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|   | Approved by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstandated December 2, 2016 296(as amended by the order of the Head of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstandated May 27, 2022 9) |

**Methodology for the formation of investment activity statistics indicators**

**Chapter 1. General provisions**

1. Methodology for the formation of indicators of investment activity statistics (hereinafter - Methodology) refers to the statistical methodology approved in accordance with the Law of the Republic of Kazakhstan "On State Statistics" (hereinafter - Law).

2. The methodology defines the main aspects and methods for obtaining statistical information on investments in fixed assets when conducting nationwide statistical surveys.

3. The purpose of this Methodology is to form a system of statistical indicators on investment statistics.

4. The methodology is applied by the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan (hereinafter - the Bureau) and its territorial divisions when compiling data on investment activity indicators.

5. This Methodology has been developed taking into account the principles of the System of National Accounts 2008.

6. The following definitions are used in this Methodology:

1) aggregation - combining low-level economic indicators into larger aggregates at all subsequent levels;

2) cultivated biological resources - animals, trees, agricultural crops and plantations that produce products on a regular basis, the natural growth and reproduction of which are under the direct control, responsibility and management of institutional units;

3) imputation - the process of replacing missing, incorrect or inconsistent values with other values;

4) investments in intangible fixed capital - expenses in objects created or acquired by organizations, used in economic activity for more than one year, having a monetary value, having the ability to alienate and generating income, but are not tangible values;

5) investments in tangible fixed capital - expenses in residential buildings, other buildings, structures, machinery and equipment, cultivated biological resources;

6) fixed assets - produced assets that are used repeatedly or continuously in production processes for more than one year;

7) customer - an individual or legal entity authorized by the investor (or being an investor itself) to implement a project for the construction of enterprises, buildings, structures for their own or state needs or for commercial purposes;

8) system of national accounts (hereinafter - SNA) - a system of statistical indicators, built in the form of a certain set of accounts and tables characterizing the results of the country's economic activity;

9) investments in fixed capital according to the concept of the system of national accounts - investments in tangible and intangible fixed capital;

10) the index of physical volume (hereinafter - IPV) of investments in fixed assets characterizes the change in investment investments in dynamics, is determined by the ratio of the volume of investments in fixed assets in the reporting and compared period in comparable prices.

**Chapter 2. Formation of investment activity statistics indicators**

7. Units of statistical observation are all business entities engaged in investment activities, regardless of the number of employees and type of economic activity.

8. Statistical information on investments in fixed assets is formed on the basis of primary statistical data of nationwide statistical observations of respondents engaged in investment activities, and nationwide statistical observations on the commissioning of facilities by individual developers.

9. The geographic coverage of investment activity provides for the accounting of investment investments at the place of its actual implementation, regardless of the place of registration of an economic entity carrying out investment activities.

10. In statistical surveys, investments are taken into account on the basis of primary accounting in accordance with international financial reporting standards.

11. Accounting for primary statistical data is carried out without value added tax.

12. Investments made in foreign currency are recalculated into the national currency at the official (market) exchange rate according to the data of the National Bank of the Republic of Kazakhstan on the date of the transaction.

13. Fixed assets acquired on the basis of a financial leasing agreement by the lessee, who is the economic owner of the asset and reflects it on its balance sheet, are included in the volume of investments.

**Chapter 3. Algorithm for revaluation of investment activity**

14. When generating operational data on the investment activities of economic entities, on a monthly basis, separately for each region, an additional assessment of the volume of investments in fixed capital is carried out.

The total volume of investment investments consists of the volume of investments in fixed assets of the respondents, individual developers and the volume of revaluation for incomplete coverage and up to the annual volume of investments of business entities.

15. The re-estimation of volumes of investments in fixed assets for incomplete coverage is based on the method of proportional data imputation. The principle of evaluation is based on the calculation of the volume of investment per employee.

With the method of proportional data imputation, missing values (imputed indicators) are predicted using explicit models (using auxiliary indicators). As an auxiliary indicator for the proportional imputation of investment in fixed assets, the number of employees, formed in the framework of surveys of labor statistics and structural statistics, is used.

16. With proportional imputation, the ratio between auxiliary indicators and imputed indicators is the same for reported and non-reported respondents, which characterizes the advantage of this method.

