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

Quality report

On the use of information and communication technologies at enterprises of 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

Tolegenkyzy Togzhan

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

Yakupova Zifa Rafikovna

S.1.5 Postal address of the contact person
010000, Nur-Sultan, Left bank of the river Ishim, 8 Mangilik El Street, House of Ministries, 4 entrance, e-mail: kazstat.rk@gmail.com

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S. 2 Introduction-Relevance

The level of development of information and communication technologies 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 aim of collecting, processing, storing, distributing, displaying and using information in the interests of its users.

Within the framework of information support of state bodies for the implementation of activities of the Information Kazakhstan-2020 and Digital Kazakhstan programs, information is generated annually characterizing the level of ICT use at enterprises.

The basis for the formation of statistics on the use of ICT in organizations is a report in form 3-inform "On the use of ICT in enterprises". The main purpose of the statistical survey is to determine the level of ICT use in organizations of the Republic of Kazakhstan.

The main users are the Ministry of Information and Communication of the Republic of Kazakhstan, JSC National Infocommunication Holding Zerde.

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", at which the indicators of national statistical forms are analyzed in detail for their relevance and the elimination of 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

General information about the organization, use of computer and computer networks, use of the Internet, e-government, cloud computing, e-commerce, e-business, ICT specialists and knowledge.

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.

When conducting a sample survey on the use of ICT in enterprises, the following statistical classifiers are used:

1) KATO - Classifier of administrative-territorial objects;
2) OKED - General classifier of economic activities;
3) KFS - Classifier of forms and types of ownership;
4) KRP - Classifier of the dimension of legal entities;
5) CSE - a classifier of sectors of the economy.

These classifiers are posted on the Internet resource Bureau of national statistics www.stat.gov.kz on the main page in the section "Official statistical information (by industry)" - Classifiers

S.4.3 Sectoral coverage

They are represented by legal entities and (or) their structural and separate divisions with types of economic activities in accordance with the codes of the General Classifier of Types of Economic Activities (hereinafter - OKED) 01-03, 05-09, 10-33, 35, 36-39, 41-43, 45-47, 49-53, 55, 56, 58-63, 64.19, 64.92, 65, 68-74, 77-82, 86, 90, 93, 95.1, 96.04 with more than 100 people, as well as with OKED 84.11 , 84.12, 84.13, 84.21, 84.30 regardless of the number - by the continuous method, according to the specified OKEDs (excluding OKED 84.11, 84.12, 84.13, 84.21, 84.30) with a population of up to 100 people - by the selective method, as well as individual entrepreneurs engaged in electronic commerce, regardless from OKED, according to the list.

S.4.4 Statistical concepts and definitions

1) The circle of respondents: legal entities and (or) their structural and separate divisions with types of economic activities according to the codes of the General Classifier of Economic Activities (hereinafter - OKED) 01-03, 05-09, 10-33, 35, 36-39, 41-43, 45-47, 49-53, 55, 56, 58-63, 64.19, 64.92, 65, 68-74, 77-82, 86, 90, 93, 95.1, 96.04 with more than 100 people, and also with OKED 84.11, 84.12, 84.13, 84.21, 84.30, regardless of the number - by the continuous method, according to the specified OKEDs (excluding OKED 84.11, 84.12, 84.13, 84.21, 84.30) with up to 100 people - by the selective method, as well as individual entrepreneurs carrying out e-commerce, regardless of OKED, according to the list.

2) Toolkit: Statistical form "Report on the use of information and communication technologies (ICT) at enterprises" (code 291112205, index 3-inform, annual frequency).

3) Type of observation: selective.

4) The deadline for providing respondents is January 19 (inclusive) after the reporting period. The submission of this statistical form is carried out on paper or electronically. Filling out the statistical form in electronic form is carried out through the information system "Data collection in on-line mode" 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).

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 year - annual forms.

S.4.5 Statistical object
ICT, Internet, computer

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

The survey of organizations using ICT is carried out on an annual basis using a sample method.

To determine the general population, the Statistical Business Register (hereinafter - SBR) is used, which contains a complete list of units with the necessary classification and address data.

