STATISTICS ON INCOME AND LIVING CONDITIONS

2013 - 2017

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INTRODUCTION

The publication 'Statistics on income and living conditions' aims to provide an insight for general public of Montenegro into the data on inequality of living standards and living conditions of citizens in Montenegro, together with a detailed overview on the used methodological concepts. This publication is a result of successful implementation of the largest European survey in domain of social statistics.

Statistical Office of Montenegro – MONSTAT started to carry out the survey on income and living conditions in 2013, and the publications presents the data for the 2013 – 2017 period. The implementation of the largest longitudinal survey[1] in Montenegro has been also supported by our international partners, the European Commission, Eurostat, World Bank and UNICEF, enabling the survey, which is fully aligned with the international standards and what represents the strategic aim of MONSTAT, carried out by their continuous assistance through significant projects and expertise.

The data are obtained by carrying out the first longitudinal survey which is considered in the European Union as the highest relevant data source, when relative poverty, inequality and living conditions are in focus, and by this a high level of quality and international comparability with the EU member countries as well as EU candidate countries is enabled aimed at establishing a relevant database for creating social policies.

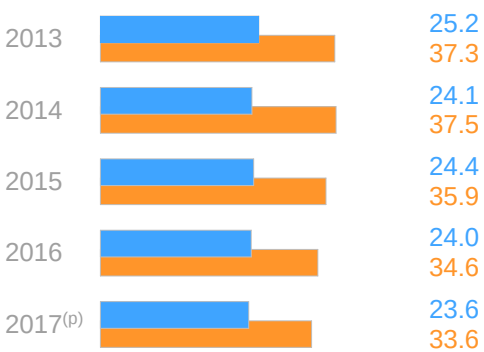
The purpose of this publication is, in addition to present the data, to provide a complete insight in methodology for poverty measurement and living conditions, as well as to explain the differences between two poverty measurement concepts used in the official statistics (absolute and relative). In this manner a broad scope of users is provided to correctly understand and use data which will be, we are sure, a very important source of information for academic community, policy creators and interested public aimed at further expert, scientific and social development of the country.

We would like to express our gratitude, before all, to citizens of Montenegro that have been interviewed using the randomly selected sample, and whose answers are of key importance for the production of reliable, internationally comparable data of MONSTAT. In addition to the interviewed citizens, we would like to thank to all engaged interviewers, experts, MONSTAT's staff team, all national and international partners.

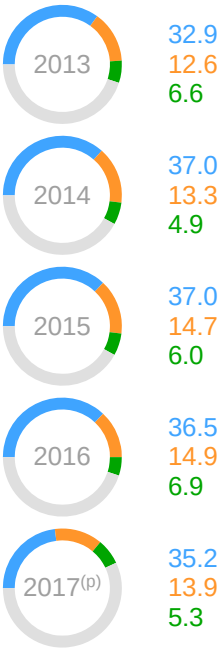
[1] Longitudinal method, i.e. survey is a continuous monitoring of one part of sample (households and individuals) over a certain time period.

MONTENEGRO

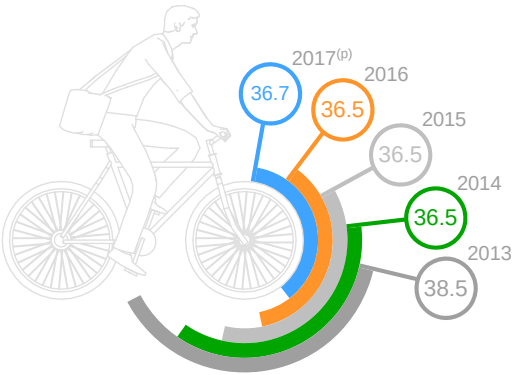
At-risk-of-poverty rate (%)
At-risk-of-poverty or Social exclusion rate - AROPE



Material deprivation by number of material items (%)

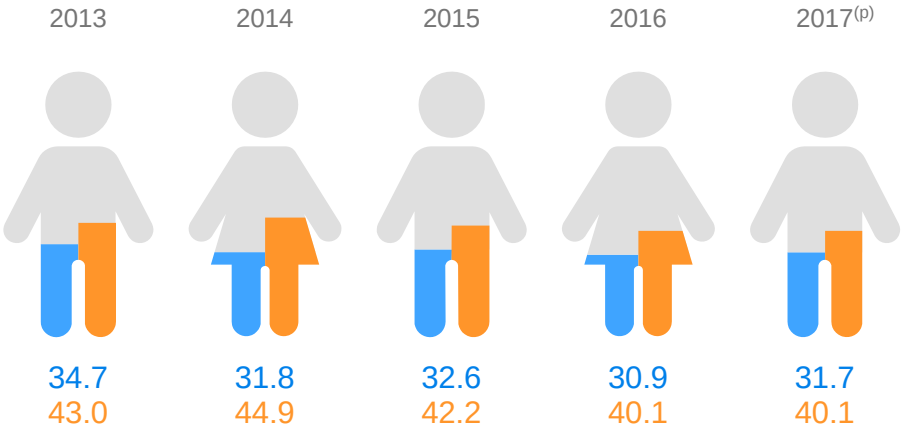


GINI coefficient

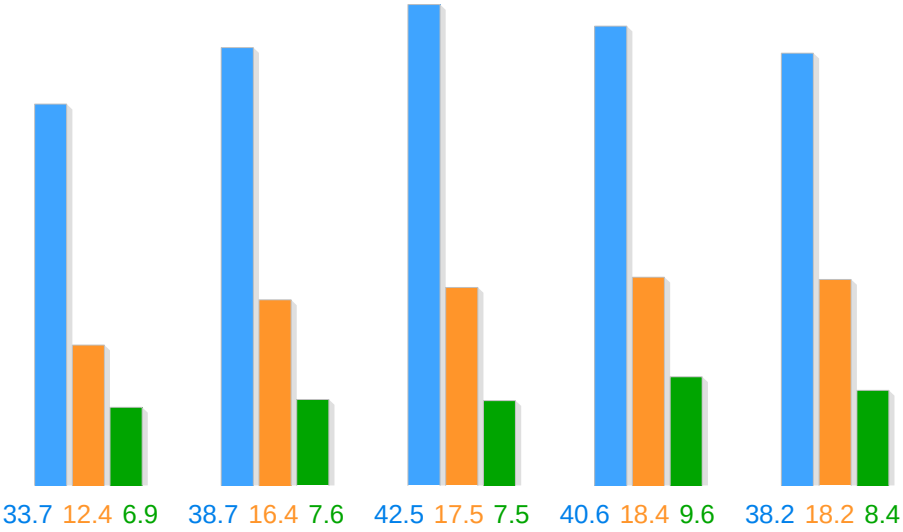


MONTENEGRO | CHILDREN AT-RISK-OF-POVERTY

At-risk-of-poverty rate (%)
At-risk-of-poverty or Social exclusion rate - AROPE



Material deprivation for children in percentage (severe - extreme)



Theoretical concepts of measuring poverty

I THEORETICAL CONCEPTS OF MEASURING POVERTY

Poverty is usually multidimensional phenomenon, but mostly linked to a lack of financial resources ("monetary poverty") so as to meet certain level of the basic needs ("poverty line"). In other words, people with low income and inability to gain basic goods and services necessary for meeting basic living needs are considered to be poor. With the development of society, the meaning of the concept of basic needs may be changed and widened so that some other needs are to be included that have not earlier considered to be basic, what can also include changes in social consensus about what poverty represents. In addition to this, economic progress influence living standard and poverty to be observed in more comprehensive manner in relation with this financial/monetary concept, what brought to the need to include other non-financial dimensions of poverty, such as: inadequate access to educational, health and social services; exclusion from the labour market; political influence; inappropriate housing conditions, etc. (Atkinson, Guio and Marlier ur. 2017).

Monetary poverty may be defined at least in two ways depending on which level of needs is considered ‘basic’ in a society:

1) If the focus is minimal living conditions that are defined according to the minimal nutritional and other standards, or
2) If the focus is on the needs that enable to achieve the living standard considered to be acceptable in one society, which is defined relatively in comparison with the average living standard of country. The first case is ‘absolute poverty’, and the second case is ‘relative poverty’.

Both concepts of absolute and relative poverty are used in the world.

The absolute poverty is defined as a lack of resources for meeting the basic living needs and is based on the absolute poverty line that stays constant over time (it is only adapted for price growth). The usual manner for defining the poverty line is the method of basic costs (Deaton and Zaidi 2012).

The concept of absolute poverty is especially useful in less developed countries where a significant part of population has not achieved this minimal living standard what requests certain policies for targeting the assistance to the poor.

It is suitable for monitoring the poverty trends over time and it can be used for the assessment of potential effects of economic growth, crises or important changes in economic policy on poverty. This is due to the fact that the trend of population consumption is compared with the same reference value, since that the absolute poverty line in every country over time is only corrected for the price growth. Thus, it's real value is constant during the time.

Nationally, specific rates of absolute poverty are not suitable for international comparisons, having in mind that in such a way defined absolute poverty line differs by countries. It is produced in every country differently, and in different level of consumption, since it represents fixed consumption necessary for minimum living needs in one society. For international comparisons, the absolute poverty line which is internationally comparable, and often used is, for example, World Bank's extreme poverty line of 1.90 PPP[2] dollars a day per capita (in PPP dollars from 2011) based on which the UN sustainable development aim 1.1 is defined, i.e. for countries of lower and middle level of income lines of 3.2 and 5.5 PPP dollars daily per capita (World Bank, 2018).

Relative poverty is defined independently from absolute minimum necessary for meeting human needs, as a relative comparing to the average living standard of country. Relative poverty represents inability to meet the needs that make a part of acceptable living standard of country. Relative poverty line is usually fixed as a certain percentage of median[3] income of households in country (in the European Union it is defined as 60% of median), and for all persons under this relative poverty line it is said that they are at risk of poverty.[4]

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[2] PPP - Purchasing Power Parity is a mean for the conversion of national currencies in the common currency that equals purchasing power of different national currencies.

[3] Median in statistics is described as a number that separates the higher half from the lower half of sample or population, i.e. this is the value which is at the middle of statistical data set. The median of final set of numbers can be found by ordering numbers by size from the lowest to the highest and the number which is in the middle of set represents the median.

[4] The World Bank has, for example, used the relative poverty line of 50% national median consumption for the comparison of relative poverty in countries of Europe and Central Asia (World Bank, 2000).

According to the European definition of poverty that is harmonised for the first time in 1975, and which has been still used, individuals are poor 'if the resources are inadequate in such a degree that they limit them to achieve minimally acceptable way of living in the member country in which they live' (Council of the European Union, 1975), where "resources" cover "goods, income in cash, as well as public and private services". Behind the decision of EU to adopt the concept of relative poverty, there are two reasons. Firstly, it is considered the key challenge for EU to provide to all population to participate in benefits of high rates of economic growth and raising the general level of welfare, and not only to achieve the basic living standard. Secondly, it is considered what we call an acceptable living standard depends on general conditions of social and economic development and differs from country to country, even inside EU (European Commission, 2004). This is why in EU it is used the indicator "at-risk-of-poverty", and for the persons whose income is below 60% of national income median it is said that they are at-risk-of-poverty (Eurostat, 2012). This definition by the Eurostat terminology „does not measure wealth or poverty, but the low income compared to other population of that country, what does not need necessarily to mean also a low living standard".[5] This is the reason why it is said that these persons are at risk of poverty, not that they are poor.

When interpreting the concept of relative poverty, it should take into account that the basis for the comparison is different from the concept of absolute poverty, because it is about the comparison of living standard with other population of country, and not with in advance defined minimum of needs. This concept of relative poverty is more useful in developed countries because less number of people is faced with the problem of extreme poverty in meeting the basic needs (Foster and other, 2013). Since the intention of this concept is different from the concept of absolute poverty, it is important to have in mind also different interpretation of indicators relative compared to the indicators of absolute poverty.

