

Statistical product –Producer Price Index/ Producer Price Index for Industrial Products (monthly)

Processes	Sub-processes	Sub-process description
<i>1. Specify needs</i>		
	<b>1.1 Determination of needs</b>	<p>The necessity of estimating Producer Price Index (PPI) is conditioned by securing the statistical observation of change in product price level issued by industrial organizations, which is estimated upon statistical indicators on the request of both structural units of Armstat conducting surveys and statistical data users. PPI is applied in national accounts as a deflator, as well as for the calculation of physical volume of industrial products at constant prices. PPI groupings are provided, upon request, to main data users; state government and local self-government bodies, public, scientific-educational, financial organizations, business society, mass media, Central Bank, international organizations and other subjects in demand for it, meeting the legislative requirements related to their confidentiality.</p>
	<b>1.2 Consulting &amp; confirmation of needs</b>	<p>Consultations on estimation methodology of PPI have been carried out with International Monetary Fund (IMF) experts. The indicators collected from statistical reporting form 1-Price (product) (monthly) (hereafter 1-Price) "On Product Price Registration Issued by Industrial Sector Organizations", which serves as the basis for calculating PPI.</p>
	<b>1.3 Establishment of output objectives</b>	<p>In order to meet international criteria, methodological surveys and changes of estimating PPI are conducted, as required.</p> <p>The opinion of statistical information users related to the Five-Year and Annual Statistical Programs is periodically studied to reveal their attitude related to the inclusion of the proposed new indicator, as well as to the available indicator, the needs and expectations.</p> <p>Information users opinions on the statistical indicators are studied through the working discussions with them, as well as through the "User</p>

		satisfaction survey questionnaire” which is available on Armstat website (see: <a href="https://www.armstat.am/am/?nid=131">https://www.armstat.am/am/?nid=131</a> ).
	<b>1.4 Identification of concepts</b>	<p>The following concepts lie on the basis of estimating PPI:</p> <ol style="list-style-type: none"> <li>1. Methodological selection of PPI estimation, according to international criteria,</li> <li>2. General population of industrial organizations covering the entire RA territory and product types sampling produced by them.</li> <li>3. Structural coverage according to Armenian Classification of Types of Economic Activity of Armenia (hereafter NACE rev 2)</li> </ol> <p>The main users of PPI are Armstat Industry and Energy Statistics and Macroeconomic Indicators and National Accounts structural divisions. The developing strategy also considers to the possible extent all suggestions and requirements that are presented by the above-mentioned divisions.</p>
	<b>1.5 Checking the data availability</b>	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". PPI database includes data on quantity and price of products issued by industrial organizations, which serves as a basis for further calculations.
	<b>1.6 Preparation of business case</b>	Before the adoption of statistical reporting form, as a normative act, by the State Council on Statistics of RA and its registration by Ministry of Justice of RA, working discussions on included indicators and instructions how to fill them in, are held with different interested bodies, scientific organizations and users, opinion of international experts is considered where available.
<b>1. Design</b>		
	<b>2.1 Design outputs</b>	<p>The main stages of the formation process of producers price index are:</p> <ol style="list-style-type: none"> <li>1. Sampling of industrial organizations</li> </ol>

		<ol style="list-style-type: none"> <li>2. Product sample collected through form 1-Price (product) (monthly) "On Product Price Registration Issued by Industrial Sector Organizations"</li> <li>3. Recording and collection of quantitative and price information</li> <li>4. Product sample from general set</li> <li>5. Formation of indicator weighing system in different aggregation levels</li> <li>6. Calculation of producer price index</li> <li>7. Publication of price index</li> </ol>
	<p><b>2.2 Design variable descriptions</b></p>	<p>Statistical information system collected on monthly basis through statistical reporting form 1-Price (product) (monthly) on producers price is composed of two sections:</p> <p>A) Information field on activity, including:</p> <ol style="list-style-type: none"> <li>a) Full name of legal persons, individual entrepreneurs engaged in industrial activity</li> <li>b) Name and coding of main type of activity</li> <li>c) Tax registration number of tax payer (TAX ID)</li> <li>d) Registration number in the State Register</li> <li>e) Main activity venue (postal address), tel. no, e-mail address</li> </ol> <p>B) Product indicators field, issued by industrial organizations, including:</p> <ol style="list-style-type: none"> <li>a) Name of the produced product, characteristics, measure unit</li> <li>b) type of realization in internal and external markets</li> <li>c) Actual in-kind amount produced in accounting month</li> <li>d) One unit price (without VAT and excise tax) of product, produced in previous accounting months</li> <li>e) Identify reasons of change in price according to codings, in case of considerable price change to previous month.</li> </ol>
	<p><b>2.3 Design data collection</b></p>	<p>Collection of statistical information is conducted on monthly basis through statistical reporting form 1-Price (product) (monthly) on producer price, approved by Resolution 46-N "Reporting form industrial product of the organization " by the State Council on Statistics of RA dated November 20, 2019. Information collection is carried out by statistical information providers independently filling the reporting form and by submitting them in paper, postal or electronic forms to the respective Armstat division, according to their place of business</p>

