



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

Quality report

*"Input-Output" tables
of the Republic of Kazakhstan for 2022*

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S.1 Contact details

S.1.1 Organization

Bureau of National Statistics Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

S.1.2 Structural subdivision

Department of National Accounts

S.1.3 Contact name

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

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S.1.5 Postal address of the contact person

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S.2 Introduction-Relevance

In conditions of a high level of division of labor, each branch of production is closely connected with other industries: on the one hand, it receives raw materials, supplies, fuel, equipment and other types of goods and services from them, and on the other hand, it supplies them with its products. Industries that produce consumer goods provide their products to the needs of the population. All these relationships can be quantified. The production of a unit output under given production conditions requires a certain amount of appropriate raw materials, supplies, fuel, electricity and specific types of equipment. A quantitative change in the volume of production of some industries necessitates a corresponding change in the volume of production of industries technologically related to the production of a given product. The interrelationships between the industries receive a clear and visual expression in the Input–output Tables (hereinafter – IOT).

The initial basis for the compilation of a symmetric IOT is a pair of supply and use tables.

For the purposes of compilation of IOT, the concepts, definitions and classification

systems of statistical units, types of activities, products used in international practice and accepted in the national economy are used.

Currently, the relevance of the formation of IOT is due to the need for economic analysis, building a macroeconomic model for forecasting and formation of the global value chain.

S.3 Metadata Update

S.3.1 Last confirmation of updated metadata

S.3.2 Last metadata placement

S.3.3 Last metadata update

S.4 Presentation of statistical information

S.4.1 Data Description

IOT is also called a symmetric table because it has the same column and row measurements for the defining branches of the economy and is compiled either "product – product" or "industry – industry". The "product – product" table characterizes which products are used in the production of other products, the "industry – industry" table shows which industries use products from other industries.

S.4.2 Classification system

Classifier of products by types of economic activity (CC RK 04-2008) harmonized with the international classifier CPA 2008.

Classifiers are available on the website of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan www.stat.gov.kz in the “Statistical Classifications” section.

S.4.3 Sectoral coverage

Resident institutional units, which together make up the country's economy, are grouped into five mutually exclusive institutional sectors: the sector of non-financial corporations; the sector of financial corporations; the sector of public administration; the sector of households; the sector of non-profit organizations serving households.

IOT are formed in the economy as a whole.

S.4.4 Statistical Concepts and Definitions

Input-output analysis has become an economic tool, the costs of each of the industries indicated in the columns relate to the flow of its output, that is, a certain amount of each type of cost is required to produce one unit of production in each of the industries. For analytical purposes, the coefficients of direct and total costs are of particular importance, which are calculated using a symmetrical IOT in basic prices.

The basic principle of forming these tables is that the total amount of resources should be equal to the total volume of use of goods and services when the measurement is carried out at the same price:

Output + import = intermediate consumption + export + final consumption + capital formation.

The cost composition of the components of GDP in the IOT is determined according to the following scheme:

Gross value added = Compensation of employees + Other taxes on production - Other subsidies for production + Net profit or net mixed income + Consumption of fixed capital;

Gross domestic product = Gross value added + Taxes on products - Subsidies on products

S.4.5 Statistical object

Goods and services.

S.4.6 Frame (principle for selecting survey units)

Not applicable.

S.4.7 Territorial coverage

The Republic of Kazakhstan as a whole.

S.4.8 Time coverage

2001-2022

S.4.9 Base period

Not applicable.

S.5 Unit

Thousand Kazakh tenge

S.6 Reporting period

Year

S.7 Legal basis

S.7.1 Legal basis

1. Law of the Republic of Kazakhstan dated March 19, 2010 No. 257-IV “On State Statistics”.
2. Plan of statistical work, approved in the established legislative order of the Republic of Kazakhstan by the Order of the Head of the Bureau of National statistics Agency for Strategic planning and reforms of the Republic of Kazakhstan.
3. The schedule for the dissemination of official statistical information, approved by order of the Head of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan.
4. Order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated October 1, 2019 No. 10 "On approval of the Methodology for compiling the "Supply - Use " and "Input-Output" tables".

