

Index Numbers

An Index number is a statistical Measure of average change in a variable or a group of variables with respect to time or space.

The variable may be enrolment of Students in an institutions, the cost of education for college students, Price of a Particular commodity or a group of commodities, wages of government workers, volume of trade, sales, exports, Imports, Production employment. etc.

→ Index number are obtained by expressing the data for various Period or Places as Percentage of some specific Period or Place selected for the Purpose of comparison and technically called the base.

→ Index number may be computed on weekly or monthly basis but generally they are computed on annual basis.

→ In short, an Index number is a device that measures the changes occurring in data from time to time or from Place to Place.

Price Index number:

Those Index numbers that measures the relative change in Prices of commodities are called Price Index numbers.

Simple & composite Index number:-

Index numbers are generally classified into Simple indices and composite indices.

Simple Index number:

An index number is called a simple index when it is computed for a single variable. Index numbers of enrollment in colleges, index numbers of gold prices, etc are example of Simple Indices.

→ A simple index can be very easily computed. The value of the variable for each period is divided by the value in the base period and the result is multiplied by 100. for example

the wages paid to the workers in a certain institution in 1980 and 1983 were Rs. 9650 and Rs. 11580 respectively. Now taking 1980 as the base year and 1983 as the given year, we have

$$\text{wage index for 1983} = \frac{\text{wages paid in 1983}}{\text{wages paid in 1980}} \times 100$$

$$= \frac{\text{Rs. 11580}}{\text{Rs. 9650}} \times 100$$

$$= 120$$

This result indicates that if the wage level in 1980 were denoted by 100, it is 120 in 1983. In other words wages have increased by 20% for 1983 by comparison with 1980.

Composite Index number:

An index number that is computed from two or more variables is referred to as composite index. Example of composite indices are the wholesale price index numbers, consumer price index numbers, etc.

Composite indices may further be classified into weighted index numbers and unweighted index numbers.