Statistical Product - Consumer price index (monthly)

Processes	Sub-processes	Sub-process description
Specify needs		
	1.1 Determination of needs	CPI is the only price index used in countries as a substitute for inflation index, as it ensures minimal requirements relating to inflation sector; timelessness (efficiency), more coverage of consumption sector and sensitivity. CPI is considered one of the most important macroeconomic indicators used by state bodies for development and implementation of monetary and financial policy, analysis, forecast and restraint of inflation factors in economy, settling separate legal disputes, etc. CPI is considered the only indicator describing inflation in the Republic of Armenia.
	1.2 Consulting & confirmation of needs	Consumer price observations and index calculations are carried out according to Annual Statistical Program of Armstat, which is approved every year by the State Council on Statistics of RA and within the frameworks of the Five-year Statistical Program (is approved by RA National Assembly). The consumer price index has been calculated since 1993 on a monthly basis. The methodology of the calculation of consumer price index has been developed jointly with the International Monetary Fund and fully meets the international standards. Provisions and order underlying the developed methodology, i. e. selection of information sources, information collection, calculations, publication of output indicators and maintenance are conformed with and implemented according to Consumer price index manual (Consumer price index manual, Theory and practice. 2004), developed by 6 famous accredited international organizations 4 (ILO, IMF, OECD, Eurostat, United Nations and the World Bank). Different commissions from IMF have visited Armstat since 1993 to improve price index calculation methodology and check quality of RA CPI. April 13-25, 2008 – presentation of metadata in accordance to

			SDDS system,
			- Questions concerning DQAF system
		1.3 Establishment of output objectives	The purpose of CPI development and calculation is to determine the size of price level change existing in RA consumer market in time and in territory. Compare RA CPI with CPI of other countries for the same period of time.
		1.4 Identification of concepts	CPI calculations include all types of households, irrespective of income amount. The procedure of selection of product and service types is carried out based on data of household survey spending by selecting products and services that have larger consumption. Observation point surveys are periodically carried out for the purpose of updating the list of products and services, expert evaluations are provided.
		1.5 Checking the data availability	Price observations are carried out by price observation specialists (statisticians) directly visiting relevant commercial (service) facilities selected for observation and record prices printed on labels and price lists. For the purpose of recording prices statisticians can take specific actions (different measurements, weights, etc.) in observation base facilities aimed at correctly determining and recording unit price. Observed prices are registered by hand computers. Collection of prices for some services that are fixed in the republic, such as telecommunication, electricity, gas and other service prices, are carried out in concentrated order in Armstat above-mentioned division responsible for CPI calculation.
		1.6 Preparation of business case	Before the processing of RA CPI calculation and approval of envisaged changes by RA State Council on Statistics through individual decision, the working discussions related to the included indicators and the instruction of filling it in are carried out with the different interested bodies, scientific organizations, users, as well as the opinion of international experts is taken into account. Survey questionnaires conducted by other countries and different international organizations are studied.
Design			
		2.1 Design outputs	The data are collected based on the Law on "Official Statistics" and "Five Year Statistical Program", as well as the Resolution No. 05-N of RA State Council on Statistics "On Approval of the Procedure for the collection of statistical data" dated 20 June 2016 and Resolution "On Approval of Annual Statistical Program".

	2.2 Design variable descriptions	Prices: Consumer prices (retail) of goods and services by which the index are calculated. Indexes: Indexes that reflect the net price changes. Elementary Index Weights: weights used for weighting the elementary aggregate of indexes for compiling sub-indexes as well as for aggregating them into the total consumer price index. Classification used; Classification of Individual Consumption by Purpose (COICOP) (Resolution N 876-N of Minister of Economy dated 19.09.2013)
	2.3 Design data collection	The observation of consumer price and service tariffs is carried out by sample order. Price and tariff observation in consumer market and consumer price and price index calculation is conducted by several working stages: ✓ Residence sample for product and service price and tariff observation ✓ Sample of base trade and organizations rendering services (where observations should be organized) ✓ Product (service)-representatives sample for observation ✓ Observation of prices and tariffs ✓ Calculation of average prices (tariffs) ✓ Formation and calculation of CPI basket weights ✓ Calculation of consumer price index
	2.4 Design of general population and sampling	CPI coverage can be devided into 2 main groups; - geographical coverage - data coverage The annual observations of RA consumer product (service) prices (tariffs) by the defined methodology are carried out in Yerevan city and in 10 cities representing all of the 10 RA marzes. Observation units are selected based on volume of goods turnover and services provided by statistical units, regardless of their type of activity, as well as by using other methods. The indicators necessary for the formation of CPI product and service basket weights are retrieved initially based on the data on household expenditures retrieved in the result of Armstat integrated living conditions survey (ILCS).
	2.5 Process and analyze design	After the collection of information the statistical indicators are subject to arithmetic and logical checks. The inaccuracies revealed in the result of check are fixed by contacting to the