		registration.
	<b>2.4 Design of general population and sampling</b>	The design of general population is conducted by Armstat Industry and Energy Statistics Division on the basis of data received as a result of statistical surveys for the provision of complete information on the products produced by organizations.
	<b>2.5 Process and analyze design</b>	After the collection of statistical information statistical indicators undergo arithmetic and logical checking, based on which correction are made with organizations preparing information, where necessary.
	<b>2.6 Design production systems &amp; workflow</b>	Preparatory work on all procedures under implementation are carried out from provision of statistical information up to the summary, particularly on provision of appropriate notifications to information providers, training of the staff through vocational trainings, etc.
<b>2. Build</b>		
	<b>3.1 Build data collection instrument</b>	The statistical reporting form needed for the collection of information and the instruction for filling it in, are available in paper and electronic form (see link <a href="https://www.armstat.am/am/?nid=547">https://www.armstat.am/am/?nid=547</a> ).
	<b>3.2 Build or enhance process components</b>	The guidelines and instructions necessary for information verification are available. Input software package (Microsoft Office Access) has necessary tools for arithmetic and logical checks of input data, systems for checking the sum total, logical chains, identification codes and other automated checks systems.
	<b>3.3 Build or enhance dissemination components</b>	The dissemination of information is possible in paper, as well as in electronic form of publication of information on monthly, quarterly and annual basis.
	<b>3.4 Regulation of processes</b>	The derivation of statistical product is carried out by the following stages: <ol style="list-style-type: none"> <li>1. Collection of information,</li> <li>2. Information input through the pre designed input software (Microsoft Office Access software),</li> <li>3. Arithmetic and logical checks and adjustments of input information,</li> <li>4. Calculation of final outcome of statistical product</li> <li>5. Provision of information to structural divisions for further calculations</li> <li>6. Provision of aggregated data to statistical</li> </ol>

		information users.
	<b>3.5 Test statistical system</b>	In case the collected indicators are partially changed due to methodological changes, the input software is regularly undergoing relevant changes. The testing of software is also carried out.
	<b>3.6 Test statistical business process</b>	In parallel with the inclusion of the indicator in the statistical reporting form, the field examination of the latter is implemented to reveal the opportunities of the respondents to provide with the indicator, as well as to test their understanding of it. Relevant changes are made in instructions of filling and methodological guidelines.
	<b>3.7 Finalize production system</b>	The composition of methodological clarifications on the completion of indicators available in statistical reporting form and provision to the statistical information providers (respondents) is carried out, at the same time contacting with relevant experts from organizations via telephone or e-mail. Opinions, suggestions and approaches of information providers and users of statistical product on indicators are finalized.
<b>3. Collection</b>		
	<b>4.1 Design general population and sampling</b>	<p>General population of organizations engaged in industrial activity on the RA territory is formed on the basis of data retrieved from statistical surveys, conducted by Armstat Industry and Energy Statistics Division. The base organization sample for PPI index calculation is conducted by Armstat Price Statistics and International Comparisons Division.</p> <p>In particular cases, the opinion of relevant divisions and regional statistical bodies, their additional recommendations are also taken into consideration and, where appropriate, certain industrial entities, which characterize and reflect the integrity and peculiarity of the industrial sectors of the given area, are engaged in the sample.</p>
	<b>4.2 Set up collection</b>	Collection of statistical information is implemented by formation of order on printing of statistical reporting form 1 Price (product) (monthly), suitable for the number of base organizations, which are selected on sample procedure subject to observation, and formation of order according to its instruction of filling in, as well as their printing and distribution to relevant organizations. The statistical reporting form and the instruction of filling it in are accessible on

		the Armstat official website. The required network resources for the report collection in the electronic form are in place.
	<b>4.3 Run collection</b>	Statistical data collection is carried out by both relevant structural units and regional departments of Armstat, by hand, mail and electronic system means, according to the Resolution of RA State Council on Statistics No 05-N on the “Approval of the Procedure of the collection of Statistical Data” dated 20 June 2016. (see <a href="http://armstat.am/file/doc/99454498.pdf">http://armstat.am/file/doc/99454498.pdf</a> ).
	<b>4.4 Finalize collection</b>	The collected information is input in the electronic environment and is subject to arithmetical and logical verification. The information input is carried out automated, as well as by direct input of information in electronic environment. Reports received in paper and electronic forms are archived after being input in electronic environment, at the same time following the legislative requirements on their confidentiality (see point IV of the link <a href="http://armstat.am/file/doc/99454478.pdf">http://armstat.am/file/doc/99454478.pdf</a> ).
<b>4. Process</b>		
	<b>5.1 Integrate data</b>	Information input mechanically and retrieved electronically from organizations and regional departments for the calculation of PPI on monthly basis is compiled in a single joint database.
	<b>5.2 Classify &amp; code</b>	Parallel to the update of product-representatives weights, coding of products, presented by base organizations are carried out once in 3-5 years, in accordance with CIPA (Classification of Industrial Products by Activities) classification.
	<b>5.3 Review and approval</b>	The cross-checking of incomplete and corrupted presented data, as well as the compiling of incorrect encoded data with requirements of pre-approved classifications is implemented.
	<b>5.4 Edit &amp; input</b>	The method of price calculation for temporarily missing products is the use of calculated prices before the revealing of information on actual prices, which allows ensuring integrity of index series in all calculation levels. The change in average geometrical value of prices of similar products is used for calculation of price of missing products; value of price average change (price indices) is used at higher levels.
	<b>5.5 Derive new variables &amp; units</b>	The calculation of PPI is carried out based on developed price information through new variables,