S.8 Privacy and data protection.

S.8.1 Privacy Policy

1. Article 8 of the Law of the Republic of Kazakhstan dated March 19, 2010 No. 257-IV "On State Statistics", according to which the confidentiality and protection of the data submitted by respondents is guaranteed.
2. Article 28 of the Entrepreneurial Code of the Republic of Kazakhstan dated October 29, 2015 No. 375-V ensures the protection of information constituting a trade secret.
3. The Information Security Policy (hereinafter referred to as the Policy), approved by the Order of the Head of BNS ASPR of the Republic of Kazakhstan dated February 10, 2021 No. 20, defines the goals, objectives, guidelines and practices in the field of ensuring information security of the Bureau. The main goal of the Policy is to ensure the availability of official statistical information, the confidentiality of information stored and processed on the Bureau's computer facilities under conditions of its integrity and authenticity.

S.8.2 Privacy – data handling

Rules for the provision and use of databases in de-identified form for scientific purposes, approved by order of the Chairman of the Agency of the Republic of Kazakhstan on Statistics dated July 2, 2010 No. 168. Registered with the Ministry of Justice of the Republic of Kazakhstan on August 13, 2010 No.6388.

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-IV.

The statistical work plan and the Schedule for the dissemination of official statistical information are posted on the website of the Unified Platform of Internet Resources for Government Agencies www.gov.kz in the section of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan in the section "Main" / "Activities" / "Main documents" / "Plans".

S.9.2 Access to the Chart

Simultaneous and equal access to all users on the website of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan in the section "Main"/ "Activities"/ "Main documents" / "Plans".

S.9.3 User access

Website of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan www.stat.gov.kz Main /Economics/Statistics of National Accounts.

S.10 Frequency of propagation

Year

S.11 Distribution format, accessibility and clarity

S.11.1 News publications

S.11.2 Publications

The statistical bulletin «Input-Output» tables of the "Republic of Kazakhstan" in Excel format in Kazakh, Russian and English is published annually on the website

of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan www.stat.gov.kz in the section Home / Economics / National Accounts / Publications / Bulletin, and Home / Economics / National Accounts / Electronic tables.

S.11.3 Online databases

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S.11.3.1 AC1.Data tables- consultations

Not implemented.

S.11.4 Access to microdata

Dissemination of data collected for the purpose of preparing official statistics is based on the requirements provided for in 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 data provided by respondents is ensured.

Rules for the provision and use of databases in de-identified form for scientific purposes, approved by order of the Chairman of the Agency of the Republic of Kazakhstan on Statistics dated July 2, 2010 No. 168. Registered with the Ministry of Justice of the Republic of Kazakhstan on August 13, 2010 No. 6388.

S.11.5 Other

Not applicable.

S.11.5.1 AC2. Metadata-consultations

Not implemented.

S.12 Documentation availability

S.12.1 Methodology documentation

1. System of National Accounts, 2008 (published by the Commission of the European Communities EUROSTAT, International Monetary Fund (IMF), Organization for Economic Cooperation and Development (OECD), United Nations (UN), World Bank). <https://unstats.un.org/unsd/nationalaccount/docs/SNA2008Russian.pdf>.

2. Guidelines for the compilation of input-output tables and their analysis (by the United Nations (UN)).
3. Order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated October 1, 2019 No. 10 "On approval of the Methodology for compiling tables " Supply - Use".

S.12.2 Quality documentation

1. Standard methodology for describing the process of producing statistical information by government bodies, approved by Order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated March 30, 2015 No. 53.
2. "Methodology for assessing the quality of official statistical information", approved by Order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated May 23, 2018 No. 63. Registered with the Ministry of Justice of the Republic of Kazakhstan on June 7, 2018 No. 17011.

S.13 Quality management

S.13.1 Quality Assurance

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

- formation according to international recommendations to ensure comparability of data in accordance with international standards;
- use of standard statistical classifications of goods, products, services;
- a comparative analysis of statistical data is carried out.

