**On approval of the Methodology for constructing producer price indices in industry**

Order of the Chairman of the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan dated May 31, 2016 No. 98. Registered with the Ministry of Justice of the Republic of Kazakhstan on June 29, 2016 No. 13845.

      In accordance with subparagraph 5) of Article 12 of the Law of the Republic of Kazakhstan dated March 19, 2010 "On State Statistics" and subparagraph 258) of paragraph 17 of the Regulation on the Ministry of National Economy of the Republic of Kazakhstan, approved by the Decree of the Government of the Republic of Kazakhstan dated September 24, 2014 No. 1011, ORDER **:**

      1. Approve the attached Methodology for constructing producer price indices in industry.

     2. The Department of Price Statistics, together with the Legal Department of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, shall ensure in the manner prescribed by law:

     1) state registration of this order with the Ministry of Justice of the Republic of Kazakhstan;

     2) within ten calendar days after the state registration of this order, send a copy of it for official publication in print periodicals and the information and legal system "Adilet";

     3) sending in printed and electronic form within five working days from the date of receipt of the registered order to the Republican State Enterprise on the right of economic management "Republican Center for Legal Information" for inclusion in the Standard Control Bank of regulatory legal acts of the Republic of Kazakhstan;

     4) placement of this order on the Internet resources of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan.

     3. The Department of Price Statistics of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan to bring this order to the structural subdivisions and territorial bodies of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan for guidance and use in work.

     4. To impose control over the execution of this order on the supervising Deputy Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan (Dzharkinbaev Zh.A.).

     5. This order shall enter into force ten calendar days after the day of its first official publication.

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| Chairman of the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan |  |
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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 Kazakhstan dated May 31, 2016 98 |

**Methodology for constructing producer price indices in industry**
**Chapter 1. General provisions**

      1. This Methodology for constructing producer price indices in industry (hereinafter - Methodology) refers to a statistical methodology formed in accordance with international standards and approved in accordance with the Law of the Republic of Kazakhstan dated March 19, 2010 "On State Statistics" (hereinafter - Law).

      2. This Methodology uses concepts in the meanings defined in the Law and the following definitions:

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

     2) base period of prices - the period for which prices are indicated in the denominator of price ratios in the calculations of elementary aggregates;

     3) price registration - collection of primary statistical data on prices (tariffs) for goods and services in the course of nationwide statistical observations;

     4) base object - a legal entity selected for monitoring and recording prices in it;

     5) classification - division of a set of objects into groups according to similarity or difference in accordance with accepted features;

     6) specification - a description or a list of characteristics that are used to identify an individual product (service) selected for price registration;

     7) the weight of the index is a value that reflects the significance of each individual element in their totality;

     8) representative product (service) - a certain type of product (service) in a product group, which is distinguished by minor features (details) that do not affect the quality and basic consumer properties of goods (services) and are homogeneous in their purpose;

     9) the price of a manufacturing enterprise - the price of a unit of sold products at the time of its exit from the "gates of the enterprise", excluding value added tax and excises, trade and sales margins, transport and other costs associated with the movement of products from the manufacturer to the buyer;

     10) industrial enterprise - a legal entity or its structural subdivision engaged in the extraction and production of industrial products, the provision of industrial services;

     11) base period of weights - a period, the cost indicators for which serve as an information basis for determining the weight components of price indices;

     12) weighting - a procedure used in index calculations to obtain summary indicators and ensure the commensurability of different goods that are not directly summable;

     13) weighting scheme - a set of weights for specific types of products, goods, services, determined by all degrees of aggregation according to the standard classification;

     14) purchase price - the price of a specific type of product (service) for industrial and technical purposes, taking into account value added tax, transport, trade and marketing, intermediary and other expenses;

     15) sample - individual items from approved classifiers, nomenclatures and reference books used in the collection and processing of statistical data.

     Footnote. Clause 2 as amended by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated 06/20/2019 No. 2 (shall be enforced ten calendar days after the day of its first official publication).

     3. This Methodology defines the main aspects and methods of nationwide statistical monitoring of the level of producer prices in industry, the selection of surveyed sample sets, the formation of weight components and the calculation of price indices of various levels of aggregation.

     4. This Methodology is applied by the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan (hereinafter - the Committee) and its territorial bodies when conducting nationwide statistical observations of the prices of manufacturing enterprises for industrial products (goods, services), the prices of purchase of products for industrial purposes by industrial enterprises and in the construction of producer price indices in industry.

     5. The methodology was developed taking into account the principles and recommendations of the Producer Price Index Manual: Theory and Practice prepared by the International Labor Organization, the International Monetary Fund, the Organization for Economic Co-operation and Development, the Statistical Office of the European Communities, the United Nations Economic Commission for Europe and the World Bank . Improvement of the Methodology is envisaged within the framework of the project "KAZSTAT: Project to Strengthen the National Statistical System", taking into account the study of the experience of European countries in the field of producer price statistics in industry.

     6. Producer price indices in industry are characterized by the following set of statistical indicators:

     1) price index of enterprises producing industrial products (goods, services) (hereinafter - producer price index);

     2) the index of prices for the purchase of products for industrial purposes by industrial enterprises (hereinafter - the index of purchase prices);

     3) producer prices for industrial products (hereinafter - producer prices);

     4) prices for the purchase of products for industrial purposes by industrial enterprises (hereinafter - purchase prices).

     The producer price index characterizes the change in prices for finished products produced by industrial enterprises and the production services they provide.

     Producer prices, in addition to the direct price factor, are formed under the influence of diverse assortment, structural shifts, changes in the share of production of goods in various organizations and with different price levels, their seasonal fluctuations, and others.

