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QUALITY REPORT

# Investments in fixed capital

# 2023



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**Content:**

# 1. Introduction – Basic information about the survey

## 1.1 Purpose, goal and subject of the survey

The aim of this survey is, except informing on investment activity in the country, to enable the calculation of GDP by expenditure approach, determine the share of gross investment in GDP. Investments in fixed assets are considered to be provisions of business entities to obtain new fixed assets and increase the value or the replacement of existing fixed assets.

## 1.2 Legal basics

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12, 47/19) defines provisions for collection, processing, and dissemination of data. The Law provides to the Statistical Office legal powers to collect and access the data necessary for the implementation of Programme and Annual Plan. The Law gives a priority to the use of administrative data and right of access to individual data that are a result of survey of other official statistical producers. As an annex to legal provisions, Statistical Office has signed several memoranda on cooperation with administrative data providers.

## 1.3 Statistical units

Reporting units are the business entities in the country that are direct investors, regardless of whether they are in a regular or probable operation in the establishment or liquidation of a natural person.

## 1.4 Coverage and scope of survey

### 1.4.1 Sectors

Units of observation are all business entities in Montenegro that are direct investors (whether they are in regular or probationary work, in setting up or in liquidation) which are registered in sectors from A to S, according to the classification NACE Rev. 2.

### 1.4.2 Statistical population

Data on realized and paid investments from legal entities in the country if they are direct investors.

## 1.5 Referent geographical area

The data refer to the whole territory of Montenegro.

## 1.6 Concepts and definitions

Realized investments represent the value of effectively carried out construction, construction or procurement of facilities, equipment and others, regardless of whether they are finished whether their payment has been made (without the revaluation of realized investments). Payment for invitations is a cash investment in fixed assets during the year in which payments are actually made, regardless of the moment of construction or acquisition of fixed assets. Realized investments in new fixed assets relate to the purchase of investment goods that have not yet been the subject of purchase of sales between the direct users of these goods (purchase made directly from the contractor of construction works, equipment manufacturers or fixed assets produced in their own direction.

### 1.7 Classifications

Statistical classification of economic activities in the European Union - NACE Rev. 2

### 1.8 Frequency of data collection

Once a year during three months (February-April).

### 1.9 Frequency of data dissemination

Data are published annually, in July of the current year for the previous year.

### 1.10 Methodology

The methodology of the annual survey Investments in fixed capital is available on the website: Methodology.

### 1.11 Base period

The base year is the previous year.

### 1.12 Unit of measure

The data obtained by this survey are expressed in percentages and thousand euros.

### 1.13 Source of data

The survey is based on the reporting method. Data is collected on a randomly stratified sample and stratification is done according to the sectors and by the number of employees. The reporting units that have entered the sample fill in the INV-01 form from the bookkeeping, and financial documentation as well as from the investment programs and technical documents. Since various sources of data are used for this report, related data must be compared and harmonized with each other. The source of data for individuals is administrative.

### 1.14 Method of data collection

Data are collected through a questionnaire (by post or email).

## 2. Relevance – Data users

### 2.1 User needs

International users:

- UN organizations,
- International Monetary Fund.

National users:

- Ministries and other public administration bodies;
- Local government and other local government bodies;
- Central bank;
- Non-governmental organizations;
- Students;
- Researchers;
- Media.

### 2.2 User satisfaction

The Statistical Office has adopted the Quality Management Strategy, the Guidebook to the Implementation of the Quality Management Strategy, as well as the Plan for the Implementation of the Quality Policy. In order to measure the degree to which fulfills obligations towards users and within the new quality policy, the Statistical Office conducted User satisfaction survey. The results of the survey are available on the Statistical Office website, link: User satisfaction

## 3. Accuracy and reliability

### 3.1 Accuracy – Overall remark

The survey is based on the reporting method. Data are collected from large and medium-sized legal entities (all legal entities are included), while small ones are selected according to the stratified sample and the stratification is done according to the Classification NACE Rev2 and by the number of employees. The data obtained is subject to the common types of errors associated with sampling error, error in coverage, measurement, processing, and inaccessible.

### 3.2 Sampling error

Since the survey does not include all units of a target population but rather a randomly selected sample of units, there are sample errors that may occur in estimations. A variation coefficient is a relative measure (percentage) of the accuracy of an estimate. Along with these measures, a lower and upper limit of a confidence interval is calculated.

*Indicators of sampling error*

The coefficient of variation is the relevant measure of sample error in 2023 it was 0,17.

### 3.3 Non-sampling error

There are four types of non-sampling errors:

1) Coverage errors - errors that occur between the target population and the sample frame;

2) Measurement errors - errors that occur during data collection. The source of these errors may be the information system, the interviewer or the data collection method;

3) Processing errors - errors that occurred after data collection, e.g. errors during input, editing and weighting;

4) Non-response errors - errors that occurred as a result of an unsuccessful attempt to obtain the desired information from the reporting unit.

There are two main types of non-response errors:

1) non-response of the unit - absence of information of the entire sample unit i

2) non-response to the item - the sampling unit was successfully contacted, but not all the necessary information was obtained.

### 3.3.1 Coverage error

Coverage errors can be:

1) Overcoverage;

2) undercoverage.

Overcoverage represents the proportion of units from the sample frame that do not belong to the target population.

