



**MONTENEGRO
STATISTICAL OFFICE**

METHODOLOGICAL GUIDELINES
CONSTRUCITON WORKS

60

METHODOLOGICAL GUIDELINES

60

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The legal basis for the implementation of this statistical survey is the Law on Official Statistics and Official Statistical System of Montenegro ("Official Gazette of Montenegro", No. 18/12 from 30. 03. 2012).

METHODOLOGICAL GUIDELINES

The aim of survey

The data collected in this survey are the result of the work of construction enterprises and natural persons in the territory of Montenegro. They allow monitoring of construction production, reviewing the size and structure of the investments in buildings and engaged workforce. The aim of the research on the construction work is to provide the results of construction activities by type of building. Under the buildings built by individual owners include the buildings that were built by the owners of their own labor, with the help of hired labor, or engaging in independent private contractors and craftsmen.

Reporting units

Reporting units of survey on construction activities are:

- enterprises with 5 and more employees which are registered in sector F – construction (area 41, 42, 43) according to the classification NACE Rev.2 and
- enterprises (KAU) which are not registered in sector F, but whose local units perform the construction works.

Reporting units in the buildings constructed by individual owners are:

- buildings that were built by the owners of their own labor, with the help of labor from outside, or engaging in independent private contractors and craftsmen.

Coverage

The survey included all reporting units with 5 and more employees who are involved in construction, regardless of ownership, association form and of the origin of capital as well as reporting units (KAU) whose business units engaged in construction works.

The survey on construction works shall include:

- preparatory work involving demolition and dismantling of buildings and other structures, land clearing, excavation of foundations and other earthworks;
- works to raise the building and construction of other facilities;
- installation and finishing work on buildings;
- renting of construction machinery and equipment for construction or demolition of buildings, with operator.

The data on construction works should be excluded:

- the cost of purchasing the land;
- costs and hours of work achieved in engineering, surveying of land, supervision and control of the project, because these activities according to the Classification, do not fall in construction;
- value added tax (VAT).

The sample frame was formed on the basis of the data from Statistical Business Register, which includes all active business entities from the area of construction as well as KAU with secondary activity in construction sector.

Reference area: The whole territory of Montenegro.

Sample: Stratified sample.

Sampling and methods of used estimation:

Initial weight W , $W = 1/f$, where is $f = nh/Nh$ (nh – sample size in a certain class of reporting units, Nh – total number of reporting units in that class obtained from database). Depending on the results obtained from the fiels, initial weight is adjusted for non-response rate.

Criteria for stracification:

Reporting units are stratified by the group of employees and classified into three classes:

Class 1: 5-49 employees,

Class 2: 50-249 employees,

Class 3: 250 and more employees.

The sample includes all reporting units from the class 2 and 3, while reporting units from class 1 is selected by random samle.

The survey on buildings built by individual owners include all buildings, new buildings and extensions, regardless of whether the competent authority has issued a permit for construction, namely: buildings with apartments (exclusively residential, predominantly residential and non-residential predominantly) and buildings without dwellings, but they are built to perform activities of catering, trade, crafts and agriculture. Apart from these, including the garage and if they are built as separate structures, as well as a weekend home. This report shall include the flats that were built by adapting non-residential space.

The survey on buildings built by individual owners were excluded from the building where they made reconstruction, alteration (except adptacije non-residential space in the apartment) and large repairs or buildings which are made without foundation and whose exterior walls entirely of boards or plaiting (ie . Not used hard construction materials). Do not include even a residential building of one room, which is less than 4 m².

Organization of survey

Data collection at the level of municipality is done in the regional offices of statistics. Control, input, processing and dissemination of collected data is done in the sector of short-term statistics.

The data are collected via questionnaire which are provided by Statistical Office of Montenegro delivered through its regional departments to reporting units from construction area.

Methods of data collection

The data for reporting units are collected through annul survey on construction works (Građ-11) while the data for natural persons are collected through annual survey on buildings built by individual owners (Građ-11a).

Reporting units received the questionnaire and instruction from the competent statistical services.

Statistical Office of Montenegro shall performed the all tasks of preparing for a proper and successful implementation of survey. For this purpose its performs the following steps: development of methodology for survey, making a questionnaire, determining the framework for the selection of the reporting units, selection of interviewers, address book of reporting units,

printing of materials for conducting the survey, submission of questionnaire to the regional units which perform their distribution to the reporting units. Regional units are collecting the material (questionnaire) and in the defined deadline sent to the statistician for data processing. In order to increase the response rate suggest the reminders by post, mail or phone.

