



Agency for Strategic planning
and reforms of the
Republic of Kazakhstan
Bureau of National statistics

Quality report

*On the use of household information and
communication technologies in the Republic of
Kazakhstan*

Content

S.1 Contact details

S.2 Introduction - Relevance

S.3 Updating metadata

S.4 Presentation of statistical information

S.5 Unit of measurement

S.6 Reporting period

S.7 Legal basis

S.8 Confidentiality and data protection

S.9 Publication Policy

S.10 Frequency of propagation

S.11 Dissemination format, accessibility and clarity

S.12 Availability of Documentation

S.13 Quality management

S.14 Relevance

S.15 Accuracy and reliability (to be completed taking into account the type of observation)

S.16 Timeliness and punctuality

S.17 Comparability

S.18 Consistency

S.19 Load

S.20 Revision of data

S.21 Processing of statistical data

S.22 Notes

S.1 Contact details

S.1.1 Organization

Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan

S.1.2 Structural subdivision

Department of Services and Energy Statistics

S.1.3 Name of contact person

Rysbaeva Ulzhan Turdalykyzy

S.1.3.1 Name of the head of the responsible structural unit

Karaulova Gulmira Sailaubekovna tel. 74-90-60

S.1.5 Postal address of the contact person

010000, Nur-Sultan, Left Bank of the Ishim River, 8 Mangilik El Street, House of Ministries, 4 entrance

S.1.6 E-mail address of the contact person

u. rysbaeva@economy.gov.kz

S. 1.7 Telephone number of the contact person

+ 7 (7172) 74-93-28

S. 2 Introduction-Relevance

The level of development of information and communication technologies (hereinafter - ICT) to a certain extent affects the competitiveness of the country's economy. The current level of economic development should correspond to the level of interaction between the business sector, civil society and the state. This cannot be achieved without the development and application of ICT.

ICT - a set of methods, production processes and software and hardware integrated with the purpose of collecting, processing, storing, distributing, displaying and using information in the interests of its users.

As part of the information support of state bodies for the implementation of activities of the Digital Kazakhstan programs, information is generated annually characterizing the level of ICT use by households.

The basis for the formation of statistics on the use of ICT by households is the report on the questionnaire N-020 "Questionnaire for a household survey on the use of information and communication technologies." The main purpose of the statistical survey is to determine the level of ICT use by households and individuals in the Republic of Kazakhstan..

The main users are the Ministry of Digital Development, Defense and Aerospace Industry of the Republic of Kazakhstan, National Infocommunication Holding Zerde JSC, local executive bodies (LEBs) and others.

The Bureau of national statistics holds meetings of working groups (focus groups), with the participation of potential users and respondents, representatives of interested government agencies, as well as NPP "Atameken", which analyze in detail the indicators of national statistical forms for their relevance and avoid duplication with indicators departmental statistical forms and forms of administrative data.

S.3 Updating metadata

S.3.1 Latest confirmation of updated metadata

S.3.2 Latest placement of metadata

S.3.3 Latest metadata update

S.4 Presentation of statistical information

S.4.1 Data description

Determination of the level of computer and digital literacy of household members, the proportion of Internet users, types of ICT use, etc. The main indicators of this questionnaire are the level of digital literacy, the proportion of Internet users, computers, etc.

S.4.2 Classification system

When conducting sample surveys, statistical classifications are of great importance. Their application affects the comparability of the information collected with the data of other statistical surveys and its quality.

A sample survey on ICT use by households uses the Statistical Classification of Administrative Territories (CATO), the International Standard Classification of Occupations (ISCO), the International Standard Classification of Education (ISCED) and reference books developed by the Bureau of national statistics.

S.4.3 Sectoral coverage

Households included in the sample are included in the survey.

The general population is the statistical register of the housing stock (hereinafter - SRHF). The general population includes households living in all types of dwellings, with the exception of those living in shared communal apartments, dormitories, nursing homes for the elderly and disabled, orphanages, prisons, hotels, religious communities and other similar dwellings. The sample was formed from apartments and amounted to 21,000 households (annually).