     The purpose of constructing a producer price index is to measure the average value of price changes for products, services, at the time of their implementation. The Producer Price Index monitors price dynamics by types of products and services produced at various stages. The rate of change in the producer price index by type of product is considered as the initial value of potential inflation in wholesale or retail trade.

     The Producer Price Index is used for:

     1) deflation of the main aggregates of the National Accounting System;

     2) accounting for the current value and calculation of indices of the physical volume of industrial production;

     3) the formation of derived statistical indicators and their individual components by other branches of statistics: revaluation coefficients for fixed assets, equipment price indices as part of the elements of the technological structure of the construction industry, and others;

     4) implementation of economic monitoring, forecasting, comparisons conducted by state bodies and international organizations.

     The purchase price index characterizes the change in prices for industrial and technical products needed by industrial enterprises for the production process and purchased by them.

     Purchase prices are formed under the influence of inflationary changes and such factors as assortment and structural shifts, changes in the ratio of the share of various types of goods, the irregularity of their purchase, changes in the conditions of purchase, seasonal fluctuations in demand, and others.

     The purpose of constructing an acquisition price index is to measure the average value of price changes for industrial and technical products at the time of their purchase, which takes into account prices for products (goods) and services purchased by industrial enterprises as intermediate products, both domestically produced and imported. An intermediate product is a production resource that is used by one establishment or production unit, but is a finished product produced by another establishment.

     The purchase price index tracks the dynamics of prices for industrial and technical products consumed in various types of economic activity.

     The construction of the purchase price index, along with the producer price index, meets the needs of the System of National Accounts in order to determine the main aggregates (for calculating gross capital formation, revaluation of stocks of material and working capital). Data on the change in these prices is used to analyze profits and the ratio of the dynamics of prices for factors of production and finished products.

**Chapter 2. Coverage and classification system**

     7. The producer price index covers operations for the production or processing within the country of products, services valued at market prices, regardless of their further sale in the domestic market or outside the country.

     The purchase price index takes into account transactions for the acquisition by industrial enterprises of the main groups of products for industrial purposes through the channels of their acquisition - within the country and outside the country.

     8. Producer price indices in industry are formed by regions. To build them, all regions of the republic are examined, regardless of the specialization of the industrial production of the region and the share in the volume of gross domestic product (hereinafter - GDP). Regional price indices take into account the peculiarities of the industrial production market of the territory and reflect inter-regional differences in the dynamics of prices for homogeneous varieties of goods. Territorial coverage provides for the accounting of basic objects at their location - in urban and rural areas, the capital, cities of republican, regional or district significance.

     9. Statistical units of observation in the construction of producer price indices in industry are units that produce finished products (provide industrial services) and make decisions regarding all production operations. They do not include ancillary, marketing or administrative units.

     10. Producer price indices in industry reflect changes in prices for the production and purchase of products, services from units operating in one or another type of industrial activity.

     Footnote. Paragraph 10 - as amended by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated September 8, 2020 No. 36 (shall be enforced ten calendar days after the day of its first official publication).

     11. In accordance with the classification of types of economic activity, industrial activity is determined by the sectors of mining, manufacturing, electricity supply and water supply.

     Footnote. Paragraph 11 - as amended by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated September 8, 2020 No. 36 (shall be enforced ten calendar days after the day of its first official publication).

     12. To detail the types of products, services, classifications of industrial products (goods, services) and products (services) of agriculture, forestry and fisheries are used.

     Footnote. Paragraph 12 - as amended by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated September 8, 2020 No. 36 (shall be enforced ten calendar days after the day of its first official publication).

     13. For consistency and comparability of the producer price index at the international level, a classification is used according to the main industrial groupings, according to which the products produced are taken into account depending on the final destination: capital goods, intermediate goods, energy, non-durable and durable goods.

     14. To ensure the price assessment of operations aimed at satisfying intermediate and final demand, products, services are accounted for as:

     1) primary products, intermediate products and final products in accordance with their place in the production chain as part of the producer price index;

     2) raw materials, including natural resources, materials, purchased semi-finished products, structures and parts, components, fuel, energy, works and services of an industrial nature performed by third parties, other materials included in the purchase price index.

     On the basis of classifications and taking into account the specialization of industrial production of each region, samples of products, goods, material and technical resources are formed, which are the basis of nationwide statistical monitoring of producer prices in industry and make up the structure of their indices.

     The source of information on changes in prices for exported, imported industrial products, goods included in the composition of producer price indices in industry is the data of nationwide statistical monitoring of the level of foreign trade prices. Accounting for exported and imported goods in producer price indices meets the need for using price indices to deflate GDP.

     Footnote. Paragraph 14 - as amended by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated September 8, 2020 No. 36 (shall be enforced ten calendar days after the day of its first official publication).

**Chapter 3. Formation of the sample population**
**Paragraph 1. Sample of basic objects**

     15. National statistical observations of the prices of manufacturing enterprises for industrial products (goods, services) and the prices of acquisition of products for industrial purposes by industrial enterprises are carried out on a sample set of basic objects, products (goods, services).

     16. A sample set of basic objects is compiled taking into account the geographical, sectoral coverage and market characteristics. The general population for compiling samples of basic objects is the data of the statistical business register.

     17. Samples of basic objects are created by combining the methods of continuous and selective observation, applied depending on the type of economic activity being surveyed and the dimension of industrial enterprises in terms of the number of people employed in them.

     Continuous observation covers large and medium-sized industrial enterprises of the mining industries, industrial enterprises belonging to the sphere of natural monopolies, and industrial enterprises specializing in the provision of production services.