An advantage of measuring the relative poverty is the comparability of relative poverty indicators with countries that measure the poverty in this way, and these are, first of all, EU countries and candidate countries for the EU membership. Additionally, it should be taken into account that the comparability of poverty indicators is achieved not only by using appropriate indicator, such as risk of poverty rate, but also by high level of

[5] http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:At-risk-of-poverty rate

aligning the EU-SILC methodology between the EU countries and other countries included in this project, that is used for obtaining the data on income of households (Eurostat, 2014).

Additionally, the relative poverty line remains relevant in view of the economic growth and growth of living standard in Montenegro. Because it is defined as 60% of national income median, the relative poverty line increases with the growth of population income median, i.e. with the growth of living standard. Thus, it does not become out-dated during the time, as it is the case with the absolute poverty line.

When monitoring the relative poverty during time, there should be taken into account that the changes in relative poverty may be a result of changes in the poverty line (moving 'benchmark' as a result of changes in the overall distribution of income), or changes in income of persons exposed to the risk of poverty or both (Foster and others, 2013). The relative risk of poverty rate may remain unchanged in the periods of crises (economic growth), because the very poverty line reduces (increases), in spite of decrease (increase) of living standard. Thus, the concept of relative poverty is not most appropriate for monitoring the changes in the poverty risk over time. This is why Eurostat calculates the risk of poverty rate fixed in time (2008), which is used for monitoring this indicator over time (UNECE, 2013). In addition to this, Eurostat also calculates the rate of permanent risk of poverty, providing among other things also an insight in how certain policies (adopted with the purpose of reducing the risk of poverty rate and increasing social inclusion) influence on persons at the risk of poverty. Definitions of this indicator are given in the next chapter.

The European Union Statistics on income and living conditions (EU–SILC) is considered the most relevant data source for the calculation of total household income, relative poverty indicator, inequality, social inclusion/exclusion as well as total living standard in one society. The reason is because SILC provides the data on socio-demographic characteristics of persons, their working activity and income (for persons aged 16 and over), education, quality of life, i.e. their health condition, material deprivation and living conditions, as well as data on household characteristics, conditions and housing costs and household income.

Based on these data, it is possible to measure not only financial poverty, but also non-material aspects of poverty, such as material deprivation and low working intensity of household members.

To observe the multidimensional aspect of poverty and social exclusion, EU formulated in 2010 a new indicator for monitoring the implementation of the Europe 2020 Strategy – strategy of smart, sustainable and inclusive growth, in domain of social inclusion and poverty reduction. This is rate of poverty risk or social exclusion. One of five aims of the *Europe 2020 Strategy* is to reduce the number of persons at the risk of poverty or social exclusion rate in EU for 20 million up to 2020 (Eurostat, 2013.). At risk of poverty or social exclusion rate represents a share of persons (in the total population) that are at the risk of poverty or materially deprived or living in households of very low work intensity. This indicator is a composite because it is a combination of three indicators: risk of poverty rate, severe material deprivation rate and very low work intensity rate. More details on these indicators are presented in the following chapter.

In addition to objective indicators of relative poverty and indicators of multidimensional poverty, the EU-SILC also enables monitoring of subjective poverty. The subjective poverty line, unlike the objective poverty line, is based on a subjective assessment of respondent on minimal level of income which is necessary for maintaining an adequate life – living standard. In surveys we mostly find three ways for determining the subjective poverty (Atkinson and Marlier, 2010).

The first method refers to the assessment of respondent on the minimal level of income necessary to his/her household to make ends meet or to achieve some other aim, e.g. not to be poor. The replies to this question are aggregated for specific types of households[6] to obtain the subjective poverty line and use for all persons. The second method refers to the assessment of respondent on minimal consumption necessary for a household such as his/her to avoid poverty, as well as the assessment of his/her income below or over this level. In this case, is a person poor or not is defined based on

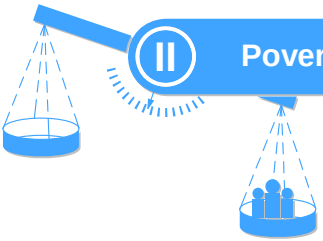
[6] Some countries exclude richer households from the analysis to avoid obtaining a very high poverty line, and they only include households on the edge of maintaining the minimum living standard, while other countries cover all households.

these subjective answers. The third method for determining the subjective poverty is based on the assessment of respondent how his/her household succeeds to make ends meet. Eurostat uses this approach and considers subjectively poor households those that reported “very difficult” or “difficult” able to “make ends meet”. Having in mind that it is a subjective assessment of respondent, the subjective poverty is in most cased higher that the objective poverty. Along with the population income growth, a subjective assessment on monetary amount necessary for meeting the basic needs also grows.

Starting from a need to align the methodology with the Eurostat standards in this statistical area too, Montenegro adopted, as already pointed out, the concept of relative poverty as the official methodology for poverty and living standard measurement. It enables to observe not only relative income poverty, but also other non-financial aspects of poverty and international comparability of these indicators with the EU member countries and some countries in the region, candidate countries for the EU membership.

With this publication, Statistical Office is starting to regularly publish the data on relative poverty and social exclusion. The indicators in this publication for the years between 2013 and 2017 are fully comparable with the EU indicators; having in mind that the data source is Survey on income and living conditions, as well as methodology for the measurement of poverty are compliant with the EU standards.

	Absolute line	**Relative line**
Methodology	World Bank	Eurostat
Calculated basis	Consumption	Income
Comparison	Not internationally comparable	Internationally comparable
Data source	Household Budget Survey	Survey on income and living conditions



II Poverty measurement in Montenegro

II POVERTY MEASUREMENT IN MONTENEGRO

In cooperation with World Bank, and assistance of Ministry of Labour and Social Welfare, Statistical Office for the first time published the 2005 and 2006 poverty analysis results in 2008. Poverty indicators based on the national absolute poverty line are obtained in line with the methodology recommended by World Bank. The main indicator on living standard for absolute poverty line is the consumption of households. Statistical Office has done a detailed calculation of absolute poverty line based on the Household Budget Survey (HBS) data which was in that period a regular annual survey of Statistical Office.

Previous poverty surveys in Montenegro in the period from 2008 to 2013 were based on the concept of absolute poverty. To determine is a person poor or not was done by comparing his/her expenditure with the absolute poverty line. The advantage of using the absolute poverty concept in that period was a need to explore possibility to meet the minimal living needs of people in Montenegro, as well as to make possible to compare the poverty during time by using the same reference poverty line which is corrected during time only for price increase.

As already mentioned, this absolute poverty line is a nationally specific line and thus not appropriate for the international comparisons.

Statistical Office adopted the concept of relative poverty based on the income of household as an official methodology for the poverty measurement according to the dynamics defined by the joint negotiation position for Chapter 18 Statistics. Statistical Office was obliged to introduce the EU methodology for monitoring poverty by which poverty is relatively expressed compared with the total population of Montenegro, and based on the total income of households.

2.1 Survey on income and living conditions

Survey on income and living conditions is an annual survey regularly implemented by Statistical Office from 2013. The data collected by this survey make possible the calculation of indicator on monetary risk from poverty and of indicator on income distribution inequality in a society.

The purpose of the survey is to provide comparable and systematically collected data individually for every country and at the EU level as a total.

Having in mind the survey complexity, EC-EUROSTAT provided the expert assistance to the Statistical Office via IPA project, and activities on the implementation of Survey on income and living conditions - SILC survey, which makes possible more comprehensive poverty and living standard measurement regarding the previous methodology, started in 2013. It represents a regular statistical survey with the annual dynamics since then.

EU-SILC represents a source for comparative statistics on income distribution and social exclusion data at the European level.

EU-SILC provides two types of annual data:

1. Data on income, poverty, living conditions in a certain time period (*cross-sectional data)*
2. Data which refer to individual-level changes over time, continuously observed over a four-year period (*longitudinal data*).

The main aims of the survey implementation are:

- Production of indicators on relative poverty, inequality and living conditions of citizens in Montenegro;
- Development of survey in line with the regulations and methodology of Eurostat;
- International data comparison;
- Improvement of cooperation with other institutions to promote/ensure use of administrative sources (registers) when implementing EU-SILC.

The data collection in EU-SILC is done by face-to-face method using the paper version of questionnaire (PAPI interview method).

A reference population for EU-SILC survey are households and its members residing in the territory of Montenegro at the time of the data collection.

Survey units are households at the territory of Montenegro selected by a random sample method, as well as all household members aged 16 and over.

Household means:

a) **Group of individuals** living together and together spending earned income (multi-person household),
b) **Individual,** who lives, earns and spends his/her income alone (one-person household).

The survey units are also members of household temporarily away in the following cases:

a) Household members temporarily away less than 12 months,
b) Pupils and students considered to be household members, regardless of the duration of their absence from their household (for educational purposes),
c) Individuals working or going to school in other place in the country or abroad, as long as they keep economic ties to the household or spend at least one month in the household over the reference year, and not having their own household.

This survey does not include:

a) Collective households (hospitals, monasteries, prisons, etc.),
b) Temporarily present persons (e.g. guests) who are members of other households,
c) Individuals residing in other place in the country or abroad longer than 12 months,
d) Sub-tenants living together with the household members in the same dwelling or house and do not share living expenses with them.

Sample

The framework for the household sample selection is the 2011 Population, Households and Dwellings Census. The household sample is a two-stage sample stratified by region (north, centre, south and Podgorica) and by type of settlement (urban, other), where units of the first stage are enumeration areas, and units of the second stage are households. The annual sample is approx. 5 200 households. Household substitutions are not allowed.

The sample follows the rotational scheme, which implies that a certain number of households remain in the sample (i.e. they can be interviewed) for four consecutive years. The total sample for each year is divided into four independent and non-overlapping subsamples – the so-called rotational groups, equal in size and sample design, which represent the whole population. Every year, one rotation group from the previous year is excluded from the sample and a new rotary group is included in the sample.

The sample covered 4 992 households in 2013, when it was started with the regular implementation of EU-SILC in Montenegro. Out of 5 517 households covered by the survey sample in 2014, there were repeated 3 993 households from 2013, while there were 1 524 households covered by a new panel and interviewed for the first time. Out of the total sample of 5 122 households in 2016, there were repeated 3 435 households from 2013 and 2014, and there were for the first time interviewed 1 524 households, while in 2016 from the sample of 5 300 households, there were 3 400 households repeated from the years 2013, 2014, and 2015, while the panel included 1 900 households. The sample size in 2017 was 5 138 households, out of which there were 1 594 households belonging to a new panel.

Territorial coverage

The EU-SILC survey is conducted in the territory of Montenegro and its processing provides the data for Montenegro.

Reference period

Reference period means the period of time to which a particular item of information collected by the interview relates. EU-SILC uses different reference periods for different items, as it follows:

Income reference period is a 12 month-period, i.e. the previous calendar year.

Reference period for material deprivation is the day of the interview.

Child care reference period for children up to 12 years of age: refers a typical (usual) week around the interview. If the date of the survey is before or during the school summer holidays, then the child care reference period shall be a typical week in the period from January to the date of interview.

Survey implementation period

EU-SILC is implemented once a year, for a period of two months (the fieldwork of the survey is done in April and May).

Survey organization, preparation and implementation

Pursuant to the Plan of Statistical Surveys, Organization, Preparation and Implementation of EU-SILC survey, as well as collected data processing are done by Statistical Office and direct actors are interviewers and controllers.

Statistical Office performs all preparation tasks for proper and successful survey implementation. For this purpose, it also performs the tasks, as it follows: survey methodology production; questionnaire drafting; determining framework for reporting unit selection; performing selection and make an address list of reporting units; survey material printing and its delivery to interviewers.

