GUIDE ON MANNER OF DETERMINING SURVEY AND REGISTERED UNEMPLOYMENT RATE

Podgorica, March 2015
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1. Introduction

Upon the proposal of European Commission, Statistical Office of Montenegro (MONSTAT) and Employment Agency of Montenegro (EOM) established a working group (in March 2013) for producing a guide with purpose of presenting methodologies used for the calculation of two measurements of unemployment rate, currently existing in Montenegro, that will explain methodological differences between them. The production of guide also included an international expert from the field of employment and unemployment that gave a significant contribution in analysing both concepts of unemployment, pointing out on their advantages and disadvantages, respectively.

The mentioned two unemployment rate measures are:

- Survey unemployment rate obtained from the Labour Force Survey - LFS conducted by Statistical Office of Montenegro (MONSTAT), pursuant to Law on Statistics and Statistical System of Montenegro (Official Gazette of Montenegro 18/12 of 30 March 2012);
- Register unemployment rate published by Employment Agency of Montenegro (EOM), based on the data obtained from the records regulated by Law on Records from Field of Labour and Employment (Official Gazette of the Republic of Montenegro 69/03 of 25 December 2003).

The Guide comprises: description of LFS in Montenegro, definitions of employment and unemployment by International Labour Organization (hereinafter referred to as the “ILO”), description of Unemployment Register by Employment Agency of Montenegro, key differences between survey and register unemployment, methods used by Statistical Office and Employment Agency of Montenegro for determining the unemployment rate, list of specific purposes of these two different measures, and proposal for further improvements.

The two concepts of unemployment have different definition, frequency and relevance within appropriate scope of applying in the labour market analysis and prognoses as well as for labour market policies. Thus, they have different role and purpose, but also advantages and disadvantages. Due to many differences, these two rates can be different, can go in the same or opposite direction, can have different trends, creating the confusion among users.

However, none of these two concepts can be replaced by the other one. This Guide is produced with the aim to help policy creators, media, and other users to understand differences between these two concepts of unemployment, but also to give proposals on their usage in an appropriate context.
2. Labour Force Survey in Montenegro

2.1. Background

Labour Force Survey (hereinafter referred to as the “LFS”) in Montenegro was carried out in 2004-2007 as an annual survey, but since 2008 LFS is carried our continuously during a whole year, and survey results are published quarterly. In accordance with the Law on Statistics and Statistical System of Montenegro (Official Gazette of Montenegro 18/12 of 30 March 2012), and Official Statistics Programme (Official Gazette of Montenegro 13/14), organization, data collection as well as data processing are done by Statistical Office of Montenegro (MONSTAT).

LFS provides quarterly and annual estimations about persons with place of residence in Montenegro regarding main characteristics of labour market, such as: employment, unemployment, inactivity, hours worked, occupation, economic activities and other variables. It also provides information on several important socio-demographic characteristics (gender, age, education, and region of residence and characteristics of household (length of absence from household, reason for absence from household).

Demographic data are collected for all age groups, while only persons aged 15 and over are asked the questions on working status at labour market. This "working active population" is classified in one of three working status (employed, unemployed, inactive) according to their real situation in reference week (and not according to the formal status or their personal view).

LFS is carried out in accordance with ILO standards and recommendations as well as in accordance with European legislative acts of Council and Parliament1, and requests of European Statistical Office (EUROSTAT), regarding methodology, organization, sampling procedure, and questionnaire design, and employment and unemployment definitions. Harmonization of concepts, definitions, classifications and methodologies enables that a large number of data obtained from LFS in Montenegro is comparable with the equivalent data of other countries, especially European countries.

Main indicators that are produced in LFS are used for measuring dynamics of labour market and monitoring aims of employment policies in Montenegro as well as for international comparisons (EU member countries, European Free Trade Association – EFTA, and other candidate countries, Organization for Economic Cooperation and Development - OECD). Key users of LFS results comprises Eurostat and European Statistical System – ESS, international organizations, newspaper agencies and researchers.

1Main legislation is Council’s Decree (EC) 577/98 of 9 March 1998 on the Labour Force Survey organization based on sample
2.2. Sample design

Target population comprises all persons with residence in Montenegro that live in private households. The sample frame from 2012 is the Census of Population, Households and Dwellings 2011. Up to 2012, the sample frame was the Census of Population, Households and Dwellings 2003.

The two-phase sample is implemented and population has been stratified in 8 strata defined by region and urbanization level:

- Urban part of capital Podgorica,
- Urban part of Central region, without municipality Podgorica,
- Urban part of North region,
- Urban part of Coastal region,
- Rural part of municipality Podgorica,
- Rural part of Central region, without municipality Podgorica,
- Rural part of North region and
- Rural part of Coastal region.

Primary sampling units - PSUs are enumeration areas from the Census of Population, Households and Dwellings 2011.

The sample is established by using a similar procedure for any of eight strata:

- The first-stage sample of enumeration areas is selected by randomly selected sample with the sampling probability proportionate to number of households in that area. The sample corresponds to the rotation scheme 2-(2)-1 (see picture 1 below), meaning that every enumeration area is included in the sample within two consecutive quarters, afterwards it is out of sample for the following two quarters, and then it is included again in one quarter. After the end of that quarter, selected enumeration area is excluded from the sample and can be again included only after a long time period.

- Second stage comprises households randomly selected for their first interview from the sample of enumeration areas. Selected households are randomly distributed in one of 13 weeks of quarter, so that the equalized distribution can be obtained. Following the rotation scheme, the same households must be interviewed for the second time after 13 weeks (3 months), and for the third time after 52 weeks (1 year).
Accordingly, every weekly sample can be divided into three equal subsamples: households for the first time in the sample (P1 in 2013Q3), for the second time (O2 in 2013Q3) or for the third time (L3 in 2013Q3). At the level of group rotation of households there is a sample overlapping of 33% in two consecutive quarters, and sample overlapping of 33% in the same quarter of two consecutive years (overlapping of 33% also exist in two samples in period of shift of 3 months).

The total number of households in quarterly sample is 2 730, and annual sample comprises 10 920 households. According to Eurostat regulations, a week starts on Monday and ends on Sunday. The first week in a year is a week that includes the first Thursday. The first reference quarter comprises 13 consecutive weeks starting from that week.