		relevant staff of regional departments and, in necessary, to relevant statisticians providing information or directly to households.
	2.6 Design production systems & workflow	The preparatory work, particularly related to the sample of trade and service facilities and notification of organized observations in these facilities, instruction and sorting of observing specialists the training of the staff through professional courses, etc. is carried out during all processes started from the collection of information until its publication.
Build		
	3.1 Build data collection instrument	Price observing specialists provide summerized descriptions of products and services selected for observation. The recorded prices are registered in relevant electronic tables.
	3.2 Build or enhance process components	The guidelines and instructions necessary for information verification are available. Input software package (Microsoft Office Access) has necessary tools for index aggregation, required software for building historical series.
	3.3 Build or enhance dissemination components	The dissemination of information is possible in electronic form of publication of information on monthly, quarterly and annual basis in accordance with the Annual Statistical Program.
	3.4 Regulation of processes	The derivation of statistical product is carried out by the following successive stages: 1. Collection of information, 2. Arithmetic and logical checks and adjustments, 3. Information input through the pre-designed input software (Microsoft Office Excel software), 4. Analysis of retrieved price information, clarification of issues, 5. Index calculation, 6. Preparation of press release, 7. dissemination of information through internet, as well as provision of paper information through electronic tables, 8. Provision of indexes to subject matter divisions
	3.5 Test statistical system	List of observed product-services are periodically updated, price indicator input software is reviewed. Reorganization and development of software, as well as review of Macros software for calculation of seasonal product prices is carried out, where necessary.
	3.6 Test statistical business process	The input of new products in CPI list is carried out under weight changes, by examining beforehand their prices in consumer market and without including their changes in index calculations. Similar test observation process is implemented in case of change and inclusion of observed residence, as well as in case of

		including new trade or service facility or changing the closed facility with the new one.
	3.7 Finalize production system	Based on retrieved price information, monthly indexes are calculated by RA marzes and for total RA. A number of indexes are also calculated compared to different periods (base, previous year accumulative, etc).
Collection		
	4.1 Design general population and sampling	Armstat Household Statistics Division provides Price Statistics and International Comparisons Division with the list of products and services consumed by surveyed households. The composition and structure of product services with their prices included in each product group are adjusted. After this the products and services that were widely consumed by population during given period of time are selected. Purpose sampling is carried out by consumed volume size.
	4.2 Set up collection	In order to organize the collection of statistical information, the formation of order on printing of relevant statistical reporting form and in case of need of the instruction of filling it in , their printing and distribution to the relevant interviewers is implemented according to the number of households previously known as subject to observation. At the same time the questionnaire and diary form is accessible on the Armstat official website. The responsible staff of structural and territorial units has relevant knowledge and skills for the organization of the statistical information collection process.
	4.3 Run collection	Statistical data collection is carried out by the Armstat marz departments, as well as by the relevant units of Armstat (mobile communication, electricity, gas and other tariffs).
	4.4 Finalize collection	Product price or service tariff, as well as their summary description and observed measurement unit is registered in relevant statistical reporting form. The collected information after being arithmetically and logically cross-checked is input in the electronic environment. The information input is carried out mechanically and with further archiving.
Process		
	5.1 Integrate data	Information received from Armstat marz departments is input in relevant software and afterwards compared in relevant electronic tables. Consumer price indexes for RA marzes are calculated based on them. RA CPI is retrieved by using specific weights for marzes.
	5.2 Classify & code	Classification of products and services and their appropriate coding is carried out using national version of Classification of

		Individual Consumption by Purpose (COICOP).
	5.3 Review and approval	Price information received from RA marz departments are subject to analysis, price change of each product and service in marzes are compared with each other and are subject to additional price observation in case of questions.
	5.4 Edit & input	Different imputation methods are applied for prices and tariffs of missing products and services, for example average change indicator for relevant group prices are inserted.
	5.5 Derive new variables & units	When product and service type disappears from consumer market, relevant methodology is applied and they are replaced by another type with the same name and quality specifications. Only product with a new name or service offered to the population, which will have relevant specific weight in CPI basket, is included in CPI composition only when basket is reviewed and recalculated. If a comparably large trade or service facility appeared in a given residence, price observation specialist consults with Armstat Price Statistics and International Comparisons Division and includes it in the list of observed facilities instead of not so representative trade (service) points from observed base facilities.
	5.6 Calculate weights	The weight formation process is implemented by the following stages: 1. Armstat Household Statistics Division provides Price Statistics and International Comparisons Division with the list of products and services consumed by surveyed households. 2. The composition and structure of product services with their prices included in each product group are adjusted. After this the products and services that were widely consumed by population during given period of time are selected. 3. Specific weight of each product (service) in general consumer basket is calculated, based on data of monetary expenditures for the purchase of products (services) by households. Marz weights are formed on the basis of the following statistical indicators: 1. Goods turnover volume, 2, Volume of offered paid services 3. Population number
	5.7 Calculate aggregates	All product-services that comprise of consumer price index basket are considered elementary aggregates in CPI calculations