Interviewer must perform all tasks entrusted to him/her in responsible and timely manner. Interviewer must attend the entire training after which testing will be performed. In case, he/she does not attend the training and does not pass the test, interviewer cannot perform the interviewing. Interviewer must submit filled-in questionnaires to controllers.

Survey instruments

For the purpose of EU-SILC implementation, methodological instruments have been determined as it follows:

- List of households selected in sample – *Address list.*

- *SILC 1-01/A questionnaire* – comprises basic information on households and all household members, as well as whether household accepted to be interviewed or not. Basic information includes identification of household, address and contact information, household structure, presence of household members in the household, moved out or deceased, moved in, and care for children up to 12 years of age.

- *SILC 1-01/B questionnaire* – contains detailed data on the very household, housing, i.e. life quality, owners of dwellings, tenants, household income and expenses, social benefits and family allowances, as well as data on value of products produced for own production.

- *SILC 1-01/C questionnaire* – contains the data on household members aged 16 and older, their education, economic activity (whether a person had job in reference week, as well as data on the main job, last job and active job search in the last 4 weeks), income (on the basis of workers employed at employer, and income on the basis of self-employment), health, and material deprivation.

- *Instructions for Interviewers*.

2.2 Methodological notes on relative poverty indicators

Definitions and explanations given below are fully compliant with the Eurostat's methodological instructions[7] and as such are the same in all countries which implement the EU-SILC survey.

Disposable income of household is the income, after paid tax and contributions, available to household for spending and saving. Components of disposable income of the household comprise:

- Cash income from work (for employees and self-employed),
- Income from capital,
- Pensions,
- Social transfers and other transfers received by households from persons who are not household members.

Disposable income **does not include**:

- Income from grey economy,
- Savings and received gifts,
- Benefits in kind (value of household production for own needs).

Income from the production of goods for its own needs implies the value of food and drinks that the household only produces and consumes for its own needs. In rural areas as well as in the northern part of Montenegro, the standard of the population largely depends on its own production. The monetary income of the population dealing with its own production can be very low and indicate a very low standard which does not have to be the case because of the significant value of its own production.

Cash income from work includes income from the main job and additional jobs paid by employer (earnings, overtime, company profit shares, annual cash bonus, cash benefit paid by employer together with monthly regular pay, 13th month pay, etc.) as well as income that a person generates on the basis of the independent organization of business activity.

Income from capital includes income from interest on savings and deposits, dividends and income from renting land, apartment or other real estate.

[7] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003R1980&from=EN

Social transfers include unemployment benefits, sick leave, child allowance, maternity leave, as well as other monetary social benefits paid by the state.

Net private transfers include regular financial assistance that the household provides or receives from a person living in another household in the country or abroad.

Equivalised disposable income is the total disposable household income evenly distributed among the members of the household according to the modified OECD equivalence scale. The function of the OECD scale is to enable a comparison of the well-being of households with different demographic characteristics. The costs of different household members are not mutually equal since:

a) there is an economy of scope, i.e., each additional member brings increasingly fewer costs than the first one, because some costs remain fixed or almost fixed,
b) subsistence of children costs less than that of adults. Therefore, total disposable income of the household is not divided by the number of actual household members, but with the adjusted number created from the equivalence scale which is used to adjust the size of the household.

According to this scale, the first adult member of the household receives a value of 1, the every other adult aged 14 and over value 0.5 and children under 14 receive a value of 0.3[8]. The income thus obtained by an equivalised adult is granted to each member of the household, whether adult or children.

At-risk-of-poverty threshold (relative poverty line) is determined by calculating the equivalised income per household member for all households. After that, the middle value (median) of the income distribution is determined and 60% of the median is determined as the risk-of poverty threshold. The at-risk-of-poverty threshold is presented in euro.

[8] For example, if a one-person household has available income of 5 000 euro, its equivalised income will also be 5 000 euro (5 000 / 1 = 5 000). However, if the household has four members, two adults and two children under the age of 14 according to this scale (1x1 + 1x0,5 + 2x0,3 = 2,1), the equivalised disposable income per equivalent adult member will be 2 381 euros (5 000 / 2,1 = 2 381) and assigned to each member of the household, either adults or children.

At-risk-of-poverty rate means a share of persons (in the total population) whose equivalised income is below the relative poverty line. These persons are not necessarily poor, but they are at higher risk to be poor. As its name suggests, this indicator does not measure the level of poverty, but the risk that the included individual is to be poor, i.e. to have difficulties in providing means for a standard usual for his/her country. Considering that population, i.e. their disposable income is compared with one another, and not with some objective benchmark, it can be said that the risk of poverty rate is more a measure of income distribution inequality, than an indicator of poverty. It does not show, as Eurostat points out, how many persons are poor, but how many have disposable income below the risk from poverty. In order to have the data on poverty comparable, it is important to use the same poverty line, as well as definitions of key concepts. At-risk-of-poverty rate is used in all European countries as a basic indicator of relative poverty. This indicates that its main advantage is comparability. The comparison of at risk of poverty rate between countries takes into account the differences in living standards between these countries, since the poverty line in every country is formed relatively with regard to living standard of a country. Due to this, it can happen that a person at risk of poverty in richer country would not be at risk of poverty in 'less rich' countries.[9]

Relative at-risk-of-poverty gap represents a difference between the at-risk-of-poverty threshold and equivalised income median of the persons below the risk of poverty threshold.

Dispersion around the at-risk-of-poverty threshold shows the percentage of people at-risk-of-poverty rate when the relative poverty line is set at 40%, 50% or 70% of the median equivalised income.

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[9] For example, a person with equivalised disposable income of 20 000 euro in a country with high living standards in which the relative line is 30 000 euro, is at the risk of poverty. However, with this income of 20 000 euro in less developed country with lower income of citizens where the relative line is set at lower level of, for example, 8 000 euro, this person would not be below the relative line, but he/she would belong to the group of citizens with high income.

Persistent at- risk-of poverty rate shows the proportion of persons in the overall population, at risk of poverty in the current year and at least in two of the previous three years. It means that this indicator includes those who have been at risk of poverty for at least three years in the last four years. They belong to permanently endangered. This calculation is done on the basis of the longitudinal component of the Survey on income and living conditions: for four years, one part of the sample does not change (rotation panel), so that it is possible to monitor the same individuals and households for four years.

Quintiles - are observed in the distribution of population ranked by some feature in 5 equal parts (each part contains 1/5, or 20% of the population). In population of 1 000 people, sorted according to the amount of income/consumption, the first quintile is the value of income/consumption of 200 persons in a row.

Quintile share ratio (S80/S20) compares the total equivalised disposable income of the upper income quintile (20% of the population with the highest equivalised income) with those from the lower income quintile (20% of the population with the lowest equivalised income). It is an indicator of income inequality which measures the relationship between the first and fifth income distribution quintals.

Gini coefficient in this survey represents the measure of inequality in the distribution of income. The value of this coefficient goes within the interval from 0 to 1, where 0 represents perfect equality, i.e. each person has equal income. The closer to 1 the value is, higher the income inequality.

Material deprivation[10] of household is an indicator of the material conditions that influence household life quality. The material deprivation items are:
1) Inability of the household to keep its home adequately warm;
2) Inability of the household to afford the washing machine;
3) Inability of the household to afford a car;
4) Inability of the household to afford paying for one-week annual holiday away from home;
5) Inability of the household to afford unexpected financial expenses;
6) Inability of the household to afford a telephone;
7) Inability of the household to afford a colour TV;

[10] Inability to afford certain items of material deprivation is based on the subjective estimate of individual if his/her household can afford some items of material deprivation.

8) Inability of the household to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day
9) Being in arrears with mortgage or rent payments, utility bills, hire purchase instalments or other loan payments.

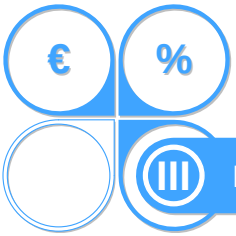
Material deprivation rate is an indicator of the inability of a household to financially afford at least 3 out of 9 items of material deprivation.

Severe material deprivation rate is an indicator of financial inability of a household to afford at least 4 out of 9 possible items of material deprivation.

Work intensity of household means a ratio between total number of months in which all working-age household members have worked during the income reference year and the total number of months the same household members theoretically could have worked in the same period. A working-age person is a person aged 18 – 59 years, with the exclusion of students in the 18 – 24 age group. The work intensity is defined as very low (0 - 0.20), low (0.20 - 0.45), medium (0.45 - 0.55), high (0.55 - 0.85) and very high (0.85 - 1). For example, low work intensity refers to households whose working-age members worked between 20% and 45% of the total number of months they could have possibly worked during a referent period.

At-risk-of-poverty or social exclusion rate (AROPE) shows the share of individuals (in the total population) who are at risk of poverty or are severely materially deprived or live in households with very low work intensity.

The most frequent activity status represents the status of persons over the age 17 which lasted over 6 months in the year preceding the year of survey.



Montenegro SILC indicators 2013 - 2017

III MONTENEGRO SILC INDICATORS 2013 - 2017

3.1 Income indicators[11]

Table 1: At-risk-of-poverty threshold (poverty line) at the annual level, EUR

	2013	2014	2015	2016	2017(p)
One-person household	1 779	1 819	1 879	1 920	2 097
Household with two adults and two children aged under 14 years (according to the OECD scale)[12]	3 735	3 821	3 946	4 032	4 405

According to the SILC data, the risk of poverty threshold in 2017 was 2 097 euro for one-person household, i.e. 4 405 euro for four-member household (two adult persons and two children under 14 years of age) at the annual level. Compared to 2013, the risk of poverty threshold for one-person household increased by 318 euro (i.e. 17.8%), and for four-member household by 670 euro (i.e. 17.9%).

[11] Income in the SILC survey includes monetary income from work, income from capital, pensions, social transfers and other transfers received by household from persons who are not household members. The data such defined **do not include** own production, i.e. benefits in kind, savings, received gifts and income from grey economy.

[12] In order to make the living standard for households different by size and structure comparable, there is used the modified OECD equivalency scale by which available household income is reduced to the income per equivalent adult. Such equivalised disposable income is the total disposable income of household corrected based on size and structure of household. The total disposable income of household is not divided by the number of actual household members, but with the corrective number resulting from the OECD equivalency scale. *E.g. if the household that has four members, two adults and two children under 14 years of age, has an available income of 5 000 euro, disposable income by equivalent adult will be 2 381 euro (5 000/2.1=2 381).* The value 2.1 is obtained by giving value 1 to the first adult household member according to the OECD equivalence scale, other adult members 14 years of age and over the value of 0.5, and all persons under 14 years of age are given with the value 0.3. In case of four-member household with 2 adults and 2 children under 14 years of age, equivalent household size is calculated in the following way: 1+0.5+(2*0.3) = 2.1

(p) The data for 2017 are preliminary.

Table 2: Average annual equivalised disposable income in EUR nominal value 2013 - 2017

	2013	2014	2015	2016	2017(p)	**2017/2013**
Income from work	2 534.2	2 561.0	2 629.4	2 723.4	2 908.8	**14.8**
Pensions	759.0	739.3	763.3	745.6	767.2	**1.1**
Social transfer	226.8	242.4	252.2	264.6	372.0	**64.0**
Income from capital	29.9	37.2	38.9	36.4	33.5	**12.0**
Net private transfers	33.7	36.6	35.8	43.0	48.5	**44.0**
Total	3 583.5	3 616.4	3 719.6	3 813.0	4 130.0	**15.3**

Looking at the annual by types of source, a trend of increase is notable among all income sources. From 2013 to 2017, income increased: from work by 14.8%; from pensions by 1.1%; from social transfers by 64.0%; from capital by 12.0%; and private transfer by 44.0%. In average, the total disposable income increased in previous five years by 15.3%.

