

Calculation methodology of CPI in Azerbaijan Republic- positive and negative sides

Consumer Price Index is one of the main indicators which are used in government's economic and social policy. At economic policy CPI is mostly used for determination of main direction of monetary policy and price forecasting process as well. At social sphere CPI is widely used for determination of living standard of population. It is included in the main indicators group which characterizes living standard of population.

Thus CPI characterizes general price change level of population's acquired goods and services for non-production consumption purpose in definite time period. It gives opportunity to average different price changes for goods and services.

It is very important to calculate the index correctly which is used in all determination process of government's economic and social policy. In general correct calculation of CPI is based on appropriateness of used methodology and its correct application. In Azerbaijan State Statistics Committee is directly responsible for calculation of CPI and this organization conducts all calculation procedures.

CPI calculation was started from 1990 year in Azerbaijan. After that from 1993 to end of 1994 within purposely program State Statistics Committee collaborated with IMF for methodology development and international experience studying purpose. CPI's scope and volume, weight and consumer basket were defined by experts. Software, price survey rules and new system which are used for calculation were developed. Following years State Statistics Committee tried to develop this methodology.

Methodology which is used by State Statistics Committee

CPI is calculated monthly, annually and in comparison with the same period of last year in Azerbaijan. Average price of goods and services is taken into consideration in CPI calculation.

Conduct of survey:

In Azerbaijan State Statistics Committee uses two sources for calculation of CPI: statistic survey on price changes in consumer market and household budget survey.

Price survey on goods and paid services and calculation of CPI are consisting of following steps:

- selection of geographical regions for survey;
- selection of base enterprises in trade and service field;

- selection of representative goods and services;
- price registration of goods and services;
- defining weight structure of consumer basket;
- calculation of average prices for goods and services;
- calculation of consumer price index.

Selection of regions: Price registration and statistic survey are conducted based on selected district and territories.

Selection of base enterprises: Base enterprises in trade and service field are selected based on selected regions. Large, medium and small trade and services enterprises are selected at center and suburbs of city for price registration. The selection of trade and service basis enterprises is conducted base on information of tax inspectors, committees on property management, and other organizations.

Selection of food and services basket (Consumption basket): The registration of prices in Azerbaijan is conducted according to product(service) set that often used by consumers. This set is confirmed by The Cabinet of Ministries. The main feature of consumption basket to measure CPI depends on its formalization elasticity. The consumption basket includes both daily used products and services and other products such as jewelry and fur products, technical services to vehicles etc. The consumption basket that designed with collaboration of IMF in 1993 includes 268 types of product and service. In 2000 the consumption basket consisted of 380 products including 116 food products, 204 non-food products and 60 services. Currently the consumption basket includes 585 products and services. 151 of them food, 111 clothes, 22 construction products, 174 home equipments, and 127 services.

The Registration of Prices: The registration of prices is conducted according to specific products and services. For each product and service separate book of registration is filled. For registration the real price of product in free market is considered.(concessionary products are excluded). VAT and other taxes include to price. For each specific product several prices are included into the registration book and this helps to determine their average quantity. If selected good or service is disappeared it will be substituted. In sale places when a product disappears for a long time it excludes from observation. The observation of prices and tariffs is conducted according to following types of service: 1) home 2) public utilities; 3) cultural; 4) paying education; 5) transportation and telecommunication ; 6) tourist-excursion; 7) health; 8) sanatorium –health resort; 9) lawyer and bank ; 10) Sport.

Consumer expenses (formation of weight structures): To determine specific weight of separate parts of consumption basket the structure of retail trade curculation, production of separate types of products, expert estimation and other information sources are used. Income tax, deposits, insurance costs, payments to pension fund, investment costs don't include to the consumption basket.

Consumption set is divided to food products; non-food products; and paying services to people.

Regions specific weight: Specific weight of regions is measured according to their population. Regions have been selected according to economic regions and due to occupation of territory 8 of 10 regions are included.

Formula: in Azerbaijan CPI is calculated based on the modification of Laspeyres formula.

To our opinion the methodology is used by SSC is complete enough excluding some aspects. But the main problem in this regard is application of methodology. Even if the best methodology is wrongly applied the consequences will be unwilling.

In Azerbaijan the factors that affect decrease of quality indicators of CPI can be divided to several groups. One of these factors is determination of consumption basket structure and its weights .

1. Consumption basket:

1.1 Methodology of determination of specific weights of products and services in the consumption basket:

According to SSC methodological information the products and services in the consumption basket are determined according to budget survey which is the selected observation form of consumer consumption, incomes, and expenses. Additional sources also are used to determine weight of separates part of consumption set. Here include structure of retail products circulation, information on production of different products, expert estimation and other references.

Generally, when methodologically researched SSC methodology can be justified. However, look at practically we find that the observation of budget survey of households is wrongly conducted. Because, the richest part of households are removed from the process. This occurs for 2 reasons. The first reason is that, the majority of rich section of households denies filling survey. Secondly, for particular reasons no one wonders to register high personal welfare in the state statistics. This situation infers with the reduction of the costs of products such as automobile, refrigerator, television, petrol, also entertainment, rest and education costs in the specific weight of consumption basket. Because such products are more tend to price increase.