     When selecting large and medium-sized industrial enterprises in the manufacturing industry, a sampling method of observation is used, based on the "value of goods produced and services provided". Small enterprises are connected when the goods they produce are the basis for the formation of economic indicators in general for the type of economic activity.

     18. When selecting basic objects, the following are taken into account:

     1) scale - coverage of objects of all types and various forms of ownership;

     2) geographical representativeness - the representativeness of objects located in different areas of the observation area;

     3) typicality - accounting for objects with practically equal working conditions for the technological process and the raw materials used, characteristic of this type of economic activity.

     19. The sample of base objects for the producer price index is used as the sampling frame for the base objects for the acquisition price index. For purchase price indices, when selecting basic objects, the regularity of purchasing a specific group of industrial and technical products in a certain type of economic activity during the reporting year is additionally taken into account.

     20. The optimal sample size is achieved by selecting basic objects with the maximum possible coverage of the main product groups, material and technical resources identified for nationwide statistical observation. One of the conditions that determine the quality of the sample is the inclusion in its composition of objects that have relatively stable relationships with suppliers. The participation of base facilities with constantly changing conditions for the sale of products and the acquisition of industrial and technical products makes it difficult to obtain comparable information on prices.

**Paragraph 2. Selection of products, services for the producer price index**

      21. A sample set of products (goods, services) for monitoring the prices of enterprises producing industrial products is formed in stages and a certain selection method is used at each stage.

     22. The first stage consists in studying the macrostructure of the Republic's industrial production. It provides for a large division of products, services into the maximum possible number of strata (departments, groups, classes, types, subspecies, position in a subspecies) in a single section of economic activity. From each department, using the main array method, groups, classes, then types of products and services are selected, with the prevailing share of the total output in the overall structure.

     23. The second stage is the selection of subspecies in the species identified for observation using the "qualification method". The regional representativeness, variety and assortment of products, which make it possible to judge the degree of completeness, are the criteria. Homogeneous (homogeneous) subtypes of products, services, specified according to certain characteristics, properties, specifications and performing functions are included.

     At the last stage, in the composition of the selected subspecies of products, specific positions are selected in the subspecies of products and services. Various selection methods are used depending on the characteristics of the subspecies: significance in the group, breadth of assortment, mobility of goods on the market, seasonality of their production, and others. Strategic goods, which form the basis of the volume of industrial production and exports of the country, and types of services in the sphere of natural monopolies are examined by a continuous method. By types of products of mass demand (consumer goods), the selection is made by the main array method, the criterion is the degree of predominance of products, services in the total volume of the group.

     24. On the basis of selected specific items in the subspecies of products and services, regional sets are formed that reflect the specialization of industrial production and the services provided by each of the regions.

     25. The formation of a regional set is carried out in stages. The regional set is selected taking into account the further formation of output indicators for the whole region in terms of products manufactured and services rendered.

     Initially, the maximum possible number of wide strata of products and services produced (rendered) by basic objects is selected. The selection of positions in the subspecies of products and services is made taking into account the purpose of the product, the type of raw materials used, the homogeneity of products and services within the stratum, and the identity of their units of measurement.

     At the second stage, specific representative goods (services) are selected for each selected item in the subspecies of products, services in the product group for the purposes of price registration, together with employees of the basic facilities, and detailed specifications are drawn up.

     26. The main principle of selecting goods for price registration is their representativeness to characterize the dynamics of prices by commodity groups, types of economic activity of the subject and the republic as a whole.

     The selection of representative goods (services) is carried out in compliance with the following criteria:

     1) production by basic objects for a long time and intended for market sale;

     2) sale on a permanent basis to the main types of consumers under the same conditions of sale;

     3) the presence of constant quality parameters and additive units of measurement;

     4) accessibility from the point of view of collecting information and the specificity of their price changes for product groups, services not selected for price monitoring.

     27. If it is impossible to select a specific type of representative product (service) with unchanged qualitative parameters, the approach of compiling a "typical model" is used to take into account changes in prices for it. A "typical model" is understood as a representative product (service) with conditionally specified parameters, the most typical (common) for the production of this product (service).

     28. The selection of representative goods (services) is made taking into account a different range of price quotations. To determine a representative average price, the minimum price variation within one product group is observed. For each type, subtype of products, services of the regional set, 3-5 most representative goods and services are selected.

     As a criterion for the representativeness of the goods selected for registration, the indicator of their share in the total output is used. To ensure representativeness in the aggregate, the cost of selected representative goods (services) is at least 70 percent of the cost of the total volume of this type of product manufactured by the enterprise or services rendered (in average annual prices for the previous year).

     29. During the year, new goods (services) - representatives within the type, subtype of products (services) that are promising for the industrial production of the base object are included. Goods (services)-representatives are connected, having specifications similar in characteristics and slightly different in price level from the representatives that form the product group.

     30. To take into account changes in the industrial production situation in the region, a rotation and updating of a set of representative goods (services) is carried out annually. Varieties that have lost their relevance with a decrease in production volume are excluded from the set of representative goods (services), varieties that have the prospect of increasing production volumes are included, rotation is also carried out by replacing one type of representative product (service) with another type that is similar in characteristics and price range.

     The revision of the regional set is carried out simultaneously with the formation of the weighting base for the upcoming reporting period.

**Paragraph 3. Selection of industrial and technical products for the purchase price index**

      31. A sample of manufacturing products for monitoring purchase prices is determined in two steps.

     At the first stage, according to the table "Costs - Output" of the "Intermediate Consumption" section, for each type of economic activity, production resources and services are selected centrally, representing the costs of production. The observation includes the main groups and types of production resources, services that determine the structure of current costs for the production of products in this type of economic activity. Groups and types of production resources and services are reviewed as there are significant changes in the structure of costs and output.

