SAMPLING DESIGN

SAMPLE:

sample means a small portion of the population taken up for intensive study purpose. It is a small part of entire population having similar characteristics of the population. It is the smaller representative of the large whole.

SAMPLING:

Sampling is the act , process or technique of selecting a representative part of a population for the purpose of determing determing the characteristics of the whole population. The process of selecting a sample from a population using special sampling techniques is called sampling. It should be ensured in the sampling process itself that the sample selected is representative of the population.

FEATURES OF SAMPLE AND SAMPLING:

1) sampling is a small representative of the whole. It is an effective alternative to the census survey. Sampling methods provides reliable data promptly and economically.

2) Sampling reduces the time, efforts and money of the researcher on data collection without any adverse effect on its quality.

3) The sampling technique is based on the assumption that random selection of sample from the universe do possesses the same features and characteristics as that of the universe.

4) The finding of sample survey are accurate and reliable. The larger sample is better as the results available are more accurate.

5) Sampling is used in data collection as well as for different purposes in our daily life.

ESSENTIALS OF A GOOD SAMPLING

1) REPRESENTATIVE:

A sample must be representative of the universe. Thr researcher must select the sample members who have the characteristics of the universe. e.g., When research is undertaken to study job satisfaction in Police, then the sample members must be the police personnel belongs to different levels in the Police Force.

2) FOCUS ON OBJECTIVES:

The sample must be selected depending upon research objectives. The researcher should be very much sure that the sample selected by him should help him in achieve his objectives.

3) FLEXIBILITY:

The sample size should be flexible. It should not be rigidly followed. It can be modified depending upon the circumstances. e.g., Sample size can be reduced if sufficient information is already available or if there is a limitation of time and fund. And sample size can be increased if there are proper informatin not available from the selected sample.

4) METHODS OF SAMPLING:

The researcher must select proper methods of sampling. The sampling methods are broadly divided into two groups. Probability methods and nonprobability methods. The researcher must select appropriate method .

5)PROPER SELECTION OF SAMPLING UNIT:

The sample unit must be appropriate. The universe comprises of the elements, and each element can be further divided into units. e.g., If a study is conducted on the job satisfaction of bank employees, then bank employees comprise the Universe. The elements of universe may comprise of bank employees/ managers in rural and urban banks. The sample unit may include male and female employees, junior and senior employees.

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6) PROPER SAMPLING FRAME:

The researcher should select proper sampling frame to collect information. Sampling frame is an instrument to obtain and add informations about the various elements of the universe. The sampling frame may inclide telephone directories, register of members in an prganisation, etc., Before selecting the sampling frame the reseracher must answer the following questions:

Does it adequently cover the universe?
Does it represent each and every unit?
Is the sample frame updated?

7)PROPER SAMPLING PLAN:

The researcher must prepare a sampling plan which must indicate:

Sampling unit
Sampling frame
Sources of data
Methods of data collection
Resources required for data collection
Time frame to collect data, etc.,

Proper sampling plan will help to decide about the right sample size, which will facilitate proper collection of data
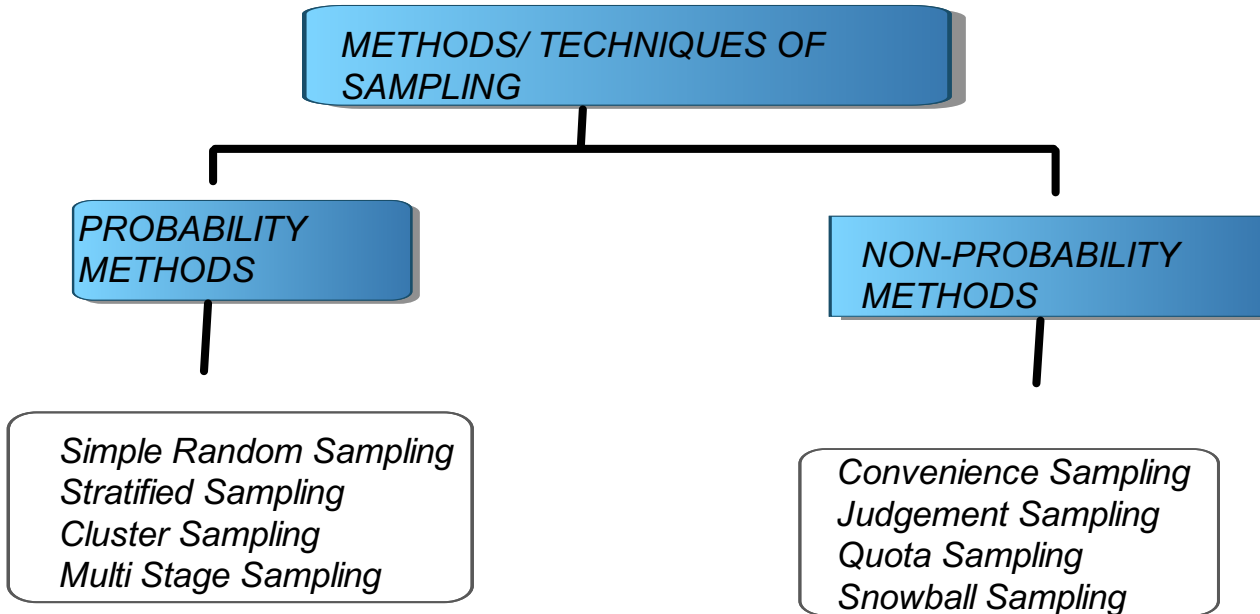
8)GEOGRAPHIC AREA OF STUDY:

The researcher must consider the area of selecting the sample size. If the area coverage is large, then the sample size should be large.In such situation the researcher may adopt multi stage cluster sampling. If the area of study is restricted only to a particular city, then the sample size should be smaller. In such situation the researcher may use sinle stage cluster sampling.

