

Index Numbers

- Index numbers are statistical devices designed to measure the relative change in the level of a phenomenon (variable or a group of variables) with respect to time, geographical location or other characteristics such as income, professions etc.

Uses of Index Numbers

The first index number was constructed by an Italian, Mr. Carli, in 1764, to compare the changes in price for the year (1750) (current year) with the price level in 1500 (base year) in order to study the effect of discovery of America on the price level in Italy.

Index Number as Economic Barometers:

(1) The indices of prices (wholesale and retail), output (volume of trade, import and export, industrial and agricultural production) and bank deposits, foreign exchange and reserves etc., throw light on the nature and variations in, the general economic and business activity of the country.

Index Numbers Help in Studying Trends and Tendencies:

Since the index numbers study the relative changes in the level of a phenomenon at different periods of time, they are specifically useful for the study of the general trend for a group phenomena in a time series data.

Index Numbers Help in Formulating Decisions and Policies:

Index numbers of the data relating to, prices, production, profits, imports and exports, personnel and financial matters are indispensable for any organisation in efficient planning and formulation of executive decisions.

Price Indices Measure the Purchasing Power of Money:

The cost of living index numbers determine whether the real wages are rising or falling, money wages remaining unchanged.

Index Numbers are Used for Deflation:

Consumer price indices or cost of living index numbers are used for deflation of net national product, income value series in national accounts. The technique of obtaining real wages from the given nominal wages can be used to find real income from inflated money income, real sales from nominal sales and so on by taking into account appropriate index numbers.

Types of Index Numbers

(1) Price Index Numbers:

The price index numbers measure the general changes in the prices. They are further sub-divided into the following:

(a) Wholesale Price Index Numbers:

It reflects the changes in the general price level of a country.

(b) Retail Price Index Numbers:

These indices reflect the general changes in the retail prices of various commodities such as consumption goods, stocks and shares, bank deposits, government bonds etc.

Consumer Price Index, commonly known as the cost of living index is a specialised kind of retail price index and enables us to study the effect of changes in the prices of a basket of goods or commodities on the purchasing power or cost of living of a particular class or section of the people like labour class, industrial or agricultural worker, low income or middle income class etc.

(2) Quantity Index Numbers:

It study the changes in the volume of goods produced (Manufactured), consumed or distributed like the indices of agricultural production, industrial production, imports and exports etc.

(3) Value Index Numbers:

It study the changes in total value of production such as indices of retail sales or profit or incomes.