     At the second stage, at the regional level, groups and types of production resources and services are specified and detailed by specific types of products (goods). The types of acquired production resources, services are selected by enlarged product groups without distinguishing brands, varieties, articles purchased from the main types of suppliers. Production inputs and services purchased for the production process are accounted for by the type of economic activity of the industrial enterprise.

     32. The types of production resources and services purchased by the basic facilities are selected according to the following criteria:

     1) the use of production resources for the technological process of production. Resources used for lighting and heating of administrative buildings, refueling of official vehicles or technical re-equipment, modernization of production are not included in the price survey;

     2) the acquisition of production resources "on the side", and not in another unit of the base facility;

     3) obligatory consideration of the factor of homogeneity of acquired resources. The production resources selected for observation are homogeneous and have the same properties.

     Not included in the price survey:

     1) raw materials and materials purchased by enterprises 1-2 times a year, except for cases when the infrequent purchase of certain types of products is sufficient for the production process and use for a long time;

     2) production resources purchased from "random" suppliers and to fulfill one-time orders for the production of products or exclusive samples at very high or very low prices or through barter, as not reflecting their real price.

     33. To take into account the structural transformations of the sample population, all its elements are reviewed annually at the beginning of the reporting year by introducing new types of production resources, services and excluding old ones.

     The introduction or exclusion from observation of certain representative goods or their types is carried out at the beginning of the reporting year, based on an analysis of the acquisition of their basic objects in the previous year. To include in the observation of a new type of product or acquisition channel, information is collected on the quantity of its purchase for the previous year and on the purchase price for December of the year preceding the reporting one.

**Chapter 4. Registration of producer prices in industry**
**Paragraph 1. Principles of price registration**

     34. Registration of prices is carried out on a monthly basis by filling in the basic objects of the statistical form of the nationwide statistical observation of prices for manufactured industrial products (goods, services) and the prices for the purchase of products for industrial purposes and submission to state statistics bodies.

     The basis for filling out the statistical form of nationwide statistical observation are documents: contracts, payment requests, invoices, powers of attorney, invoices and other accounting documents.

     To ensure the purity of the price comparison, price registration is carried out for a certain period of time and is observed from month to month. Price registration is carried out for types of goods and services comparable in terms of their quality, terms of sale and purchase, types of consumers and other properties during the reporting year. Compliance with the principle of price comparability implies that in each reporting period, in a specific base object, the price of a product similar to the product, the price of which was registered in the previous period, is recorded.

     Footnote. Paragraph 34 - as amended by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated September 8, 2020 No. 36 (shall be enforced ten calendar days after the day of its first official publication).

     35. Registration of prices is carried out in a standard unit of measurement. The standard units of measurement are consistent with the general system of classifications used in statistics. In cases where products have a different unit of measure when sold or purchased, prices are recalculated, and packaging is an element of the specification of the representative product.

     36. When registering prices, measures are taken to maintain confidentiality and use primary statistical data exclusively for statistical purposes, guaranteed by the current legislation in the field of state statistics. The bodies of state statistics carry out verification of the reliability of primary statistical data, their clarification, logical and visual control of price information, reasons for price changes.

      To confirm the reliability of primary statistical data in accordance with subparagraph 17) of Article 12 of the Law, additional information is provided as basic objects: contracts, payment requests, invoices, powers of attorney, invoices and other accounting documents.

     Price changes caused by an improvement or deterioration in the quality of goods or services are not taken into account when calculating price indices. When changing the technical and economic parameters of a registered product, service, it is determined to what extent the change in prices is associated with a change in quality in order to apply quality adjustments.

     Footnote. Paragraph 36 - as amended by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated September 8, 2020 No. 36 (shall be enforced ten calendar days after the day of its first official publication).

**Paragraph 2. Registration of producer prices**

     37. Producer prices are recorded without taking into account value added tax and excises, trade and sales margins, transportation and other costs associated with the movement of products from the producer to the buyer.

     When registering producer prices, detailed specifications of specific representative goods (services), terms of delivery (payment) and types of consumers are taken into account.

     Specifications of goods (services)-representatives are compiled to provide a price assessment for identical goods, services in successive periods of observation and include technical and qualitative characteristics. When drawing up the specification, the elements that have the greatest impact on the price level when they change are taken into account: the scope of delivery (large lot, small lot), payment terms (preliminary, at the time of delivery, in a month), types of consumers (population, industrial enterprise, agricultural producer) and others.

     Specifications of representative goods (services) remain unchanged during the reporting year. When changing the specification, which has a significant impact on the price level, the representative product (service) is taken into account as "new".

     38. Registration of prices by types of consumers and terms of delivery makes it possible to exclude the influence of factors associated with changes in the terms of sale of goods or types of buyers when calculating price indices. Basic facilities sell the same type of product to different consumers at different prices, the level and dynamics of prices also differ when selling products within the republic and abroad. Proceeding from this, price registration is carried out for the observed types of goods for two or three main types of consumers. If there is a frequent change of consumer types in the base object, prices are recorded for several consumer types. In case of insignificant discrepancies in price levels, the average price prevailing for several types of consumers is recorded. With a strong discrepancy in the price level by types of consumers, each of the consumers is considered as a separate type of product. When registering prices, "random" consumers with a very low or very high price level are excluded, as they do not reflect the real price dynamics.

     39. Registration of prices in industries with a frequent change in the range of products is carried out for their small assortment groups, which include homogeneous goods with the same consumer properties. When using average prices of small assortment groups, a slight deviation of their level within the group is allowed.

