RESEARCH METHODOLOGY

LECTURE-34

Simple Random Sampling

The Simple Random Sampling is a sampling technique wherein every item of the population has an equal and likely chance of being selected in the sample. Here, the selection of the item solely depends on the chance and therefore, this method is also called as a Method of Chance Selection.

The selection of samples through simple random sampling is free from the personal bias as the investigator/researcher does not exercise his discretion of preference in choosing the items. Often, the random sampling is called as a representative sampling because it is believed that if the sample size is relatively large and is chosen randomly, then it is likely to represent the same characteristics as that of the population.

The most common method used to obtain the random samples from the population is a Lottery Method. Under this method, all the items of the population are numbered or named on the identical paper slips and then these slips are mixed up in a container. The investigators blindfold himself and select as many slips from the container that constitute the desired sample size.

Here, the selection is purely based on a chance and every item has an equal chance of getting selected. This method is very popular in the lottery draws. While using the lottery method, it is essential to check that the slips are of identical size, color, and the shape, otherwise, there is a possibility of personal bias and prejudice.

Stratified Sampling

The Stratified Sampling is a sampling technique wherein the population is sub-divided into homogeneous groups, called as 'strata', from which the samples are selected on a random basis. The strata are formed on the basis of the member's shared attributes and characteristics. These are mutually exclusive as every item of the population is assigned to a single stratum. The items should be selected from every stratum such that each element has the chance of being selected in a sample, with a probability close to 0.

The stratified sampling is used when the investigator wants to study or

compare the specific subgroups within the population. In simple random sampling, the researcher is not sure that the subgroup which he wants to observe is represented by the sample selected or not. Thus, there is more statistical precision in stratified sampling technique than the simple random sampling. This is also because the sampling error, i.e. the variability in the subgroups is smaller than that of the population.