9)ECONOMY:

The sample size should be economical.It should be cost effective.It should not put extra burden to the researcher. But it should facilitate proper data collection.

METHODS/ TECHNIQUES OF SAMPLING

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PROBABILITY METHODS

NON-PROBABILITY METHODS

Simple Random Sampling
Stratified Sampling
Cluster Sampling
Multi Stage Sampling

Convenience Sampling
Judgement Sampling
Quota Sampling
Snowball Sampling

I. PROBABILITY SAMPLING METHODS:

Probability sampling method is also known as random sampling. Probability means possible chance.Each element of the population has known chance or opportunity of being selected or included in the sample.

FEATURES:
1)It is the systematic and objective method of sampling that provides equal chance to every element of the population in getting equal chance to be selected in the sample.

2) The results of probability sampling are more accurate and reliable

3) It helps in the formulation of a true representative sample be eliminating human biases

4) It is commonly used in research because its mathematical base.

5) It is a mechanical method rater than mental processof sampling, which eliminates personal bias in the sample selection.

6) Each element of the population knows in advance about the possibility of being included in the sample.

1) SIMPLE RANDOM SAMPLE

This is the most popular method which is normally followed to collect data. This technique provides every element or unit an equal chance of being selected in the sample. It is suitable for selecting a sample from a small homogeneous group. There are two sub-methods:

a) Lottery method
b) Random Tables.

LOTTERY METHOD:

In this method , each element is given a number and then the numbers are mixed or placed in a box. By draw of lots, the sample is selected.

RANDOM TABLES:

In this method, the elements are given numbers and the numbers are placed in rows. The sample is selected from the rows at random. e.g., The researcher decides that all the number in the third row may be the sample.

2) STRATIFIED SAMPLE:

The population is divided into many strata or segments based on income, occupation,age, religion, gender, etc., After dividing the population into different segmentscertain number of sample is selected from each stratum or segment. There are two ways of stratified sampling:

Proportionate stratified sampling
Disproportionate stratified sampling

In proportionate sampling, certain fixed percentage is taken of each stratum to represent the sample. In case of disproportionate sampling, there is no such percentage considered to represent the sample.

3) CLUSTER SAMPLING:

Cluster sampling is also known as 'area sampling'. Under this method, instaed of selecting individual units, the researcher divides the population into clusters or groups and accordingly sample is selected. The sample is selected groupwise. The groups are selected on random basis as sample. Cluster sampling method is less costly as travelling of interviewer is minimized. It is useful when the researcher desires to study the characteristics of certain individuals or items of identical nature.e.g., If we wnayt to study the nature of students of Mumbai, we may divide into various groups on the basis of area, say Western , Eastern, South and North Mumbai and if the sample size is 200, we may select 50 students from each group.

4) MULTISTAGE SAMPLING:

Multistage sampling is the further development of the principle of cluster sampling. Ordinarly multi stage sampling is applied in big inquiries extending to a considerable large geographical area. Suppose we want to investigate the working efficiency of nationalised banks in India, the first stage is to select the large primary sampling unit such as states in a country. Thereafter, we may select certain districts from the state and interview all the banks in the chosen district. This represent two stage sampling design . If we select one town in the selected district and interview all banks in the selected town, then that is known as three stage three stage sampling design and so on.

II. NON PROBABILITY SAMPLING:

It involves the selection of units based on factors rather than random choice. It is also known as deliberate sampling and purposive sampling. It is a sampling method where some elements of the population have no chance of selection or where the probability of selection cannot be accurately determined.

1) CONVENIENCE SAMPLING:

The selection of units from the population is based on their easy availability and accessibility to the researcher is known as convenience sampling.

e.g., A chips company that surveys a sample of its employees to know the acceptance for a new flavour of potato chips that it plans to introduce in the market.

Here the criterion for selecting the sample is easy availability and accessibility.

Although this type of research is easy and cost effective the findings of the sample survey cannot be generalised to the entire population as the sample is not a proper representative.

As there is no set criterion for selecting the sample, there is a scope fpr research being influenced by the bias of the researcher.

2) JUDGEMENT SAMPLING:

The selection of a unit from the population based on the judgement of an experoenced researcher is known as judgement or purposive sampling.

Here the sample units are selected based on population's parameters.

It is often noticed that companies frequently select certain preferred cities during test marketting products.This is because they consider the population of that particular city to be representative of the total population of the country.

3) QUOTA SAMPLING:

Under this method, the researcher allocates certain quota (relating to respondents) to certain groups groups under study. The quotas may differ from each area depending upon certain factors like age, occupation, income, etc., The number of respondents that are to be drawn from each of several categories is specified in advance and the final selection of the respondents is left to the interviewer who proceeds until the quota of each category is fulfilled.

Quota sampling finds extensive use in commercial research where the main objective is to ensure that the sample represents in relative proportion.

e.g., If a researcher wants to seqment the entire population based on gender, then he would have two categories of respondents that is male and female and if he want to collect dat from 30 respondents he may select 15 respondents from each quota.

4) SNOW BALL SAMPLING:

It is a sampling design in which respondents selected earlier are asked to identify other sample members. This technique is used when the population being sought is a small one and finding them by traditional means are low.

e.g., To find out golf players in aparticular cities, we may locate one golf player and collect the names of two or three other golf players from him.

One respondent is used to generate the names of the other respondent is called snowballing and it can be done again with the second set of respondents.It is a type of networking for finding new respondents of some rare type.