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Topic: INDEX NUMBER

MEANING OF INDEX NUMBER

An index number may be defined as a special average which helps in comparison of the level of magnitude of a group of related variables under two or more situations.

Index numbers are a series of numbers devised to measure changes over a specified time period (the time period may be daily, weekly, monthly, yearly, or any other regular time interval), or compare with reference to one variable or a group of related variables. Thus, each number in a series of specified index number is:

a) A pure number i.e., it does not have any unit.

b) Calculated according to a pre-determined formula.

c) Generated at regular time intervals, sometimes during the same time interval at different places.

d) The regular generation of numbers form a chronological series.

e) With reference to some specified period and number known as base period and base number, the latter is always 100. For example, if the consumer price index, with base year 1996 is calculated to be 180 for the year 2003, it means that consumer prices have increased by 80 per cent in 2003 as compared to the prices prevalent in 1996.

USES OF INDEX NUMBERS

Though originally the index number was developed for measuring the effect of change in prices, today they have become indispensable for analyzing the data related to business and economic activity. This statistical tool can be used in several ways as follows:

1) Decision makers use index numbers as part of intermediate computations to understand other information better. Nominal income can be transformed into real income. Similarly, nominal sales into real sales & so on …, through an appropriate index number. Consumer price index, also known as cost of living index, is arrived at for a specified group of consumers in respect of prices of specific commodities and services which they usually purchase. This index serves as an indicator of 'real' wages (or income) of the consumers. For 41 Relational and Trend Analysis 42 example, an individual earns Rs. 100/- in the year 1970 and his earnings increase to Rs. 300/- in the year 1980. If during this period, consumer price index increases from 100 to 400 then the consumer is not able to purchase the same quantity of different commodities with Rs. 300, which he was able to purchase in the year 1970 with his

income of Rs. 100/-. This means the real income has declined. Thus real income can be calculated by dviding the actual income by dividing the consumer price index:

Real income in 1980 = Actual income in 1980/Consumer price index of 1980

= 300/400=Rs.75/-with respect to 1970 as base year.

Therefore, the consumer's real income in the year 1980 is Rs. 75/- as compared to his income of Rs. 100/- in the year 1970. We can also say that because of price increase, even though his income has increased, his purchasing power has decreased.

2) Different types of price indices are used for wage and salary negotiations, for compensating in price rise in the form of DA (Dearness Allowance).

3) Various indices are useful to the Government in framing policies. Some of these include taxation policies, wage and salary policies, economic policies, custom and tariffs policies etc.

4) Index numbers can also be used to compare cost of living across different cities or regions for the purpose of making adjustments in house rent allowance, city compensatory allowance, or some other special allowance.

5) Indices of Industrial Production, Agricultural Production, Business Activity, Exports and Imports are useful for comparison across different places and are also useful in framing industrial policies, import/export policies etc.

6) BSE SENSEX is an index of share prices for shares traded in the Bombay Stock Exchange. This helps the authorities in regulating the stock market. This index is also an indicator of

general business activity and is used in framing various government policies. For example, if the share prices of most of the companies comprising any particular industry are continuously falling, the government may think of changes in its policies specific to that industry with a view to helping it.

7) Sometimes, it is useful to correlate index related to one industry to the index of another industry or activity so as to understand and predict changes in the first industry. For example, the cement industry can keep track of the index of construction activity. If the index of construction activity is rising, the cement industry can expect a rise in demand for cement.