

## Univariate analysis in survey research

Survey research constitutes an important element – survey analysis. The simplest form of survey analysis deploys a procedure called univariate analysis. Univariate analysis deals with analyzing one variable at a time as against multi-variate analysis that deals with more than one variable at a time.

There are many tools used in univariate analysis such as frequency distribution, measures of central tendency, grouping, histogram, etc.

Frequency distribution relates to measuring the frequency of occurrence of a particular response category. For example, a survey research having a sample of 500 will have 250 males and 250 females. Thus, the table showing three columns – gender, frequency (25 each) and percentage (50% each) will be a typical case of univariate analysis. Such an analysis helps the survey researcher to find any difference between the responses from the respondents.

Measures of central tendency involve three tools namely mean, mode and median. All the three are 'average' measures. In real life people have a tendency to call mean as average. However, it is not restricted to mean alone, but to all the three. Mean is the arithmetical average of the values received from the respondent. For example, in a survey of 100 sampling units, the mean value of the amount of time spent on internet each day is 2 hours 25 minutes. Mode is the value occurring most of the time from the collected data. In this example of internet usage, mode value could be 2 hours 40 minutes. This value may have been recorded by 30% of the total sample size. This measure becomes important when one has to deal with open ended questions – how much time in a month do you have to spend at the garage to have your car repaired? When dealing with this type of question, it will be better to deploy mode than using mean value. While mean may seem to be more accurate, exact amount of time spent at the garage is not 'really' important in real life. It will be a good idea to use mean to compute average mileage of a car. Median is used when one deals with a variable having 'continual' properties. For example, when dealing with average age of the sample, median is almost always used in stead of mean or mode.

Grouping technique is used when the collected values are too scattered to conclude. For example, if one were to draw conclusions on eating habits of individuals between 21 and 40 years of age group, it will be good idea to group these ages into four or five classes like 21 – 25, 26 – 30, 31 – 35, and more than 35 years.

Histograms are the visual aids used to depict frequency distribution. Histogram is a group of vertical bars with each representing a value. In the above example, four years brackets will represent one bar. Histograms are used to make it reader friendly. Histograms are used for interval scales while bar charts are deployed for continuous variables.

## About the Author

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