Proportional imputation is carried out according to the formula:

           (1)
      Where:

*x* i - the value of the auxiliary indicator;

*i* - the value of the imputed indicator;

*R* - the ratio of the average *y* to the average *x* , for the respondents who answered.

17. Calculation of the revaluation is carried out in the following sequence:

1) unreported enterprises by types of economic activity for the reporting month are selected from the individual catalog for statistical observation of monthly frequency from among large enterprises.

2) enterprises with parameters similar to those of non-reporting respondents are selected from the database of reported large enterprises. In order to reduce the impact of extreme low and high values, respondents with maximum and minimum values of fixed capital investment are excluded by cutting off.

3) the average value of the volume of investments in fixed capital for each type of economic activity is calculated.

4) for each type of economic activity, the average number of employees in enterprises is calculated.

5) the ratio of the average value of the volume of investments to the average number of employees for each type of economic activity is calculated by the proportional method.

                   (2)
 where:

*q i r*- the volume of investments in fixed assets per worker;

*i* – type of economic activity;

*q i sr* - the average value of the volume of investments in fixed assets;

*r i sr* - the average number of employees.

6) the number of employees at unreported enterprises by type of economic activity is determined ( *k i r* ).

The calculated volume of investments in fixed assets per employee by type of economic activity is multiplied by the number of employees in unreported enterprises by the corresponding type of economic activity.

            (3)
 where:

*q i d* -the volume of revaluation at unreported enterprises;

*i* – type of economic activity;

*q i r* - the volume of investments in fixed assets per worker;

*k i r* - the number of employees at unreported enterprises.

7) the value of the revaluation by type of economic activity is determined by aggregating the volume of revaluation for unreported respondents by the corresponding type of economic activity.

8) the sum of the obtained values by type of economic activity is equal to the additional estimate for incomplete coverage for large enterprises in the region.

9) the amount of revaluation for incomplete coverage of large enterprises in the Republic of Kazakhstan is calculated by aggregating the revaluation for large enterprises in the regions in accordance with the formula:

                 (4)
 where:

*qkr \_*- the volume of revaluation for incomplete coverage of large enterprises in the Republic of Kazakhstan;

*j* - regions;

*qjkr\_*– the amount of revaluation for incomplete coverage of large enterprises in the regions.

18. The algorithm for revaluation of investment investments for medium-sized enterprises is similar to the calculation for large enterprises. Data for the Republic of Kazakhstan are formed by aggregating the revaluation by regions.

19. The total amount of the revaluation of investment investments for incomplete coverage of respondents in the Republic of Kazakhstan is equal to the sum of the revaluation for incomplete coverage for medium and large enterprises in all regions and is calculated using the following formula:

              (5)
 where:

*q d* - the volume of revaluation of investments for incomplete coverage of respondents in the Republic of Kazakhstan;

*q kr* - the volume of investments for incomplete coverage of respondents in the regions by large enterprises;

*q sred* - the volume of investments for incomplete coverage of respondents in the regions for medium-sized enterprises .

20. The revaluation of investment investments to the annual volume is determined by comparing and analyzing operational data and updated annual data of the corresponding year.

At the level of primary statistical data, the catalog of enterprises according to the national statistical observation of the annual frequency and the catalog of enterprises of operational data are compared. The data on investment volumes of enterprises that reported only according to statistical observation of annual frequency are distributed over twelve months and added to the corresponding type of economic activity. Additional valuation is carried out for large and medium-sized enterprises in each region.

21. Data for the Republic of Kazakhstan are formed by aggregating additional estimates of regions.

22. The formed aggregate volume of revaluation by regions is edited by analyzing the time series, taking into account the socio-economic potential of the region. The corrected amount of revaluation is distributed according to the algorithm and connected to the aggregated reporting data.

**Chapter 4. Calculation of the index of the physical volume of investments in fixed assets**

23. When calculating the IPV of investments in fixed capital, the data for the reporting period are deflated into comparable prices of the compared period. As deflators (price indices), data generated by price statistics are used.

For the calculation of IPV, the detailed asset structure of investments in fixed assets is used. Investments in fixed capital include the following components: costs for construction and installation works and major repairs; the cost of acquiring machinery, equipment and vehicles; other costs.