Table 3: Share in equivalised income by quintiles[13], %

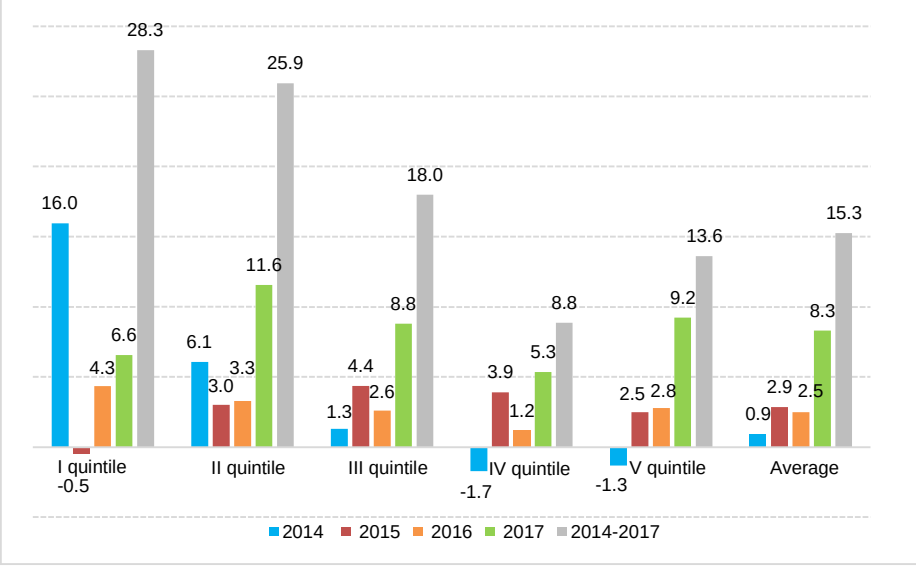
	2013	2014	2015	2016	2017(p)
First quintile	5.1	5.8	5.6	5.7	5.6
Second quintile	10.8	11.3	11.2	11.4	11.8
Third quintile	16.6	16.2	17.0	16.8	17.0
Fourth quintile	24.4	24.4	24.1	23.9	23.1
Fifth quintile	43.2	42.3	42.1	42.2	42.6

[13] **Quintile** – represents a part of population ranked according to some characteristics in 5 equal parts (every part contains 1/5, i.e. 20% of population), from the minimum to the maximum value.

The income proportion of 20% of population a (in the total income of Montenegro citizens) with the highest income is 42.6%. On the other side, the income proportion of citizens in the first quintile is the lowest (5.6%).

For the observed five-year period (2013 - 2017), no statistical significant divergence exists in terms of proportions in equivalised income by quintiles.

Figure 1: Annual and cumulative nominal increase of disposable income by income quintiles, 2014 - 2017 (2013=100)



Observing the quintiles for the period of 2013 - 2017, the highest increase is achieved in the income of citizens that belong to the first quintile (28.3%), then in the second quintile (25.9%), and the third quintile (18.0%), i.e. income increased the most in the group of first 20% of citizens with the lowest income (28.3%), then in the second group (25.9%), and the third one (18.0%).

Figure 2. Cumulative nominal increase of income components, 2013 - 2017, by income quintiles

From 2013 to 2017, an increase in income from work is noticed in all quintiles, and the highest increase is observable among population belonging to the first quintile (101.3%), while the lowest increase is present in the fourth IV quintile (6.0%). Social transfers also increased in previous five years, out of which the most for citizens belonging by income in the third quintile (125.1%). The amount of pensions increased the most in the first quintile (30.2%); income from capital increased the most in the third quintile (68.1%). On other side, income from capital was reduced by 63.4% in the first quintile in the period from 2013 to 2017.

Observed as a total by quintiles, the highest increase of income has been noted in the first quintile (28.3%).

3.2 At-risk-of-poverty and inequality indicators

Table 4: The main indicators of at-risk-of poverty and inequality[14]

	2013	2014	2015	2016	2017(p)
At-risk-of-poverty rate, %	25.2	24.1	24.4	24.0	23.6
Relative at risk of poverty gap, %	39.7	32.8	36.6	35.6	34.0
Permanent at-risk-of-poverty rate[15], %				15.6	
Income distribution inequality – quintile ratio (S80/S20)	8.5	7.3	7.5	7.4	7.6
Gini coefficient	38.5	36.5	36.5	36.5	36.7

At-risk-of-poverty rate in Montenegro in 2017 was 23.6%, what makes 1.6 percent points less compared to 2013. A decrease trend is also recorded in relative at risk of poverty gap, since value of this indicator in 2013 was 39.7%, and in 2017 it was 34.0%, what makes a decrease by 5.7 percentage points. Permanent at-risk-of-poverty rate for period 2013 – 2016 was 15.6%.

Income distribution inequality (S80/S20) reduced from 8.5 recorded in 2013 to 7.6 recorded in 2017. Accordingly, 20% of citizens with income in the fifth quintile had 7.6 times more income than 20% of citizens with income in the first quintile in 2017.

In the observed period, a slight decrease of income inequality was recorded, because the value of Gini coefficient decreased from 38.5 in 2013, to 36.7 in 2017.

[14] At-risk-of-poverty rate is more indicator of inequality than poverty, this is also suggested by the fact that income increase will not necessarily lead to decreasing the relative poverty rate. This is due to the reason if income would proportionally rise for all citizens, the relative line would increase, but the at-risk-of-poverty rate would remain the same, i.e. income inequality of citizens would remain at the same level.

[15] Permanent at-risk-of-poverty indicates the population percentage living in households at risk of poverty in current year and at least two from previous three years. It means this indicator covers those in the last four years with at least three years of at risk of poverty.

Table 5: Dispersion around the at-risk-of-poverty threshold

	2013	2014	2015	2016	2017(p)
At-risk-of-poverty rate, if threshold is:					
40% of median	16.2	11.9	13.5	12.9	11.9
50% of median	21.9	17.4	19.9	18.7	17.2
70% of median	33.4	32.5	31.9	31.2	30.4

The influence of selecting the at risk of poverty threshold on the risk of poverty rate is shown in Table 5. An increase in the risk of poverty threshold from 60% to 70% of median of equivalised income would increase at-risk-poverty rate by 6.8 percentage points, i.e. to 30.4% in 2017. Reducing the risk of poverty threshold from 60% to 50% of equivalised income median would reduce at-risk-of-poverty rate by 6.4 percentage points, i.e. to 17.2% in 2017.

Table 6: At-risk-of-poverty rate before and after social transfers[16], %

	2013	2014	2015	2016	2017(p)
At-risk-of-poverty rate after social transfers	25.2	24.1	24.4	24.0	23.6
Social transfers not included in income	28.9	31.1	29.4	28.9	31.4
Pensions and social transfers not included in income	46.1	46.5	45.1	44.1	46.6

The risk of poverty rate before receiving social transfers is calculated based on income deducted with the value of social transfers and pensions.

The risk rate before social transfers would be 31.4%, while the risk rate before social transfers and pensions would be 46.6%.

[16] For details on social transfers, see the methodological part of the publication, page 19.

Table 7: At-risk-of-poverty rate by household type, %

	2013	2014	2015	2016	2017(p)
Household without dependent children	**15.1**	**13.0**	**15.9**	**16.6**	**15.7**
Single-person household	14.6	15.8	18.9	16.5	19.1
Male	15.3	16.0	19.4	16.0	19.5
Female	14.1	15.6	18.5	16.9	18.7
Single-person household, person under 65 years of age	15.7	16.6	20.8	19.0	23.1
One-person household, persons aged 65 years and over	13.2	15.0	16.9	14.3	15.6
Two adults	**15.2**	**12.4**	**15.4**	**16.6**	**14.7**
Two adults, both under 65 years of age	19.8	11.7	16.3	14.1	12.4
Two adults, at least one aged 65 years and over	7.8	9.1	11.6	15.5	14.8
Other households without dependent children	**16.3**	**14.0**	**16.5**	**17.6**	**15.3**
Households with dependent children	**30.1**	**29.3**	**28.9**	**28.0**	**28.0**
One parent with at least one dependent child	32.6	23.1	28.9	25.2	28.0
Two adults with one dependent child	17.2	16.4	15.8	16.6	16.3

	2013	2014	2015	2016	2017(p)
Two adults with two dependent children	26.7	22.8	23.6	22.2	21.2
Two adults with three or more dependent children	47.9	45.4	48.7	44.6	45.9
Two or more adults with dependent children	30.0	29.5	28.9	28.1	28.0
Other households with dependent children	27.1	28.8	26.6	25.8	26.1

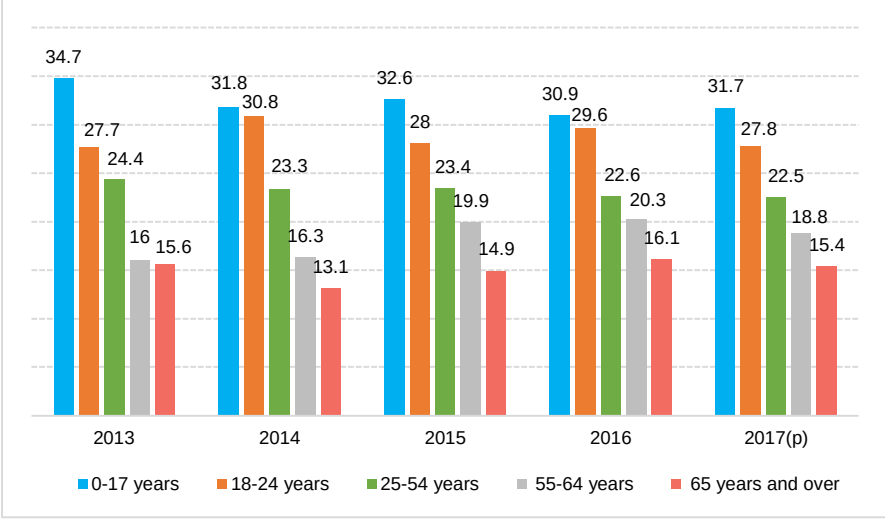
In households without dependent children, the risk of poverty rate in 2017 was 15.7%, with no statistically important divergence in period 2013 - 2017. The risk of poverty rate for single-person households was 19.1%, what is 4.5 percentage points more than in 2013. The risk of poverty rate in single-person households is higher for persons under 65 years of age (23.1%), than in single-person households where member is older than 65 years (15.6%).

Households with two adults are in 14.7% of cases at risk of poverty, and during the five-year period (2013 – 2017) no statistically significant divergence exists.

On other side, households with dependent children were more exposed to the risk of poverty (28.0%) compared to households without children (19.1%) for single-person household, and two-person household without children (14.7%).

Compared with 2013, decreased risk of poverty rate was recorded in all types of households with dependent children, and decrease is the most visible in households with two adults and two dependent children (5.5 percentage points).