			or CPI contingent. Elementary product (service) price is formed from all price indicators that are registered during given period for specific products or sevices. In the result of average arithmetical mean values of relevant specific weights for products and services calculated based on elementary aggregates or individual price indexes (for sub-classes, classes, sections and total CPI) and consumer expenditures, aggregated price indexes of various groupings of consumer products and services are retrieved, according to COICOP classification. All other necessary grouping indexes are retrieved by similar aggregation method.
		5.8 Finalize data files	Index calculation is carried out every month through relevant software based on price data, as compared to the previous month. By using monthly changes, indexes for different periods are retrieved by chain method, as compared to base, given month of previous year, given period of previous year and to all necessary periods. Relevant historical series of dynamic price changes are built.
Analyse			
		6.1 Prepare draft outputs	After the monthly calculation of consumer price indexes, preparation of summary presentation of aggregated data is made. Their summary publication is made on fifth working day after each accounting month on Armstat official web page.
		6.2 Validate outputs	The methodological requirements to the received indicators are strictly followed during the whole process of receiving according to the pre-defined classifications, methodological guidelines and the instruction provided by International Monetary Fund.
		6.3 Explanation and interpretation of outputs	After the calculation of aggregated indicators their logical analysis are carried out by using evaluations of impact of different socio-economic phenomena on relevant aggregated indicators.
		6.4 Apply disclosure control	The confidentiality of statistical indicators (not containing individual (personal) data) that is subject to publication, as well as requested by the users of statistical information is strictly followed according to the Law on Official Statistics and the Resolution of the SCS No 53 " Approval of the Order on Protection of Statistical Confidentiality" dated 25 June 2001, and only summarized data are provided (see: https://www.armstat.am/file/doc/99454478.pdf).
		6.5 Finalize outputs	The analysis of observed prices and indexes calculated based on them is carried out by their historical and time series before the

			dissemination of summary information. Comparison is made between price levels of seasonal products recorded during the same period of the previous years.
Dissemination			
	7.1 Update output systems		The work on the derivation and final checking of relevant tables of statistical indicators that are subject to publication is carried out, as well as the time series update is implemented. In case of the need the changes and/ or additions are made in the concepts and methodological explanations of the relevant indicator.
	7.2 Produce dissemination products		All production steps for dissimination products are carried out; preparation of explanation text, tables, figures and other materials, editing of that products and their conformity to publication standards.

7.2 Produce dissemination products (continued):

Annual Publications
- "The Statistical Yearbook of Armenia" is available in Armenian, English, and Russian.
- "Armenia's Marzes and Yerevan city in Figures" statistical handbook is available in Armenian and English.
- "Armenia in Figures" statistical handbook is available in Armenian and English
- "The Prices and Price Indices in the Republic of Armenia" annual statistical handbook is available in Armenian and English.

News Releases
- "Current Data for Main Macroeconomic Indicators Describing the Republic of Armenia's Socio-Economic Situation" is available in Armenian.

Press Release
- "Consumer Price Index in the Republic of Armenia" is available every month in Armenian.

Monthly bulletin
- "The Socio-Economic Situation of the Republic of
- Armenia" monthly information report is available in Armenian and Russian.
- "The Consumer Price Index in the Republic of Armenia" statistical monthly bulletin is available in Armenian.

Quarterly bulletin
- "The Poverty and Food Security" statistical bulletin is

		available in Armenian and English. Internet Electronic publications are available in Armenian (fully), English and Russian at: http://www.armstat.am/en/?nid=82 The monthly and historical data of CPI are available at: https://armstatbank.am/pxweb/en/ArmStatBank/?rxid=602c2fcf-531f-4ed9-b9ad-42a1c546a1b6,602c2fcf-531f-4ed9-b9ad-42a1c546a1b6.	
	7.3 Manage release of dissemination products	The dissemination of statistical information is carried out according to the schedule envisaged by the Five-Year and Annual Statistical Programs.	
	7.4 Promote dissemination products	Submission of dissemination products. Use of tools to manage communication with users. Use of website, Facebook, etc.	
	7.5 Manage user support	In case of the official request of the users of statistical information related to the information not being published, the calculation of additional indicators is carried out at possible extend and submitted to them following the principle of confidentiality of statistical information.	
Evaluation			
	8.1 Gather evaluation	Indicators for integrated household survey monetary expenditures, data received from branch units, data on product prices produced by producers and sold in the republic, agricultural product sold by peasant farms, specific weights of financial services offered by central bank, etc serve as a base for indirect calculation of CPI.	
	8.2 Conduct evaluation	Calculated weights of enlarged groups used for CPI aggregation that are adjusted according to data received from relevant subject matter units, are compared with indicators of similar groupings on monetary expenditures of integrated household survey. Price level according to observed cities registered in consumer market of the republic and change tendencies calculated by them are compared with each other.	
	8.3 Agree action plan	In the case of detection of discrepancies between the information received from different sources on the same indicator being compared, the revealing of the possible reasons is carried out, and the corresponding final adjustment is implemented based on it.	