		i. e. the calculation of price indices.
	<b>5.6 Calculate weights</b>	Weighing system for indicators in different aggregation levels is formed in two phases. In the first phase product volumes are used by CIPA classification and in second phase product volumes used by NACE hierarchy and as a total sum of all RA industry degrees.
	<b>5.7 Calculate aggregates</b>	PPI is calculated by Laspeyres formula on monthly basis through aggregation of price indices, according to hierarchic degrees of NACE and CIPA classifications.
	<b>5.8 Finalize data files</b>	PPI calculation is considered final. It is recalculated only on the basis of presented document on the change in price calculation methodology by organization.
<b>5. Analyse</b>		
	<b>6.1 Prepare draft outputs</b>	Quality distinction and seasonal variation corrections are not made to the PPI calculation.
	<b>6.2 Validate outputs</b>	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 on completing the statistical reporting form.
	<b>6.3 Explanation and interpretation of outputs</b>	After the production of aggregated indicators their logical analysis is carried out using dynamics of relevant indicators for previous months.
	<b>6.4 Apply disclosure control</b>	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: <a href="https://www.armstat.am/file/doc/99454478.pdf">https://www.armstat.am/file/doc/99454478.pdf</a> ).
	<b>6.5 Finalize outputs</b>	Comparisons of information on the same economic entities received from different sources are carried out before the application of input information, as a result of which information credibility is verified.
<b>6. Dissemination</b>		
	<b>7.1 Update output systems</b>	At the end of each accounting year information database and calculation tables of producers price are updated and prepared for the next accounting year.

		At the same time information input tables are provided to Armstat marz departments.
	<b>7.2 Produce dissemination products</b>	<p>All production steps for dissemination products are carried out; preparation of explanation text, tables, figures and other materials, editing of that products and their consistency to publication standards.</p> <ul style="list-style-type: none"> <li>• The data on monetary intermediation system is published in Armenian, Russian, English through the yearbooks, statistical handbooks and monthly data reports:</li> <li>• “Statistical Yearbook of Armenia” (Armenian, Russian, English)</li> <li>• “Armenia in Figures”, statistics summary (Armenian, English)</li> <li>• “The Prices and Price Indices in the Republic of Armenia” statistical handbook (Armenian, English)</li> </ul> <p><b><i>Electronic version</i></b></p> <p>Electronic versions of publications are available in Armenian (full), Russian, English at the following address: <a href="http://www.armstat.am/am/?nid=82">http://www.armstat.am/am/?nid=82</a></p> <p>Monthly and historical data are available in Armenian, English at <a href="https://armstatbank.am/pxweb/en/ArmStatBank/?xid=602c2fcf-531f-4ed9-b9ad-42a1c546a1b6,602c2fcf-531f-4ed9-b9ad-42a1c546a1b6">https://armstatbank.am/pxweb/en/ArmStatBank/?xid=602c2fcf-531f-4ed9-b9ad-42a1c546a1b6,602c2fcf-531f-4ed9-b9ad-42a1c546a1b6</a>.</p>
	<b>7.3 Manage release of dissemination products</b>	The dissemination of statistical information is carried out according to the schedule envisaged by the Five-Year and Annual Statistical Programs. In case of the changes and adjustments made in the indicators provided by the providers of statistical information the indicators already published by the Armstat are also being changed and adjusted correspondingly.
	<b>7.4 Promote dissemination products</b>	Submission of dissemination products. Use of tools to manage communication with users. Use of website, Facebook, etc.
	<b>7.5 Manage user support</b>	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.
<b>7. Evaluation</b>		



	<b>8.1 Gather evaluation input</b>	Data provided on industrial statistics serve as means of assessing information credibility on indicators included in database of producers price statistics
	<b>8.2 Conduct evaluation</b>	Qualitative assessment of producers price statistics indicators is conducted by comparing 1-Price reporting form and indicators collected by Armstat Industry and Energy Statistics Division.
	<b>8.3 Agree action plan</b>	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.