     40. Registration of prices in the event of a temporary cessation of production and marketing of products provides for the use of "conditional" prices. Calculation of "conditional" prices of producers of industrial products is carried out on the basis of:

     1) the relative change in prices for similar goods in the form of products;

     2) the average change in prices for the product group, which includes the disappeared type of product;

     3) the average change in prices for the sub-sector, industry on average in the republic;

     4) using the price of the last (previous) registration. The use of the price of the last (previous) registration is applied in the conditions of stabilization of price dynamics, when the costs of production for the period remained unchanged.

     In the event of a complete cessation of production of the observed representative product (service) in the base facility or its closure (liquidation, reorganization), the product or service is replaced within a year. For the optimal implementation of the procedure for replacing the disappeared type of goods (services) - representatives, in addition to the goods and services involved in the calculations, additional monitoring of their similar types with similar specifications is carried out.

     41. Registration of prices for certain types of seasonal goods, the production of which is carried out in certain months of the year (production of sugar, certain types of shoes, clothing, processing of fruits, vegetables, and others), is carried out as follows. During the period of temporary cessation of production of seasonal goods, but with continued shipment (sales), data on sales prices for the types of goods sold are recorded. In the absence of actual sales prices in the reporting period, the use of "conditional" prices is applied. The use of "conditional" prices is made before the start of the issue and the appearance of actual prices.

     42. Separate industrial enterprises, along with the production of their own goods, carry out the production of products from give-and-take raw materials. When manufacturing products from give-and-take raw materials, processing organizations do not purchase raw materials for product development, but provide the owner of raw materials with a service for processing it, and, in some cases, do not have information about the cost of the finished products they have produced. This applies to the production of food products, oil products, textile production and others.

     Registration of prices for products manufactured from give-and-take raw materials is carried out in the following order:

     1) if the products manufactured from give-and-take raw materials are not sold by the processing enterprise, but are completely transferred to the owner of the raw materials, registration is carried out on the basis of selling prices at which the products are sold by the owner (or a supply and marketing organization created by him), although they are not its producers . At the same time, the registration price does not include taxes, markups and allowances that are not included in the manufacturer's price;

     2) if part of the products manufactured from raw materials to be supplied remains at the disposal of the processing enterprise and is sold by it independently, registration is carried out on the basis of selling prices at which the products are sold by the processing enterprise.

     If it is impossible to obtain price information for products manufactured from give-and-take raw materials, the calculation of price indices is carried out on the basis of determining the estimated prices of these types of goods, by summing up the data on the cost of work (services) for the production of finished products received at the processing enterprise, and data on the cost of raw materials , transferred for processing, received from manufacturers (or other organization) that own the raw materials.

**Paragraph 3. Registration of purchase prices**

     43. Purchase prices are recorded taking into account value added tax, excises, transport, trade and marketing, intermediary and other costs for the supply of a unit of goods or services at the time and place specified by the buyer.

     44. One of the conditions for monitoring the prices of certain types of goods purchased by the basic objects is the choice of a stable supplier under constant conditions of purchase. This allows, when calculating price indices, to exclude the influence of factors associated with changes in the terms of purchase or types of suppliers. Types of suppliers of certain types of goods differ in their purpose - industrial organizations that directly produce goods; intermediary and marketing organizations; wholesalers and others. Goods and services are purchased within the republic and abroad (from a domestic manufacturer and by import). Price levels for a certain type of product vary significantly depending on the terms of delivery, manufacturer, transportation costs and others.

     When registering prices, "random" suppliers are excluded, as they do not reflect the real price dynamics (temporary with insignificant supply volumes, with marginal price levels), when purchasing goods, services from several regular suppliers, monitoring is carried out by types of suppliers.

     45. When registering prices for purchased resources, services, there are situations associated with the absence of data on them in the basic objects.

     Registration of prices in the event of a temporary suspension of the purchase of products provides for the use of "conditional" prices until data on the actual purchase prices are received. To ensure the continuity of the time series of the purchase price index, there are the following methods for calculating "conditional" prices for temporarily missing price information:

     1) use of the price of the last (previous) registration;

     2) the use of prices for similar types of resources, services from other consumers;

     3) determination of the "settlement" price, obtained by using the price of the last registration and the producer price index (regional or republican).

     In the event of a complete cessation of the acquisition of certain types of goods, as well as the closure or re-profiling of the base facility, a replacement is made for a similar facility acquiring similar goods, but not included in the observation.

**Chapter 5. Registration of prices when the qualitative characteristics of the observed types of goods, services change**

      46. Ensuring price comparability in the face of changing qualitative characteristics of observed types of goods is one of the most pressing problems in price registration. This applies to goods of chemical, textile and clothing industries, production of machinery and equipment.

     47. Observation of the prices of goods with a specific, detailed description of their specifications allows you to exclude the impact of qualitative changes and reflect only a price change. In conditions of instability in industrial production, tracking prices for the same type of product with certain technical parameters over a long period is difficult. Adjustments are made to the recorded data to ensure consistency with the previous recording period and obtain a net price change.

     To adjust prices for quality, "implicit" (implicit or indirect) and "explicit" (explicit or direct) methods are used.

     48. Implicit adjustments include: the "matching" method, the "direct price comparison" method, the "imputation of the overall average" method, the "carry forward" method, the "demonstration that prices have not changed" method.

     The method of "overlapping" is used implicitly when performing a rotation of product samples. It is used for mass consumption products , if it is possible to register prices for old and new goods in parallel. The old sample of products is used to calculate the price index for this category of products for the previous period ( t ) compared to the previous one ( t -1), and the new sample of products is used to calculate the price index in the reporting period ( t +1) relative to the previous one ( t ) . The method of "matching" is based on the assumption that the entire difference in price at a single point in time between the missing product and its substitute is due to the difference in quality.