This design of sample enables for every quarterly sample to be equally distributed in all quarter weeks (see picture on right).
2.3. Data collection

Selection unit and observation unit in the survey is a household selected by sample considered to be:

A) Any family or other community of persons reporting to live together and spending their income on housing, food, etc., regardless of presence/absence of all household members in the place of household’s residence or out of that place;

B) Any person living alone (one-member household), without his/her household in another place, that lives in a separate or detached dwelling or as a subtenant, no matter if he/she lives in the same room with another one-member household or with tenant household members, but not spending his/her income, but only paying housing service.

This survey does not cover collective households (single-room occupancy hotel, student dormitory, home for children and youth with difficulties, home for social endangered children, pensioners and old-age population home, home for adults with disability, collective accommodation for displaced persons, religious institutions, etc.)

Surveying units are all household members, regardless of their age and current presence at home. The data are collected by approx. 30 interviewers, directly collecting information from sampled individuals. However, it is allowed that one person (aged 18 years or over) gives answers for other household members. The data are collected by “face-to-face” method using paper questionnaire.

2.4 Data processing, publishing and quality

Usage of up-to-date demographic data enables that the LFS data reflect migration of population in Montenegro, and its municipalities, and that the data are comparable in time and space. For this purpose, MONSTAT calculates the population estimates in the middle of year, by age groups, gender and municipalities.

In addition to demographic data, LFS in each quarter uses the data from other sources or registers to improve its quality. One of the sources is administrative source of employment (Central Register of Tax Administration) providing the data in formal or register employment, and covers all persons that signed working contract with company, institutions or organization, and with individual employers no matter if they are employed on permanent or temporary basis, and full-time or part-time basis.

All data obtained by LFS for quarter/year possess fully inside coherence, since they are based on the same micro-data, and they are calculated using the same estimation methods. Rates/relations have been calculated from the data expressed in absolute values (i.e. number of persons).
When observing quarterly and annual data, it can be said that there is insignificant level of incoherence between them, because the annual data are not derived as the average quarterly weights, but again calculation of weights is done for the total annual sample.

In the last ten years LFS has gone through several improvements in methodological terms by using new classifications and harmonization of definitions with international concepts. These "necessary" changes, however, have brought both certain differences in data, and a break in the time series:

a) Framework for the selection of sample in surveys carried out up to 2003 was the Census of Population, Households and Dwellings in 1991, and the survey was carried out on the basis of sample of approx. 500 households. Framework for the selection of sample for surveys from 2004 to 2008 was the Census of Population, Households and Dwellings in 2003, and the survey was carried out on the sample of 900 households, and in that period the LFS was carried out annually. Since 2008 up to 2011 LFS is carried out quarterly and sample frame selection is still the 2003 Census, but the number of households in the sample is changed and in that period is 2 730 quarterly. Sample selection frame for the survey after 2012 is the Census of Population, Households, and Dwellings in 2011, and the survey is carried out on 2 730 households quarterly (10 920 annually).

b) In the meantime, as an addition, the definition of population of working age has been changed. In previous surveys, the active population comprised all population aged from 15 to 64 years (up to 2007), while currently this refers to all persons aged 15 years and over.

Results that are obtained from sample based surveys are subject to usual types of errors related to techniques of sampling and interviews:

1) Sampling errors are characteristics of all surveys that are done on the sample and they are caused by observation of sample as a part of population. The size of sampling error can be controlled by the size and design of sample. However, for some smaller domains (levels or data groups) that possess insufficient number of units in the sample, high sampling errors cause unreliable and unstable results.

2) Non-sampling errors are:

- Coverage errors: over-coverage that appears due to the coverage of non-existing or uninhabited houses or due to the population that does not live anymore in the country. The under-coverage is the problem that occurs due to the insufficient coverage, i.e. non-updating framework that serves for selection of sample (e.g. not covering the newly built dwellings that are inhabited, and not covering persons that moved in a place with the intention to stay there for a year or longer). Additionally, it is possible during the survey to encounter a problem that several households are recorded as one household in the list that represent a frame or vice versa, what is also one of reasons of over-coverage and under-coverage.
- Errors of measurement and processing occur usually due to questionnaire, type of survey, interviewing person, errors in answer, coding, data entering, editing and imputation of data, etc.

- Non-response is often due to refusing or non-making a contact. In this case, the difference appears among the data obtained on the basis of data collected (usually a part of planned sample) and those that would be calculated if the dull sample was realized.

### 2.5 Classification of labour force according to Labour Force Survey

According to the Labour Force Survey persons with the place of residence in Montenegro that lives in households in the given country is classified in the following groups at the labour market:

- **Active population or labour force**, which is the sum of two separated groups:
  - Employed persons;
  - Unemployed persons.

- **Inactive population** refers to persons not classified as employed persons or as unemployed persons.

Working active population represents the population aged 15 years and over, and consisted of active and inactive population.

The most important indicators that are derived from this classification of labour force are the following:

- **Activity rate** – represents the percentage of active population of the number of working active population.

- **Employment rate** – represents the percentage of employed persons of the number of working active population.

- **Unemployment rate** – represents the percentage of unemployed persons of the number of active population.

Target population in Labour Force Survey is the population with the place of residence in Montenegro (i.e. resident population), that is within the European System of Accounts (ESA95) defined in the following manner: a) a person belongs to the group of resident population of a country if a person resides or intends to stay at the economic territory of that country for period of one year and over; b) member of resident households continues to be resident, even if he/she often travels out of economic territory, because his/her center of economic interest stays in the economy where he/she is resident (example: seasonal worker who every year works 6 months in a country, and 6 months in other country, must be interviewed in the country where he/she has economic interests, family dwelling).
Unemployed persons are in LFS identified in accordance with the standards of ILO and by operative definition from the Decree of European Commission (EC) 1897/2000. According to these definitions the unemployment covers persons of age 15 to 74 years that:

a) Were without job during the reference week, i.e. they had neither job nor were on job (one hour or more) in paid employment or self-employment;

b) Are currently available for work, i.e. were able to work as an employed or self-employed person during two weeks after reference week;

c) Actively sought job, i.e. took concrete steps to be self-employed or to find a paid work in period of four weeks including a reference week or persons that found a job that will start afterwards, i.e. for not more than three months.