After the processing of data its done calculation and logical control. In the case of illogical the reporting units/natural persons are contacted for check.

Definition

The **main contractor** is a company that is a direct party to a contract with the investor.

Subcontractor is a company that has a contract for the execution of part of the works signed with the company that is the main contractor.

Construction is the execution of construction and building - construction work, installation of services, plant and equipment.

Buildings are structures connected with the ground (underground, aboveground construction and hydraulic engineering), for carrying out construction works, and are made of construction materials and components. Soil preparation, seeding or planting and others. which are used for agricultural purposes, does not fall within the construction works.

Buildings are permanent structures with a roof and external walls, constructed as a stand-alone utility units that protect from weather and other external influences and are intended for dwelling, performing a certain activity or for placing and keeping of animals, goods, equipment used in various industrial activities and services etc.

Buildings are also constructions covered with roof but without (all) walls, for example. eaves, as well as partly or completely below the surface, for example shelters, underground garages, shops and other business premises in underground passages and the like.

Individual building is a separate building in the case where buildings have a common structure (eg. buildings associated with one side or row houses) or some units that are separated by a firewall. If in buildings with no common frame of the fire wall, the building is considered to be individual buildings if they have a separate entrance, its own maintenance systems and can be used separately.

Residential buildings are buildings in which 50% or more of useful floor area is used for housing.

Non-residential buildings are constructions without dwelling area is less than 50% of the total floor area is intended for residential use. If at least half of the total floor area is used for housing, buildings are residential.

A **dwelling** is any residential construction unit intended for habitation, consisting of one or more rooms with ancillary rooms (kitchen, hallway, bathroom, closet, etc.) Or without them, and has one or more separate entrances directly from the hallway with staircase from the yard or the street.

Floor area (m²) is a useful floor area of the dwelling, measured inside the walls of the dwelling and presents the sum of areas of all rooms, kitchens, bathrooms, toilets and other utility rooms in the apartment.

It excludes the area of the basement and attic, which are not regulated as an apartment or part of it, then the surface garage, boiler room, pantry, etc. as well as staircases and other common areas in multi-dwelling buildings.

If you are given information on apartments in family homes, in the usable area of the apartment is not included in the surface of the basement, attic, stairways or corridors that connect the two apartments (unless you connect the same room apartment), as well as surface garage, boiler room and storage room.

Sizes upgraded parts of the building (in horizontal or vertical direction) are displayed in units of measure only if they obtained such building new apartments or commercial premises as new housing units for any purpose. The unit does not appear to upgrade rooms or utility rooms within the existing dwellings and similar expansion of existing business premises.

To avoid multiple data presentation, data on building (and housing) are given only for buildings (apartments) built by reporting units as the main contractor, ie. by direct contract with an investor or for their own purposes (eg. to be sold on the market). Reporting units contained in these buildings is to take some papers (eg. installation and final works) or a second phase of construction on the direct contract with an investor or as a subcontractor does not respond to questions about the building and apartments.

Other buildings are all constructions that are not buildings: railways, roads, bridges, highways, airport runs, pools etc.

Finished construction is every building in which they completed all planned construction, craft and installation works, so that it can be used for the purposes for which it was intended.

Value of construction work is shown at current prices and it comprises all construction material built and work spent regardless of whether such work and materials are paid or not. Data on the value of executed works related to works performed in the reporting year on finished and unfinished buildings. The value of work performed by contractors - a legal person, is given on the basis of annual compilations, while the value of the work performed by individuals is given on the basis of the statement of the owner.

New building involves construction of a new building at the site where before no structure or she existed, but was removed. Construction of new buildings and rebuilding (from the ground) buildings that are due to natural disasters, war and the like completely destroyed or were so damaged that they had to completely demolish.

New construction of a road or railway line is considered to be completely built in the lower or upper machine that cuts through entirely new route, or with partial use of the old route, whereby completely changed.

Upgrading involves construction of new parts of the building (in horizontal or vertical sense) to the existing building. These are construction works that receive new usable units beside the existing buildings or existing buildings, for example brand new house or office, or example extension of existing roads, water, sewer and other pipelines or communication lines, and the like. Here does not include the extension of existing buildings, for example. upgrading of certain rooms or premises, extension of roads or other extensions which usually increases the capacity of existing buildings.