     The "direct price comparison" method compares the price of a new product with improved quality with a previously registered price of the product. The method is applied to products of various industries with a small difference in quality and the absence or unacceptability of additional information. The application of this method is possible with the completeness of the specifications used to describe the price of a registered representative product (service). The disadvantage of this method is the systematic overestimation of the price index by constantly ignoring small changes in the quality of substitute species.

     The method of "imputation of the overall average" involves the use of "imputation" prices for products with a strong change in quality or disappeared products. The method provides for the calculation of a "conditional" price based on changes in prices for similar types of products within the group, or for similar products from other basic objects. This method is used for the products of engineering industries and when the products of other industries disappear.

     The "carry forward" method involves keeping the last recorded price unchanged. To use this method, there is a need to be sure that there will be no change in the price of this type of product. This method is applicable for a short period of non-production (1-2 periods) and for capital and durable goods.

     The "demonstration of no price change" method is applied when there is no comparable replacement product, and the difference in prices between the old and the replacement product is significantly different. It is impossible to determine how much of this difference is due to price changes and how much is due to quality changes, so the whole difference according to this method is attributed to quality, keeping the price constant.

      The application of the "combination" method, the "direct price comparison" method, the "general average imputation" method, the "price carry-forward" method, the "demonstration of the absence of price changes" method are given in the appendix to this Methodology.

     49. Explicit quality adjustment methods estimate the cost of quality changes between the old and new product and adjust one of the prices (usually the base price) based on the difference between the costs of producing two different quality products. These include methods: "adjustment for quantity", "taking into account differences in production costs", "expert judgments", "hedonic regression".

     The "quantity adjustment" method applies to products that are replaced by products of a different size than those previously available, provided that the differences in quantity do not affect the quality of the product. This method is applicable for packaged packaging of mass consumption products.

     The method of "accounting for differences in production costs" involves estimating the change in product quality based on the degree of change in the costs of producing two similar types of products of different quality. With this method, the adjustment to the price of the old product is equal to the cost of introducing additional features of the new product.

     The "judgment" method is based on one or more experts estimating the cost of the difference in quality between the old and the replacement product. It is used when the technical specifications of the compared types of products differ and it is impossible to quantify and identify the difference in price. The reliability of the method depends on the qualifications of experts and differences of opinion. If it is impossible to use alternative methods for evaluating complex goods, expert opinions are justified.

     The method of "hedonic regressions" is used to estimate the price of a product, considered as a function dependent on its characteristics. It is applied when price and feature data are available for a set of models, and if those features explain price volatility well given econometric considerations. The method of hedonic regressions is applicable to the products of the industry, the production of machinery and equipment.

**Chapter 6. Formation of the weighting scheme**
**Paragraph 1. Weights for the producer price index**

     50. Producer price indices are calculated on the basis of numerous price data collected from all types of underlying facilities and covering selected economic activities and products. Due to differences in the volume of production or sales of some types of products from others, to take into account the relative importance of each surveyed element and the impact of a change in its price on the overall value of the index, the indexed values are weighted.

     51. As weights for the producer price index, the value of manufactured industrial products by sub-types of products by enterprises is used, which makes it possible to simultaneously take into account the share of a sub-type of products and an industrial enterprise in regional specialization and the nationwide volume of the industrial market.

     The main information source for determining the cost is the statistical data of the annual survey of industrial enterprises. Additional sources are enterprise censuses, enterprise registers, administrative data of state bodies responsible for the regulation of certain types of economic activity.

     52. The process of constructing a weighting scheme for the producer price index includes the following sequential operations:

      1) determination of the cost of industrial products produced for a certain base period, and its distribution among the basic objects, subspecies, types, classes, groups, departments and sections included in the observation;

      2) implementation of linking the average annual cost and price level by product subspecies to a single time period taken as a comparison base;

      3) distribution of the cost of industrial products depending on the sales channel.

      The use of sampling sets (products (goods, services), basic objects) for price assessment necessitates the adjustment of weights to take into account data not included in the producer price index.

      The average annual cost of manufactured industrial products is determined according to the full list of types of products (goods, services) of the statistical classification and distributed among the relevant subtypes selected for price monitoring. For non-covered subtypes of products (goods, services), cost data are proportionally distributed across all constituent elements.

      When constructing the producer price index, the condition must be met so that the base period of the weights corresponds to the base period of the price. This makes it necessary to adjust the average annual value of industrial output for the base year to the prices of December of the previous year. To do this, a correction factor is determined as the ratio of the price index for December of the previous year to the average price index for the year for which the weights are derived. The average price index is calculated as the arithmetic mean of the price indices of the months of the base year to December of the year preceding it.

      The correction factor is located by sections of the classification of the producer price index at a two-digit level and is applied for each lower level of aggregation - group, class, species, subspecies. By multiplying the previously determined average annual cost by the adjustment factor, the adjusted cost by subtypes of products and services is calculated, which is then summed up by increasing levels of aggregation.

      Based on information on the use of industrial products in the domestic market and export supplies (according to data on the value of exports of industrial goods, the balance of resources and use of goods, the structure of exported products by country), the adjusted value by type of product is distributed according to sales channels - in the domestic market and abroad. country limits.

     The values found are final and are used as weights in constructing the producer price index.

     Footnote. Paragraph 52 - as amended by the order of the Chairman of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan dated September 8, 2020 No. 36 (shall be enforced ten calendar days after the day of its first official publication).

     53. The weighting scheme remains constant for a certain period of time so that the index reflects only price changes. At the same time, during periods of significant changes in the structure of industrial production, the weighing scheme is updated.

