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- **Difficulties or Problems in the construction of Index Numbers:**

- **Purpose of Index Numbers**: There are various types of Index Numbers , constructed with different objectives. Before constructing an Index Numbers , one must define the objective . The construction of Index Numbers is significantly influenced by the objective or purpose of the study. For example , if the objective is to study the impact of change in the value of money on the consumers one should construct consumer's price index numbers . If we have to study the impact of change in the purchasing power of money on the producers, we should construct index numbers on the basis of wholesale prices.

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- **Selection of Base Year:** Selection of Base Year is another problem in the construction of Index Number. The base period is the period against which prices of the current year are compared .Usually, this period is of one year ,and it is called the base year of the Index Number. While selecting the base year , following points should be considered:

- (a)The base period should be a normal one , i. e. ,it should be free from abnormalities like flood, earthquake, wars, boom, depression etc.

- (b)The base period should not be too near or too distant in the past.

- (c)The base period should not be too short or too long.

- (d)It should provide actual data and ensure their availability.

- (e) The base may be fixed base or chain base . In case of a fixed base, variables of a given year are linked with those of a fixed base year whereas in case of a chain base, variables of a given year are linked with those of the preceding year.

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- **Selection of Commodities:** All commodities are not included in the construction of an Index Number but a sample of commodities is taken . The choice of these sample commodities depends upon the purpose of constructing index numbers. For example, If we are preparing a cost of living index numbers , we must select only such commodities as are generally consumed by the working class. In selecting items, the following points are to be kept in mind:
- (a) The items should be representative of the tastes, habits and customs of the people.
- (b) Items should be recognizable,
- (c) Items should be stable in quality over two different periods and places.
- (d) The economic and social importance of various items should be considered
- (e) The items should be fairly large in number.
- (f) All those varieties of a commodity which are in common use and are stable in character should be included.

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- **Selection of Price Quotation:** After the selection of goods and services, the problem arises of prices to be selected,e.i.,From where the prices to be collected; whether to choose wholesale prices or retail prices ; whether to include taxes in the prices or not, whether to use money price (e.g. oil Rs.120 per kg)or Quantity prices(e.g. oil 1/120kg per rupee) etc. The prices of a commodity vary from place to place and even from shop to shop in the same market. It is not possible to obtain price quotations from all places where the particular commodity is purchased or sold.

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- **While collecting prices, the following points are to be noted:**
- (a) Prices are to be collected from those places where a particular commodity is traded in large quantities.
- (b) Published information regarding the prices should also be utilised,
- (c) In selecting individuals and institutions who would supply price quotations, care should be taken that they are not biased.
- (d) Selection of wholesale or retail prices depends upon the type of index number to be prepared. Wholesale prices are used in the construction of general price index and retail prices are used in the construction of cost-of-living index number.
- (e) Prices collected from various places should be averaged.

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- **Choice of an Average:** Since the index numbers are, a specialised average, the problem is to choose a suitable average.For constructing an Index Number any Average such as mean, median, mode, geometric mean, harmonic mean can be used. From the practical point of view median and mode are unsuitable because of their being erratic. The geometric mean and harmonic mean are difficult to calculate and hence arithmetic mean is generally used for calculating index number.

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- **System of Weighting:** All the goods and services are not of equal importance for consumers. So when we select goods for construction of index numbers, it becomes essential to assign weights to goods according to their relative importance. For example, the prices of stationery items will be given more weightage while preparing the cost-of-living index for teachers than while preparing the cost-of-living index for the workers. Weights should be unbiased and be rationally and not arbitrarily selected. While selecting weights one should decide:
- (a)Whether to use implicit weights or explicit weights
- (b)Whether to use quantity weights(q) or value weights(pq)
- (c)Whether to fixed weights or fluctuating weights.

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- **Selection of Formula**: Index Numbers can be constructed with the help of many formulae, such as,Laspeyre's method, Dorbish and Bowley's method, Fisher's method. Which formula should be used to construct the index depends upon the purpose of the Index Numbers and the nature of data available. There is no particular formula that could be considered best under all circumstances.

- To be continued………