Undercoverage is a problem that arises due to insufficient coverage, that is, failure to update the framework used to select the sample (eg, failure to cover large investments in that year). The undercoverage rate is difficult to estimate because it is not possible to know which units are not included in the target population.

*Indicator of coverage error*

Order to eliminate the coverage problem, the sample frame is updated each year and based on the updated framework, a sample for the investment survey is created every year.

### 3.3.2 Error of measurement

Measurement errors occur during the data collection because of the difference between the recorded and the actual values of the variable. An intermediate analysis is performed by the correction.

### 3.3.3 Non-response error

Non-response errors are errors due to an unsuccessful attempt to obtain the desired information from the selected unit. Two main types of non-response errors are considered:

1) Unit non-response, which refers to the absence of information about the entire units selected in the sample (unfilled questionnaire);

2) Item non-response refers to the situation in which the sampled unit was successfully surveyed, but not all the necessary information was obtained.

*Non-responding unit rate*

The unit non response rate is calculated as the ratio of the number of units which did not responded to the total number of eligible units (unweight rate). Average unit non response rate in 2023 was about 35,3%.

*Item non-response*

The item non response rate is calculated as the ratio of the eligible units which have not responded to a particular item and the in-scope units that are required to respond to that particular item. The average item non response rate in 2023 was about 9,3%.

#### 3.3.4 Data processing error

Collected data pass through a range of processes before the final compilation (estimates, etc.) are produced: coding, keying, editing, imputing, weighting, tabulating, etc. Errors introduced at these stages are called processing errors.

*Imputation rate*

Not available.

### 3.4 Seasonal adjustments

Not relevant.

### 3.5 Data revision

#### 3.5.1 Data revision policy

Statistical Office of Montenegro has adopted a revision policy and it is available on the website: Revision policy

#### 3.5.2 Data revision practice

This survey uses regular revisions. Large and unplanned audits are only used in the specific cases defined by the revision policy.

#### 3.5.3 Data revision - average size

Not available.

## 4. Timeliness and punctuality

### 4.1 Timeliness

Preliminary data are published 207 days after the end of the reference period. The final data are published 9 months after the end of the reference period.

Timeliness of final data: T+9 months after the end of the reference period.

*Time lag of the first results*

The number of days (or weeks or months) from the last day of the reference period to the day of publication of first results:

T1 = dfrst - dref,

T1 = 207 days

dfrst - release date of first results

dref - last day (date) of the reference period of the statistics.

Deadlines for publication of data during 2023 are published according to the Release Calendar.

*Time lag of the final results*

The number of days (or weeks or months) from the last day of the reference period to the day of publication of complete and final results. Data are published 9 months after the end of the reference period in accordance with the release calendar.

Information on the preliminary release are treated as preliminary until the next release. A time gap of publication of final data in the investments releases is 9 months.

### 4.2 Punctuality

The accuracy indicator represents the time difference between the actual publication of the data and the planned publication of the data.

P3 = dact - dsch

As for the research of investments, the accuracy = 0, which means that the data is published in accordance with the Calendar of publication of data.

## 5. Availability and clarity

### 5.1 Statistical Release Calendar

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12 and 47/19.) stipulates that official statistical producers prepare, update, and publish the Statistical Release Calendar. It is published on the website of Statistical Office not later than 20 December for the next year, for all official statistical producers that includes date of releasing statistical data. Any change in date of releasing in the Calendar is published in advance in accordance with the Procedure on Unplanned Revisions.

### 5.2 Access the data Release Calendar

The calendar of data publication is available on the following link: Release Calendar

### 5.3 Releases

Releases of Investments in fixed assets is available on: Releases.

### 5.4 Publication

All publications published by the Statistical office of Montenegro are available at the link: Publication.

### 5.5 On-line databases

Data are available on web site: Database.

### 5.6 Access to micro data

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12 and 47/19) regulates rules under which external users can obtain an access to individual data for needs of research. Article 58 defines types of scientific and research organizations that can obtain such data. Providing individual data without identifiers is possible only upon a written request of scientific and research institutions, with purpose of performing scientific and research activities as well as international statistical organizations and statistical producers from other countries. The research entity signs the agreement with the Statistical Office, and it signs the statement on respecting the confidentiality principle. Official statistical producers keep separate records on users and the purpose of using the statistical data given to these users.

### 5.7 Metadata occupancy

The ratio of the number of metadata elements provided to the total number of metadata elements applicable. For the survey Investments in fixed capital, the metadata fill rate is 100%.

## 6. Comparability

### 6.1 Comparability - geographical

The methodology is comparable to international statistical standards, ie, with the European System of Accounts (ESA2010) and the National Accounts System (SNA2008).

### 6.2 Time comparability

Investment in fixed capital survey data are fully comparable over time and are available from 2002 to 2023 according to the NACE Rev.2 Classification of Activities at the sector level.

*Time comparability indicator*

Length of comparable time series indicator is calculated as follows:

CC1 = Jlast - Jfirst + 1

Jlast - number of the last reference period with disseminated statistics;

Jfirst - number of the first reference period with comparable statistics.

According to the above formula, the length of the comparable time series for the research of investments in fixed capital is 21 years. Data on investments in fixed assets have been available since 2002 on the MONSTAT website and are comparable over time.