**Paragraph 2. Weight components for the purchase price index**

     54. The construction of the purchase price index involves the use of a weighting scheme that reflects the cost structure of production resources, services purchased for the production process within each type of activity and in the industry as a whole.

      55. The formation of the weighting scheme for the purchase price index is based on the use of two information sources - the data of the "Costs - Output" table (hereinafter - TCO) and data received directly from the underlying objects.

      The use of TCO weighting scheme for constructing, containing data on the structure of material costs by types of resources, is considered the most justified, especially if the purchase price index is built for the whole country. However, the information presented in it is not detailed enough to take into account the structure of the acquisition of resources to the level of the types of products and services selected for monitoring prices. Also, TCO is not formed in the regional context.

     Another disadvantage of using TCO data is that their estimates contain imputed figures for non-market activities, which may not be justified in determining the weights for the purchase price index, since non-market activities are not included in its economic scope.

     The second information source is data on the cost of production resources, services for the surveyed range of basic objects. The collected data on the quantity and prices of purchased products, with a constant sample of basic objects throughout the year, are a qualitative basis for the formation of a weighing scheme.

     The use of cost data obtained directly from the underlying objects ensures that the requirement for the correspondence of the base period of the weights and the base period of prices is met. As a result, there is no need for an additional procedure for normalizing the weights.

     56. The weighting scheme is formed centrally separately for each region and for the whole country. For each region, there are cost data distributed by types of economic activity, which are further broken down by types of production resources, services, depending on the share in this type of activity.

     57. The process of building a weighing scheme includes:

     1) formation of the initial average annual cost of production resources and services;

     2) formation of value for products connected to observation for the first time;

     3) formation of the final cost and specific weights with their distribution between types, sections, sections and channels.

     The initial average annual cost of a production resource is calculated as the product of the average annual quantity accumulated according to the monthly data of the base objects reported in the previous year and the average annual price for the resource based on the results of observation for the same year.

     In order to form weight components for products (services) connected to observation for the first time, information on cost data for a comparable range of basic objects reporting in the reporting year is additionally requested.

     Based on the finally formed cost, specific weights are calculated to analyze the structure of the "new" weighing scheme in comparison with the current one. The resulting value is final and is used as weight components in the construction of the purchase price index during the reporting year. The weighing scheme is updated when the cost structure of production resources and services purchased for the production process changes.

**Chapter 7 Calculating of average prices and price indices**

     58. The average price is the generalized value of the prices of goods (services) representing a homogeneous type of product (service). Average prices are calculated for a certain period of time, by territory, types of products (services).

     To calculate the average price, the geometric mean formula is used:



(1)

      where:



– average price by type of product (service) j in period t ;



– product of prices of goods (services) - representatives of products (services) j in period t ;

       *n* - the number of prices (price quotations).

     When calculating the average price, the equality of the number of fixed prices in the compared periods is taken into account.

     59. The producer's price for industrial products (services) in the region is calculated as the geometric mean of the prices of registered representative goods (services).

     The purchase price of products in the region is calculated as the geometric mean of the types of products in the types of economic activity.

     The average price in the republic is determined as the weighted average of the prices of the regions.

     To ensure the representativeness of average prices by type of product (service) in the region, their formation is carried out subject to the availability of prices in at least three different basic objects reporting in the reporting period. If the above condition is not observed, average prices by type of product (service) in the region are calculated solely for use in further calculations of average prices in the republic and price indices.

     To ensure the representativeness of the average price in the republic, its formation is carried out subject to the availability of prices in at least three regions in the reporting period. The exception is the average price for "specific" products, the production of which is typical for only one region throughout the country.

     60. The calculation of price indices begins with the calculation of the price index of the elementary aggregate (hereinafter - individual price index), at the second stage, higher-level indices are calculated by aggregating individual price indices (hereinafter - aggregated price indices).

     61. An individual price index by type of product (service) j is calculated on the basis of information about the price level or their change for representative goods (services) that determine it.

     To calculate individual price indices, the formula of a simple (unweighted) geometric average of individual price indices is used, which is equivalent to the ratio of unweighted geometric average prices (Jvons index):



(2)

     where:

       *I* j - individual price index by type of product (service) j ;

       *i* – individual price indices;

       *t , t -1* - reporting and previous comparison periods, respectively;

       *p* t *, p* t -1 - the price per unit of goods (services)-representative in the corresponding period;

       *j* - type of product (service), which combines several specific goods (services) representatives (from one to n );

       *n* - the number of representative goods (services) that determine the type of product (service).

     At subsequent stages, elementary price indices, in accordance with the hierarchical structure of the classification and using appropriate weights, are combined into aggregate price indices.

     62. The aggregation of price indices by sales channels and acquisition channels is carried out from the level of product groups and above to the type of economic activity using the appropriate aggregation weights.

     Aggregated price indices by channels, groups, subclasses, classes and above by aggregation at the national level are calculated as weighted averages of individual price indices using the modified Laspeyres formula. According to it, in each period of time, changes in the prices of elementary aggregates are weighted through constant basic weights. The constancy of the basis weights ensures the purity of the price comparison and excludes the influence of structural shifts (change in quantity).

     According to the modified Laspeyres formula, price changes are calculated based on successive price observations. In each time period, the basis weights are multiplied by the last value of the price index:



at



(3)

     where:

       *I* L – price index for the period t compared to the previous period *t -1* ;



- individual price index by type of product (service) for period *t* to period *t -1* ;

       *P0* \_ *x Q* 0 - the cost of products (services) in the prices of the base period, used as the basis for constructing a weighing scheme;

        *P* t -1 *x Q* 0 - the cost of products (services) in the reporting period;



- the product of individual price indices by type of product (service) to the previous period.

