STATISTICS : INTRODUCTION

The word 'statistics' Of English language has either been derived from the Latin word status or Italian word Statistica or German word Statistick. In each case it means An organized 'Political state'. Statistics was origin as the science of kings. in ancient times, For the Kings to run their rules smoothly, there was a need for numerical information related to the determination of the manpower, military system and fiscal policy, For which the Kings used to collect information. in the course of time , the use of this science gradually started in many new fields such as trade, economics, social, science, medicine etc. Today, statistics affect everyone. everyone uses this subject unknowingly. statistics is the cornerstone of all branches today.

DEFINITION OF STATISTICS

Definition off statistics is divided in two parts, some authors have defined the word in the plural sense and some authors have defined it in the singular form i.e., Statistical method.

Definition in plural sense

Bowley : "Statistics are numerical statement of fact in any department of inquiry placed in relation to each other."

Achenwall: "statistics are a collection of noteworthy fact concerning straight both historical and descriptive."

Definition in singular Sense

A.L. Bowley: 1. "Statistics may be called the science of counting."

2. "Statistics Me rightly be called the science of averages."

3. "Statistics is the science of measurement off social Organism regarded as a whole, in all its manifestation."

Boddengton, "Statistics is the science of estimate and probabilities."

NATURE OF STATISTICS

Statistics as a Science

Science is a body of systematized knowledge from which is specified proposition are deducted in accordance wit no you want to science differ, the logical scientific method are common to all the sciences. Using the approach of systematic doubt, scientific method is a process of discovering the truth in a systematized manner by logical Considerations.

There are in general four stages in scientific inquiry:

Observation, Hypothesis, Prediction, and Verification.

Statistics as an Art

An art is an applied knowledge and creation of beauty leading to perfection. if science is a knowledge than art is an since the successful application of statistical method depends to a considerable degree on the skill and special experience of the statistician and on his knowledge of the field of application, statistiques may be called an art of applying scientific methods similar to an artist who possesses an can apply the requisite skills, experiences and patience for the creation of beauty leading to perfection. "Statistics is both science and art, which relates to the study and use of the principles and policies used in the compilation, representation, analysis, interpretation of numerical facts for a certain purpose in any field of knowledge or research. So that concentrate an intelligent decisions can be taken in the event of uncertainty."

SCOPE OF STATISTICS

1. **Statistical Methods –** Statistical methods are those methods which are used to clarify numerical facts.

   1. Collection of Data: Collection of data is the 1st and the basic statistical method. data are collected to objective and planning of investigation.

   2. Organization of Data: Data are collected from published sources are generally in organized form, but the data collected from survey, etc., need organization and systematization.

   3. Presentation: After the organization of data they are presented. There are three important method of presentation: (a)statistical Tables,(b)Diagrams, (c)Graphs.

   4. Analysis: After presentation of data the next step is that analyzes

   5. Interpretation: After an analysis of data the final stage is interpretation or drawing conclusion from the data.

   6. Forecasting: With the help of statistical method forecasting is also done on the basis of past and present data.

2. **Classification of Statistics**

   1. Descriptive statistics: Descriptive statistic is related to the numerical data or fact. Such data are collected either by counting or by some other process of measurement.

   2. Inductive Statistics: It includes the process of drawing proper and rational conclusion about the universe on the basis of analysis of sample, making statement and forecasting and various method of decision making .

   3. Applied statistics: It involves application of statistical methods and techniques to the problem an actual facts.

III. Application of statistics: Statistics is widely used in areas like economics, business management, mathematics, astronomy, psychology, sociology, chemistry, physics, engineering, medical science, etc., and in many areas specialized branch of statistics have been developed.

Importance of Statistics

- Importance for administrators
- importance in economics
- importance in banking
- Importance For insurance companies
- Importance in the field of education
- importance for economic planning

Limitation of statistics

- Study of numerical facts only
- Study of aggregates only
- Homogeneity of data
- Misuse of statistics is possible