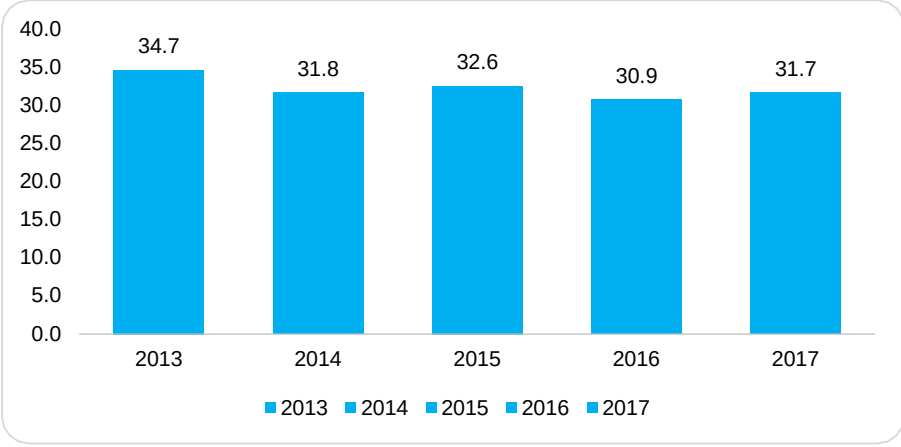
Figure 3: At-risk-of-poverty rate by age, %



Children under 17 years are in 31.7% cases at risk of poverty, what is less by 3 percentage points compared to 2013. Figure 3 shows that the risk of poverty rate decreases with the increase of age. Middle-aged generations (25 – 64 years) are under-average risk, while the lowest risk of poverty is recorded among citizens aged 65 years and over (15.4%).

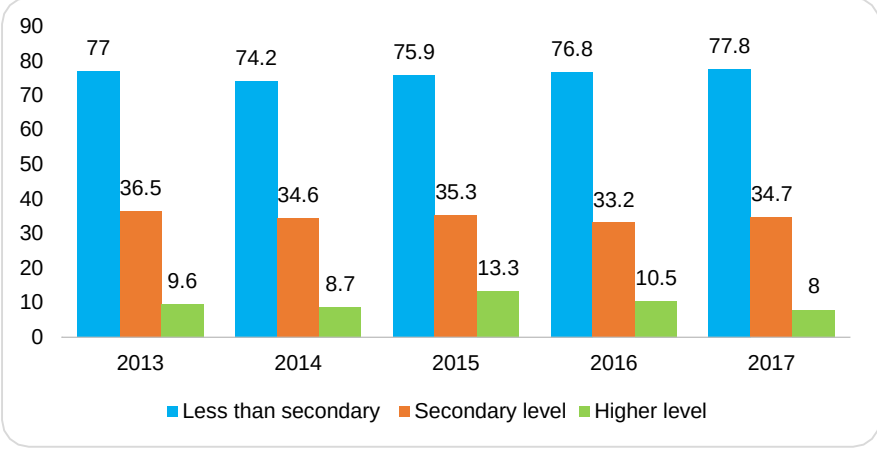
In cooperation with UNICEF, Statistical Office calculated a certain set of indicators which refer to the relative poverty of children, presented in this publication.

Figure 4: Rate of children at risk of poverty during years, %



It can be concluded from Figure 4, during previous five years, the relative poverty of children decreased by 3 percentage points, and it is now 31.7%.

Figure 5: Children at risk of poverty during years by highest level of education attained by parents, %



The classification of educational activities is based on ISCED — the International Standard Classification of Education, UNESCO 2011 version.[17] It has the following categories:

- 0 — early childhood education
- ISCED 1 — primary education
- ISCED 2 — lower secondary education
- ISCED 3 — (upper) secondary education
- ISCED 4 — post-secondary non-tertiary education
- ISCED 5 — short-cycle tertiary education
- ISCED 6 — Bachelor's or equivalent level
- ISCED 7 — Master's or equivalent level
- ISCED 8 — Doctoral or equivalent level

Figure 5 shows that almost three quarters of children whose parents are with lower than secondary level of education (ISCED: 0-2) are at risk of poverty. With the increase in the level of education of parents, the rate of children at risk of poverty decreases dropping down to approx. one third when observing children of parents with level of education up to the secondary level (ISCED: 3-4). The rate additionally drops down to 8% when the children of parents with the high level of education are observed (ISCED: 5-8).

[17] More information available at https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Children_at_risk_of_poverty_or_social_exclusion#Impact_of_parents.E2.80.99_education_level_on_risk_of_poverty

Figure 6: Material deprivation rate of children during years, %

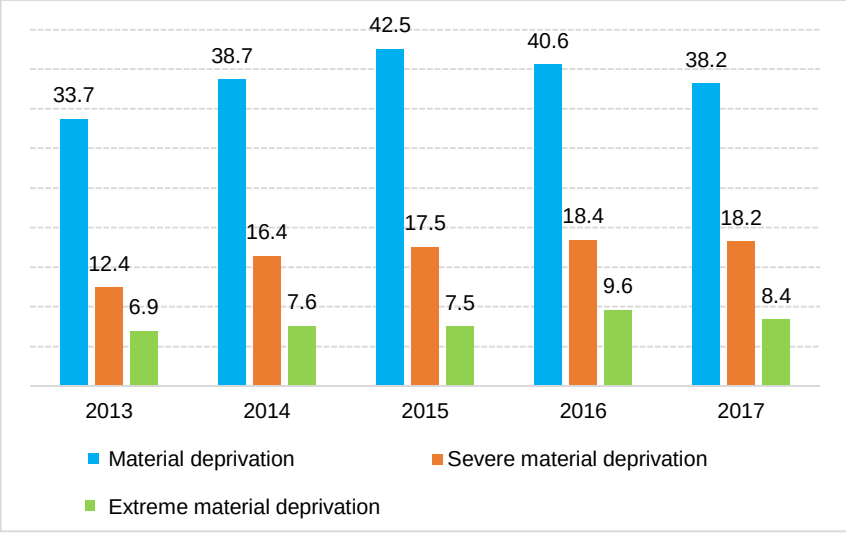
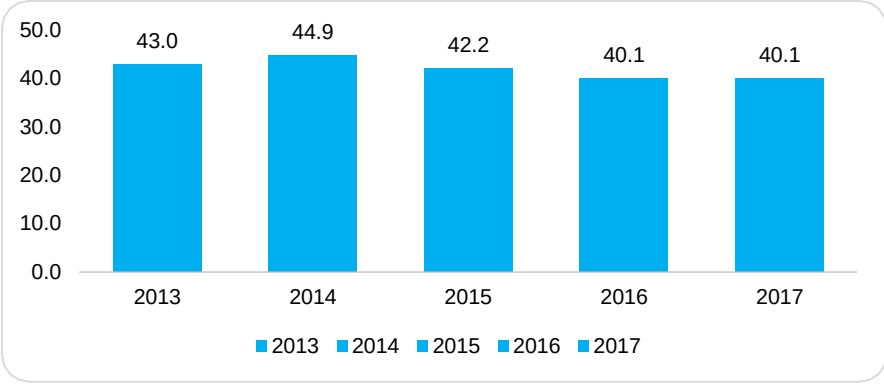


Figure 6 shows three levels of material deprivation among children during several years. The first level shows the inability of household to afford at least three out of nine material items in households; the second level named severe material deprivation means the inability of household to afford at least four out of nine material items; while the third level, named extreme deprivation is characterised by the inability of household to afford at least five out nine material deprivation items.[18]

In the period from 2013 to 2017, material deprivation rates of children increased. When the first level of material deprivation observed, the rate increased by 4.5 percentage points; severe material deprivation rate increased by 5.8 percentage points, and extreme material deprivation rate increased by 1.5 percentage points.

[18]For the details on material deprivation items see the methodological part of the publication, page 21.

Figure 7: At-risk-of-poverty or social exclusion (AROPE) rate for children over years, %



AROPE is a standard Eurostat's variable representing a combination of risk of poverty rate, severe material deprivation rate, as well as rates of households with very low work intensity. Figure 7 shows that AROPE rate for children (0 – 17 years of age) during the five-year period decreased by 2.9 percentage points, and in 2017 it was 40.1%.

Table 8: At-risk-of-poverty rate by sex, %

	2013	2014	2015	2016	2017(p)
Male	24.9	24.2	24.4	24.5	24.2
Female	25.4	23.9	24.5	23.6	23.0

The observation by gender does not show significant difference in the risk of poverty between males and females for the years 2013 - 2017. In the observed period, women were less exposed to the risk of poverty, while male exposure risk remained the same. In 2017, the risk of poverty rate of men was 24.2% and compared to the risk of poverty rate of women it is higher by 1.2 percentage points (23.0%).

Table 9: At-risk-of-poverty rate by the highest attained level of education, %

	2013	2014	2015	2016	2017(p)
Primary school and less than primary school	36.6	36.1	35.7	37.7	36.2
Secondary school, secondary non tertiary education	21.1	21.5	22.3	21.7	20.8
High education (Bachelor, Master and Doctoral level)	6.0	6.1	7.6	7.0	6.8

According to the SILC survey, the risk of poverty is presented according to the three levels of education, as shown in Table 9. The risk of poverty in 2017 significantly falls as the level of education rises: from 36.2% for persons with unattained or attained primary school; over 20.8% for persons with the secondary level of education attained, to 6.8% for persons with high education.

Table 10: At-risk-of-poverty rate by the most frequent activity status (18 years and over), %

	2013	2014	2015	2016	2017(p)
Employed at employer	5.5	7.2	6.1	6.6	5.9
Self-employed	10.9	12.1	18.9	16.0	19.8
Unemployed	49.0	43.7	44.0	42.2	44.8
Pensioners	12.1	12.4	14.2	16.4	14.4
Other inactive	30.0	32.0	33.4	32.9	31.0

The risk of poverty rate by the most frequent activity status[19] shows that 44.8% of unemployed is exposed to the risk of poverty in 2017. Self-employed persons have the risk of poverty rate higher than employed at employer (19.8% and 5,9%, respectively), since this category covers farmers whose income in kind are not included in the income, as well as

[19] Activity status is defined based on the statement of respondent on his/her own status that lasted over 6 months in the year preceding the surveying year.

family workers[20] in households with no income by definition. Among pensioners, the risk of poverty rate in 2017 was 14.4% and compared to 2013 it increased by 2.3 percentage points.

Table 11: At-risk-of-poverty rate by work intensity of household members (18 - 59 years), %

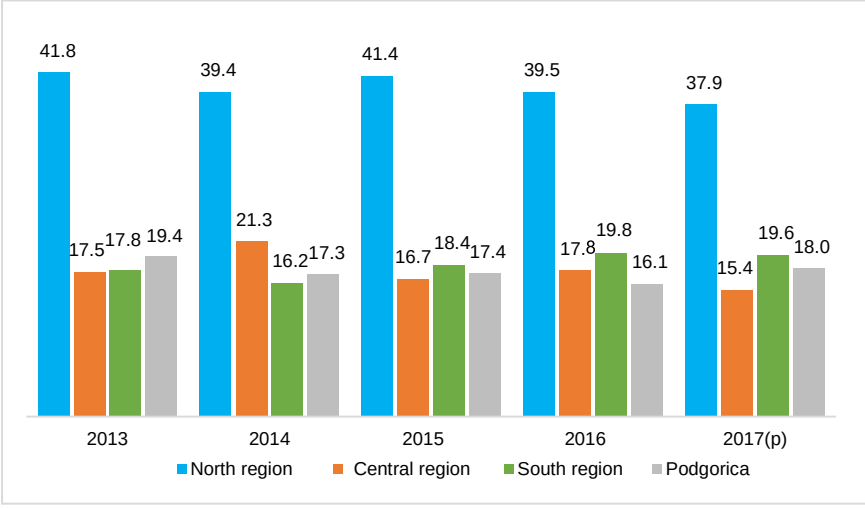
	2013	2014	2015	2016	2017(p)
Very low	63.5	58.9	63.2	61.6	59.9
Low	22.0	26.6	28.8	24.5	25.1
Medium	15.0	15.9	14.8	15.5	17.6
High and very high	0.6	2.2	2.5	2.1	2.2

The highest proportion of persons at risk of poverty lives in households with very low work intensity[21]. In 2017, this percentage was 59.9%. The risk of poverty rate by work intensity falls as the work intensity increases, from 25.1% in households with low work intensity, over 17.6% in households with medium work intensity, to 2.2% in households with high and very high work intensity.

[20] Family workers are persons helping family members in work or keeping family business/individual farms without any compensation.