     Using the modified Laspeyres formula allows you to calculate indices with a high level of aggregation and has a number of advantages:

     1) really shows a pure price comparison, since constant weights are used to calculate it, in contrast to the Paasche index, which is based on the weights of the current period and, accordingly, reflects not only price changes, but also quantities (production volumes);

     2) significantly speeds up the counting process, since the data of the previous period, available in advance, are used for weighting;

     3) allows during the year to take into account changes in the range of products (services) caused by changes in consumer behavior;

     4) lends itself better to economic interpretation, since the influence of price and quantity can be traced separately.

     63. When switching to new weights for calculating price indices, the principle of their continuity is observed. This is achieved by linking the indices calculated by the new weights with pre-existing time series of price indices. The linking or chaining procedure is designed to ensure that the individual price indices at all levels correctly reflect the dynamics over the different years. The linking or linking procedure is carried out using a linking factor. It is defined as the ratio of the long-term price relative to December of the base year using the old weighting scheme to the long-term price relative calculated using the new weighting scheme. The coupling coefficient is calculated from the aggregated levels and remains unchanged until the next change of the weighing scheme. Subsequent calculations of long-term price relatives according to the new weighting scheme are made taking into account the obtained coupling coefficient.

     64. The construction of price indices for the corresponding period of the previous year (month, period with a cumulative total) is carried out by the basic method, which provides for the "linking" (linking) of monthly price indices with each other to form a consistent dynamic series, having as a base a fixed reference point or a base period .

     Calculation of monthly price indices of the reporting year to the corresponding month of the previous year is carried out by dividing the monthly price index in the index row of the reporting year by the monthly price index in the same row of the previous year:



(4)

     where:

       *I* t – price index for the month *t* of the reporting year *g* to the corresponding month of the previous year *g -1* ;

       *It* g - the price index of the month *t* of the reporting year *g* in the index series;

       *It* ( g -1) - the price index of month *t* of the previous year *g -1* in the index series.

     Cumulative price indices for the corresponding period of the previous year are determined by dividing the sum of monthly price indices of the index series of the compared period with the same sum of monthly price indices of the previous year:



(5)

where:



- price index for January-December of the reporting year to January-December of the previous year;

       *I* 1 g *, I* 2 g *, ..., I* 12 g - price indices for January, February, ..., December of the reporting year in the index series;

       *I* 1( g -1) *, I* 2( g -1) *,… I* 12( g -1) – price indices for January, February, ..., December of the previous year in the index series.

     Price indices for the quarter, half year and nine months of the reporting year are calculated in a similar way to the corresponding period of the previous year.

     Price indices for a quarter to the previous quarter are calculated as the ratio of the sum of monthly price indices in the index series that define the reporting quarter to the sum of monthly price indices of the previous period:



(6)

where:



– price index of the second quarter of the reporting year to the first quarter;

       *I* 4 g *, I* 5 g *, I* 6 g - price indices for April, May, June of the reporting year of the index series;

       *I* 1 g *, I* 2 g *, I* 3 g - price indices for January, February, March of the reporting year of the index series.

**Chapter 8. Data distribution**

     65. In accordance with the international Special Data Dissemination Standard developed by the International Monetary Fund, the Producer Price Index is published monthly according to predetermined release dates. Information is distributed simultaneously to all users in the form of a press release, express information, by posting them on the Committee's Internet resource. More detailed information on price changes by groups, classes and types of goods is published in statistical bulletins and collections.

     To assist users, the publication of the price index is accompanied by brief methodological explanations.

     In order to ensure public confidence in the index, the description of price registration procedures and the procedure for calculating the price index is published in the form of booklets, brochures and other publications and is available on the Committee's website.

     The publication of average prices is carried out subject to the representativeness of the calculated average prices for the region and the republic.

|  |  |
| --- | --- |
|   | Appendix to the Methodology for constructing producer price indices in industry |

 **Application of the "combination" method**



     In the time period ( t -1), when both products (2 and 3) are available and the sample rotation is planned, a replacement product is selected that is close in quality, but differs in specification. The difference in price between product 2 (old) and product 3 (new) is related to the difference in quality.

**Applying the Direct Price Comparison Method**



     In the absence of a price for product 1 (old), a replacement product 2 (new) with the same specifications is selected in period t . The difference in price between product 1 (old) and product 2 (new) is taken as a direct price change.

**Application of the "imputation of the general average" method**



     If there is no price in period t for product 2 (disappeared), the "conditional" price is calculated using the average price change for similar types of products (1 and 3).

**Applying the "carry forward" method**

|  |  |
| --- | --- |
| Durable products, capital goods | Observation period |
| t-2 | t-1 | t | t+1 |
| Products 1 | 40 | 40 | 44 | 44 |
| Products 2 (old) | 27 | 25 | - | - |
| Elementary price index(product 2) | 100.0 | 92.6 | 100.0 | 100.0 |
| Products 3 | 21 | 20 | 22 | 23 |
| Products 4 | 29 | thirty | 33 | 33 |

     During periods of no price ( t and t +1) for product 2 (old), the last recorded price remains unchanged.

**Application of the "demonstration of the absence of price change" method**

|  |  |
| --- | --- |
| Durable products, capital goods | Observation period |
| t-2 | t-1 | t | t+1 |
| Products 1 | 10 | 10 | - | - |
| Products 2 | - | (40) | 40 | 50 |
| Elementary price index | 100.0 | 100.0 | 100.0 | 125.0 |

     In the absence of a comparable replacement product, and if there is a significant price difference between the old and the replacement product, the whole difference is attributed to quality, keeping the price constant.

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