Restoring old, rundown, abandoned buildings construction work which involves at least one dwelling or other premises in the building completely reconstructed using the relevant parts of existing structures, preserved external facades of buildings and so on, although the interior attic and wall partitions completely demolished (eg. due to the age of the building, natural disasters, war and the like.).

Adaptation of non-residential space in new housing implies a change of purpose non-residential to residential. These are construction works that existing space in the building (eg, attic or basement that had not been arranged for housing, garage space in which she performed a manufacturing or service industry) change the purpose or it is converted into one or more dwellings.

Under other adaptations space in buildings include the construction works that existing space in the building (eg. House, attic or basement that had not been done for commercial purposes, garages, etc.) Altering the purpose or becoming a commercial or copies of works which existing commercial adjusted for other business purposes.

Improvement of existing buildings are construction works which substantially improves the value in use of the building (eg, capacity) and prolongs battery life. Such works include: expansion of building, remodeling, refurbishment and modernization, as well as replacement of essential parts of dilapidated buildings.

Expansion involves building construction works that expand the existing building, for example. upgrade room or utility room in existing homes or business premises, expansion of roads for greater bandwidth, the replacement of existing pipelines and power lines with those who have the capacity and the like.

Modifications, refurbishment and modernization involves construction works which substantially improves the quality, function, capacity and duration of the existing building. Here, therefore, include works that affect the technical features essential for the building, such as. rehabilitation, modernization works due to changes in the technological process of production and so on. This group of works belonging to the introduction of pipeline installations, central heating, air-conditioning, elevators and other installations in the buildings they had not been for these installations.

Replacing worn-essential parts of buildings involves the construction work which completely replaces worn-out or damaged due to various disasters are essential parts of the building, such as. complete roof structure, stairways, elevators, windows and the like. or complete replacement of old electrical, plumbing and other installations, replacement of worn stripes on the entire route or part of the route, changing part of the road or around the time a new layer of asphalt, etc.

Regular maintenance and repairs represents construction works performed periodically in order to maintain the building in usable condition.

The average number of workers on construction sites - including all workers by a reporting unit hired to work on construction sites, regardless of qualification, type of employment (employment contract, service contract or any other type of contract, and written or oral agreements, workers hired through operating agency or loaned by other companies) and duration of work at the construction site.

If the (small) companies performing work on the job site with the direct involvement of the owner or manager of the company, family members, etc. it is necessary to include them in this group of workers.

The average number of employees should be calculated by adding up the data from the monthly payroll or other records and divide by twelve, or the number of months in which the company is open all year.

The total number of hours worked generated at construction sites - this figure is calculated by adding up the data on the actual number of hours for all months in the reporting year. Include actually realized classes of employees (at the above question 2.1.) And to classes during regular working hours, overtime, night work, work on Sundays and public holidays, regardless of whether they are paid or not.

Building size of the building - includes information on the size of the building in the box provided. For new buildings and restoration of collapsed buildings on the size of the data are given for the entire building, and for the expansion and changes in the allocation provide data on the size of the part of the building that builds or modifies purpose.

Building size of the building is expressed in two units of measure, and gross area in m² and gross volume in m³.

Gross building area (m²) is the sum of the area of all floors of the building covered exterior walls, including the thickness of external walls.

Include the floors where the floor beneath the surface of medium elevation of the surrounding terrain and the ground floor and all the floors above the ground surface including stairs, elevators, hallways, entrances, passages, etc., but excluding the balcony.

Gross capacity building (m³) is the sum of the volumes of all roofed parts of the building, including outer walls. It is calculated by dividing the gross building area of the corresponding parts of the building multiplied by the height of these parts. Home angle height of buildings (or parts of buildings) is calculated from the surface of the basement floor or second lowest floors in the building up of medium height roof structure, ie the building with a flat roof or terrace, which is the ceiling of the top floor, takes the angle of the lower surface of the flat roof or terrace.

The above definition of the unit of measurement are general statistical standards for the presentation of the building size recommended by European statistics and UN / Economic Commission for Europe.

Purpose of the building - a building can be:

Exclusively residential building is a building that is entirely intended for housing and there is no room for any activities, but may have garages and other common areas that are intended for the needs of the occupiers.