S.13.2 Quality assessment

Quality is ensured by the strict application of the concepts of the international standard SNA 2008 and the reliability of the data.

S.14 Relevance

S.14.1 Needs

Main users:

government bodies (Ministry of National Economy of the Republic of Kazakhstan and others);

research institutes (Institute of Economic Research and others);

international organizations (EAEC, OECD and others);

university teachers, students and others.

S.14.2 User satisfaction

The Bureau of National Statistics of the Agency for Strategic Planning and Reform of the Republic of Kazakhstan annually conducts a survey of users of official statistical information according to questionnaire Q-002 “User Survey”.

S.14.3 Completeness/R1. Data completeness-share

In accordance with the international standard SNA 2008.

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

S.15.1 Overall Accuracy

The accuracy of the source data is controlled by evaluating the methodological validity of the data sources and compliance with methodological recommendations

S.15.2 Sampling errors-indicators/A1.

Not applicable.

S.15.3 Non-sampling error

Not applicable.

S.15.3.1 Coverage error

Not applicable.

S.15.3.1.1 A2.Excess coverage - share

Not applicable.

S.15.3.1.2 A3.Common units - ratio

Not applicable.

S.15.3.3 No response errors

S.15.3.3.1 A4.Unit of absence - share

Not applicable.

S.15.3.3.2 A5.No response item - share

Not applicable.

S.16 Timeliness and punctuality

S.16.1 Timeliness

S.16.1.1 TP1.Waiting period - first results

IOT are published 12 months after the reporting period (T+12).

S.16.1.2 TP2.Waiting period - latest results

The first results are final.

S.16.2 Punctuality

S.16.2.1 Punctuality/TP3

Data are published and disseminated within the time frames in accordance with the Statistical Work Plan and the Dissemination Schedule of Official Statistical Information, approved by order of the head of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan.

According to the Plan of statistical work for 2023, the bulletin "Tables " Input-Output" of the Republic of Kazakhstan for 2022" was published on December 22, 2023.

S.17 Comparability

S.17.1 Geographical comparability

Comparable at the international level, since calculations are carried out in accordance with the SNA 2008 methodology.

S.17.1.1 Asymmetry by mirror flow statistics - coefficient/CC1

Unacceptable.

S.17.2 Duration of comparable time series/CC2

Published since 2001.

S.18 Consistency

S.18.1 Consistency external, cross

Calculations are carried out in accordance with the 2008 System of National Accounts methodology prepared by the International Monetary Fund (IMF), the Organization for Economic Co-operation and Development (OECD), the Statistical Office of the European Communities (Eurostat), the United Nations (UN) and the World Bank, which ensures the application common concepts,

definitions, classifications and assessment methods.

S.18.2 Internal consistency

The "Supply-Use" tables are used to compile symmetrical IOT.

The need to transform the data in the " Supply-Use " tables (here in after – SUT) to compile the Input–Output matrix is caused by the existence of secondary products.

In Kazakhstan's national practice of IOT is formed product by product, where the final demand quadrant of the usage table remains unchanged. It already reflects demand by product group. The parts of the table that relate to intermediate consumption and value added are being modified to move from data by industry to data by product groups.

When the resource table is symmetrized, the releases of secondary products are transferred to another type of activity as the main type of activity, respectively, it is also necessary to transfer the costs of production of this secondary product in the usage table.

In practice, it is very difficult to collect information on intermediate production costs incurred. And dividing them into primary and secondary activities is an even more time-consuming process. International guidelines recommend the following methods for solving this problem.

There are two methods for composing a symmetric matrix:

Based on the assumption of the production technology in an industry, according to which each industry has its own characteristic means of production, regardless of the composition of the products of that industry.

Based on the assumption of product manufacturing technology, according to which each product is produced in its own characteristic way, regardless of the industry in which it is produced.

Detailed information on the application of these methods is described in the Methodology for compiling the "Supply-Use" and "Input-Output" tables.

