

## **Nature of Statistical Data:**

### **Temperature Figures and Statistics:**

To the man in the street statistics are just figures. But statistics are not mere mass of figures. There is a difference between mere figures and statistics. Any figures cannot be called statistics .e.g. the mere utterance of the figures 1545, 735, 438, or 500,400 does amount to any statistical statement. They are not doubt quantitative figures, but not statistics; they are mere figures because they do not satisfy the fundamental characteristics of statistics. Firstly, these figures do not satisfy the fundamental characteristics of statistics do not concern any sphere of inquiry. I.e. they do not throw light on any problems .thirdly they are not placed in relation to each other i.e., they are not capable of comparison .what sort of figures will be called statistics, is explained in detail in the paragraphs that follows.

### **Characteristics of Statistical Data:**

**Statistics** in the plural sense, are “aggregates of facts .affected to a marked extent by a multiplicity of cause , numerically expressed, enumerated or estimated according to reasonable standards of accuracy, collected in a systematic manner, for a predetermine purpose, and placed in relation to each other.”

From this definition it is clear that statistics (in the sense of statistical data) possess the following characteristics.

#### **Statistics are numerical statements of facts:**

That is statistics must be quantitative expressed. E.g. ages of say, 3 people may be expressed as young, middle-aged and old. They are no doubt statement of facts. But will not be called statistics because they are not quantitatively expressed; they are just qualities expressions. But if these statements of facts are expressed in numerical measurement say 20 years, 35 years and 60 years, then they will be called statistics of ages.

#### **Statistics are aggregates of facts.**

A single statement of facts ,through expressed numerically, does not constitute , statistics for example a single age of 25 years or a single salary of an employee, or a single figures of sale of an article, will not be called statistics. But a series of ages of a group of people, or a series of figures of purchase of an article. Etc would be called statistics, why? Comparison is the essence of statistics, therefore, for the purpose of comparison, there must be more than one measurement relating to the same phenomenon, so that comparison may be possible with reference to time, place or frequency of occurrence.

Statistics arise out of enumeration or estimation according to reasonable standards of accuracy.

Numerically statements of facts results either from (a) enumeration or count or measurement in which case they are supposed to be accurate and precise, or from (b) estimation (i.e. estimate) by some expert, estimated figures cannot be absolutely accurate and precise, the reasonableness of the degree of accuracy expected in such figures depends largely on (a) the purpose for which statistics are collected and also (b) on the nature of the particular problems about which data are being collected. There cannot be a inform standard of accuracy applicable to all types of data.

Statistics are the result of collection in a systematic manner.

To confirm to reasonable standard of accuracy. Statistics are collected in a systematic manner, because if figures are collected in a haphazard way, one cannot be sure of the degree of accuracy of such data. Therefore, figures not collected in a systematic manner cannot be called statistics.