



الهيئة العامة للإحصاء
General Authority for Statistics

Wholesale Prices Index Methodology

2016



Methodologies

First: Description:

A program that observes the movements of commodity and services prices during the first selling phase (wholesale) in Saudi markets by measuring the wholesale prices index.

Second: Definition:

The wholesale prices index is defined as the index that measures the average changes in sold commodities and services in Saudi Arabia.

This index measures the change in price only. Therefore, all price changes resulted from differences in qualities, deduction in quantities, differences in shipment ways, or any other affecting factors are excluded. The net price is all what we need here.

Third: Definitions Related to the Wholesale Price Index:-

Price index:

A relative index that measures the changes in the prices of a group of commodities and services. The index can be calculated by the percentage of commodity and services prices during the comparison period to their prices during the base period.

Commodity and services basket:

A group of commodity and services that are selected according to their significance in the importing balance and the estimate of local product value.

Sale points:

Establishments or units from which data of commodity and services wholesale prices are collected

Shadow sample:

A group of reserve sale points to which we refer in order to change one of the basic sale points because of inability to get prices.

Comparison period price:

The price of any commodity or service in the current period of time.

Base period price:

The price of any commodity or service in a previous period of time compared to the current price.



Base year:

The year in which the comparison period prices are attributed.

Fourth: Wholesale Price Index Methodology:-

1- Coverage and Containment:

The wholesale price index is for everyone. It is prepared to cover all regions of Saudi Arabia. The prices of commodities and services are collected from three cities; Riyadh, Jeddah, and Dammam.

The general frame of the wholesale price index activities is composed of all commercial transactions in Saudi initial markets of locally produced or imported commodities.

2- Determining the Base Year:

The wholesale index base year is determined in the year of getting the import value based on the data of foreign trade statistics and the domestic product value estimate.

3- Selecting the Commodity and Services Basket:

The commodity and services sample is selected by:

- A commodity classified list is used according to (SITC). It becomes a frame for terms containing ten main sections, each section has chapters, and each chapter has terms.
- The importing value is calculated depending on the data of foreign trade and the estimates of the value of domestic product which has been obtained from the data of chambers of commerce and some major institutions and companies such as PETROMIN, SABIC, and others.
- The values of terms that are related to weapons have been excluded from the total number of values.
- The relative significance of each section is determined by dividing the importing value and the domestic product on the total domestic product and importing values. The relative significance of each chapter and each term has been determined using the same way.
- The basket terms are distributed among the main ten sections based on the relative weight of each main section. Each section must contain two terms at least.
- The chapter is selected based on the relative value of the chapters in the section. The same for terms; terms are selected based on the relative value of the term in the chapter.





The main ten sections are:

1. Food and live animals.
2. Beverages and tobacco.
3. Crude materials except fuel.
4. Mineral fuel and the like.
5. Oil and lipid.
6. Chemicals and the like.
7. Manufactured commodity that are classified according to material.
8. Transport equipment and machines.
9. Diverse manufactured commodity.
10. Other commodities.

4- Selecting Institutions Sample:

A list of institutions collected from different sources in Riyadh, Jeddah, and Dammam is used. Some of these sources are: the establishments' economic research conducted by the authority. In addition to the data of chambers of commerce and industry, which are used to find a frame for the institutions with the needed conditions such as practicing the initial sale to one or a number of the terms basket commodities that are used as a sample for the wholesale price index formation. After that, a sample of these institutions is used. This sample is contacted to make sure that it is proper and can be used as a data source.

5- Collecting Prices:

The list of institutions of each city is prepared. Each page contains the institution's distinct data, in addition to information about the terms that are priced by this institution such as the term number, characteristics, and previous price. A blank must be left for the new information and changes of price. The researcher, who collects the prices, visits the institutions and writes down any change in the prices. Once the process is completed, the supervisor revises all the data, re-enter them, and write comments if there are any.

6- Processing Data:

- a- Data entry using computers

After revision, the prices and any changes are recorded using a computer. Then, a re-revision must be done to make sure that all data are correct.



After entering data, the list of initial index is extracted. In this list, we can find the prices of base period, pervious period, current period, and the phases of indices calculations. This list is thoroughly and accurately revised to check the mistakes and correct them.

b- Preparing indices charts

Once the data are entered, the indices final tables are printed. These tables include:

- (1) Table of wholesale price index by sections
- (2) Table of wholesale price index by sections and division
- (3) Table of wholesale price index by sections and item .
- (4) Table of wholesale price indices annual average
- (5) Table of terms' relative importance's

7- Calculating wholesale price index:

Laspeyre formula is used to calculate the wholesale price index:

$$I_t = \frac{\sum_{i=1}^n W_{oi} \frac{P_{ti}}{P_{oi}}}{\sum_{i=1}^n W_{oi} \frac{P_{t-1i}}{P_{oi}}} \times I_{t-1}$$

While:

I_t = Index at time period, t

P_t = Prices at time period, t

P_{t-1} = Prices at time period, t - 1

P_o = Prices at base period, o

W_o = Weight at base period, o

t = Time period beginning from o, ..., n

i = Items from 1, ..., n.

I_{t-1} = Index at time period, $t-1$

8- Data Qualitative Quality:

To guarantee the highest level of accuracy, work progress must be followed up during all phases either office work or field work. Moreover, we must make sure that data are collected accurately according to each term of the program terms. In order to apply the qualitative quality, the following points should be considered:

- 1- Developing and preparing different software in order to examine data and make sure that they are correct and accurate.
- 2- The researcher must be in the required location on the determined time of pricing.
- 3- A group of specialists from the authority's central department, branches, and office should periodically visit each city on a specific time. An automatic quality sampling is done on the city level and researcher level.
- 4- The work should be assessed periodically, and international developments in this field should be followed.



Fifth: Publishing:

Data of wholesale prices index are published according to the following methodology:

- 1- Publishing the wholesale prices index results monthly.
- 2- Publishing them on specified and announced dates on the authority official website.
- 3- The authority official website www.stats.gov.sa is a certified and official publishing platform.
- 4- Providing all kinds of beneficiaries with the results using the appropriate mechanism.

Sixth: How to Benefit from the Results?

- The wholesale price index is used to observe the changes in imported and local commodity prices.
- The wholesale price index is an essential tool used in preparing the national accounts. It protects the income and national aggregates so that the prices changes do not affect them.



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