S.4.4 Statistical concepts and definitions

- 1) The survey unit is a household, which is an economic entity consisting of one or more individuals living together, pooling all or part of their income and property, and jointly consuming goods and services. Household members 6 years of age and older are to be interviewed.
- 2) Toolkit: Statistical form "Questionnaire of household survey on the use of information and communication technologies" (code 292112057, index H-020, annual frequency).
- 3) Type of observation: selective observation
- 4) The deadline for submission is January 30 (inclusive). The survey is carried out on paper by interviewers. The sample survey questionnaire is filled in for each separately sampled household (family) included in the sample. It is not allowed to combine in one form of the questionnaire records of information on several families belonging to different households, even if they live within the same premises.
- 5) The last revision of the form was in 2017, the statistical form was posted on the Internet resource Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan (www.stat.gov.kz) in the section For respondents - Statistical forms for 2019 - Annual forms.
- 6) ICT - a set of methods for working with electronic information resources and methods of information interaction, carried out using a hardware-software complex and a telecommunications network;
- electronic government - a system of information interaction between government bodies and with individuals and legal entities, based on the automation and optimization of government functions, as well as designed to provide services in electronic form;

- Internet - a worldwide system combined networks of telecommunications and computing resources for the transmission of electronic information resources.

S.4.5 Statistical object

The statistical objects are households and family members aged 6 and over.

S.4.6 General population (principle of selection of survey units)

The survey on ICT use in households is carried out on a sampling basis.

The information base for the formation of the sample population of households is the SRLF.

The use of this database is due to a number of advantages:

- availability of a ready-made sampling frame, which excludes one of the significant cost items associated with compiling the sampling frame;
- availability of a constantly updated database, which is necessary for the implementation of the rotation of households;
- availability of information on households in the territorial context.

The sample is 21,000 households and the reserve is -0.1% of the general population (annually).

In order to avoid the effect of household fatigue from participation in the survey, households are rotated (replaced) annually. The size of the rotation is equal to 1/3 of the total number of surveyed households. Every year, 1/3 of the households are removed from the sample and replaced by others, and after 3 years the sample is completely renewed. The replacement of households is done using the same method as originally used for sampling. This includes replacing households with households belonging to the same stratum, segment or cluster.

The survey covers households living in all types of residential premises, with the exception of those living in shared communal apartments, hostels, boarding houses for the elderly and disabled, orphanages, prisons, hotels, religious communities and other similar residential premises.

S.4.7 Territorial coverage

14 regions and the city of Almaty, Nur-Sultan, Shymkent.

S.4.8 Time coverage

In Kazakhstan, the ICT household survey has been conducted since 2004 on an annual basis. There are time series for 2004-2018.

S.4.9 Base period

The base period is the year preceding the survey year.

S.5 Unit of measurement

Percent

S.6 Reporting period

year

S.7 Legal basis

S.7.1 Legal framework

1. Law of the Republic of Kazakhstan dated March 19, 2010 No. 257-IV "On state statistics".
2. Rules for the provision of primary statistical data by respondents, approved by order of the Chairman of the Agency of the Republic of Kazakhstan on Statistics dated July 9, 2010 No. 173.
3. Rules for the submission of administrative data by administrative sources on a gratuitous basis, approved by order of the Acting Chairman of the Agency of the Republic of Kazakhstan on statistics dated July 14, 2010 No. 183.
4. The plan of statistical work, approved in accordance with the established legislative procedure of the Republic of Kazakhstan by the Order of the Minister of National Economy of the Republic of Kazakhstan.
5. Schedule for the dissemination of official statistical information, approved by the Order of the Chairman of the Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan.
6. Rules for the provision on a gratuitous basis of statistical information not provided for by the schedule for the dissemination of official statistical information and developed on the basis of primary statistical data submitted by respondents in accordance with the schedule for submitting primary statistical data by respondents, approved by the order of the Chairman of the Agency of the Republic of Kazakhstan on Statistics of May 20, 2010 No. 113.
7. Rules for the provision and use of databases in a de-identified form for scientific purposes, approved by Order of the Minister of National Economy of the Republic of Kazakhstan dated December 18, 2015 No. 778.
8. Methodology on statistics of information and communication technologies, approved by the Order of the Chairman of the Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan of No. 246 dated October 21, 2016 (registered with the Ministry of Justice of the Republic of Kazakhstan on November 23, 2016 No. 14447).