Above mentioned Decree also contains so called 12 principles for the formulation of questions on working status that concern: a) position of questions for collection of working status by the definition of ILO; b) corresponding, type and content of questions on employment so that the people are separately identified that has work when they are temporarily absent from work (persons on vacation), persons with small-scope work, even with those in duration of one hour as well as unpaid family workers; c) reference period for employment, active job seeking, and availability. Among these principles, two of them relate to the mentioned condition c) mentioning precisely what are active methods of seeking and what order should be in the questionnaire.

Unemployed person is defined as a person that should be declared himself/herself that he-she used one of these active methods: that was in contact with public service for employment with the purpose of finding a job, that was in contact with private agency with purpose of finding a job, that applied directly at employers, that asked friends, relatives, in trade unions, etc., that put advertisements for seeking job or replied to job advertisements, that observed job advertisements, passed tests and checks, or was on interviews, sought for land, buildings or equipment, submitted a request for licences, licence for financial resources. When "contact with Employment Agency of Montenegro with purpose of finding a job" is concerned, it is clear provided what is considered to be actively seeking (e.g. registering an interviewed person on Employment Agency of Montenegro for the first time), and what is not actively seeking (for ex. administrative renewal of registration for applying for an unemployment fee).

It is important to take into account that the condition a) contained under definition Unemployment is considered to be that only persons that are classified as "not employees" in accordance with concept of ILO may be classified as unemployed if they satisfy other two conditions. It means that the ILO definition on unemployment implicitly refers to the ILO definition on employment.
In this moment\(^2\), definition of *employment* is not contained in the Decree as it is the case with the definition of unemployment. However, explanations that EUROSTAT prepares every year using the guidelines of International Labour Office, contain rules of implementation that clearly refer to what is needed to be considered as an employment and what not.

According to these rules, persons aged 15 years and over are classified as employed if:

1) They performed any type of work for salary or profit in reference week one hour or more (including family workers, but not compulsory military service or work for public benefit).

2) They did not work but had a job or business from which they were absent in reference week (including family workers).

Thus, an employee is a person that performs any type of work for salary or profit in reference week, even if it lasted for one hour. A salary covers cash payments or "payment in goods" (payment in goods or services instead for money), regardless if the payment was received in a week when the work was performed or not.

Two main categories of employees are:

- **Self-employed persons**: persons that work within their own business, professional practice or in a farm with purpose of gaining profit (that employ at least one person, or that do not employ other persons), even if an enterprise does not succeed to make a profit.

- **Employees**: persons that work at state or private employer and that receive compensation in the form of salary, fee, tips, payment depending on performance or payment in kind; included also military persons.

Employees are also considered to be:

- A person that grows agricultural products if the owner of agricultural production (e.g. crops, livestock, wood, fish catch, etc.) and if it fulfils one of the following conditions: a) agricultural production is targeted for purchase or exchange, even if there is only small part is considered, b) agricultural production is only intended for own production and it represents a significant share in the total consumption of that household.

- **Family worker**, i.e. person that helps other household members in running family business or agricultural holdings, without any formal payment, and under condition that they are not considered to be employees.

- **Persons on training** (trainees or apprentices) that receives a salary in cash or in indirect privileges.

- Persons that is not working, because he/she is on suspension leave, and that has the confirmation letter on returning to the job within 3 months or he/she continues to receive \(\geq 50\%\) of salary of his/her employer.

\(^2\) Working group initiated by Eurostat in 2012 finished its mandate proposing operative definition of employment and questionnaire model that could be a part of new legal framework EU- LFS
Picture 2 presents a graph of flow used at the international level for the labour force classification.

**Picture 2: Classification of labour force in EU-LFS** (source: Eurostat)

1. Person aged 15 years and over lives in private household
   - Yes: Person did any work for pay or profit during the reference week
     - No: Person not having worked at all although having a job or business during the reference week
       - No: Employed persons
       - Yes: Unpaid family worker
2. Person aged 15-74 years, No job search activity - job already found that will start within 3 months
   - No: Person can start to work immediately (within two weeks)
     - Yes: Person during last 4 weeks actively searched for a job
       - Yes: Unemployed persons
       - No: Person aged 15-74 years search for employment

3. Register of unemployed persons of Employment Agency of Montenegro

Employment Agency of Montenegro acts in accordance with the Law on Employment and fulfilment of rights from the insurance of Unemployment\(^3\), regulations in the domain of labour, health, pension and disability insurance, social protection, etc. The mentioned Law regulates that the Employment Agency of Montenegro, as a responsible body for issues of employment, performs the following activities of employment:

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1) Informs on possibilities and conditions for employment;
2) Assists in finding job\(^4\);
3) Professional orientation and counselling on planning professional development;
4) Education and training of adults;
5) Professional rehabilitation of persons who face difficulties in finding a job;
6) Public works;
7) Assists in finding job for citizens of Montenegro abroad in accordance with special law;
8) Issues working permit for foreigner, in accordance with special law\(^5\);
9) Implements other measures of active employment policy.

In addition to employment activities, Employment Agency of Montenegro performs the following:

1) Ensures rights from the insurance from unemployment and other rights in accordance with the law,
2) Keeping records in the domain of employment in accordance with law\(^6\);
3) Monitoring trends at the labour market and preparation of analytical and informative bases for defining employment policy;
4) Implementing international contracts on employment;
5) Cooperation with employers, education institution and other private or natural persons in conducting employment activities;
6) Cooperation in the domain of employment at the international level;
7) Other issues in the area of employment in accordance with law and other regulations.

Employment Agency of Montenegro in all municipalities of Montenegro possesses organization units – regional offices connected with the central office. Unemployed persons are registered in regional offices by the place of residence. All regional units implement in a uniform manners regulated technology of work with unemployed persons, performs the registration, and entering in the Register of Unemployed persons.

