Statistics

Statistics – Plural Sense

It refers to numerical statements of facts or data.

As per Secrist statistician- is quite comprehensive in nature.

- “aggregate of facts affected to marked extent by multiplicity of causes, numerically expressed, enumerated or estimated according to a reasonable standard of accuracy collected in a systematic manner for a pre-determined purpose and placed in relation to each other”.

Statements of facts will be called statistics only when

- they are aggregative
- they are estimated according to a reasonable standard of accuaracy
- they are collected in a systematic manner for a predetermined purpose
- they are placed in relation to each other

Following numbers can’t called statistics

- a single figure
- qualitative characteristics such as merit, honesty

The numerical facts should be comparable if they are to be called statistics.
All statistics are numerical statement of facts but all numerical statement of facts are not statistics.

Statistics – Single Sense

It refers to the subject statistics like other subjects maths, science.

Charactristics of Statistics

- **Statistics are aggregate of facts**
- **Statistics are affected to a marked extent by a multiplicity of causes**
- **Statistics are numerically expressed, enumerated or estimated**
- **Statistics are numerated or estimated according to reasonable standard of accuracy**
- **Statistics should be collected in a systematic manner for a predetermined purpose**
- **Statistics should be capable of being placed in relation to each other**

Charactristics of Statistics

Statistics are aggregate of facts : A single age of 20 or 30 years is not statistics, a series of ages are. Similarly, a single figure relating to production, sales, birth, death etc., would not be statistics although aggregates of such figures would be statistics because of their comparability and relationship.

Statistics are affected to a marked extent by a multiplicity of causes : A number of causes affect statistics in a particular field of enquiry, e.g., in production statistics are affected by climate, soil, fertility, availability of raw materials and methods of quick transport.

Charactristics of Statistics

Statistics are numerically expressed, enumerated or estimated

The subject of statistics is concerned essentially with facts expressed in numerical form—with their quantitative details but not qualitative descriptions. Therefore, facts indicated by terms such as ‘good’, ‘poor’ are not statistics unless a numerical equivalent, is assigned to each expression. Also this may either be enumerated or estimated, where actual enumeration is either not possible or is very difficult.

Statistics are numerated or estimated according to reasonable standard of accuracy

Personal bias and prejudices of the enumeration should not enter into the counting or estimation of figures, otherwise conclusions from the figures would not be accurate. The figures should be counted or estimated according to reasonable standards of accuracy. Absolute accuracy is neither necessary nor sometimes possible in social sciences. But whatever standard of accuracy is once adopted, should be used throughout the process of collection or estimation.

Charactristics of Statistics

Statistics should be collected in a systematic manner for a predetermined purpose

The statistical methods to be applied on the purpose of enquiry since figures are always collected with some purpose. If there is no predetermined purpose, all the efforts in collecting the figures may prove to be wasteful. The purpose of a series of ages of husbands and wives may be to find whether young husbands have young wives and the old husbands have old wives.

Statistics should be capable of being placed in relation to each other

The collected figure should be comparable and well- connected in the same department of inquiry. Ages of kids are to be compared only with the corresponding ages of other kids, and not with, say, heights of trees.

Functions of Statistics

To present facts in a definite form

To simplify raw data

To facilitate comparison

To help formulating policies

To study relaionship between different phenomena

To forecast future values

To measure uncertainty

To test a hypothesis

Scope of Statistics

Statistics in economics

Statistics in industry, business, commerce

Statistics and state

Limitations Of Statistics

Statistics deals only with quantitative characteristics

Statistics does not deal with single object

Statistical method may not provide the best solution

Statistics can be misused

Measures Of Central tendency

- Mean
- Median
- Mode