The number of representative products and services in the consumption basket.

In Azerbaijan the number of representative products and services of the consumption basket was determined in 1993 and 268 representative products and services included. Later on it reached to 380. The last three year the basket consists of 585 products. For some reason the last increase coincided with the new increase stage of inflation in the country. Generally, if we look at the world practice, in the US this number is 200, France 191, Canada 600, New Zealand 315, Bulgaria 514, Ukraine 270, Georgia 311 and Kyrgyzstan 343. Generally, in recent years in order effectively to conduct price observation, this number in world practice is tried to being decreased. In Azerbaijan this is whole reverse. If we look at the last 165 products in the consumption basket their weight in the basket is less than 1%.

To our opinion the increase of numbers in the basket aims to decrease the index, because the growth rate of prices of more consumed products and services are more rapid relative to less consumed products and services

The weight of representative products and services in the consumption basket.

Although representative products and services in the consumption basket are determined according to observation of budget survey, there also other factor that play a role. By saying other factor we mean ‘expert references’ that serves for reduction of the index. In generally, the products that tend to less prices increase are placed with higher weight to the consumption basket. For instance price of metro service. According to calculations of Statistics Committee payment for metro is at 18-th place in consumer basket with 0.010412487 coefficient. This is totally unacceptable. First, there is no any metro Azerbaijan except Baku. Second, not all people in Baku continuously use metro. Third, the price of metro is so low that, even it is less than 1.04% of total budget. The main reason of high weight of metro prices in the consumption basket is that, the metro price is regulated by the government and has been constant for long years. Such examples can be enlarged.

2. The specific weight of regions:

The main insufficiency in computation of CPI is the calculation of “specific weight” of regions in the CPI. According to methodology of SSC the weight of regions is calculated based on the population quantity in the regions. The main insufficiency in this regard is incorrect calculation of population in the regions. For instance, most people registered in a region currently live in Baku and the SSC calculates population based on their registration and this directly affects disbalance in the region’s weight. Besides, many people registered in Azerbaijan currently live and work in Russia and other countries but they are

considered by the SSC. Generally, in a country with close to 1 million refugees it is very difficult to determine population based on the regions. Alternatively to this method research group of Economic Research Center for Alternative Inflation Methodology project proposed to calculate weight of regions by using goods turnover and service size and special weight of regions were calculated by this method. Here goods turnover and service size are defined with coefficient 0.818 and 0.182 respectively. These coefficients based on information of the National Bank of Azerbaijan. For example Baku represents 49,32% and 65,95% of the total goods turnover and service size respectively. The specific weight of Baku is calculate as $(49.32 \times 0.818 + 65.95 \times 0.182 = 52.34666)$. Generally, since the prices are higher in Baku relative to other regions, the SSC tries to reduce the weight of Absheron economical region in which Baku is located. See for more information about the weight of regions in below table.

Table: Specific weights of regions

Economic Regions	Product circulation	Service size	Average weights	SSC's weight information
ABSSHERON	53.44	68.69	56.2155	26.9943575
GANGA-GAZAKH	10.53	7.14	9.91302	13.4654319
SHEKI-ZAGATALA	4.54	2.89	4.2397	6.5182754
LANKARAN	6.36	4.3	5.98508	9.3407449
GUBA-KHACHMAZ	3.88	2.5	3.62884	5.5778515
ARAN	14.11	9.69	13.30556	30.4445749
DAGLIK-SHIRVAN	2.03	1.29	1.89532	3.1914511
NAKHCHIVAN	3.2	2.74	3.11628	4.4673128
YUKARI KARABAKH	1.91	0.82	1.71162	0

3. Statistical observation on price and tariff changes in markets:

The level of statistical observation on price and tariff changes in Azerbaijan is low. The reason depends on objective and subjective factors. Generally, in markets "floor price" always exists. We can give apple as an example. There several types of apple in a market. The price growth dynamics of low grade products also low. If consequently, the index is wished to be low then the price of low graded products should be observed.

Besides, when the government observes the agriculture products to be increased, it organizes agricultural products fairs in Baku in definite dates (generally in weekends) and the prices are much lower in these market than others. And when the SSC registers prices of agricultural products over Baku city, it mostly considers the prices of the markets (fairs) organized by the government and this affects the final index to be low.

To our opinion, invisible inflation also is not considered. For example, although the price of bread in recent years remains constant the size gradually is diminished. That is invisible inflation. In the consumption basket for its size bread takes 4th place in people's consumption costs with 0.027023662 coefficient. And its affect to final index is obvious.

In conclusion, we should note that the Center for Economic Reforms continues its work on perfection of current methodology, its application and calculation of CPI within the framework of "Alternative Inflation Measure Methodology" project.

Center for Economic Reforms

Research Group on

"Alternative Inflation Measure Methodology"

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