KAZAKHSTAN`S EXPERIENCE IN CPI COMPILATION

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METHODOLOGICAL STANDARDS OF CPI COMPILATION

SNA 2008

CPI manual: theory and practice

On the basis of the international standards are developed and work:
1. Methodology of CPI compilation.
2. Rules of registration of primary statistical data, except for the data submitted by respondents and households.
3. Methodology of prices observation on consumer goods and services.
4. Specifications of varieties goods (services) selected for price collection.
Geographical coverage – urban and rural settlements. Total 85.

The reference population – all households which incur expenses on country’s territory.

- Capital: Astana
- Area: 2.7 mln. sq. km. (9-th in the world)
- Population: ~18.2 mln.
- Currency: Kazakhstani tenge (KZT)

✓ Every month about 120 thousand price quotations for 510 goods and services collected all over the country
✓ About 11 thousand outlets in the sample.
✓ 332 price collectors in the whole country.
BASKET OF GOODS AND SERVICES

The basket is composed centrally and is the same by composition for all regions of the country.

The distribution of goods and services into groups is made according to the Classification of Individual Consumption by Purpose (COICOP).

HISTORY OF THE COMPOSITION OF THE CPI BASKET

- 1995: 275
- 2000: 344
- 2002: 435
- 2008-2015: 508
- 2016-2018: 510

Revised once in 5 years.
Observation of prices is based on the principles of a sample statistical survey.

Non-probability sampling method using:
- cut-off sampling;
- quota sampling;
- the representative item method.

The sample of outlets and items is revised annually.

Selected:
- geographical places (areas);
- outlets;
- products.

Sampling frames:
- statistical business register;
- telephone business directories;
- catalogs and other lists of wholesale companies and retail organizations.
PRICE COLLECTION METHODS

1. Personal visit retail outlets. 
   Tools: 
   - Paper Questionnaire "Registration of prices for consumer goods and services" (Ц-101); 
   - in the pilot testing, an electronic form of data input using Portable computing devices – Samsung Galaxy Tab Active (SM-T365). Development of the CAPI system.

2. Through the Internet for services such as passenger railway and air transport, mobile communications, some types of medical services.

3. By telephone - sanatoriums, medical and educational institutions, organizations that provide ritual services. At the same time 1 time per quarter – visit them.
PRICE COLLECTION

Prices are collected on a particular date in the month.

The main condition for prices collection of a certain type of product (service) in a particular outlet is to register it`s price on the same day of the month as in the previous period.

The advantage of this approach is:
- simplicity;
- consistency;
- efficiency with relation to costs.

For each item is collected 6-10 price quotations.
IIS «e-Statistics» (implemented since 2015)
**CONSTRUCTION OF WEIGHTS**

Weights of the CPI are defined on the basis of the structure of household consumption expenditures and they are uniform for the republic and regions.

Main source ➔ the latest annual data on household expenditure.

Additional sources ➔ structure of retail turnover and SNA.

Weights updating is annually.

When the weights changed continuous CPI series should be created by linking the index numbers. As a link, December is taken each year.

A linking coefficient is calculated for linking.
CALCULATION OF PRICE INDEXES

CPI is calculated in two stages:

• calculation of the elementary index - the Jevons formula;
• calculation of aggregated indices - modified Laspeyres formula.

For a comprehensive analysis of inflation processes, monthly price indices are calculated:
• to the previous month;
• to December of the previous year;
• to the corresponding month of the previous year;
• to the corresponding period of the previous year;
• to December 2015 (base year).

_The CPI is calculated for the whole country and for 16 regions._
# ADJUSTING FOR QUALITY CHANGE

In practice, the following methods are used:

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<thead>
<tr>
<th>Implicit methods</th>
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<tr>
<td>Direct comparable replacement method</td>
<td>all goods (with small differences in the quality of goods)</td>
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<tr>
<td>Overlap method</td>
<td>certain types of goods and services (with differences in quality)</td>
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<tr>
<td>Overall mean/class mean imputation</td>
<td>certain types of clothing and footwear, sporting goods, solid fuel (seasonal)</td>
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<tr>
<td>Carry forward</td>
<td>temporarily missing goods (within 2 months)</td>
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<tr>
<td>Quantity adjustment method</td>
<td>certain types of goods (for differences in packaging)</td>
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FEATURE OF TREATMENT CERTAIN TYPES OF SERVICES