S.8 Конфиденциальность и защита данных

S.8.1 Политика конфиденциальности

1. Article 8 of the Law of the Republic of Kazakhstan dated March 19, 2010 "On State Statistics", in accordance with which a guarantee of confidentiality and protection of the submitted data by respondents is ensured.
2. Article 28 of the Entrepreneurial Code of the Republic of Kazakhstan dated October 29, 2015 ensures the protection of information constituting a commercial secret.
3. Information security policy (hereinafter referred to as the Policy) approved by the Order of the Chairman of the Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan dated October 31, 2016 No. 252 defines the goals, objectives, guidelines and practical techniques in the field of ensuring information security of the Committee. The main goal of the Policy is to ensure the availability of official statistical information, confidentiality of information stored and processed on the computer equipment of the Committee under the conditions of its integrity and authenticity.

S.8.2 Privacy - data handling

The rules for the provision and use for scientific purposes of databases in a de-identified form, approved by Order of the Minister of National Economy of the Republic of Kazakhstan dated December 18, 2015 No. 778.

S.9 Publication Policy

S.9.1 Publication Calendar

Clause 1, Clause 2 of Article 26 of the Law of the Republic of Kazakhstan "On State Statistics" dated March 19, 2010 No. 257.

The schedule for the dissemination of official statistical information is posted on the website of the Bureau of national statistics www.stat.gov.kz in the section "Home" // "Basic documents".

S.9.2 Access to the Graph

The schedule for the dissemination of official statistical information is posted on the website of the Bureau of national statistics www.stat.gov.kz in the section "Home" // "Basic documents".

S.9.3 User access

Bureau of national statistics website www.stat.gov.kz. Official statistical information> Operational data (express information, bulletins)> Information and communication technologies

S.10 Propagation frequency

year

S.11 Dissemination format, accessibility and clarity

S.11.1 News publications

not applicable

S.11.2 Publications

- 1) Statistical bulletin "On the use of information and communication technologies by households in the Republic of Kazakhstan", posted on the Internet resource Bureau of national statistics in the section Official statistical information (by industry) - Operational data (express information, bulletins) - Information and communication technologies - Bulletins;
- 2) Statistical collection "Development of communications and information and communication technologies in the Republic of Kazakhstan", posted on the Internet resource Bureau of national statistics in the section Official statistical information (by industry) - Collections, quarterly publications, spreadsheets, analytics - Statistical collections;
- 3) Indicators of state and sectoral programs posted on the Internet resource Bureau of national statistics in the section Official statistical information (by industry) - Indicators of state and government programs;
- 4) The main indicators and dynamic tables are posted on the Bureau of national statistics Internet resource in the section Official statistical information (by industry) -Information and communication technologies

S.11.3 Online databases

Bureau of national statistics website www.stat.gov.kz. Information and analytical system "Taldau" - ICT statistics - On the use of ICT by households.

S.11.3.1 AC1. Data tables-consultation

Not implemented

S.11.4 Microdata access

The rules for the provision and use for scientific purposes of databases in a de-identified form, approved by Order of the Minister of National Economy of the Republic of Kazakhstan dated December 18, 2015 No. 778.