With purpose of keeping precise, systemized and timely records from the labour domain, Employment Agency of Montenegro uses application programs as a part of the same network and which are daily updated. This network is consisted of:

- **Records of Unemployed Persons** where are collected the data on unemployed persons referring to working experience, education, professional development, and other information necessary for communication between Employment Agency, unemployed and employer;
- **Statistics and reporting**, possess the data on unemployed persons registered themselves at Employment Agency in the last 20 years, enables providing the review on supply and demands for unemployed persons by different characteristics (qualification structure, gender, age, regional structure, etc.);

\(^4\) Assisting in finding a job refers to providing professional assistance in connecting a person searching a job, change of employment and employer, for the purpose of signing a contract on work, in accordance with special law
\(^5\) Law on Employment and Work of Foreigners (Official Gazette of Montenegro No 22/08 and 32/11)
\(^6\) By Law on Keeping Records in Area of Labour and Employment (Official Gazette of the Republic of Montenegro No 69/2003)
- **Professional training and re-qualification**, enables monitoring of realization through all measurements of active employment policy (education and training programmes, public works, etc.);
- **Loans for self-employment**, follows the implementation of Self-Employment Programme that is realized since February 1999;
- **Keeping records on vacant working positions**, enables monitoring of all free working positions that are announced by employers at Employment Agency;
- **Compensation in cash or in kind to unemployed persons**, an application which monitors realization of rights from the insurance from unemployment;
- **Employers**, enables the provision of the data on cooperation of employers with Employment Agency;
- **Foreigners**, monitors issuing of labour permits and employment of foreigners.

All mentioned applications are interlinked; they use the data from each other and represent one entire IT system of Employment Agency. In addition to the regular data collection and updating with information obtained from unemployed persons and employers, updating registers is continuously done by obtaining the information from registers of Tax Administration of Montenegro, Pension and Disability Fund, Health Fund of Montenegro, etc.

### 3.1 Criteria of Employment Agency of Montenegro’s Register of Unemployed Persons

Register of unemployed persons is maintained by Statistical Office of Montenegro in accordance with the Law on Employment and Exercising Rights from Insurance from Unemployment, Law on Keeping Records in Area of Labour and Employment. Employment Agency of Montenegro carries out different employment services and programmes, such as: keeping records of unemployed persons, fee for unemployment, counselling and providing assistance in finding a job, implementation of active labour market policy (trainings, earning or public works subsidies, assisting in finding a job.

According to the Law on Employment and Exercising of Rights from insurance from Unemployment, unemployed person is a person aged 15 to 67 years with Montenegrin citizenship, or a foreigner with personal working permit that is recorded at Employment Agency of Montenegro, able or partly able to work, not having found a job, and actively searching a job, excluding regular pupil, student, employee on unpaid leave, pensioner and farmer entered in the register of farmers at the competent body.

### 3.2 Rights and obligations of unemployed persons

Measures of active employment policy are created with purpose to activate unemployed persons and to assist them to enter into employment and use the combination "Rights and obligation". The rights in the form of monetary payments and and other rights envisaged for activating persons searching a job to register at Employment Agency of Montenegro as unemployed persons. Obligations are in form of activities that should be done by unemployed persons with purpose of register and updating the registration. These obligations are defined by "individual plan of employment“ individually agreed with personal counsellor from Employment Agency of Montenegro.
The registration provides an opportunity to employment agencies to immediately offer to unemployed persons all available working positions, counselling about job, and assistance in finding a job, thus reducing the time needed to change a job. Thus, Employment Agency of Montenegro classifies unemployed persons in different categories, thus a separate group of seminars or programmes can be organized for each of these categories.

Employment Agency of Montenegro keeps a record on unemployed person who has obligation to:

1) Actively search a job\(^7\);
2) Performs obligations defined by individual employment plan\(^8\);
3) Participates in measures of active employment policy\(^9\), in accordance with the law, general act of Employment Agency and individual employment plan;
4) Accept an appropriate employment\(^10\), in accordance with the law and individual employment plan;
5) Contact personally Employment Agency to be informed on possibilities and conditions of employment, and assisting in finding a job, upon every call of Employment Agency, at least once in two months, i.e. once a month for users of allowance;
6) Inform Employment Agency on any change of influence on attaining or losing the rights and obligation by this law, but not later than 8 days after the change occurred;
7) Fulfils other obligations by the law, general act of Employment Agency and individual employment plan.

Unemployed person has the right to:

1) Be informed by Employment Agency on possibilities and conditions for employment;
2) Use free of charge service of Employment Agency;
3) Define an individual employment plan with Employment Agency;
4) Participate in programmes and measures of active employment policy, in accordance with individual employment plan;
5) Receive allowance for the time of unemployment in accordance with the law;
6) Receive cash assistance for the purpose of education, training, professional rehabilitation of persons with difficulties to find a job, and to be included in other measures targeted at increasing the employment, i.e. reducing unemployment, in accordance with the general act of Employment Agency.

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\(^7\) **Actively searching job** means regular fulfilment of obligations of persons searching a job in accordance with the law and individual employment plan.

\(^8\) **Individual Employment Plan** is an agreement between main coordinator for employment and unemployed when searching for a job and including in measures of active employment policy. Individual Employment Plan is updated according to new trends and changes in the labour market.

\(^9\) **Active employment policy** is plans, programmes and measures aimed at increasing the employment, i.e. reducing unemployment.

\(^10\) **Appropriate employment** is employment with type and level of education or occupation.
Person with difficulty finding a job\textsuperscript{11} has an advantage in implementing certain measures of active employment policy. Employment Agency of Montenegro stops to keep the records on unemployed persons if an unemployed person:

1) Signs a work contract in accordance with the law;  
2) Unregisters from the records;  
3) Refuses to be included or does not fulfil obligation defined by the contract on inclusion in the programme of active employment policy;  
4) Becomes an owner or majority shareholder of business entity;  
5) Becomes an entrepreneur;  
6) Refuses an appropriate employment;  
7) Has not reported accurate data on fulfilment of conditions for gaining the status of person searching for a job;  
8) Reaches 67 years of age and 15 working years, unless he/she is unemployment benefit recipient up to the expiry of right on receiving unemployment benefit;  
9) Uses the right on pension in accordance with the special law;  
10) Becomes a disability pension beneficiary due to complete professional disability;  
11) Is sentenced to prison for longer than 6 months;  
12) Does not actively search for job;  
13) Is not available to be employed\textsuperscript{12};  
14) Acts against working regulations;  
15) Becomes an insured famer, i.e. priest or religious service employee as well as monk and nun in accordance with the law on pension and disability insurance (Official Gazette of the Republic of Montenegro No 54/03, 39/04, 61/04, 79/04, 81/04, 14/07, 47/07, and Official Gazette of Montenegro No 79/08, 14/10, 78/10, 66/12, and 38/13);  
16) Fails to report within the defined deadline at the Employment Agency, without providing an acceptable explanation up to 30 days in the manner defined by Employment Agency’s acts.