Calculation of the average change of differential tariffs for certain types of utilities:
• central heating;
• hot water;
• electricity.
Tariffs are differentiated by volume of consumption and availability of metering devices.

\[ I = \sum_{j=1}^{k} i_j \times w_j \]

- \( I \) – weighted average tariff change for the service
- \( i_j \) – change in the differentiated tariff for a group of consumers \( j \)
- \( k \) – number of consumer groups
- \( w_j \) – weight of consumer group \( j \)

The weight for each population group is determined on the basis of their monetary expenditures for the payment of this type of service.
THE TREATMENT OF FINANCIAL AND INSURANCE SERVICES

Financial

since 2011: • payment for making payments;
• payment for card services.

since 2016: • payment for money transfer services.

Insurance

since 2011: • insurance of personal vehicles.

since 2021: • health insurance.
DERIVED PRICE INDEXES

• price index for socially important food products (weekly);
• core inflation;
• price index for the groups with the lowest monetary incomes;
• price index for the groups with the largest monetary incomes;
• retail price index.
ISO 9001:2015 and GSBPM

**ISO 9001:2015 – Management of the organization as a whole**

- Definition and analysis of product requirements
- Design and development
- Procurement
- Production and service
- Monitoring and measurement

**GSBPM – Management of the process and its final product**

- Learning needs
- Development
- Design
- Collection
- Process
- Analysis
- Dissemination
- Evaluation
Process landscape of the Quality Management System of the Committee on Statistics in accordance with GSBPM

Management by the system of quality

Strategic planning of statistical activities

Production of statistical information

Basic statistical activities

1. Determination of needs
2. Designing the production process
3. Building the production process
4. Collection of primary statistics
5. Data processing
6. Data analysis
7. Dissemination of official statistical information
8. Evaluation of the production cycle

Declared and assumed customer requirements

Support Activities

Coordination of administrative data collection
Classification
Formation of a sample
Information infrastructure management
Procurement (Finance and Documentation)
Personnel Management

Formation of a system of statistics indicators:
- prices, production and environment, services and energy, social and demographic, labor and living standards, structural and business surveys;
- the formation of indicators of the system of national accounts, the results of national censuses, the maintenance of registers

Customers
Every month:

1st day after the reporting period - express information “About inflation in the Republic of Kazakhstan", “About inflation in the regions of the Republic of Kazakhstan".

On the 4th day after the reporting period - the statistical bulletin "Consumer Price Index in the Republic of Kazakhstan".

Information-analytical system "Taldau" - on 3-4 days from the date of issue of the bulletin.

The website of the Committee on Statistics of the Ministry of National Economy
www.stat.gov.kz
1. Completion of the CAPI system implementation and its integration with the e-Statistics system.

2. Revision of the basket.

3. Improvement of treatment services in the CPI.

4. Implementation of quality reports.

5. The use of scanner data for the CPI.

6. Collection of data on prices in the Internet-trade for the CPI (web-scraping).
IMF mission 1995, 1997:
• The methodology of compiling the CPI meets most international standards and exceed them in the field of annual updates of the weights.

IMF, Report on the Observance of Standards and Codes, 2007:
• Concepts and definitions, as well as the basis for accounting for CPI indicators, meet international standards;
• To compile the CPI indicators are used the economically justified source data and statistical methods;
• Source data correspond to the definitions, coverage and classification, as well as the accounting time, reporting periods and methods for estimating the estimated CPI indicators;
• There are clear rules for including new source data, as soon as practicable;

Eurostat, Global Assessment of the Statistical System of the Republic of Kazakhstan, 2008:
• The CPI is calculated in accordance with international standards;
• The level of detail of the price of goods is sufficient for a detailed analysis of changes in the CPI;
• Weights are revised each year on the basis of a household income and expenditure survey. Such a system of adjusting the consumer basket provides a reflection in the CPI of changes in the structure of consumption.

Eurostat, Global Assessment of the Statistical System of the Republic of Kazakhstan, 2017:
• The CPI is calculated in accordance with international standards;
• There are historical dynamic series of consumer price and producer price indices since 1992;
• A number of improvements were made in the context of the KAZSTAT project with the support of international experts.
Thank you for attention!