S.11.5 Other

S.11.5.1 AC2. Metadata consultation

not implemented

S.12 Availability of Documentation

S.12.1 Methodology documentation

- 1) "Methodology for statistics of information and communication technologies" approved by the order of the Chairman of the Bureau of national statistics dated October 21, 2016 No. 246. Registered with the Ministry of Justice of the Republic of Kazakhstan on November 23, 2016 No. 14447. Posted on the Internet resource Bureau of national statistics www.stat.gov.kz in the section "Methodology" - Statistics of information and communication technologies;
- 2) "Methodological Regulation on Statistics 2018", fourth edition, supplemented. Posted on the Bureau of national statistics Internet resource www.stat.gov.kz in the "Methodology" section;
- 3) Guidance on Measuring ICT Access and Use at the Household and Individual Level, available on the International Telecommunication Union (ITU) website www.itu.int.

S.12.2 Quality documentation

1. П11. Policy in the field of quality, approved by the order of the Chairman of the Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan dated April 23, 2015 No. 67.
2. Quality objectives Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan, Quality objectives of the Office of Service and Energy Statistics.
3. Documented information of the quality management system: Quality manual; Documented procedures; Instructions; Process map "Production of official statistical information" (SMK KS KP 03-18).
4. Standard methodology for describing the process of production of statistical information by state bodies, approved by the Order of the Chairman of the Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan dated March 30, 2015 No. 53;
5. Methodology for assessing the quality of official statistical information, approved by the Order of the Chairman of the Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan dated May 23, 2018 No. 63

S.13 Управление качеством

S.13.1 Quality assurance

The quality and reliability of ICT statistics data is supported by generally accepted procedures:

- compliance with the basic principles of primary accounting;
- use of standard statistical classifications of goods, products, services;
- at the stages of collection and processing of primary data, all control schemes (format-logical, arithmetic) have been developed and implemented;

- to confirm the reliability of primary data, the possibility of obtaining additional information from respondents is legally enshrined.

S.13.2 Quality control

The survey results on ICT household use in terms of accuracy and reliability can be rated as good. Based on a sample obtained by the method of simple random sampling, based on the use of a table of random numbers and constant monitoring of the quality of the survey, the accuracy, reliability and representativeness of the survey results are ensured. The results obtained are representative both for the general population and for its subgroups.

S.14 Relevance

S.14.1 Needs

The Ministry of Digital Development, Defense and Aerospace Industry of the Republic of Kazakhstan, National Infocommunication Holding Zerde JSC, local executive bodies and other state bodies - for analytical work.

S.14.2 User satisfaction

An annual survey of users of official statistical information is carried out, according to the questionnaire Q-002 "User survey"

S.14.3 Completeness / R1. Data completeness-share 100% coverage

S.15 Accuracy and reliability (to be completed according to the type of observation)

S.15.1 Overall accuracy

The Household ICT Use Survey is designed in such a way that potential errors can be minimized and controlled. Nevertheless, when conducting a sample survey, inaccuracies are possible, called random errors in statistics, even if the survey was carried out with the greatest care. Such errors are identified and corrected by the regional departments of statistics and the Bureau of national statistics in the course of statistical observation.

S.15.2 Sample errors - indicators / A1.

The ICT household survey is conducted on the basis of a random sample survey. In this way, the accuracy of the results can be assessed in terms of the error calculation.

The relative standard error is calculated after a sample survey. The value of "relative standard error" estimates the percentage of deviation of the obtained sample results from the true value of the general population. The relative standard error of the sample is inversely proportional to the sample size, i.e. when the sample size is increased by four times, its errors are halved.

The relative standard error for the most important indicators at the republican level was less than 0.3%

S.15.3 Non-sampling error

When conducting a survey on the use of ICT by households, there were no errors not due to the sample survey, since the sample size was set at 21,000 households (~0.42% of the general population) and a 0.1% reserve number of households was provided. In this regard, the number of reporting households in 2018 amounted to 21,000 households.

