CHRISTIAN EMINENT COLLEGE, INDORE

(Academy of Management, Professional Education and Research)
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E-Content
on
Sampling plan & Sampling Error

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Sampling plan

Definition:-

A sampling plan is a term widely used in research studies that provide an outline on the basis of which research is conducted.it tells which category is to be surveyed, what should be the sample size and how the respondents should be chosen out of the population.

Sampling plan:-

Sampling plan is a base from which the research
Starts and includes the following three major decisions:
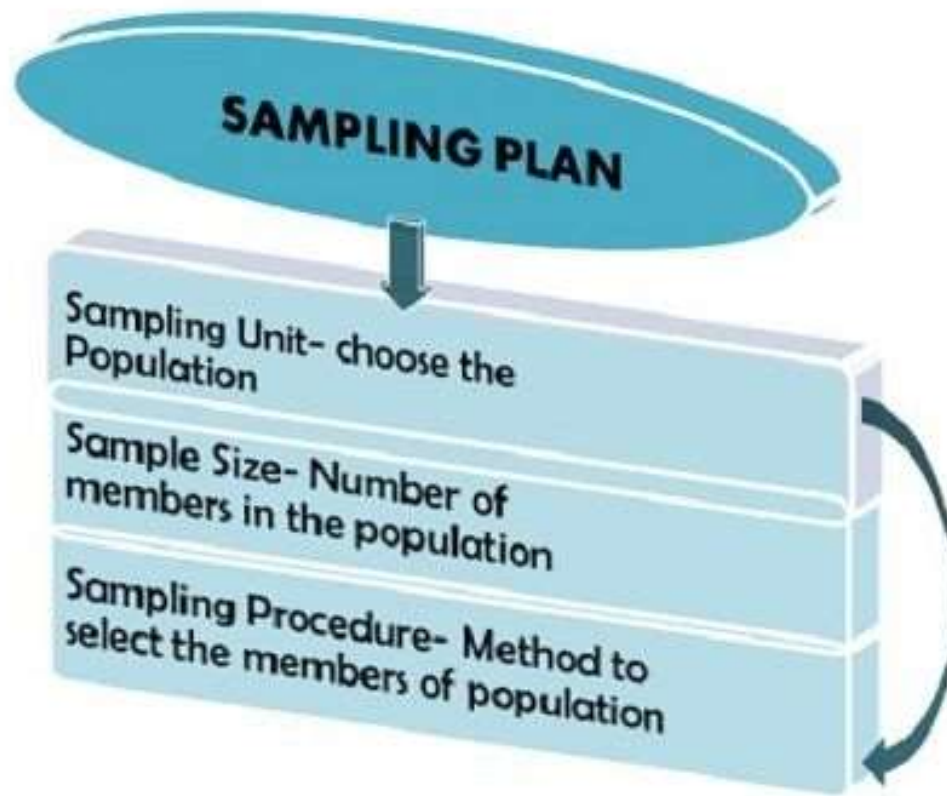
1. What should be the Sampling unit i.e. choosing the category of the population to be surveyed is the first and the foremost decision in a sampling plan that initiates the research.

Example:-

In the case of Banking industry, should the sampling unit consist of current account holders, saving account holders, or both? Should it include male or female account holders? These decisions once made the then sampling frame is designed to give everyone in the target population equal chance of being sampled.

2. The second decision in sampling plan is determining the size of the sample i.e. how many objects in the sample is to be surveyed.

3. The final decision that completes the sampling plan is selecting the sampling procedure i.e. which method can be used such that every object in the population has an equal chance of being selected.

Following are the probability samples

- **Simple Random Sample:**–
  where every item of the sample has an equal chance of getting selected.

- **Stratified Sample:**–
  In this, the population is divided into mutually exclusive groups viz. age group and then the choice is made randomly from each groups.

- **Cluster sample :-**
  It is also called area sampling, here the population is divided on the basis of location viz. city and then selected randomly.

Following are the non-probability samples:-

- **Convenience Sample:**–

   Here, the researcher selects the easiest and accessible population member.