Above mentioned reasons of stopping the records keeping show that certain unemployed persons solve the issue of unemployment by entering in the employment, starting own business or becoming pensioner, while other persons are still unemployed. But, by the Law on Employment and Implementation of Rights from Insurance of Unemployment does not have the status of unemployed person as an active job searcher, and is not included in the calculation of registered unemployment rate.

\textsuperscript{11} Person with difficulty finding a job is unemployed person that due to different difficulties (difficulties with health, insufficient or inappropriate education, social and demographic characteristics, etc.), is not competitive at the labour market, and has difficulties to find a job.

\textsuperscript{12} Employment availability is the availability of unemployed person at the address of his/her place of residence or in another set address, every working day, at set time.
Table 2 provides the list of several specific reasons that initiates the registration of unemployed persons at Employment Agency of Montenegro.

Table 2

<table>
<thead>
<tr>
<th>Type of rights</th>
<th>Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation and benefit of active labour market</td>
<td>All registered unemployed persons</td>
</tr>
<tr>
<td>Unemployment benefit/pension and health insurance</td>
<td>Unemployed persons are entitled to right of cash benefit, 3 to 12 months depending on the duration of previously registered job. Cash benefit amounts 40% of minimal wage defined by the General Collective Agreement. Pension, health insurance, and taxes are also provided. Some specific categories must have cash benefits and longer than one year, or they have the right on state or social benefit. The right is defined by the regulation: it is necessary 12 months of continuous work or at least 18 months of previous working experience.</td>
</tr>
<tr>
<td>Family social assistance/benefit</td>
<td>Received from Centres for Social Welfare, but recipients of this kind of benefit must be registered as unemployed persons in the register of Employment Agency of Montenegro</td>
</tr>
<tr>
<td>Health insurance</td>
<td>Unemployed persons are entitled to right on health insurance for both themselves and their family members (unemployed spouse and children up to 25 years of age). For persons not insured by other basis or via employed family member, even if for those persons that are actually inactive or informally employed.</td>
</tr>
<tr>
<td>Salary/payment for participation in state public works</td>
<td>Public works are done in cooperation with local self-government, municipal enterprises and NGO sector</td>
</tr>
<tr>
<td>Maternity benefit</td>
<td>Prolonged period of cash benefits for maternity</td>
</tr>
<tr>
<td>Reimbursement of resettlement costs</td>
<td>Regulated by the law. Only once a possibility of possibility to move to another city for the purpose of new job search</td>
</tr>
<tr>
<td>Loans for self-employment</td>
<td>5,000 – 15,000 EUR</td>
</tr>
<tr>
<td>To ensure a new job</td>
<td>Even if they have a job</td>
</tr>
</tbody>
</table>
Number of persons registered as persons that actively searched a job is the most used reference when analysing labour market at national or regional level, and benchmark of unemployment rate published by Employment Agency of Montenegro. The data are continuously published at the website, and accessible to users for specific analyses.

As already mentioned, relevance of registered unemployment rate depends on being up-to-date and accuracy of data on both employment and unemployment. Under existing conditions, both data on employment and on unemployment does not fully fulfil this main starting request. This is because there are still a certain number of persons in the records of Employment Agency with the arguable status (illegal work, farmers and students which are on the basis of unemployment status are entitled to the right of health insurance, recipients of family benefits in kind, etc.), in spite of the fact that they are not arguable from the point of status definition of unemployment. Additionally, registered employment also covers a part of non-residential labour force what brings the correctness of this data and their usage for defining the registered unemployment rate under question. In addition, the updating of data on employment dynamically lag behind updating of data on unemployment that can be practically defined daily.

Accordingly, main pre-condition for defining a relevant registered unemployment rate is to ensure better updating of data on employment via the system of comprehensive registration of tax-payers, contribution and insurance payers\(^ {13}\), i.e. registering employed persons in compulsory insurance types, and for the distinction of non-residential from domestic labour force as well as defining several modalities of these records (by municipalities, gender, age groups, education level, etc.). In addition to this, Employment Agency will put efforts to define the data relevance as high as possible by implementing international standards referring to the status determination.

4. Key differences between survey and registered unemployment

In addition to all possible measurement differedence of influence on both sources, there are several concept differences in definition of unemployment that have influence on data comparability (see Table 3).

<table>
<thead>
<tr>
<th>Table 3 – Key differences of survey and registered unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey unemployment (LFS)</strong></td>
</tr>
<tr>
<td>Based on</td>
</tr>
<tr>
<td>Years of age</td>
</tr>
<tr>
<td>Reference population</td>
</tr>
<tr>
<td>Households and institutions (collective households)</td>
</tr>
</tbody>
</table>

