

# Measurement and Scaling Techniques

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# Measurement and Scaling Techniques

- Measurement scales in Research Methodology are used to categorize and/or quantify variables.
- Measurement is the process of observing and recording the observations that are collected as part of research
- The recording of the observations may be in terms of numbers or other symbols to characteristics of objects according to certain prescribed rules.

- The rules for assigning numbers should be standardized and applied uniformly. This must not change over time or objects
- Scaling: Scaling is the assignment of objects to numbers or semantics according to a rule

# Types

Typically, there are four levels of measurement scales or methods of assigning numbers:

- (a) Nominal scale
- (b) Ordinal scale
- (c) Interval scale
- (d) Ratio scale.

## (a) Nominal scale

- In this scale the different scores on a measurement simply indicate different categories. The nominal scale does not express any values or relationships between variables.
- Ex: labeling men as '1' and women as '2' which is the most common way of labeling gender for data

## (b) Ordinal scale

- Ordinal Scale involves the ranking of items along the continuum of the characteristic being scaled.
- In this scale, the items are classified according to whether they have more or less of a characteristic.
- For example, a fast food home delivery shop may wish to ask its customers: How would you rate the service of our staff? (1) Excellent • (2) Very Good • (3) Good • (4) Poor • (5) Worst •

## (c) Interval scale

- Interval Scale is a scale in which the numbers are used to rank attributes such that numerically equal distances on the scale represent equal distance in the characteristic being measured.
- For example: temperature

## (d) Ratio scale.

- Ratio Scale is the highest level of measurement scales. This has the properties of an interval scale together with a fixed (absolute) zero point.
- For example, the number of customers of a bank's ATM in the last three months is a ratio scale.