- **Judgment Sample:-**
   Here, the researcher select those members of the population whom he thinks to contribute the accurate information.

- **Quota sample:-**
   Here, the researcher interviews the fixed number of members of each category.

Sampling Error

A sampling error is a statistical error that occurs when an analyst does not select a sample that represents the entire population of data and the results found in the sample do not represent the results that would be obtained from the entire population.

Population

Randomly selected or biased sample

Sampling error occurs
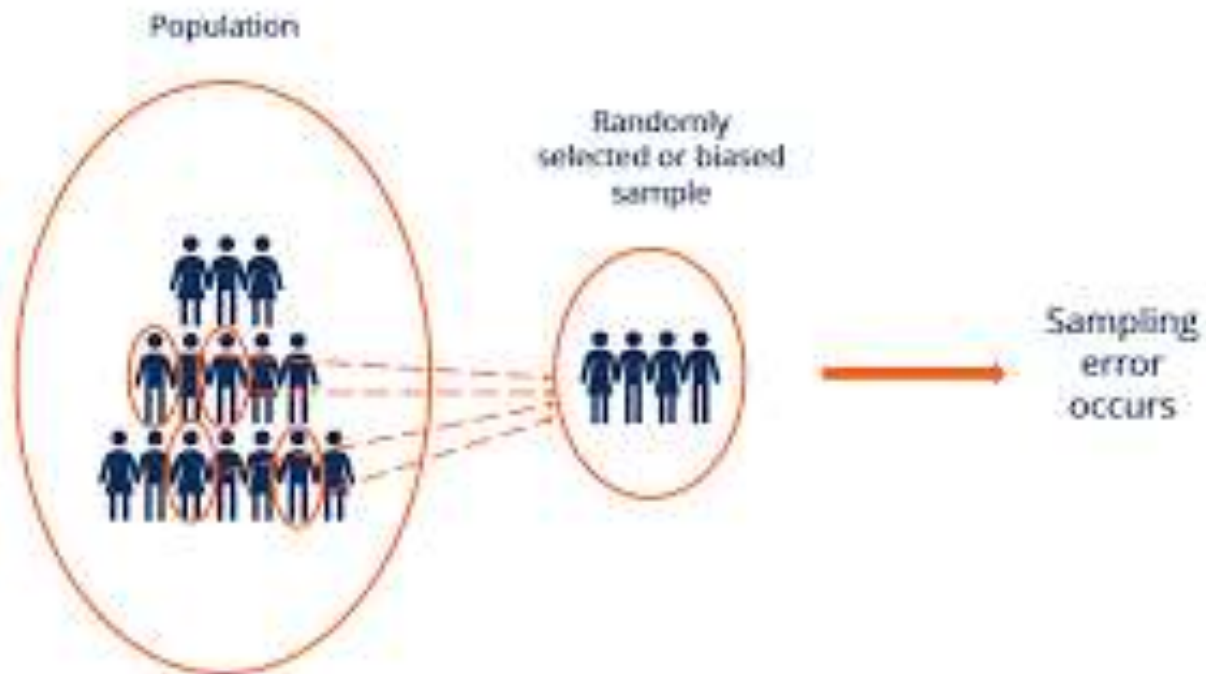
Most common sampling errors

1. Sample frame error: -
   Sampling frame errors arise when researchers target the sub-population wrongly while selecting the sample.For example,picking a sampling frame from the telephone white pages book may have erroneous inclusions because people shift their cities.

2. Selection error:-
   A selection error occurs when respondents self-select themselves to participate in the study.

3. Sampling errors: -
   Sampling errors occur due to a disparity in the representativeness of the respondents.

Simple steps to reduce sampling errors

1. **Increase sample size:-**
   A larger sample size results in a more accurate result because the study gets closer to the actual population size.

2. **Divide the population into groups:-**
   Test groups according to their size in the population instead of a random sample.

3. **Know your population:-**
   Study your population and understand its demographic mix. Know what demographics use your product and service and ensure you only target the sample that matters.

Thank You