

# Statistics

## The Nature of Statistics as a subject:

What Statistics is not? "Statistics should not be taught as a subject correlative with physics, chemistry, economics and sociology. Statistics is not a science; it is a scientific method." (Croxtton and Coroden: Applied General Statistics)

In order to get a clear conception of what statistics is, let us first see what statistics is not.

1. Statistics is not a subject of study in the sense that economics, chemistry, physics, psychology, history etc. are.
2. Statistics is not a science like physics or chemistry or biology.
3. Statistics is not Mathematics, although the statistical methods are basically mathematical.

## What Statistics is?

Having seen what statistics is not we now proceed to see what statistics is not we now proceed to see what statistics is. Let us proceed step by step.

1. Phenomena are many and various, such as chemical, physical, biological, graphical, social, psychological, economical, business etc.
2. Each phenomenon has its own peculiarities, characteristics and problems.
3. For studying any phenomenon, for one practical purpose, some method is required
4. Method of study or research available are several namely:
  - a. The Experimental Method
  - b. The Empirical Method
  - c. The Historical Method
  - d. The Case Method
  - e. The Deductive Method
  - f. The Statistical Method

It is, therefore, clear that statistics is methodology. It is a method of studying problems relating to any phenomenon. That is, Statistics is a technique of research.

A given phenomenon or an aspect of a phenomenon cannot be studied by any one method: The choice of method depends upon the nature of the phenomenon to be studied," It must not be assumed that the statistical method is the only method to use in research, just as the carpenter needs to use more than one tool in completing a piece of work, so that the research worker must often make use of not one, but several methods.

### Statistical Defined:

The term "Statistics" is used in two different sense, and therefore conveys two different meanings, it is used sometimes in the singular number and sometimes in the plural number. When used in plural number, the term "Statistics" refer to the subject matter of statistics, i.e. numerical data or number reflecting count or measurement or estimate of some kind. In common parlance the term statistics issued in this sense synonymously with the term data e.g. We hear "Statistic of exports and imports" or "statistics of prices in Pakistan". Here the term is used in the plural number and refers to data (or figures) concerning exports and imports and prices".

The other sense in which the term statistics is used in singular, used in this sense, it refers to the subject of statistics as a whole. It then denotes a subject that deals with principles and method of handling numerical data.