# CHAPTER 1

# INTRODUCTION

- A consumer is a person who consumes goods and services for the satisfaction of his/her wants.

- A seller is a person who sells goods and services produced by him/her or produced by somebody else with the motive to earn profit. A seller may or may not be a producer.

- A producer is a person who produces goods and services to sell in the market to earn profit, such as farmers, manufacturers, etc. All producers are sellers but not all sellers are producers.

- A person who is working for another person and getting paid for rendering his/her services is called a **service holder**. For example, a worker is being paid in return for the rendering his/her labour services to the producer.

- A person who provides services to others for payment in return is called as **service provider**. For example, a doctor renders his/her medical services in exchange of the fees paid to him/her.

- The activities that involve the use of scarce resources to carry out production, consumption, saving, investment, etc. are called **economic activities**.

- **According to Alfred Marshall** (a great profounder of Modern economics), by engaging in diverse economic activities, a person is performing **'ordinary business of life'.**

- The four economic activities are **Productions, Distributions, Savings and Investments.**
    - ***Production*** is defined as the process of converting the raw materials and other important inputs such as, labour services into useful goods and services by the means of acquiring utility.
    - ***Savings*** is that part of one's income that is not consumed and is saved for future consumptions. In other words, it refers to the cost of sacrificing a part of present consumption to enhance future consumption.
    - ***Investment*** refers to the expenditure incurred by the producers on the purchase of assets (capital formation) that helps them generate excess production capacity, thereby profit.

- **Economic problem** refers to the problem of choice that arises from the allocation of scarce resources to various alternate uses. For example, Rs 10,000 can either be used for purchase of a mobile phone or to purchase a pair of branded shoes. Therefore, in this case one faces the problem of choice between a mobile and a pair of shoes due to the limited availability of scarce resources (money) and alternate uses of resources (for purchase of shoes or mobile phone).

- **Opportunity Cost** refers to the cost incurred by making a choice. In the above example, if the consumer is purchasing a pair of shoes, then he/she need to sacrifice the benefits of a mobile phone and vice-versa. The opportunity cost of purchasing shoes is expressed in terms of sacrificing the benefits of mobile phone.

- **Scarcity** is the root cause of all economic problems because the things that satisfy our wants are limited in availability.

- '**Scarcity is the undercurrent of economic problem'**
  - Means (resources) are always scarce to fulfil the unlimited wants of an economy. This scarcity of resources leads to the problem of choice among different alternatives.
  - An economy needs to analyse the cost (or the opportunity cost) of allocating the resources to one while sacrificing the other use.
  - If there would have been no scarcity of resources, then there would be no problem of choice, and hence, no economic problem.

- The aggregates or averages that relates to an enquiry or some relationship are taken as **Statistics**.

- **Statistics in the plural sense** refers to the systematic collection of numerical facts. It refers to the information in terms of numbers or numerical data such as, employment statistics, population statistics, etc.

- **Statistics in the singular sense** implies science of studying the statistical methods. It refers to the techniques or methods of collecting, organising, presenting, analysing and interpreting the data.

- **Statistical tools** refer to the methods or techniques used for the collection, organisation, presentation, analysis and interpretation of the statistical data.

- **Importance of Statistics in Economics**
  - ***Policy Formulation*** **-** Statistics helps the government and the policy makers **to formulate various policies** for the economic development. For example, if Indian Government aims at encouraging the production level, then the government formulates its policy based on the average production level of the past few years.
  - ***Accessing the Performance of an Economy*** - It provides the basis for comparing and analysing the performance of economy overtime. For example, the data on the national income can be used to compare the economic performance of the economy over a period of time.
  - ***Facilitates Research*** - Statistical data is a significant input to conduct various researches. The researchers undertake researches for studying the relationship between different variables such as, price and demand, poverty and health, etc.
  - ***Helpful in Solving Economic Problem*** - It acts as a tool for solving economic problem. The causes of the problem are identified through statistical methods and accordingly policies are formulated to solve the economic problem.

- **Limitations of Statistics**
  - ***Describes only Quantitative Aspects:*** Statistics studies only those variables that can be expressed in numerical numbers; fails to take into account the qualitative variables such as beauty, loyalty, etc.
  - ***Studies only Aggregates***: Statistics deals only with the aggregates of the quantitative variables; individual values have no significance.

- ***Results Hold True only as Averages***: Statistical laws hold true only on an average basis or approximation and are not exact. For example, if per-capita income in India is Rs 33,000, then it necessarily does not imply that each and every person has an income of Rs 33,000.
- ***Can only be Used by Experts***: Only a person who has comprehensive and sophisticated knowledge of statistics can handle statistical data efficiently. It cannot be equally efficient and interpreted by a layman.
- ***Inapplicable to Heterogeneous Data***: It cannot be applied to heterogeneous data. Data should be homogeneous in nature in order to be compared.

- When the users of the statistics tend to manipulate the data to support their already drawn conclusions, then it leads to **distrust and the process of data manipulation is known as Data Mining.**

- **Statistical methods are no substitute for common sense**
  Statistical data should not be believed blindly as it can be misinterpreted or misused. The numerical data should not be deliberately used without applying common sense. The statistical data may be politically influenced or may involve personal bias. Moreover, statistical data and methods fail to reveal the errors committed by the investigator while surveying and collecting data.