[21] Persons living in households with very low work intensity are all persons aged from 0 to 59 years that live in households whose members of working age worked less than 20% of total number of months in which they could work during reference period (the year preceding the surveying year). Other categories of work intensity are the following: low (from 20% to less than 45%), medium (from 45% to 55%), high (over 55% to 85%) and very high (over 85% to 100%). Household members of working age are persons aged 18-59 years, excluding students in age group 18-24 years.

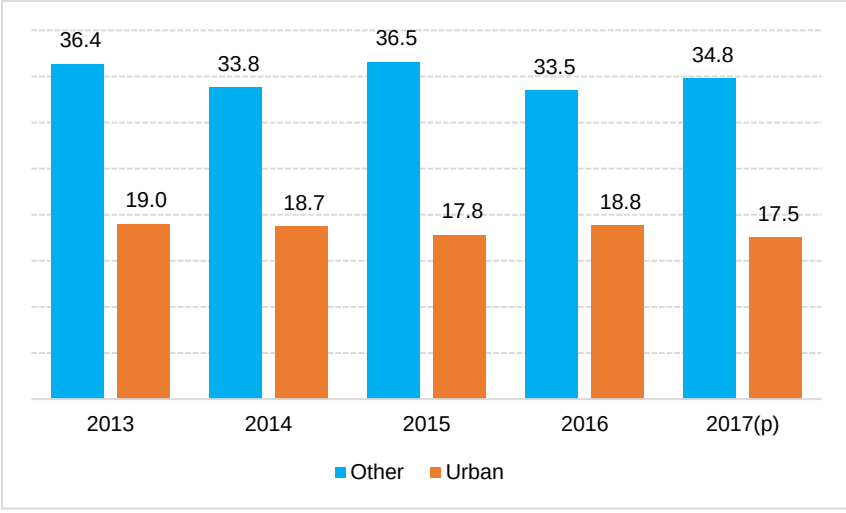
Figure 8: At-risk-of-poverty rate by regions, %



The population of northern region is the most exposed to the risk of poverty during the entire observed period, while the ranking of other regions by years was different. In 2017, 37.9% of population of northern region was at risk of poverty, while population of central region had the lowest risk of poverty (15.4%). Compared to 2013, northern and central region, and the capital Podgorica recorded a decreased risk of poverty rate.

Considerably lower income of population in northern region compared to other regions can be explained to a certain degree by a dominant share of agriculture. Disposable income does not include the value of household's production for its own needs. The income from production of goods for own needs means the value of food and beverages produced and consumed by household for its own needs. In both rural areas and in northern part of Montenegro, the standard of population largely depends on the own production. Monetary income of population engaged in the own production can be very low and indicates to a very low standard what does not need to be the case due to the important value of own production.

Figure 9: At-risk-of-poverty rate by type of settlement, %



Population of other (rural) areas is considerably more exposed to the risk of poverty than the urban population. Non-inclusion of income in kind also contributes to this difference, which is considerably more important in rural than in urban areas. The risk of poverty is present for every third resident of rural areas (34.8%). The risk of poverty rate in urban area was 17.5% in 2017.

3.3 Material deprivation and social exclusion indicators

Table 12: Material deprivation rate by number of material deprivation items, %

	2013	2014	2015	2016	2017(p)
Three or more items	32.9	37.0	37.0	36.5	35.2
Four or more items	12.6	13.3	14.7	14.9	13.9
Five or more items	6.6	4.9	6.0	6.9	5.3

Material deprivation rate of 35.2% in 2017 shows the proportion of persons living in households that cannot afford at least three out of nine material deprivation items.

Severe material deprivation rate of 13.9% in 2017 shows the proportion of persons living in households that cannot afford at least four out of nine material deprivation items.

Extreme material deprivation rate of 5.3% in 2017 shows the proportion of persons living in households that cannot afford at least five out of nine material deprivation items.[22] No significant difference occurred in material deprivation rate by number of material deprivation items in the five-year period (2013 – 2017).

Table 13: Share of persons in total population living in households by work intensity of household members[23], %

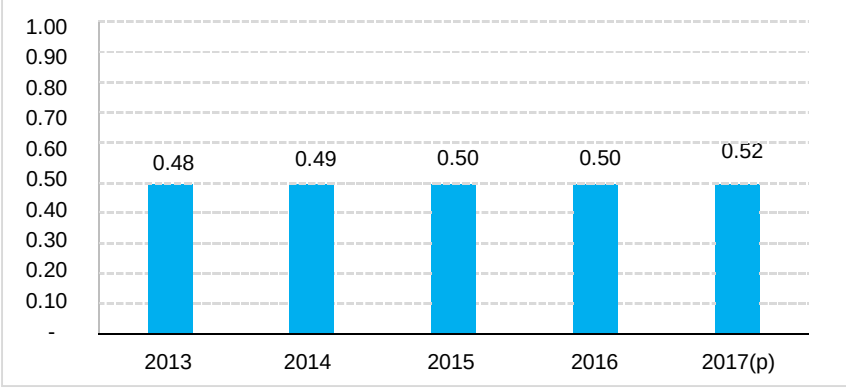
	2013	2014	2015	2016	2017(p)
Very low	22.6	21.6	19.2	20.0	19.3
Low	10.0	12.0	12.1	11.5	10.2
Medium	22.8	21.4	21.2	21.2	20.1
High and very high	27.3	28.0	28.8	28.6	30.2

[22] For the details on the materials deprivation items, see the methodological part of the publication, page 21.

[23] A sum of proportion of persons living in households with different work intensity is not equal to 100% because this indicator refers to the persons aged 0-59 years.

In Montenegro, the highest proportion of persons lives in households with high or very high work intensity, and in which all members of working age from 18 to 59 years worked between 55-100% out of the total number of months in which they could work during the reference period (the year preceding the surveying year). Compared to 2013, in 2017 the proportion of persons living in households with very low work intensity reduced, from 22.6% to 19.3%, while the proportion of persons living in households with high and very high work intensity increased by 2.9 percentage points (from 27.3% to 30.2%)[24].

Figure 10: Average work intensity of household members (aged 0 – 59 years)



Between 2013 and 2017, a slight increase was recorded in work intensity of household members, in 2017 on the scale 0 to 1 it was in average approx. 0.52. Households where all members of working age (aged 18 - 59 years) work a full working time have the value of this indicator 1; households where nobody works have value 0, while households with one to two members of working age working the full working time have work intensity 0.52.

[24] Work intensity represents the ratio of total number of months in which all household members of working age worked in reference period and total number of months in which the same household members theoretically could work in the same period. Household members of working age are persons aged 18-59 years, excluding students aged 18-24 years. Work intensity can be very low (0-0.20), low (0.20-0.45), medium (0.45-0.55), high (0.55-0.85) and very high (0.85-1).

Table 14: At-risk-of-poverty or social exclusion rate and components of this indicator, %

	2013	2014	2015	2016	2017(p)
At-risk-of-poverty rate	25.2	24.1	24.4	24.0	23.6
Severe material deprivation rate	12.6	13.3	14.7	14.9	13.9
Proportion of persons living in households with very low work intensity[25]	22.6	21.6	19.2	20.0	19.3
At-risk-of-poverty or social exclusion rate	**37.3**	**37.5**	**35.9**	**34.6**	**33.6**

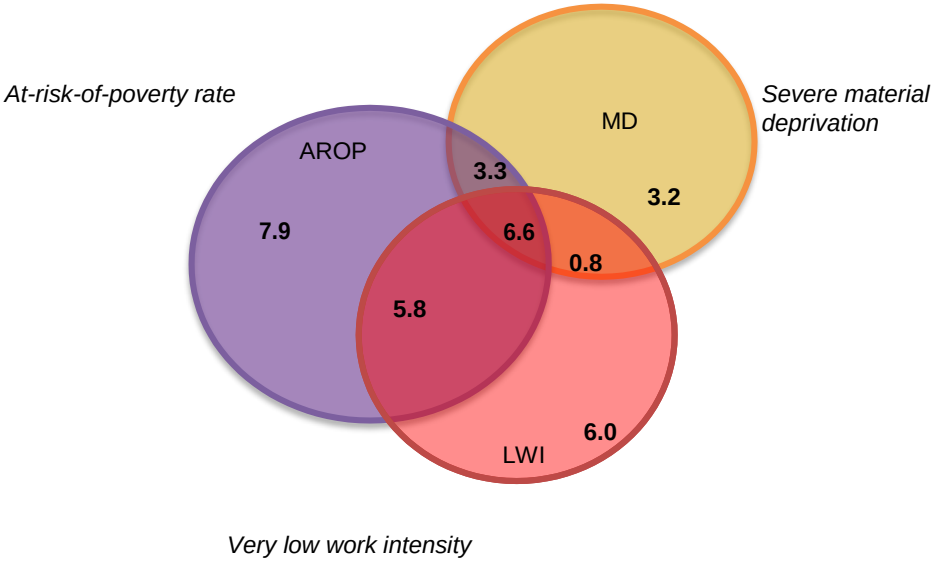
Indicator at-risk-of-poverty or social exclusion rate (*AROPE)* represents a combination of at-risk-of-poverty, severe material deprivation rate, and rate of households with very low work intensity.

It is considered for persons to live at risk of poverty or in social exclusion if they are at least in one out of three or all three previously mentioned poverty dimensions. Some persons are in the same time in two or three poverty categories and due to this it is impossible to observe this indicator as a sum of individual components, since this observation of indicators would lead to double counting in certain cases. Therefore, this indicator represents a combination, not the sum of three previously mentioned components.

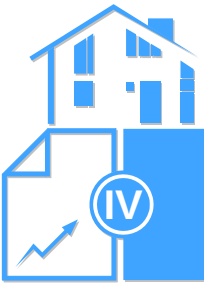
Considering that this indicator at risk of poverty or social exclusion rate is represented by three different risk categories, it is possible to calculate different combinations of risk between these categories, as well as every individual risk category.

[25] Share of persons living in households with very low work intensity as a component of at risk of poverty or social exclusion indicator measures the share of persons aged 0-59 years in the total population living in households where persons of working age worked during the reference period less than 20% of their total working potential.

Figure 11: At-risk-of-poverty or social exclusion rate in Montenegro, 2017 (p), %



Observing by components of at risk of poverty or social exclusion indicator, in 2017 the at risk of income poverty was the most common type of poverty (23.6%), while 13,9% of population in Montenegro live in households having reported that cannot afford at least four out of nine material deprivation items. When the work intensity is observed as a component of this indicator, almost one fifth of Montenegro population aged 0 to 59 years live in households with very low work intensity (19.3%).



