

SAMPLING TECHNIQUES:- Sampling is a method of collectⁿ of data. It is a process of getting a representative fraction of a population. The method of selection of a part of " to represent the whole population is called sampling.

Every population consist of individuals or items n are known as sampling units. Sampling helps us to draw inferences about the whole population simply by observing or measuring a few sampling units.

Essentials of sampling:-

1. Selected sample should be homogenous & should have no diff when compared to main population
2. A reasonable no of items should be selected in a sample to make the result more reliable
3. The selected sample should have similar characteristics as the original population
4. Individual items of the sample should be independent of each other.
5. A particular sample collected should be a representative of the original population
6. The sample size should be optimum to make the results more accurate.

Advantages of Sampling :-

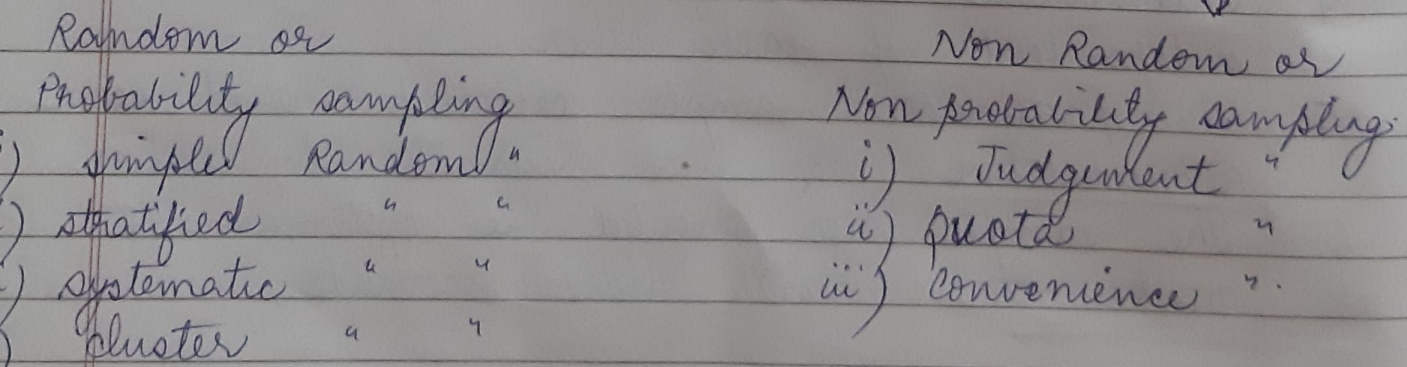
- saves time as exp performed w few individuals
- only method available in case of infinite population
- economical, as it reduces the cost of exp.
- It is reliable.
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Disadvantages.

- It needs skill & expertise.
- Result may be false or inaccurate, if proper sampling is not done.
- sometimes the population may be small enough to draw a sample.
- All individuals are not represented in the sample.

Best Method

Methods of Sampling



i) Random Sampling :- In this type, a small group is selected from a population without any pre determination selection is made in an unbiased way without any discrimination. Every individual has an equal chance of selection.

i) Simple Random Sampling :- It is the simplest method where each item has an equal chance of selection. It is done by 2 methods. i) Lottery method
ii) Number "

Lottery :- simplest & most popular method.
Number :- also known as Table of Random number method.

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Merits :-

ii) Stratified Random Sampling :- used in heterogeneous population. The population under study is first divided into homogenous groups or classes called as strata. Sample is drawn at random from each strata. It gives represent to all the strata. It has greater accuracy & better representation.

iii) Systematic Random Sampling :- It is also known as Quasi-Random sampling.

It is generally applied for field studies where the population is large, scattered & heterogeneous. It is a simple & convenient method. Time & labour involved are small. & very accurate results can be obtained if the population is infinite & homogeneous. In this type of sampling, the entire field is divided into grids.

iv) Cluster Random Sampling - Cluster is a randomly selected group. It is used when units of population are natural groups like hospital wards, houses of towns, schools of fishes etc. This tech allows small no. of target population to be sampled.

Eg:- used to evaluate vaccination as per the WHO guidelines.

Merits of Random sampling :-

1. It is scientific.
2. Less chances of biasness
3. sampling error can be measured.
4. Economical
5. In case of Random sampling, theory of probability is applicable.

Demerits :- 1) Sometimes it requires the complete list.

2. If the size of population is small, it is difficult to do Random sampling.

3. If units of population are spread over large areas simple Random sampling is not possible & cluster sampling is used.

d' Non-Random sampling :-

A non-Random sample is not selected on the basis of probability.

i) Judgement sampling :- Also called as Purposive sampling.

It is a deliberate sampling method & based on the choice of investigator.

ii) Quota sampling :- A definite quota is assigned to diff units bet sampling & the outcome is a non random sample.

iii) Convenience sampling :- Also known as Chunk it is done at the " of the investigator.

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Difference b/n Non Random & Random sampling:-

Basis of Comparison.

Random

Non-Random.

i) Meaning.

The subjects get an equal opp to be selected as a representative sample.

It is a techs where it is not known that \bar{n} individual will be selected from the populaⁿ.

ii) Basis of selection.

Random

Arbit^{ry}.

3) Opportunity of selectⁿ.

Fixed & known.

Non specified & unknown.

4) Research

Conclusive

Exploratory.

5) Result

Unbiased

Biased.

6) Inference

Statistical

Analytical.

7) Hypothesis

Tested

Generated