

B.A. Part III (Economics Honours)
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4. Weighted Average of Relatives Method:

In this method also different weights are used for the items according to their relative importance.

The price index number is found out with the help of the following formula:

$$P_{01} = \frac{\Sigma RW}{\Sigma W}$$

where ΣW stands for the sum of weights of different commodities :
 and ΣR stands for the sum of price relatives.

Commodity	Weights W	Base Prices Year P ₀	Current Year Prices P ₁	Price Relatives $R = \frac{P_1}{P_0} \times 100$	RW
A	5	10	20	$20/10 \times 100 = 200.0$	1000.0
B	4	15	25	$25/15 \times 100 = 166.7$	666.8
C	2	40	60	$60/40 \times 100 = 150.0$	300.0
D	3	25	40	$40/25 \times 100 = 160.0$	480.0
Total	$\Sigma W=14$				$\Sigma RW = 2446.8$

$$\text{Index Number } (P_{01}) = \frac{\Sigma RW}{\Sigma W}$$

$$P_{01} = \frac{2446.8}{14} = 174.8$$

Difficulties in Measuring Changes in Value of Money:

Measurement of changes in the value of money through price index number is not an easy and reliable technique. There are a number of theoretical as well as practical difficulties in the construction of price index numbers. Moreover, the index number technique itself has many limitations.

(A) Conceptual Difficulties:

The following are the conceptual difficulties during the construction of price index numbers:

1. Vague Concept of Value of Money:

The concept of money is vague, abstract and cannot be clearly defined. The value of money is a relative concept which changes from person to person depending upon the type of goods on which the money is spent.

2. Inaccurate Measurement:

Price index numbers do not measure the changes in the value of money accurately and reliably. A rise or fall in the general level of prices as indicated by the price index numbers does not mean that the price of every commodity has risen or fallen to the same extent.

3. Reflect General Changes:

Price index numbers are averages and measure general changes in the value of money on the average. Therefore, they are not of much significance for the particular individuals who may be affected by the changes in the actual prices quite differently from that indicated by the index numbers.

4. Limitations of Wholesale Price Index:

The wholesale price index numbers, which are generally used to measure changes in the value of money, suffer from certain limitations:

(a) They do not reflect the changes in the cost of living because retail prices are generally higher than the wholesale prices.

(b) They ignore some of the important items concerning the urban population, such as, expenditure on education, transport, house rent, etc.

(c) They do not take into consideration the changes in the consumers' preferences.

(B) Practical Difficulties:

The practical difficulties in the way of constructing price index numbers, and therefore, in measuring changes in the value of money are as follows:

1. Selection of Base Year:

While preparing the index number, first difficulty arises regarding the selection of base year. The base year should be a normal year. But, it is very difficult to find out a fully normal year free from any unusual happening. There is every possibility that the selected base year may be an abnormal year, or a distant year, or may be selected by an immature or biased person.

2. Selection of Items:

The selection of the representative commodities is the second difficulty in the construction of index numbers:

(a) With the passage of time the quality of the product may change ; if the quality of a product changes in the year of enquiry from what it was in the base year, the product becomes irrelevant,

(b) The relative importance of certain commodities may change due to a change in the consumption pattern of the people in the course of time; for example, Vanaspati Ghee was not an important item of consumption in India in the pre-war period, but today it has become an item of necessity. Under such conditions, it is not easy to select the appropriate commodities.

3. Collection of Prices:

It is also difficult to obtain correct, adequate and representative data regarding prices. It is not an easy job to select representative places from which the information about prices to be collected and to select the experienced and unbiased individuals or institutions who will supply price quotations. Moreover,

there is the problem of deciding which prices (wholesale or retail) are to be taken into consideration. It is comparatively easy to get information about wholesale prices which vary considerably.

4. Assigning Weights:

Another important difficulty that arises in preparing the index numbers is that of assigning proper weights to different items in order to arrive at correct and unbiased conclusions. As there are no hard and fast rules to weights for the commodities according to their relative importance, there is very likelihood that the weights are decided arbitrarily on the basis of personal judgement and involve biasness.

5. Selection of Averages:

Another major problem is that which average should be employed to find out the price relatives. There are many types of averages such as arithmetic average, geometric average, mean, median, mode, etc. The use of different averages gives different results. Therefore, it is essential to select the method with great care. Dr. Marshall has advocated the use of chain index number to solve the problem of averaging and weighing.

6. Problem of Dynamic Changes:

In the dynamic world, the consumption pattern of the individuals and the number and varieties of goods undergo continuous changes.

They create difficulties for preparing index numbers and making temporal comparisons:

(a) Since, in the course of time, old commodities may disappear and many new ones come into existence, the long-run comparison may become difficult,

(b) The quantity and quality of commodities may also change over the period of time, thus making the choice of commodities for constructing index numbers difficult,

(c) A number of factors, like income, education, fashion, etc., bring changes in the consumption pattern of the people which render the index numbers uncomparable.