The costs of construction and installation works and major repairs include the costs of a set of works for the construction of buildings and structures, expansion, reconstruction, installation of power, technological and other equipment, as well as the costs of major repairs of non-residential, residential buildings and structures .

Other costs - costs for design and survey work, architectural supervision, maintenance of directorates of facilities under construction, costs for cultivated biological costs, as well as costs for objects created or acquired by organizations that have been used in economic activities for more than one year, have a monetary value, have the ability to alienate and generating income, but not material values.

24. IPV of investments in fixed assets is formed by the previous month, by the corresponding period of the previous year (month, cumulative period) and by the previous year.

IPV of investments in fixed capital is calculated for the Republic of Kazakhstan, as well as by regions.

25. Calculation of the IPV of investment in fixed assets is carried out in several stages. At the first stage, the volumes by components of investment in fixed assets are converted into comparable prices (using the corresponding price indices by types of assets) and aggregated.

The costs of construction and installation works are translated into comparable prices, taking into account the price index for construction and installation works, the costs of purchasing machinery and equipment - a weighted index of prices for machinery and equipment (manufactured and imported), other costs in the volume of investments in fixed capital - from using price indices for other costs.

26. Calculation of IPV for all components is made by the ratio of the volumes of the reporting period to the volumes of the compared period in comparable prices. Similarly, the aggregate volume of investments in fixed assets correlates with the volume of the compared period in comparable prices.

27. The IPV of investments in fixed assets of the reporting period to the base year is calculated by the chain method, in which the annual IPVs of investments in fixed assets ( *I* q ) are successively multiplied, for example:

 (6)

Where:

*I q* – IPV of fixed capital investments, in %.

The calculation of the index on the basis of one base year is carried out for 5 years. After the base year is updated. The year ending in "0" or "5" is selected as the base year.

28. Indicators of investment statistics during the reporting year are formed monthly according to operational data, until the formation of the final annual data. As a result, there is a difference between operational and final annual data.

To form time series of monthly data harmonized with annual data, the archive operational database is recalculated taking into account the received annual data.

29. The new monthly data obtained as a result of the recalculation are fully harmonized with the annual data and are added to the total time series of monthly data.

30. Before receiving annual data and recalculating archived monthly data, the unrecalculated archive base of the previous year is used as the base. After receiving the recalculated dynamic series, the archive database of the previous year is replaced by a new one.

**Chapter 5. The main groupings of output data based on the model analysis scheme**

31. A comprehensive analysis of investment activity according to a model scheme determines the relationship between various sectors of the economy. The model scheme for the analysis of investment activity (hereinafter - Model scheme) is carried out on the basis of primary data on investment statistics using cross groupings.

32. Depending on the nature of the analysis being carried out, investment activity indicators are aggregated into various groups. The use of the Model Scheme allows obtaining meaningful information on the volume and dynamics of investments in fixed assets, the structure, sources of financing and conditions for financing investments, the study of profitability, as well as its socio-economic efficiency and use for further analysis.

33. The territorial structure of investment investments is formed taking into account the geographical orientation of investments in fixed assets.

The grouping evaluates the proportional distribution and efficiency of the use of investments at the country level as a whole and by region.

34. The technological and reproductive structure of investment investments is one of the important groupings of output indicators.

Based on the available surveyed statistical indicators on the costs of construction and installation works, the cost of equipment, tools and other capital works and costs, a grouping is formed according to the technological structure of costs, which is necessary for analyzing the effectiveness of investment investments.

35. To analyze the investment of funds in the extensive and intensive development of economic entities, a grouping of the reproductive structure of investment investments is formed. The grouping of reproduction structures of investment investments is formed as follows:

new construction and expansion of existing enterprises (new) - costs allocated for construction and installation work without major repairs of buildings and structures;

reconstruction and expansion of existing enterprises - the cost of major repairs of buildings and structures;

technical re-equipment - the cost of acquiring machinery and equipment, excluding vehicles, major repairs of equipment.

36. The grouping of investment financing sources is formed by aggregating own and borrowed funds, the ratio shows the financial stability of economic entities. The indicators presented in the grouping reflect the availability of investors' own funds, the participation of the state and foreign investors in the investment process.