The main criteria for the formation of the sample for the survey of the use of ICT in organizations are:

1) by organization:

- active organization;

- small businesses (sample size is 10%);

- large and medium-sized enterprises are surveyed using a continuous method (100%);

- individual entrepreneurs on the list carrying out e-commerce, regardless of OKED

2) by government bodies:

- government bodies are surveyed using a continuous method. The survey involves active government bodies regardless of size.

The sample is formed on the basis of an order for a sample design in accordance with the "Methodology for conducting sample surveys of enterprises" 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 August 22, 2016 No. 169, posted on the Internet. resource Bureau of national statistics www.stat.gov.kz in the section "Methodology" - Formation of a sample for statistical observations.

S.4.7 Territorial coverage

Republic of Kazakhstan and its regions

S.4.8 Time coverage

In Kazakhstan, a survey on the use of information and communication technologies in enterprises has been conducted since 2004 on an annual basis. There are time series for 2004-2017.

S.4.9 Base period

The base period is the year preceding the survey year.

S.5 Unit of measurement

Thousand Kazakh tenge

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 of statistical information on a gratuitous basis that is 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 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 for scientific purposes of databases in a de-identified form, approved by the Order of the Minister of National Economy of the Republic of Kazakhstan dated December 18, 2015 No. 778.

S.8 Confidentiality and data protection

S.8.1 Privacy Policy

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 of databases in a de-identified form for scientific purposes, approved by the 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.

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

1. Law of the Republic of Kazakhstan dated March 19, 2010 No. 257-IV "On state statistics".
2. The plan of statistical work, approved in accordance with the established legislative procedure of the Republic of Kazakhstan.
3. The schedule for the dissemination of official statistical information, approved in accordance with the established legislation of the Republic of Kazakhstan 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.
4. The 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 were approved by order of the Chairman of the Agency of the Republic of Kazakhstan on Statistics dated May 20, 2010 No. 113.

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

6. Methodology for the formation and dissemination of official statistical information in electronic form, 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 November 30, 2016 No. 292.

7. Guidelines for interacting with users, including the media and the general public, approved by the Chairman of the Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan on August 18, 2015.

8. Guidelines for the use of corporate identity, approved by the Chairman of the Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan on December 7, 2016.

S.10 Propagation frequency

year

S.11 Dissemination format, accessibility and clarity

S.11.1 News publications

S.11.2 Publications

1) Statistical bulletin "On the use of information and communication technologies at enterprises of 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) - Statistics of 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 the State Program "Informational Kazakhstan - 2020", 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, the total costs of information and communication technologies, indicators of the use of information and communication technologies in organizations, the number of computers in organizations, etc., are posted on the Bureau of national statistics Internet resource in the Official statistical information section (by industry) - Statistics of information and communication technologies.

S.11.3 Databases in on-line mode

Information and analytical system "Taldau"

S.11.3.1 AC1. Data tables-consultation

Not implemented

S.11.4 Microdata access

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

S.11.5 Other

unacceptably

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) Eurostat Methodology "Toolkit for Information Society Statistics 2015", posted on Eurostat's website ec.europa.eu.

S.12.2 Quality documentation

1. 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. Objectives in the field of quality Bureau of national statistics of the Agency for strategic planning and reforms of the Republic of Kazakhstan, Objectives in the field of quality of the relevant structural unit.

3. Documented information of the quality management system: Quality manual; Documented procedures; Instructions; Process maps.

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 Quality management
S.13.1 Quality assurance

The quality and reliability of data on ICT statistics in organizations 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;
- a comparative analysis of statistical data in dynamics;
- 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, various format and logical controls are also included in the software for processing primary statistical information.

S.13.2 Quality control

The survey results on ICT use in enterprises in terms of accuracy and reliability can be rated as good. The used method of simple random sampling, based on the use of a table of random numbers and constant monitoring of the quality of the survey, ensures the accuracy, reliability and representativeness of the survey results.

S.14 Relevance
S.14.1 Needs

Ministry of Information and Communication of the Republic of Kazakhstan and JSC "National Infocommunication Holding" Zerde "-for monitoring target indicators of the State Programs" Information Kazakhstan - 2020 "and" Digital Kazakhstan ";

The Ministry of National Economy of the Republic of Kazakhstan, local executive bodies and other state bodies - for analytical work.

