media).

8.2. Measuring user perception and satisfaction

8.2.1 Quality and performance indicator – Customer satisfaction index (US1)

No separate user satisfaction survey is conducted to determine level of satisfaction with this product, i.e. the survey outputs.

8.2.2 Quality and performance indicator – Length of time since most recent user satisfaction survey (US2)

No separate user satisfaction survey is conducted to determine level of satisfaction with this product, i.e. the survey outputs.

9 Cost and Respondent/Reporting unit Burden

9.1 Survey costs of the statistical office

9.1.1 Quality and performance indicator – Annual operational costs, with breakdown by major cost components (PCR1)

Costs of statistical institutions in B&H which conducted a survey are divided on: material costs and the compensation expense. Material costs include the costs of printing the questionnaire and other supporting materials procurement, while compensation expense includes expenses for payment of interviewers, controllers, supervisors and operators for data entry. The costs do not include statistician matter slaries and other costs of statistical institutions in B&H.

9.2 Respondent/reporting unit burden and costs

9.2.1 Quality and performance indicator – Annual respondent burden in hours and/or financial terms (PCR2)

As an indicator of burden on respondents the time that the reporting units use to participate in the Survey is estimated. Survey conducted in households, usually takes about 35 minutes or about 11 minutes per respondent.

Approximate assessment of the time used in households which are interviewd in the field is 5.302 hours. The time spent with households that have not participated in the survey were not included.

Table 9: Costs of reporting units and respondent burden

Number of reporting units	Annual number of questionnaires	Time spent per questionnaire	Total time spent (hours)
8.837	8.837	0,6	5.302

9.3 Measures to reduce costs and burden

Measures to be taken in order to reduce costs and burden on the responding units:

- to reduce the number of contacts with reporting units,
- to use of administrative data,
- to start using data from the Census as a frame for sampling to reduce frequent participation and burden on the same household in the survey.

10 Confidentality, Transparency and Security

10.1 Confidentality

Confidentiality of statistical data is required by law, and the personnel conducting the statistical survey has the same legal obligation to protect confidentiality. In the Article 27 of the Law on Statistics of B&H states that: " All measures of organisational, regulatory, administrative and technical nature necessary to protect confidential data against unauthorised access, disclosure and use, shall be taken by the competent authorities in collecting, processing, transmitting and dissemination of Statistics of Bosnia and Herzegovina including at the entity level." Article 28 of the same Law reads as follows: "Persons having access to confidential data in the performance of their tasks shall be subject to compliance with the provisions of this Law, even after the cessation of their functions."

Also, the "Rulebook on Security of Statistical Data in the Agency for Statistics" defines the procedures for ensuring confidentiality in collecting, processing and dissemination – which includes protocols for ensuring that individual data are accessed strictly on a need-to-know basis, rules for defining confidential cells in output tables and procedures for detecting and preventing residual disclosure, and in addition, the arrangements under which users outside the Statistical Authority may access microdata for research purposes.

Note: The staff conducting the survey sign a statement of confidentiality.

10.2 Transparency

Users are informed about the way of using the Labour Force Survey data.

Statements made at press conferences about the survey results are absolutely unbiased and politically neutral.

No mistakes were noticed in the 2014 Labour Force Survey publications, which was why there was no need for any corrections and their release.

10.3 Security

Discussed in Chapter 10.1.

11 Conclusion

In the next period the following will be necessary:

- To establish procedures for complete registration of corrections made in the editing stage for all variables (not only for key variables);
- In cooperation with IT staff, to develop a system for registering online accesses to the database and the number of accesses to electronic bulletins and releases for individual statistical areas (surveys);
- To ensure, within the existing User Satisfaction Survey or through a separate User Satisfaction Survey, the information on the level of user satisfaction for individual surveys;
- To transform annal survey in continuous throughout the year, with quarterly and annual production of results.