International comparison of at-risk-of-poverty, inequality and social exclusion indicators, 2013 - 2017

IV INTERNATIONAL COMPARISON OF AT-RISK-OF-POVERTY, INEQUALITY AND SOCIAL EXCLUSION INDICATORS, 2013 - 2017

Poverty indicators, comparable overview of data with the EU countries and countries in the region, **2013**

	At –risk-of-poverty rate %	At-risk-of-poverty or social exclusion rate%	At-risk-of-poverty rate before social transfers (pensions included in income) %	At risk-of-poverty rate before social transfers (pensions not included in income) %	Gini coefficient	Inequality of income distribution – income quintile share ratio (S80/S20)
EU-28	16.7	24.6	26.0	44.5	30.5	5.0
Austria	14.4	18.8	25.9	44.1	27.0	4.1
Belgium	15.1	20.8	26.3	42.1	25.9	3.8
Bulgaria	21.0	48.0	26.7	41.9	35.4	6.6
Czech Republic	8.6	14.6	16.6	36.9	24.6	3.4
Montenegro	**25.2**	**37.3**	**28.9**	**46.1**	**38.5**	**8.5**
Denmark	11.9	18.3	27.8	41.5	26.8	4.0
Estonia	18.6	23.5	25.2	39.5	32.9	5.5
Finland	11.8	16.0	26.4	41.7	25.4	3.6
France	13.7	18.1	24.4	44.4	30.1	4.5
Greece	23.1	35.7	28.0	53.4	34.4	6.6
Netherlands	10.4	15.9	20.8	37.2	25.1	3.6
Croatia	19.5	29.9	29.7	44.6	30.9	5.3
Ireland	15.7	29.9	38.3	49.2	30.7	4.7
Iceland	9.3	13.0	22.7	34.5	24.0	3.4
Italy	19.3	28.5	24.6	45.5	32.8	5.8
Cyprus	15.3	27.8	24.3	36.5	32.4	4.9
Latvia	19.4	35.1	25.8	43.0	35.2	6.3
Lithuania	20.6	30.8	30.3	46.6	34.6	6.1
Luxembourg	15.9	19.0	29.4	45.3	30.4	4.6
Hungary	15.0	34.8	27.0	50.1	28.3	4.3

Poverty indicators, comparable overview of data with the EU countries and countries in the region, **2013**

/continued/

	At-risk-of-poverty rate %	At-risk-of-poverty or social exclusion rate %	At-risk-of-poverty rate before social transfers (pensions included in income) %	At-risk-of-poverty rate before social transfers (pensions not included in income) %	Gini coefficient	Inequality of income distribution – income quintile share ratio (S80/S20)
North Macedonia	24.2	48.1	26.8	41.0	37.0	8.4
Malta	15.7	24.0	23.3	38.4	27.9	4.1
Germany	16.1	20.3	24.5	43.8	29.7	4.6
Norway	10.9	14.1	25.9	38.0	22.7	3.3
Poland	17.3	25.8	22.8	43.2	30.7	4.9
Portugal	18.7	27.5	25.5	46.9	34.2	6.0
Romania	23.0	41.9	28.1	50.0	34.6	6.8
Slovakia	12.8	19.8	20.1	38.0	24.2	3.6
Slovenia	14.5	20.4	25.3	42.3	24.4	3.6
Spain	20.4	27.3	30.0	45.5	33.7	6.3
Serbia	24.5	42.0	31.8	51.1	38.0	8.6
Switzerland	14.5	16.3	23.0	35.4	28.5	4.2
Sweden	16.0	18.3	28.8	44.0	26.0	4.0
Turkey	23.1	51.2	24.8	39.5	42.1	8.7
United Kingdom	15.9	24.8	30.1	45.2	30.2	4.6

Source: Eurostat - https://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database

Poverty indicators, comparable overview of data with the EU countries and countries in the region, **2014**

	At-risk-of-poverty rate%	At-risk-of-poverty or social exclusion rate%	At-risk-of-poverty rate before social transfers (pensions included in income) %	At-risk-of-poverty rate before social transfers, (pensions not included in income) %	Gini coefficient	Inequality of income distribution – income quintile share ratio (S80/S20)
EU-28	17.2	24.4	26.1	44.8	31.0	5.2
Austria	14.1	19.2	25.4	43.8	27.6	4.1
Belgium	15.5	21.2	27.5	43.1	25.9	3.8
Bulgaria	21.8	40.1	27.2	46.2	35.4	6.8
Czech Republic	9.7	14.8	17.2	37.1	25.1	3.5
Montenegro	**24.1**	**37.5**	**31.1**	**46.5**	**36.5**	**7.3**
Denmark	12.1	17.9	26.9	41.5	27.7	4.1
Estonia	21.8	26.0	28.4	40.9	35.6	6.5
Finland	12.8	17.3	27.6	43.3	25.6	3.6
France	13.3	18.5	24.0	44.4	29.2	4.3
Greece	22.1	36.0	26.0	52.3	34.5	6.5
Netherlands	11.6	16.5	21.3	37.8	26.2	3.8
Croatia	19.4	29.3	29.9	45.2	30.2	5.1
Ireland	16.4	27.7	37.1	48.2	31.1	4.9
Iceland	7.9	11.2	21.4	32.6	22.7	3.1
Italy	19.4	28.3	24.7	45.8	32.4	5.8
Cyprus	14.4	27.4	24.6	36.5	34.8	5.4
Latvia	21.2	32.7	26.9	41.7	35.5	6.5
Lithuania	19.1	27.3	27.5	43.5	35.0	6.1
Luxembourg	16.4	19.0	27.6	44.8	28.7	4.4
Hungary	15.0	31.8	26.6	50.1	28.6	4.3
North Macedonia	22.1	43.3	24.8	41.7	35.2	7.2
Malta	15.9	23.8	23.8	37.8	27.7	4.0
Germany	16.7	20.6	25.0	44.1	30.7	5.1
Norway	10.9	13.5	24.8	38.2	23.5	3.4
Poland	17.0	24.7	22.8	43.8	30.8	4.9
Portugal	19.5	27.5	26.7	47.8	34.5	6.2
Romania	25.1	40.3	28.7	50.4	35.0	7.2
Slovakia	12.6	18.4	19.6	38.0	26.1	3.9
Slovenia	14.5	20.4	25.1	42.5	25.0	3.7
Spain	22.2	29.2	31.1	47.5	34.7	6.8
Serbia	25.4	43.1	32.6	52.5	38.6	9.8
Switzerland	13.8	16.4	24.4	37.6	29.5	4.4
Sweden	15.6	18.2	30.0	45.4	26.9	4.2
Turkey	23.0	41.6	24.7	40.0	41.,2	8.3
United Kingdom	16.8	24.1	29.4	43.6	31.6	5.1

Source: Eurostat- *https://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database*

Poverty indicators, comparable overview of data with the EU countries and countries in the region, **2015**

	At-risk-of poverty %	At-risk-of-poverty or social exclusion rate %	At-risk-of-poverty rate before social transfers (pensions included in income) %	At-risk-of-poverty rate before social transfers (pensions not included in income) %	Gini coefficient	Inequality of income distribution - income quintile share ratio (S80/S20)
EU-28	17.3	23.8	26.1	44.7	31.0	5.2
Austria	13.9	18.3	25.6	44.4	27.2	4.0
Belgium	14.9	21.1	26.7	43.4	26.2	3.8
Bulgaria	22.0	41.3	28.4	43.0	37.0	7.1
Czech Republic	9.7	14.0	16.8	37.0	25.0	3.5
MONTENEGRO	**24.4**	**35.9**	**29.4**	**45.1**	**36.5**	**7.5**
Denmark	12.2	17.7	25.8	40.6	27.4	4.1
Estonia	21.6	24.2	27.9	39.4	34.8	6.2
Finland	12.4	16.8	26.8	43.4	25.2	3.6
France	13.6	17.7	23.7	44.4	29.2	4.3
Greece	21.4	35.7	25.4	52.8	34.2	6.5
Netherlands	11.6	16.4	22.3	39.1	26.7	3.8
Croatia	20.0	29.1	31.0	45.2	30.4	5.2
Ireland	16.3	26.0	36.2	46.3	29.8	4.5
Iceland	9.2	12.5	19.9	31.7	24.7	3.4
Italy	19.9	28.7	25.4	46.0	32.4	5.8
Cyprus	16.2	28.9	25.4	38.8	33.6	5.2
Latvia	22.5	30.9	27.3	40.9	35.4	6.5
Lithuania	22.2	29.3	28.7	43.0	37.9	7.5
Luxembourg	15.3	18.5	27.2	44.7	28.5	4.3
Hungary	14.9	28.2	25.6	49.1	28.2	4.3
North Macedonia	21.5	41.6	24.8	40.5	33.7	6.6
Malta	16.3	22.4	23.7	37.5	28.1	4.2
Germany	16.7	20.0	25.2	44.1	30.1	4.8
Norway	11.9	15.0	26.5	40.3	23.9	3.5
Poland	17.6	23.4	22.8	44.0	30.6	4.9
Portugal	19.5	26.6	26.4	47.5	34.0	6.0
Romania	25.4	37.4	29.2	49.4	37.4	8.3
Slovakia	12.3	18.4	19.0	38.1	23.7	3.5
Slovenia	14.3	19.2	24.8	42.5	24.5	3.6
Spain	22.1	28.6	30.1	47.0	34.6	6.9
Serbia	25.4	41.3	37.2	55.7	38.2	9.0
Switzerland	15.6	18.2	25.0	38.0	29.6	4.5
Sweden	16.3	18.6	29.8	44.7	26.7	4.1
Turkey	22.5	41.3	24.1	39.6	41.9	8.6
United Kingdom	16.6	23.5	29.3	44.2	32.4	5.2

Source: Eurostat- *https://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database*

Poverty indicators, comparable overview of data with the EU countries and countries in the region, **2016**

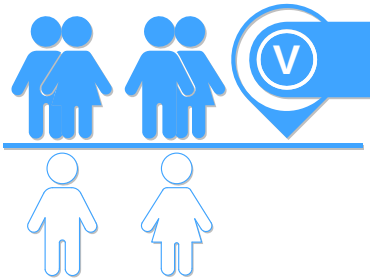
	At-risk-of poverty %	At-risk-of-poverty or social exclusion rate%	At-risk-of-poverty before social transfers (pensions included in income) %	At-risk-of-poverty before social transfers, (pensions not included in income) %	Gini coefficient	Inequality of income distribution – income quintile share ratio (S80/S20)
EU-28	17.3	23.5	25.9	44,5	30,8	5.2
Austria	14.1	18.0	26.3	44.8	27.2	4.1
Belgium	15.5	20.7	26.3	44,2	26.3	3.8
Bulgaria	22.9	40.4	27.9	45.6	37.7	7.7
Czech republic	9.7	13.3	16.3	36.5	25.1	3.5
Montenegro	**24.0**	**34.6**	**28.9**	**44.1**	**36.5**	**7.4**
Denmark	11.9	16.8	24.9	40.3	27.7	4.1
Estonia	21.7	24.4	28.9	39.6	32.7	5.6
Finland	11.6	16.6	27.0	43.7	25.4	3.6
France	13.6	18.2	23.5	45.1	29.3	4.3
Greece	21.2	35.6	25.1	52.9	34.3	6.6
Netherlands	12.7	16.7	22.0	38.5	26.9	3.9
Croatia	19.5	27.9	27.3	44.8	29.8	5.0
Ireland	16.6	24.2	34.7	44.6	29.5	4.4
Island	8.8	12.2	19.9	31.6	24.1	3.3
Italia	20.6	30.0	26.2	46.5	33.1	6.3
Cyprus	16.1	27.7	25.0	38.3	32.1	4.9
Latvia	21.8	28.5	27.8	40.2	34.5	6.2
Lithuania	21.9	30.1	27.9	42.1	37.0	7.1
Luxemburg	16.5	19.8	27.1	44.4	31.0	5.0
Hungary	14.5	26.3	25.8	47.7	28.2	4.3
North Macedonia	21.9	41.1	25.8	41.6	33.6	6.6
Malta	16.5	20.1	23.8	37.9	28.5	4.2
Germany	16.5	19.7	25.3	43.5	29.5	4.6
Norway	12.2	15.3	26.3	40.9	25.0	3.7
Poland	17.3	21.9	22.7	43.5	29.8	4.8
Portugal	19.0	25.1	25.0	46.1	33.9	5.9
Romania	25.3	38.8	29.4	49.5	34.7	7.2
Slovakia	12.7	18.1	18.4	37.9	24.3	3.6
Slovenia	13.9	18.4	24.3	41.2	24.4	3.6
Spain	22.3	27.9	29.5	46.8	34.5	6.6
Serbia	25.5	38.7	35.9	54.9	38.6	9.7
Switzerland	14.7	17.8	24.7	38.4	29.4	4.4
Sweden	16.2	18.3	29.8	45.0	27.6	4.3
Turkey	22.8	45.1	24.7	40.5	42.6	8.6
United Kingdom	15.9	22.2	28.1	42.7	31.5	5.1