\(^ {13}\) Law on Comprehensive Registration and Reporting System on Calculation and Payment of Tax and Contributions (Official Gazette of the Republic of Montenegro No 29/05), and Rulebook on Mode and Contents of Uniform Application for Registration of Tax Payers, Payers of Contribution and Insured Persons in Central Register (Official Gazette of Montenegro No 10/10 and 32/10).
<table>
<thead>
<tr>
<th>Reference period</th>
<th>Special reference periods (according to EUROSTAT notes)</th>
<th>Special reference periods according to the Law on Unemployment and Employment Agency regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>International definition in accordance with ILO and EUROSTAT.</td>
<td>Definition in accordance with national law on employment for needs of labour market policy (unemployment benefits, social assistance, health insurance, active policies, etc.)</td>
</tr>
<tr>
<td>What they measure</td>
<td>Labour Force Survey collects the data on economically active population or on labour force in Montenegro by ILO recommendations. Main categories observed are total employment, unemployment, demographic, education, socio-economic, and other characteristics.</td>
<td>Number of registered persons recorded in Employment Agency of Montenegro</td>
</tr>
<tr>
<td>Measures refer to what</td>
<td>Measures state in the labour market. It is used for the analysis of long-term and middle-term trends in labour market.</td>
<td>For analysing trends and forecasts of supply and demand of labour force at the labour market.</td>
</tr>
<tr>
<td>Data publishing</td>
<td>Quarterly and annual average.</td>
<td>Weekly, monthly, quarterly, and annual data. All measures in this moment refer to the end of reference period. The average can be also calculated.</td>
</tr>
<tr>
<td>Quality</td>
<td>Sampling error refers to (reduced) preciseness of data collected.</td>
<td>Is not covered by sampling errors</td>
</tr>
<tr>
<td>Possible problems with underestimation/overestimation</td>
<td>Non-receiving data, non-establishing contact with household (non-response). Overestimation of unemployed persons that are easily found and interviewed. Underestimation of employed persons (especially those in informal sector)</td>
<td>Some unemployed persons are not interested to register themselves: a) Underestimation of unemployed youth of age 15-24 (insufficient number of persons registered because they are non-qualified), b) Persons that have never worked or not recently worked, c) Persons that are in education system. Overestimation because of persons with informal or short-term employment, who do not report that and do not demand benefits.</td>
</tr>
<tr>
<td>Preciseness of small areas</td>
<td>Smaller preciseness for small areas, such as age groups by region, due to sampling error.</td>
<td>High preciseness, even for small areas, such as municipalities and small age groups.</td>
</tr>
</tbody>
</table>

Differences in concept among the data on unemployment, provided by these two sources, are also obvious according to the scheme in Picture 3. Description of certain population groups that makes this difference is described below.

[A] Persons classified as unemployed by ILO in LFS, and persons from the Register of Unemployment in Employment Agency of Montenegro with active job search

- These are all persons that in the same time and in the same period possess all conditions to be classified as unemployed persons by ILO and persons from the Register of Unemployment in Employment Agency of Montenegro that actively search a job.
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[B] Persons not part of target population in LFS and persons from the Register of Unemployment in Employment Agency of Montenegro that actively search a job
- Montenegrin citizens in collective households or institution;
- Foreign persons with temporary working permit.

[C] Persons classified as inactive according to ILO in LFS and persons from the Register of Unemployment in Employment Agency of Montenegro actively searching a job
- Agricultural producers if they do not sell their products, but use for own consumption;
- Recipients of family social benefits provided by Centres for Social Welfare;
- Registered unemployed must regularly report themselves in Employment Agency of Montenegro, every two months to prolong their registration (cash benefit recipients once a month). If during 4 weeks of reference period, unemployed person according to ILO have not visit the Employment Agency to ask for a job, and not used any other methods for active job search, he/she cannot be any more considered as unemployed according to ILO definition.

sl. 3 – Overview of differences in concept between survey and registered unemployment

[D] Persons classified as employed according to ILO in LFS, and persons from the Register of Unemployment in Employment Agency actively searching for a job
- Persons working in informal sector (illegal work or grey economy), are not included in the Register of employed persons in Tax Administration;

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\(^{14}\) As a note that arrival in Employment Agency premises is considered as the method of actively searching for a job only if the purpose of the visit was to find a job. See the ILO definition of unemployment, under item 2.5 Classification of labour force by Labour Force Survey.
- Persons with short-term employment, even if lasting one hour, who do not report their activity to Employment Agency of Montenegro;
- Agricultural producers that sell everything or a part of their products, but reported in the Register of Agricultural Producers of the competent body, can register themselves and maintain the registration as persons from the Register of Unemployment in Employment Agency of Montenegro that actively search for a job;
- Persons absent from the job due to suspension leave not over 3 months, classified according to ILO as employees, but can be registered and maintain their registration as persons from the Register of Unemployment in Employment Agency of Montenegro that actively search for a job;
- Under certain circumstances, apprentices (professional development programme) with high education level are registered as unemployed in Employment Agency of Montenegro, but with a paid job, thus classified according to the LFS as ILO employees.

Persons classified as unemployed according to ILO in LFS, and persons from the Register of Unemployment in Employment Agency of Montenegro with no active job search

- Persons aged 68-74 years can be classified as unemployed according to ILO in LFS, but with no right to be registered as persons from the Register of Unemployment in Employment Agency of Montenegro with active job search;
- Regular students may be unemployed according to the ILO definition, but they do not fulfil conditions for the registration as unemployed in Employment Agency of Montenegro;
- Pensioners can be unemployed according to ILO in LFS, but they do not fulfil conditions for the registration as unemployed in Employment Agency of Montenegro;
- A large number of long-term unemployed persons that were active in job search, but already having used their right on cash benefit;
- Many persons having a regular job in the past, but only for several months, and in that manner do not have insufficient years of experience (unsuitable) to receive cash benefit or other benefit for unemployed persons;
- Persons deleted from the Register of unemployed persons that, according to the rules of Employment Agency of Montenegro, must wait 6 months to be registered again as persons that actively search for a job;
- All persons that do not have interest for unemployment benefit: a) persons already having the right on health insurance over the other household employed member, b) persons with family or personal income sufficient to support them until they find a new job, c) Miscellaneous.

As in many countries, these two concepts of unemployment are significantly different. It is possible that a large number of unemployed by ILO is not registered as persons from the Register of unemployment in Employment Agency of Montenegro that actively search for a job, and a significant number of registered unemployed persons are considered to be unemployed according to the ILO definition, but they are classified as employees or inactive by the ILO definition.
5. How Statistical Office and Employment Agency of Montenegro calculate unemployment rate

Unemployment rate, as one of main indicators for understanding structure and trends at the labour market, represents the relation between number of unemployed and active population (as the sum of employed and unemployed persons).

\[
\text{Unemployment rate} = \frac{\text{Unemployed}}{\text{Active population}} \times 100 = \frac{\text{Unemployed}}{\text{Employed} + \text{unemployed}} \times 100
\]  

(1)

Relevance of unemployment rates depends on how much the data on employment and unemployment are updated and precise. Unemployment rate can be measures both for men and women respectively, for persons of different age groups, different education levels, and different regions inside the country. It is important that both employed and unemployed groups are produced by the same methodology, to refer to the same population, and to have the same reference period (in regards with the fact that both have very high seasonal form).

