



MONTENEGRO
STATISTICAL OFFICE

METHODOLOGY

Use of information and communication technologies in enterprises

88	METHODOLOGICAL GUIDELINES	88
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Content

The legal basis3

METHODOLOGICAL GUIDELINES.....3

 The aim of survey.....3

 Statistical units3

 Coverage.....4

 Survey organization.....4

 Definitions4

 Dissemination.....5

 Harmonization with EU regulations.....5

The legal basis for the implementation of the survey on statistics of Use of information and communication technologies in enterprises is the Law on Official Statistics and Official Statistical System of Montenegro ("Official Gazette of Montenegro", No. 18/12 from 30. 03. 2012, 047/19 from 12. 08. 2019) and Annual plan for statistical surveys.

Law on Official Statistics and the system of official statistics reporting units are obliged to give information and individual data obtained in the survey are protected and can be used only for statistical purposes.

METHODOLOGICAL GUIDELINES

The aim of survey

The main objective of the survey on the use of information and communication technologies in enterprises is to collect information from enterprises about:

- ICT systems and their use in enterprises,
- use of the Internet and other electronic networks by enterprises,
- e-commerce,
- e-business and organizational aspects,
- the use of ICT by information and services exchanges with public administration (e-government),
- ICT skills in enterprises and the need for ICT skills,
- barriers to the use of ICT, the Internet and others electronic networks, e-commerce and e-business processes,
- ICT security, security and protection, etc.

Statistical units

Statistical units are enterprises that have 10 or more persons employed from certain sectors according to NACE Rev. 2:

Section C - "Manufacturing industry";

Section D, E - "Electricity, gas and steam and air-conditioning, water supply, sewerage and waste management, control of waste disposal processes and similar activities";

Section F - "Construction";

Section G - "Wholesale and retail trade; repair of motor vehicles and motorcycles";

Section H - "Transport and storage";

Section I - "Accommodation and food service activities";

Section J - "Information and communication";

Section L - "Real estate activities";

Divisions 69-74 - "Professional, scientific and technical activities";

Section N - "Administrative and support activities";

Group 95.1 - "Repair of computers and communication equipment";

Coverage

Use of information and communication technologies in enterprises is conducted on a representative sample.

The sampling frame is based on the Business Register. Survey includes all enterprises from certain sectors according to the classification that have 10 or more persons employed in specific sectors: administrative and support service activities; construction; information and communication; real estate business; manufacturing industry; supply of electricity, gas, steam and air-conditioning, water, waste management, control of waste disposal processes and similar activities; transport and storage; wholesale and retail trade, repair of motor vehicles and motorcycles; accommodation and catering services.

Survey covers enterprises at the level of Montenegro.

Reference period for most questions is year in which the survey is conducted, while some questions refer to the year preceding the survey.

Survey organization

Pursuant to the Plan of Statistical Surveys, Organization, Preparation and Implementation of survey, as well as collected data processing are done by Statistical Office.

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.

Data collection is realized by telephone interview, at the level of Montenegro.

The period of data collection is annually, data are collected only once a year, in April, for the year in which the survey is conducted.

Definitions

Personal computer (PC) includes desktop computer that is usually fixed in one place with a separate physical keyboard for data input, display, and storage case. Laptop is not considered as a PC.

Laptop is the computer with extremely small dimensions than the personal computer that a man can easily carry with you.

DSL (Digital Subscriber Line) stands for a technology that transports data at high speeds (e.g. equal to or greater than 144 Kbit/s) over existing copper networks. DSL technology is a type of Internet connection that is much faster than dial-up access. Therefore, it is referred as a broadband one.

Important DSL technologies include:

ADSL: This term is used for DSL where assigned more bandwidth to download from upload (Asymmetric DSL).

SHDSL: The same download and upload speed (DSL Simmetric).

VDSL: Very high bit-rate DSL, with speeds up to 53Mbps compared to about 8 to 10 Mbps for ADSL.

Wired fixed Internet (Cable modem, LAN, optic cable, PLC)

Cable modem: This technology allows high-speed Internet access to be delivered over a cable TV network.

LAN (Local Area Network): High-speed Internet connections via housing networks.

Fibre optic cable: A technology which is not based on copper wire. The technology uses lasers or light emitting diodes and can provide unlimited bandwidth potential.

PLC: Means power line communication. Broadband over ordinary power lines in general can range from 256 Kbit/s to 2.7 Mbit/s.

Fixed wireless technologies: Technologies in this group are all wireless technologies for Internet access between fixed points. Examples include WiFi or WiMax. Public WiFi or WiMax can be available to everyone within a specific area. WiMax connectivity provides fixed wireless access similar to WiFi functionality, but at a much higher range (up to about 50 km).

Mobile broadband connections (3G, GPRS, GSM, UMTS)

Third generation (3G) of mobile technology allows greater access speed compared to GPRS.

GPRS data transmission standard for mobile telephony is the transition to the 3G standard. GPRS allows for faster data transfer compared to traditional standard, but not as fast as the 3G.

GSM (Global System for Mobile Communications) in addition to voice and data transmission, this standard provides services such as SMS or international Roaming.

UMTS is a third generation (3G) mobile technology for networks based on the GSM standard.

Dissemination

The publication of data is done in accordance with the Statistical Release Calendar of the Statistical Office, according to a predefined date and manner of publishing data.

Published data are available to users in the annual release on the use of information and communication technologies in enterprises, the Statistical Yearbook, the publication "Montenegro in Figures", and on the Web.

Harmonization with EU regulations

The survey on the usage of information and communication technologies in enterprises is harmonized with the Implementing Regulation (EC) no. 808/2004 and regulations of the European Commission which change depending on the year of survey.

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