

Learning Objectives

Sampling

Definition

Types of sampling

Types of Probability sampling

1. Simple random sampling
2. Cluster sampling
3. Systematic sampling
4. Stratified Random sampling

Types of non-Probability sampling

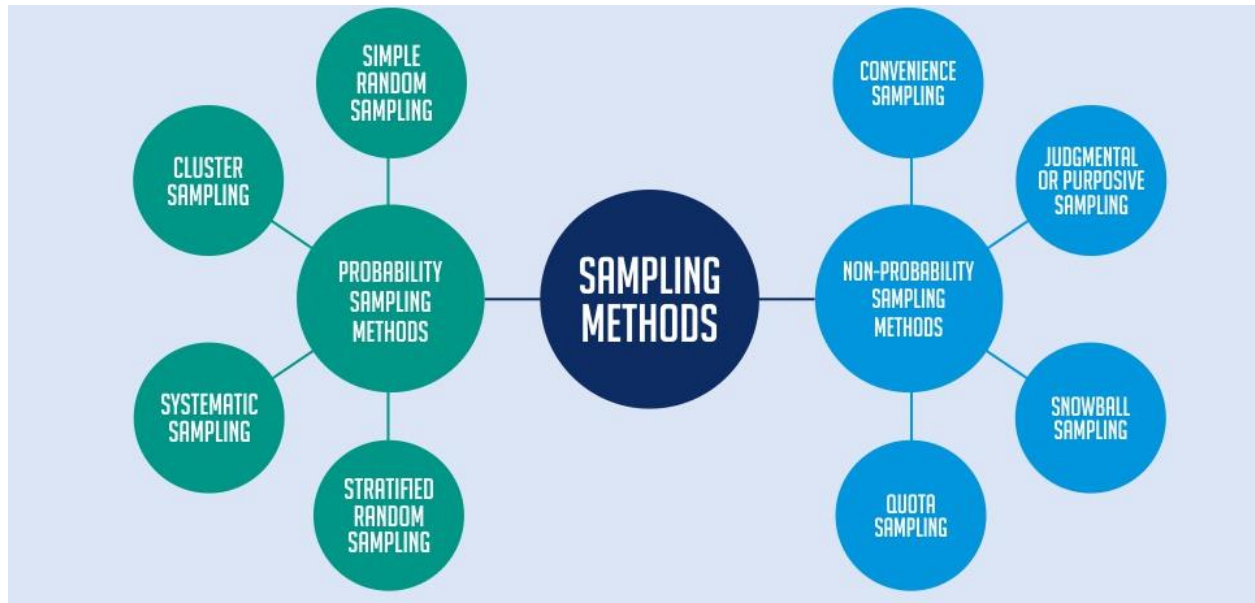
1. Convenience sampling
2. Judgmental or Purposive sampling
3. Snowball sampling
4. Quota Sampling

Sampling

Definition

Process of selecting certain members or the subset of the population to make statistical inferences from them and to make estimate characteristics of the whole population.

Types of sampling



Probability sampling

Sampling method that selects random members of a population by setting a few selection criteria, which can allow every member to have equal opportunities to be a part of various samples.

It gives fair chance to all members to be included in the sample. Bias in the sample derived is almost negligible.

Non – probability sampling

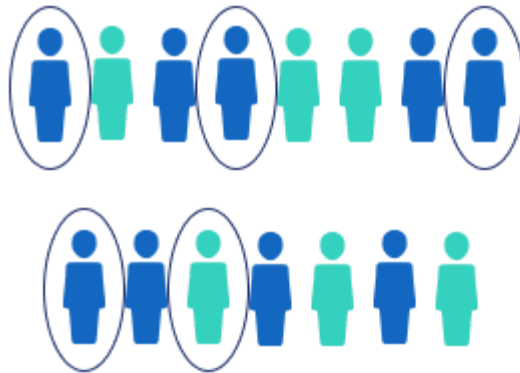
This method does not have any pre-defined selection process, which makes it difficult for all the elements of a population to have equal opportunities to be a part of sample

Types of Probability sampling

1. Simple random sampling

It's a simple method to save time in which every single member of the population is chosen randomly by chance, each individual has the exact same probability of chosen to be a part of a sample.

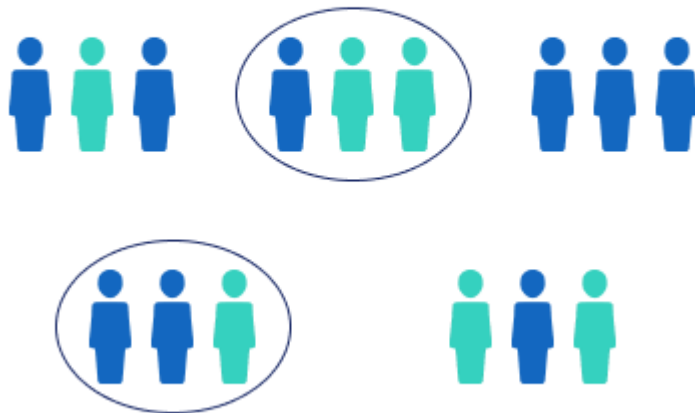
Simple random sample



2. Cluster sampling

Dividing the entire population into sections or clusters, that represent the population on the basis of parameters of the population. Which makes it easy to derive effective inference from the population.