Unemployment rate according to the ILO is calculated by formula (2) and using sets obtained by the same method, by the same survey (Census of Population, Households and Dwellings and quarterly LFS), and with the consistent classification where employed and unemployed persons are mutually exclusive sets.

"Unemployment rate by ILO = " \((\text{ILO unemployed}) / \text{ILO employed + ILO unemployed}\)" (2)

Registered unemployment rate\(^{15}\) in Montenegro is calculated by Employment Agency of Montenegro using the registered unemployment as the numerator (Formula 3) and active population from Census of Population, Households, and Dwellings as the denominator.

Study ordered by Employment Agency of Montenegro done in July 2007 showed that the rate calculated through this study and rate calculated by Employment Agency of Montenegro, using the formula 3, is almost identical\(^{16}\).

\[
\text{Registered unemployment rate} = \frac{\text{Registered unemployment}}{\text{Active population from 2011 Census}} \times 100
\]  

(3)

\(^{15}\) Registered unemployment rate is calculated by certain national criteria in several other European countries, among which: Austria, Czech Republic, Germany, Slovenia, Spain.

\(^{16}\) To check the correctness of this method, in the first week of July 2007, Institute for Strategic Studies and Prognoses carried out on behalf of Employment Agency the survey 'Labour Force and Employment in Montenegro'.

According to the survey, unemployment rate for the age 15-65 years was 12.6%, what is similar to the unemployment rate determined in this manner by Employment Agency, i.e. 12.58%.
6. Alternative measurement of registered unemployment rate

In the methodology used by Employment Agency for the calculation of registered unemployment rate, the same denominator has been used for several years, and this is the reason why the seasonality was not reflected. In addition, the data used have been obtained by different methods and they were collected for the different purposes. It is important to note that the data from the ‘2011 Census of Population, Households and Dwellings’ on employment and unemployment were obtained by using the same ILO definition currently in the use by LFS, thus they cannot be compared with the concept of registered unemployment (see picture 3 in the Guide).

Formula 4 represents an alternative manner to calculate the registered unemployment rate, similar to formula (3). Although, in this case both nominator and denominator can refer to the same quarterly or annual period, the same reasons as in previous formula are why this method is not recommended.

\[
\text{Registered unemployment rate} = \frac{\text{Registered unemployed}}{\text{Active LFS population}} \times 100
\]  

(4)

Second way to calculate the registered unemployment rate is provided in the equation (5), where the nominator is the sum of the employment by ILO and registered unemployment, and where two values refer to the different concept and are collected by different methods and for different purposes. In this case, there is also a high probability that these two sets are partly overlapping, and that they are in this way calculated twice in the denominator.

\[
\text{Registered unemployment rate} = \frac{\text{Registered unemployed}}{\text{ILO employed} + \text{Registered unemployed}} \times 100
\]  

(5)

Nevertheless, equations (4) and (5) have other shortcoming, i.e. sets are produced by different institutions with different frequency, thus timely publication of monthly registered unemployment rates cannot be guaranteed. More precisely, these sets by ILO are only accessible at the quarterly bases, and they are published approx. 75 days after the reference period. On the other side, registered data are daily updated and published weekly and monthly approx. 20 days after the end of reference period.

Based on the analysis, the conclusion is that the best solution for the calculation of registered unemployment rate in Montenegro is the equation (6).

\[
\text{Registered unemployment rate} = \frac{\text{Registered unemployed (age 15 – 67)}}{\text{Registered employed (age 15 – 67) + registered unemployed (age 15 – 67)}} \times 100
\]  

(6)
In this case, both employed and unemployed persons levels are produced from the registers, although maintained by different institutions and for different purposes. Registered employment is actually produced from the Central Register of Tax Administration and only contains formal employments. These two sets are in principle overlapping, because the personal data from the Central Register of tax Administration about persons that have become formally employed are monthly submitted to Employment Agency, to enable their removing from the register of unemployed persons with active job search.

Registered employment covers all persons that signed the work contract with company, institution/organization, or with individual employer, regardless if they are employed on temporary or permanent basis, and if they work full time or short-time. Since January 2009, it also comprises the data of foreign employees in Montenegro\textsuperscript{17}. Data on registered employment on monthly and annual level, by activity and municipality is published by Statistical Office on the basis of data obtained from Tax Administration.

The usage of formula (6) has also several other advantages:

- Both registers are monthly updated giving a possibility for monthly unemployment rate to be monthly published under deadline of 20 days after the end of a month. In this way, relevance, timeliness and preciseness of data on employment and unemployment are guaranteed.
- By having all values produced from registered data, their quality should be high, even if small areas are considered. This quality will give a possibility to Employment Agency of Montenegro to calculate and publish the registered unemployment rate for different subgroups, such has: cumulative for age group 15-67 years, especially for certain age groups (e.g. youth under 25 years of age), by gender, regions, and by municipalities. It is possible to calculate separately by this method rates for "non-residential labour force" and for "residential labour force"\textsuperscript{18}, because both sources comprises and identify these special subgroups.

The calculation of registered unemployment rate by formula (6) will be possible to implement when inputs necessary for its calculation become accessible from the administration body competent for the maintenance of Central Register of Tax Payers and Insured Persons.\textsuperscript{19}

\textsuperscript{17} Foreigners can be employees, i.e. they can work in Montenegro, under conditions determined by law, collective agreement, ratified and international agreements, and general rules of international right.

\textsuperscript{18} Defined by internationally harmonized criteria about the 12-month stay.

\textsuperscript{19} Law on Comprehensive Registration and Reporting System on Calculation and Payment of Tax and Contributions (Official Gazette of the Republic of Montenegro No 29/05), and Rulebook on Type ad Contents of Application for Tax-Payer Registration, Contribution Payers and Insured Persons in Central Register (Official Gazette of Montenegro No 45/08; 32/10)
7. Different measures for different purposes: when and how to use them?

Each of these two concepts of unemployment (LFS-based and registered) has its own role and specific scope of use in the labour market analysis and prognoses. Neither of these two concepts cannot be replaced by the other one. Contrary to that, these measures are interchangeable.

LFS can measure individual share in labour market in general sense and with different level, and not only to collect the data on unemployment (e.g. employment, insufficient employment, and groups that meet some, but not all needs within definition of unemployment\(^{20}\)).