Source: Eurostat- *https://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database*

Poverty indicators, comparable overview of data with the EU countries and countries in the region, **2017**

	At-risk-of poverty %	At-risk-of-poverty or social exclusion rate %	At-risk-of-poverty rate before social transfers (pensions included in income) %	At-risk-of-poverty rate before social transfers (pensions not included in income) %	Gini coefficient	Inequality of income distribution - income quintile share ratio (S80/S20)
EU-28	16.9	22.5	24.9	44.0	30.3	5.1
Austria	14.4	18.1	24.9	43.4	27.9	4.3
Belgium	15.9	20.3	26.4	43.9	26.0	3.8
Bulgaria	23.4	38.9	29.2	44.8	40.2	8.2
Czech Republic	9.1	12.2	15.8	35.2	24.5	3.4
MONTENEGRO(p)	**23.6**	**33.7**	**31.4**	**46.6**	**36.7**	**7.6**
Denmark	12.4	17.2	25.3	40.5	27.6	4.1
Estonia	21.0	23.4	29.0	39.3	31.6	5.4
Finland	11.5	15.7	26.7	43.7	25.3	3.5
France	13.3	17.1	23.9	45.4	29.3	4.4
Greece	20.2	34.8	24.0	50.8	33.4	6.1
Netherlands	13.2	17.0	21.9	38.0	27.1	4.0
Croatia	20.0	26.4	26.6	43.2	29.9	5.0
Ireland	:		:	:	:	:
Iceland	:		:	:	:	:
Italy	20.3	28.9	25.2	45.4	32.7	5.9
Cyprus	15.7	25.2	24.5	37.5	30.8	4.6
Latvia	22.1	28.2	28.3	40.0	34.5	6.3
Lithuania	22.9	29.6	29.7	42.3	37.6	7.3
Luxembourg	18.7	21.5	29.0	47.0	30.9	5.0
Hungary	13.4	25.6	24.9	46.6	28.1	4.3
North Macedonia	:		:	:	:	:
Malta	16.8	19.2	23.7	37.5	28.3	4.2
Germany	16.1	19.0	24.2	42.2	29.1	4.5
Norway	:		:	:	:	:
Poland	15.0	19.5	24.0	44.2	29.2	4.6
Portugal	18.3	23.3	23.6	45.2	33.5	5.7
Romania	23.6	35.7	28.3	47.5	33.1	6.5
Slovakia	12.4	16.3	17.5	37.4	23.2	3.5
Slovenia	13.3	17.1	24.0	41.5	23.7	3.4
Spain	21.6	26.6	28.4	45.1	34.1	6.6
Serbia	:		:	:	:	:
Switzerland	:		:	:	:	:
Sweden	15.8	17.7	29.2	44.2	28.0	4.3
Turkey	:		:	:	:	:
United Kingdom	:		:	:	:	:

Source: Eurostat- *https://ec.europa.eu/eurostat/web/income-and-living-conditions/data/database*



V Absolute poverty in Montenegro

V ABSOLUTE POVERTY IN MONTENEGRO

5.1 Indicators of absolute poverty in Montenegro

In cooperation with World Bank, and with support of Ministry of Labour and Social Welfare, in 2008 Statistical Office for the first time published the results of 2005 and 2006 Poverty Analysis. Poverty indicators based on absolute poverty line were obtained in line with the methodology recommended by World Bank. The main indicator of living standard for absolute poverty line is the consumption of households. Statistical Office did the detailed calculation of absolute poverty line on the basis of Household Budget Survey – HBS data.

HBS is the survey based on the sample of households based on the Census of Population, Households and Dwellings. HBS collects the data on:

- Income and expenses of households,
- Supply with permanent consumption goods,
- Demographic characteristics of households, etc.

Two different periods of observation are used: three months and twelve months. Beside this, households are provided with the diary at the beginning of interview and they need to keep the records on costs for food and non-food products during reference period (one month), as well as earned income.

The aim of HBS is:

a) Collecting the data necessary to produce the balance of personal consumption in the National Accounts – NA system,
b) Establishing databases to obtain the weights for the calculation of consumer price index,
c) To serve as a data source for the production of absolute poverty line (consumption method).

Thus, the data collected offer a large scope of database for monitoring the changes in living conditions. HBS data in Montenegro are suitable for monitoring and calculation of absolute poverty line in Montenegro over time and Statistical Office will continue with the calculation of this poverty line in those years when HBS is implemented.

As already mentioned, the main indicator on living standard for the calculation of absolute poverty line is consumption. Household consumption aggregate for needs of poverty calculation covers the following categories:

- Food, alcohol, and tobacco: expenses for purchase of food products are included, together with the estimated value of consumption from the own production and the estimated value of gifts. Only considered is the consumption for personal use in households, while products purchased for business or agriculture are excluded. In addition, excluded are expenses occurred for purpose of giving gifts. In other words, according to the definition of consumption for the needs of poverty analysis, the consumption of households comprises values of purchase, received gifts and own production, but only those products that serve for personal consumption of household members, and not those purchased for purpose of business, agricultural production or giving gifts.
- Non-food products: included are expenses on (a) clothes and footwear, (b) housing, water, electricity, gas and other fuels, (c) small appliances for household and regular maintaining of dwelling, (d) health, (e) transport, (f) communication, (g) recreation and culture, (h) education, (i) restaurants, cafés, and hotels, and (j) other goods and services.

Modified OECD scale was used to adapt the total consumption to differences in size and composition of household, i.e. to calculate equivalent consumption of households. Equivalent size of household is calculated as a weighted sum of household members, where the first adult in household is calculated as 1 unit, every second adult aged over 14 years, as 0.5 unit, and every child under 14 years of age as 0.3 unit.

2016 Montenegro absolute poverty line was constructed in line with the basic needs approach recommended by Ravallion (1994), with necessary modification, and consisted of two main components: (a) poverty line for food, and (b) appropriate expenditure for purchase of the basic non-food products. Both components summed up together result in the total absolute poverty line. The 2006 poverty line serves as an 'anchor' for which the estimates of poverty line and all poverty indicators are linked. The 2016 absolute poverty line is modified for inflation rate, i.e. average annual change of price indicated by consumer price index.

The absolute poverty line used by Statistical Office is used for the poverty analysis is a nationally specific line and it cannot be used for international comparisons, just for monitoring situation and changes of poverty in Montenegro.

Poverty measures

Poverty indicators (or measures) are statistical functions which convert the ratio between consumption and poverty line for the observed households and persons in one number representing an observed poverty situation. Recently, for the needs of surveying the absolute poverty, three poverty measures from so called FGT class of poverty measures are mostly used (Foster-Greer-Thorbecke, 1984)[26], and these are poverty rate, poverty gap and squared poverty gap.

Poverty rate - population whose equivalent consumption falls below the poverty line is considered to be poor. Poverty rate gives first, basic information on poverty but does not give information are all the poor equally poor and are they all close to poverty line. To determine more precisely who is poor, within the poverty line, poverty gap and severity indicators are used.

Poverty gap is the total amount of money the poor persons miss to achieve the consumption at the poverty threshold level, but presented as an average per capita of a country, and expressed as a percentage of poverty line. Plainly, the poverty gap is the money missing in average to eliminate the poverty, expressed as per capita and in percentage of poverty line. Or total difference between the actual income and poverty line for all poor, but divided by number of population and expressed in percentage of poverty line.[27]

Poverty severity is the squared poverty gap, i.e. this is the sum of all squared differences between actual income and poverty line for the poor. In this way a higher weight is placed on those households who are further away from the poverty line.

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[26] See Foster, James, Joel Greer and Erik Thorbecke (1984) "A Class of Decomposable Poverty Measures," Econometrica, 52(3), p. 761-766

[27] For example, the poverty gap of 10% implies that monetary means in amount of 10% of poverty line are necessary for saving all persons from poverty in average, per capita.

Measures of inequality

Share in consumption of the poorest x% is simple direct measure of inequality, useful when the attention is to be directed only to the poorest, for example, the poorest 10% or 20%. When the share of the poorest in the distribution of total consumption decreases, it can be said that inequality in society rises, observed from the position of the poorest citizens.

Quintile share ratio (s80/s20) is the ratio of average consumption of the 20% of the richest and the 20% of the poorest citizens. As this ratio is higher, differences between the rich and the poor are higher, i.e. inequality in society is higher.

Gini coefficient, alike the measures based on proportions in consumption of the poorest and the richest citizens, takes into consideration all elements of distribution, i.e. consumption of all persons in the society. Gini coefficient takes values between 0 and 1. Higher coefficient indicates higher inequality. The value 0 indicates a situation of complete equality (all persons have an equal consumption), while the value 1 indicates the situation of complete inequality (one person has the entire consumption in the society, all other persons have nothing).

Table 15: Absolute poverty line for the years 2013, 2014, 2015 and 2017[28]

	2013	2014	2015	2017
National absolute poverty line (in euro, monthly, adult equivalised)	186.45	185.14	187.92	192.42
Poverty rate (%)	8.6	7.5	9.8	-
Poverty gap (%)	2.4	1.4	3.0	-
Poverty severity (%)	1.1	0.4	1.3	-

- No available data

[28] A series was interrupted in 2016 due to the timing of the Household Budget Survey. Periodicity of collecting and publishing data of the Household Budget Survey moved since 2015 from annual to multi-annual survey, according to the Annual Plan and Statistical Release Calendar.

The absolute poverty line in Montenegro in 2017 was 192.42 euro per adult equivalised, which is 4.5 euro more than in 2015. In 2015 9.8 percentage of population had and equivalised spending below the absolute poverty line.
Poverty gap, as indicator of poverty intensity, increased from 1.4 percent in 2014 to 3.0 percentage in 2015. The data on the poverty gap of 3.0 percent in 2015 indicates that in order to escape poverty for all poor persons in the society funds in the amount of 3.0 percent of poverty line need to be provided per each inhabitant and then to allocate those funds to each poor person in the exact amount sufficient for their total spending to reach the poverty line.

Poverty severity has also increased relative to 2014 and it was 1.3 percent in 2015.

Table 16: Inequality index 2013 - 2015

	2013	2014	2015
Share in total spending of the poorest 20% (S20)	8.7%	9.5%	8.7%
Share in total spending of the richest 20% (S80)	37.5%	37.1%	36.2%
Share of quintiles (S80/S20)	4.3	3.9	4.2
Gini coefficient	26.2%	25.6%	25.2%

Between 2015 and 2014 share of spending of poorest 20% of population in total spending was reduced from 9.5 percent to 8.7 percent. Likewise, 20% of richest have reduced their share in total spending distribution from 37.1 percent to 36.2 percent. The Gini coefficient shows to a drop in inequality in Montenegro in 2015. Coefficient was reduced from 25.6 to 25.2 percent.

"Poverty (measured as spending below the standardized poverty line of middle income countries of 5.5 dollars/day in 2011 Purchasing Parity Power) was reduced from 8.7 percent as it was in 2012 to estimated 4.8 percent in 2018."[29]

[29] Western Balkans, Regular Economic Report No 14.

Table 17: World Bank estimates

	2013	2014	2015	2016	2017	2018(f)
Poverty rate of 5 USD per day (PPP) (% of population)	9.9	4.8	4.6	4.2	4.4	4.8

Source: World Bank estimates

For the international comparison, the absolute poverty line internationally comparable and frequently used is for example the extreme poverty line of the World Bank of 1.80 PPP dollars per day per capita (in dollars of 2011 purchasing power) based on which the UN sustainable development objective of 1.1 was defined, or for lower and middle income countries of 3.2 and 5.5 respectively of PPP dollars per day per capita (World Bank, 2018).

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