S.14.2 User Satisfaction

S.14.3 Completeness / R1. Data completeness-share

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

S.15.1 Overall accuracy

The survey on the use of ICT in enterprises is designed in such a way that possible errors can be minimized and controlled. Nevertheless, when conducting a sample survey, inaccuracies are possible, called random errors in statistics (incorrect filling of data on cost, operator error when filling a report, etc.), 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 survey on ICT use in enterprises is carried out 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, its errors are halved.

The relative standard error for the most important indicators at the republican level was less than 3%.

S.15.3 Non-sampling error

Errors not caused by a sample survey: due to the obligatory provision of primary statistical data, there are no non-responses during the survey. When conducting a survey on the use of ICT in enterprises, there were no errors that were not due to the sample survey.

S.15.3.1 Coverage error

Unacceptably

S.15.3.1.1 A2. Overcoverage-share

Unacceptably

S.15.3.1.2 A3. Common units-ratio

Unacceptably

S.15.3.3 No response errors

S.15.3.3.1 A4. Absence unit-fraction

Unacceptably

S.15.3.3.2 A5. No response-share clause

Unacceptably

S.16 Timeliness and punctuality

S.16.1 Timeliness

S.16.1.1 TP1 Waiting period - first results

Annually 55 days after the reporting period

S.16.1.2 TP2 Waiting Period - Latest Results

Annually 55 days after the reporting period

S.16.2 Punctuality

S.16.2.1 Punctuality / TP3

The data are published in accordance with the Statistical Work Plan, approved in accordance with the established legislation of the Republic of Kazakhstan 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 mirror flow statistics-coefficient / CC1

unacceptably

S.17.2 Length of comparable time series / CC2

unacceptably

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 electronically and on paper at the request of the respondent.

When collecting data online, the respondent is provided with automated arithmetic and logical controls, excluding the possibility of typical input errors. Information processing processes are automated using local software systems, control of input and output information is provided. The average time spent on filling out the form is 1-2 hours. Duplication with other examinations is excluded. No administrative data is used.

S.20 Revision of data

S.20.2 Revision of data / A6

unacceptably

S.21 Processing of statistical data

S.21.1 Input data

Statistical information on ICT statistics in organizations is formed on the basis of primary reports of respondents in the form 3-inform "Report on the use of information and communication technologies (ICT) in enterprises".

Statistical observation is carried out by a sample method.

The statistical business register (SBR) is used as the general population.

In this case, the main criteria for the formation of the general population should be:

1) by enterprises (OKED codes: 01-03, 05-09, 10-33, 35, 36-39, 41-43, 45-47, 49-53, 55, 56, 58-63, 64.19, 64.92, 65, 68-74, 77-82, 86, 90, 93, 95.1, 96.04)

-activity code: 1 - active enterprise;

-dimension codes: 105-160 (small) (10%);

-dimension codes: 215-225 (medium) (100%);

-dimension codes: 305-311 (large) (100%);

2) by government bodies (OKED codes: 84.11, 84.12, 84.13, 84.21, 84.30), ACT = 1, 100%.

3) for individual entrepreneurs engaged in e-commerce, regardless of the OKED according to the list.

The organization's ICT Use Survey sample uses a stratified sample using simple random sampling.

In this survey, the target population is stratified by economic activity, enterprise size and region.

The sample data is disseminated to the general population using the spreading factors.

Propagation coefficients are calculated per stratum.

S.21.2 Inspection frequency

year

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

According to ICT statistics in organizations, the provision of a statistical form is carried out on paper or in electronic form. Filling in the statistical form in electronic form is carried out through the information system "Online data collection" posted on the Bureau of national statistics Internet resource (www.stat.gov.kz)

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 and logical controls are also included in the software for processing primary statistical information. Format-logical controls: between sections, modules, items.

S.21.5 Imputation - share / A7

unacceptably

S.21.6 Correction

Correction of data is carried out directly in the course of statistical observation.

S.21.6.1 Seasonal adjustment

unacceptably

S.22 Notes

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