Measurement

Assignment of numbers to characteristics of objects or events according to rules.

- **In response to a question on whether he/she is using the ATM provided by a particular bank branch, the respondent may say 'yes' or 'no'.**
  - You may wish to assign the number
    - '1' for the response yes and
    - '2' for the response no.

1. Facilitate further statistical analysis of data obtained.
2. Numbers facilitate the communication of measurement rules and results

Measurement Scales

There are four levels of measurement scales or methods of assigning numbers:

(a) Nominal scale,

(b) Ordinal scale,

(c) Interval scale, and

(d) Ratio scale.

Measurement Scales

Nominal Scale

In this numbers serve as “tags” or “labels” only, to identify or classify an object.

The nominal scale does not express any values or relationships between variables.

What is your hair colour?

- (•) 1- Brown
- ( ) 2- Black
- ( ) 3- Blonde
- ( ) 4- Gray
- ( ) 5- Other

Measurement Scales

Ordinal Scale

- reports the ranking and ordering of the data without actually establishing the degree of variation between them.
- "Ordinal" indicates "order"
- Ranking of high school students – 1st, 3rd, 4th, 10th… Nth. A student scoring 99/100 would be the 1st rank, another student scoring 92/100 would be 3rd and so on and so forth.

Measurement Scales

Interval Scale

- An interval scale contains all the information of an ordinal scale,
- but it also one allows to compare the difference/distance between attributes
- Does not have true zero. (0 degree temp)

Customer satisfaction is key to organizational growth.

- 1- Completely agree
- 2- Somewhat agree
- 3- Neutral
- 4- Somewhat disagree
- 5- Completely disagree

Measurement Scales

Interval Scale

- An interval scale contains all the information of an ordinal scale,
- but it also one allows to compare the difference/distance between attributes
- Does not have true zero. (0 degree temp)
- Only feel the difference but cannot justify

Customer satisfaction is key to organizational growth.

- 1- Completely agree
- 2- Somewhat agree
- 3- Neutral
- 4- Somewhat disagree
- 5- Completely disagree

Measurement Scales

Ratio Scale

- highest level of measurement scales
- have absolute true zero (0 money)
- Justify the difference
- Examples of ratio scales include weights, lengths and times, age etc.