LFS-based unemployment rate is an appropriate measure of unemployment level at the labour market and it is internationally comparable. When calculating the registered unemployment rate, every country implements different law on employment that regulates the manner of keeping records on unemployed persons, so that the unemployment rate is less internationally comparable.

Survey unemployment rate and, more general, definition of unemployment by International Labour Organization (together with other survey results) are used:

- To measure labour market trends;
- As an indicator of social and economic welfare;
- For analysing long-term and medium-term labour market trends;
- For the analysis of the position of different social and demographic groups at the labour market (defined by age, gender, education, region, previous working experience, etc.), and especially for identifying factors for unemployment and long-term unemployment, and monitoring of their influence;
- For the analysis of labour market trends among employment, unemployment and inactivity;
- For the analysis of activity when searching a job, as well as reasons for inactivity (need for more data on inactivity, by age group, gender, type of inactivity, disability, pensioners, not interested, down hearted, students, and by level of education),
- Generally, when it is important to analyse unemployment in connection with any other data collected via the same questionnaire both at individual and household level.

Registered unemployment rate and other data relate to registered unemployment (number of new registered unemployed persons and vacant working posts, relation between total number of registered unemployed persons, and number of registered unemployed persons that have found a job) are less internationally comparable due to certain rules for the registration inside these countries, but can be used for the following:

- Measurement of number of persons whose situation regarding employment is such that they satisfy the criteria for obtaining state assistance,
- For educative purposes, training scheme, adapted policy,
- For the analysis of short-term trends and short-term forecasts of supply and demand of labour force (especially because the registration data are the only data on supply and demand of labour force available at the monthly level, and they are significant for obtaining the early signals on important events at the labour market),

\(^{20}\)Since 2012, Eurostat has started to calculate and publish additional measures of unemployment rate
- For the analysis of supply and demand of labour force at the municipality level,
- For the analysis of influence of labour market policy and projects,
- For the analysis of influence of change in criteria for gaining rights on benefits, health insurance, and social insurance,
- Data on registered unemployment together with quarterly survey data are used for monthly calculation of seasonal unemployment rates in the EU member countries\textsuperscript{21}.

### 8. Main conclusions and recommendations

Working group has concluded the following:

These two concepts cannot be replaced by each other. Contrary to that, these measures complement each other.

It is important that the data users understand differences between these two concepts of unemployment, and that they use in a right manner each of them. They have different role and purpose, but also differences in advantages and disadvantages. However, due to many differences, these two measures can have different levels; they can move in the same or contrary direction and can have different trends.

As every indicator based on the survey, unemployment rate based on LFS is also exposed to measurement errors. Thus, it is necessary continuous effort of Statistical Agency, as it was up to now, to reduce and control these errors. Work of Statistical Office of Montenegro respects the principles of the European Statistics Code of Practice. This Code is based on 15 principles: professional independence, mandate for data collection, adequacy of resources, commitment to quality, statistical confidentiality, impartiality and objectivity, sound methodology, appropriate statistical procedures, non-excessive burden on respondents, cost-effectiveness, relevance, accuracy and reliability, timeliness and punctuality, coherence and comparability, and accessibility and clarity.

Registered data on unemployment are less internationally comparable due to specific rules for the registration of unemployed inside countries (every country implements the national law on employment that regulates different criteria for defining an unemployed person). However, they give timely and precise measure of short-term development (changes from month to month). Data on registered unemployment can be used in Labour Force Survey:

\textsuperscript{21} These models have been already used in several European countries so that the harmonized monthly unemployment rate is obtained, delivered to Eurostat for official monthly indicators.
- if it is necessary for the calibration of results from the LFS sample up to more comprehensive data on registered unemployment, and in this way to reduce bias and to foster preciseness;
- Data on registered unemployment together with quarterly survey data are used for monthly calculation of seasonal unemployment rates in the EU member countries.

Both Statistical Office and Employment Agency of Montenegro have recognised a need for closer cooperation between these two institutions (as well as with Tax Administration of Montenegro). More intensive cooperation will use as more as possible their work and their data aimed at higher matching of data collected, for the purpose of better and more comprehensive understanding of labour market, as well as for the purpose of more successful implementation of their missions and increasing relevance and correctness of their data.

Aimed at improving the data of LFS, register of Employment Agency and Tax register it is necessary to do the following:

a) Improvements in Labour Force Survey:
   - Check reasons for very high variability of level and unemployment rate;
   - To calculate annual data as an average of quarterly data (not to do the re-calculation of weights for total annual sample);
   - To publish the data on inactive population by age groups;
   - To take steps for creating additional indicators of unemployment by ILO;
   - To take steps within the calculation of monthly unemployment by ILO by using the above mentioned models.

b) improvements in the Register of Employment Agency of Montenegro:
   - Employment Agency will calculate the unemployment by using the formula (6), from the moment when Tax Administration of Montenegro provides and publishes necessary data on registered employment (residential and non-residential employees, gender, age, education structure, employment by municipalities, etc.).

With the aim of providing input for the calculation of registered unemployment rate, intensifying the cooperation with Tax Administration will be done by these activities:

- providing detailed data by municipalities, gender, and age groups, by activity sectors (Nace Rev.2), occupation, type of contract (on permanent or temporary basis, with full time or short-time);
- to provide existing data on registered employment separately for domestic and foreign labour force;
  - To publish the mentioned data on a monthly level;

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22 This method has been already used in several European countries with purpose of obtaining harmonized monthly unemployment rate, delivered to Eurostat for official monthly indicators.
9. References:

- LFS-based and registered unemployment rates: LFS-based and registered unemployment rates: Why do they differ and why do we need both? Prof. Dr. Mihails Hazans (University of Latvia). Note prepared for participants of the high-level study visit by Montenegrin labour market stakeholders to Latvia in the framework of the assignment IPA 08-06 „Good governance on labour market and employment statistics“ of the project IPA 08-06 GOVIPA “Labour market governance”
- Do LFS-based and registered unemployment rate measure the same? Is it necessary that these two rates are equal or almost equal? - Internal document. MONSTAT
- Working documents and studies of Eurostat (2006), Registered unemployment (RU) in comparison with Unemployment (LFS), Africa Melis and Britta Lüdeke