Mostly residential building is a building in which over 50% of usable area occupied apartments and rooms that serve beneficiaries (garage tenants, utility room), a useful space allocated for the activity is less than 50%. If it is true 50% of the area intended for residential use and 50% of the office space, the building is also classified in this group.

Mostly non-residential building is a building in which the major area of over 50%, occupy the premises for carrying out one or more activities, ie. residential area occupies less than 50% of usable building.

Only non-residential building as a whole is intended to perform certain activities or in its composition does not have rooms intended for housing.

Building with apartments exclusively for the family vacation house or other building in which all dwellings constructed home. As a rule, the investor or buyer of these apartments is a private person who uses them for its own purposes.

System construction - building can be:

The traditional system of construction is characterized by the application of traditional (classical) building materials such as brick, stone, concrete, etc. traditional (artisanal) way, and to only use basic prefabs ("assembly" and other carriers, lintels, etc.).

Under semi mounting system involves the construction under which less than 50% of the building running from construction of prefabricated elements that are installed most often dry process with minimum wet process.

Under mounting system means a building in which 50% or more structures derived from pre-manufactured construction of prefabricated elements on the construction site products previously manufactured prefabricated building elements that appear most frequently implanted dry method.

Size floors in the building - corresponds to the number of floors above and below ground.

The *ground floor* of the first floor of the building above the basement and the basement or above the middle elevations of the surrounding terrain (if the building has no basement) which are constructed residential or commercial premises.

The *basement* is a space in the building which is located under the below middle elevations of the surrounding land and as such belongs to the floors below ground.

Attics are typically not counted in the floors, however, if in the area built apartment or office space then appears as the next floor above the top floor of the building.

If the building has a mezzanine between the ground and first floors, and it is usually in cases where the part of the ground floor premises, it should be counted as ground because it is structurally connected to the ground floor and the first floor by floor constructions common shares or common ceiling.

Mezzanine occur in cases where the building has a lil more floors, a horizontal division of the floors was not carried out in a plane through the entire building. Usually, the division made on half of the building, and the difference in floor height of both parts of the half-height floors, so that the two mezzanine that connects the lower leg staircase considered one floor.

If the building does not have the entire amount of the same number of floors, number of floors is calculated according to the highest part. For buildings which are still upgrading corresponds therefore what upgrades. If the ground builds in the horizontal direction (expansion) corresponds to the "ground floor", if it builds up the first floor corresponds to a "one", and so on.

Installations in the building - it is necessary to chose one of the following responses:

The building is equipped with *central heating* installations if the central heating installations planned or built into the entire building or part of a building. Answer the central heating is given by the zaokriži one of the answers relating to the delivery method of heat as follows:

- Remote, if the heat is supplied from the public (local) power plants;
- Heating in the building (or housing) if the rooms in the building heated by heat supplied from a common boiler room in the building (which can heat a building or several of them) or provided for heating individual apartments or commercial premises.
- No, if not in one of the buildings are planned or built-in installation of central heating.

Lift - response " has " given if at least one entrance to the building is planned or has one or more elevators. Answer "no" is given if the building is not anticipated that there is no lift.

The usable area of office space in buildings, m² - enter the information on the usable surface area of business premises in the building, regardless of whether they are in exclusively or predominantly non-residential building or in a predominantly residential building.

Under the business premises shall mean the room in which it is performed to manufacture goods or provide different services (restaurants, shops, personal services), office premises for any purpose, including government and banks, medical offices, facilities that provide scientific, educational or cultural activity and so on.

The usable area of the business premises of the floor area measured within the walls of these rooms.

It excludes the area of the basement and attic, which are not regulated as office space, then the garage area that is not used for work, boiler room, pantry and stairs.

If the building is intended exclusively for residential use, or if the building exclusively with apartments for holidays in this question there can be no data.

Confidentiality

According to the Law on Official Statistics and Official Statistical System of Montenegro Article 54, aggregates of economic units are considered to be confidential if composed less than three units and the share of one unit in the aggregate exceed 85% of the total.

Dissemination

The published data are available to users in the Annual release of construction works, Statistical Yearbook, on the Web and application for the Android devices. Depending to the requirements and user equipment the data shall be submitted by post, fax or e-mail.

Harmonization with EU regulations

The survey of construction activities are harmonized with the Classification of activities NACE Rev.2 and Classification of Types of Construction – CC 1997.

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