37. On the basis of the departmental classifier of forms and types of ownership, a grouping of output indicators by form of ownership is formed. The analysis of the grouping of data makes it possible to determine the share of investments of economic entities of state, private and foreign forms of ownership.

38. Groupings for domestic and foreign investments in fixed capital are formed in the form of a matrix, based on sources of financing in combination with the form of ownership.

External investments of this group differ from investments considered within the framework of the balance of payments due to the difference in methodological approaches to the formation of these indicators. Foreign investments in fixed assets are part of foreign direct investment embodied in fixed assets.

The algorithm for the formation of internal and external investment investments is given in Appendix 1 to this Methodology.

39. The grouping formed on the basis of the type of economic activity is used in the analysis of investment investments by sectors of the economy. According to the nature of the direction of investments (end use) and the activities carried out by business entities, this grouping is divided into investments according to the direction of use and types of economic activity of the investor.

40. To analyze the attraction of investments in the non-primary export-oriented sector of the country's economy, a grouping of investments in fixed capital of the non-primary sector of the economy is formed.

The non-primary sector of the economy is presented without taking into account the mining industry and quarrying, agriculture, forestry and fisheries. Output indicators are formed by various cross groupings.

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| Appendix to orderHead of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan dated May 27, 2022 9Appendix to the Methodology for the formation of indicators of investment activity statistics |
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**Algorithm for the formation of internal and external investment investments**

|  |  |  |  |
| --- | --- | --- | --- |
| Investors | Identification code | Volume of investment in fixed assets | including |
| budget resources | own funds | bank loans | other borrowed funds |
| republican budget | local budget | Total | of which foreign banks | always | of which non-residents |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Internal |  |  |  |  |  |  |  |
| State property | 11 |  | X | X | X | Column 5 - Column 6 | Column 7 - Column 8 |
| Private property | 15 |  |  |  |  |  |  |
| Property of citizens | 16 |  |  |  | X |  |  |
| Property of non-state legal entities and their associations | 17 |  |  |  |  |  |  |
| Ownership of enterprises without state and foreign participation | 19 |  | X | X | X | Column 5 - Column 6 | Column 7 - Column 8 |
| Ownership of enterprises with state participation, without foreign participation | 23 |  | X | X | X | Column 5 - Column 6 | Column 7 - Column 8 |
| Ownership of joint ventures with foreign participation | 28 |  | X | X | X/2 | Column 5 - Column 6 | Column 7 - Column 8 |
| Property of public, including religious associations | 29 |  | X | X | X | Column 5 - Column 6 | Column 7 - Column 8 |
| foreign ownership | 32 |  |  |  |  |  |  |
| Property of other states, their legal entities and citizens | 33 |  |  |  |  |  |  |
| Property of foreign states | 34 |  | X | X |  | Column 5 - Column 6 | Column 7 - Column 8 |
| Property of foreign legal entities | 36 |  | X | X |  | Column 5 - Column 6 | Column 7 - Column 8 |
| Property of foreign individuals | 37 |  | X | X |  | Column 5 - Column 6 | Column 7 - Column 8 |
| Property of international organizations | 38 |  | X | X |  | Column 5 - Column 6 | Column 7 - Column 8 |
| External |  |  |  |  |  |  |  |
| State property | 11 |  |  |  |  |  | X |  | X |
| Private property | 15 |  |  |  |  |  |  |
| Property of non-state legal entities and their associations | 17 |  |  |  |  |  |  |
| Ownership of enterprises without state and foreign participation | 19 |  |  |  |  |  | X |  | X |
| Ownership of enterprises with state participation (without foreign participation) | 23 |  |  |  |  |  | X |  | X |
| Ownership of joint ventures with foreign participation | 28 |  |  |  | X/2 |  | X |  | X |
| Property of public, including religious associations | 29 |  |  |  |  |  | X |  | X |
| foreign ownership | 32 |  |  |  |  |  |  |
| Property of other states, their legal entities and citizens | 33 |  |  |  |  |  |  |
| Property of foreign states | 34 |  |  |  | X |  | X |  | X |
| Property of foreign legal entities | 36 |  |  |  | X |  | X |  | X |
| Property of foreign individuals | 37 |  |  |  | X |  | X |  | X |
| Property of international organizations | 38 |  |  |  | X |  | X |  | X |

X - data is taken into account