S.15.3.1 Coverage error

not applicable

S.15.3.1.1 A2. Overcoverage-share

S.15.3.1.2 A3. Common units-ratio

S.15.3.3 No response errors

S.15.3.3.1 A4. Absence unit-fraction

not applicable

S.15.3.3.2 A5. No response-share clause

S.16 Timeliness and punctuality

S.16.1 Timeliness

S.16.1.1 TP1 Waiting period - first results

The results in the bulletin are published annually, according to the Statistical Work Plan approved for the current year.

S.16.1.2 TP2.Waiting Period - Latest Results

The results in the bulletin are published annually, according to the Statistical Work Plan approved for the current year, the results are final.

S.16.2 Punctuality

S.16.2.1 Punctuality / TP3

The data are published in accordance with the Statistical Work Plan approved by the Order of the Minister of National Economy of the Republic of Kazakhstan and the Schedule for the dissemination of official statistical information, approved by the Order of the Chairman of the Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan.

S.17 Comparability

S.17.1 Geographic comparability

Data is comparable across regions

S.17.1.1 Asymmetry in mirrored flow statistics-coefficient / CC1

S.17.2 Length of comparable time series / CC2

The dynamic performance in ICT statistics has been comparable and continuous since 2004. There are time series for 2004-2018.

S.18 Consistency

S.18.1 Consistency, external, cross

The methodology for ICT statistics was developed in accordance with the international recommendations of experts from the statistical offices of Germany and Spain, obtained within the framework of the KAZSTAT Project (Project on Strengthening the National Statistical System) and Eurostat standards.

S.18.2 Internal consistency

The ICT statistics methodology has been agreed with all structural divisions of the Bureau of national statistics.

S.19 Load

Data collection is carried out on paper by interviewers. All answers are recorded according to the words of the respondents; the submission of supporting documents is not required.

The organization of data collection and processing is the task of the territorial divisions of statistics (departments of statistics of cities, districts and departments of statistics of regions).

S.20 Revision of data

S.20.2 Revision of data / A6

there was no data revision

S.21 Processing of statistical data

S.21.1 Input data

Statistical information on ICT statistics in households is formed on the basis of primary reports of households on the H-020 questionnaire "On the use of information and communication technologies by households".

Statistical observation is carried out by a sample method.

2) The Household ICT Use Survey is a decentralized survey that is based on interviewing household members by interviewers. The organization of data collection and processing is the task of the territorial divisions of statistics (departments of statistics of cities, districts and departments of statistics of regions).

3) The ultimate goal of sample observation is to characterize the general population based on the data obtained from the sample. In order to obtain data that are generalized to the general population, statistical weighting of the survey results is performed. The implementation of this method is carried out by assigning to each surveyed household a statistical weight that characterizes the total number of households represented by the part in the sample.

4) The spreading coefficients are calculated by strata.

S.21.2 Inspection frequency

year

S.21.3 Method (method) of collecting primary statistical data

The survey is carried out on paper by interviewers.

The sample survey questionnaire is filled in for each separately sampled household (family) included in the sample. It is not allowed to combine in one form of the questionnaire records of information on several families belonging to different households, even if they live within the same premises.

In conducting a household survey, a standard interviewing method is used, that is, using a standardized questionnaire form with ready-made questions and standardized methods for recording respondents' answers. This method ensures that all respondents are asked the same questions in the same sequence, and that responses to the same question from different respondents are recorded using a comparable method.

S.21.4 Reliability of primary statistical data

In order to improve the quality of data, check the correctness of filling out the statistical form and minimize the lack of answers on some questions of the statistical form, plausibility checks are defined at the level of input of primary data in electronic format, and various format-logical controls are also included in the software for processing primary statistical information.

S.21.5 Imputation - share / A7

S.21.6 Correction

Correction of data is carried out directly during the interviewing.

S.21.6.1 Seasonal adjustment

The results of this survey do not require smoothing as seasonal influences are not expected from the use of ICT.

S.22 Notes

In the future, continue to work on ensuring the quality and comparability of ICT statistics at the international level.