It is important to note here that the formation of a symmetrical usage table is not based on the reported data obtained from the data collection of statistical forms of national statistical observations, but is obtained by mathematical transformations,

and this undoubtedly affects the quality of the direct and full cost coefficients in the IOT.

The table below shows data on releases of SUT and IOT, and the percentage of change in releases in IOT after the transfer of secondary activities to another industry as the main one:

Secti ons	Name	Output in SUT thousand Kazakh tenge	Output in IOT thousand Kazakh tenge	%
A	Products of agriculture, forestry and fisheries	11 279 149 227	11 189 785 177	99,21
B	Mining industry products	29 198 890 269	29 154 495 948	99,85
C	Manufacturing industry products	27 548 775 655	27 510 126 691	99,86
D	Electricity, gas, steam and air conditioning	3 136 039 658	3 132 880 827	99,90
E	Water supply; sewerage system, waste collection and disposal services	627 920 187	627 946 931	100,00
F	Construction works	11 077 332 411	11 060 467 629	99,85
G	Wholesale and retail trade services; car and motorcycle repair services	24 058 666 745	24 150 351 836	100,38
H	Transportation and warehousing services	10 824 997 445	10 816 035 702	99,92
I	Accommodation and catering services	1 754 240 357	1 760 688 967	100,37
J	Information and communication services	2 816 554 755	2 828 634 418	100,43
K	Financial and insurance services	6 465 030 243	6 474 578 813	100,15
L	Real estate services	11 478 692 271	11 526 135 609	100,41
M	Professional, scientific and technical services	4 688 855 059	4 684 183 990	99,90
N	Administrative and support services	3 572 538 206	3 633 511 920	101,71
O	Public administration and defense services; compulsory social	4 428 159 291	4 428 159 291	100,00

Secti ons	Name	Output in SUT thousand Kazakh tenge	Output in IOT thousand Kazakh tenge	%
	security services			
P	Educational services	6 139 583 206	6 136 894 540	99,96
Q	Public health and social services	4 441 318 030	4 440 802 827	99,99
R	Services in the field of art, entertainment and recreation	1 840 144 118	1 837 533 547	99,86
S	Other services	3 074 817 510	3 058 490 371	99,47
T	Services of households employing domestic workers and services for the production of goods and services for their own consumption	137 510 975	137 510 975	100,00
U	Services of extraterritorial organizations and bodies	0	0	
	Total	168 589 216 009	168 589 216 009	100,00

In those products in which the percentage of discrepancy is 100%, there are no products of secondary activities or they are very insignificant.

In those products in which the percentage of discrepancy is more than 100%, the products of secondary activities, transferred from other industries as the main activity, prevailed.

In those products in which the percentage of discrepancy is less than 100%, the products of secondary activities that were transferred to other industries as the main activity prevailed.

It is also important to note that in the quality report of the "Supply - Use Table" of the Republic of Kazakhstan", factors that affect the quality of formation not only SUT, but also the quality of formation of IOT were described.

S.19 Load

Input-output tables are generated by the staff of the Bureau of National Statistics in Excel.

Departmental and administrative data are also used in the formation of these tables.

There is no duplication with other statistical works.

S.20 Data revision

S.20.2 Data revision/A6

The revision is carried out in cases of changes in the methodology or classifier,

S.21 Processing of statistical data

S.21.1 Input data

The initial data for the formation of the IOT are the data of the "Supply - Use" tables.

S.21.2 Survey frequency

Year

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

The results of national statistical observations were obtained in the form of an Excel spreadsheet from the sectoral departments of statistics and the RSE of the IWC. Departmental and administrative data were obtained in the form of an Excel spreadsheet within the framework of existing joint orders on the exchange of information with government agencies, upon request and from official data source sites.

S.21.4 Reliability of primary statistical data.

The analysis of data received from industry departments of statistics and from administrative sources is carried out. During the verification process, the results obtained are compared with the previous period.

S.21.5 Imputation - share /A7

Not applicable.

S.21.6 Adjustment

Not applicable.

S.21.6.1 Seasonal adjustment

Not applicable.

S.22 Notes

Continue to work on ensuring the quality of statistical data.