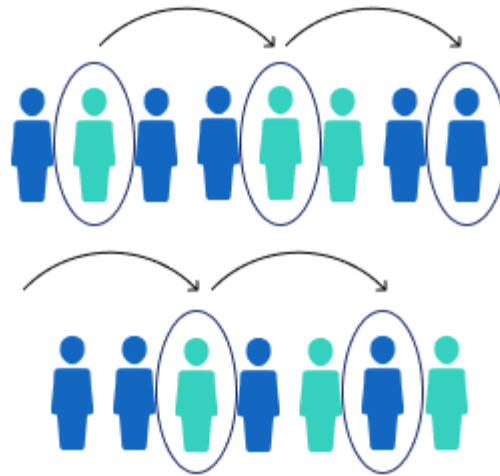
Cluster sample



3. Systematic sampling:

In this method samples are chosen at the regular interval of a population. It requires starting point of the sample and the sample size that can represent the regular interval. Since this method has predefined interval this technique is the least time consuming.

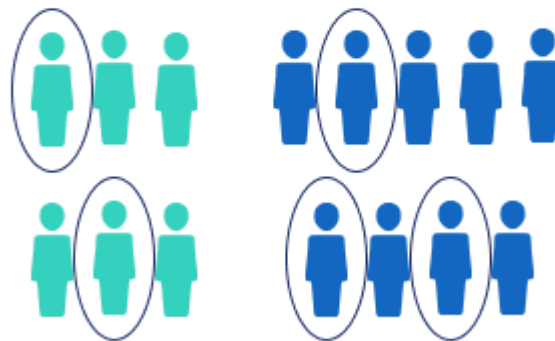
Systematic sample



4. Stratified Random sampling

In this method the population can be divided into smaller groups, that don't overlap but represent the entire population together, these groups can be organized and draw samples from each population.

Stratified sample

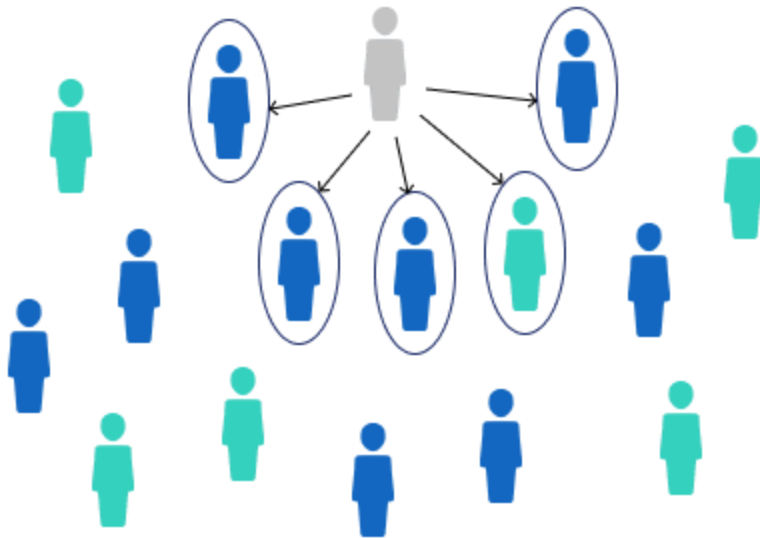


Types of non-Probability sampling

1. Convenience sampling

It's easy to get in touch with the customer at the mall or the busy street for the survey. This method is used when there are time and cost limitations. Nearly no authority over selecting elements and purely done on the basis of proximity.

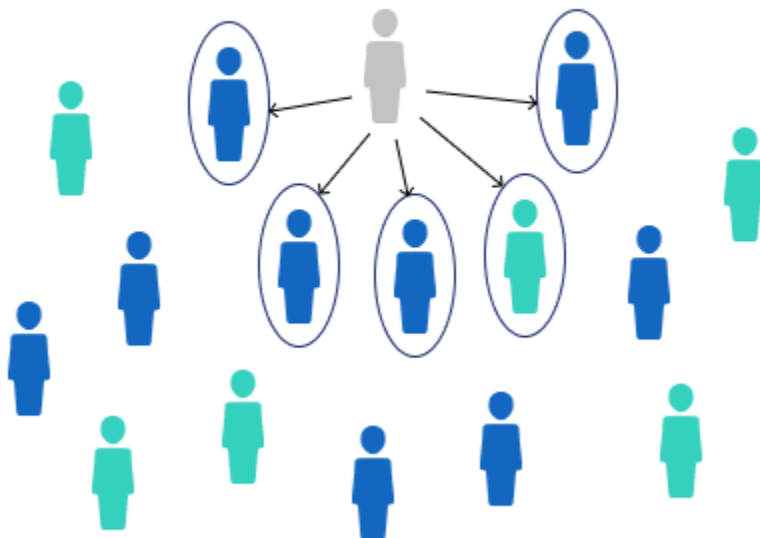
Convenience sample



2. Judgmental or Purposive sampling

The samples are formed by the judge purely considering the purpose of study along with the understanding of target audience. Its based on the research requirements and the element that is not required for the research is not included in the study.

Convenience sample



3. Snowball sampling

This method is used to understand the subjects which are difficult to trace. This method is used to deal with highly sensitive data.

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graph TD
    A[Grey] --> B[Teal]
    A --> C[Blue]
    B --> D[Teal]
    B --> E[Teal]
    C --> F[Blue]
    C --> G[Blue]
    C --> H[Blue]
  
```

Selection of member in this sampling on basis of specific attributes, that are found in the population. Quick method of collecting samples.