

# SAMPLING METHOD

POLS5001: RESEARCH METHODOLOGY

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- ❑ Sampling is considered a very useful method in the field of social science and social research.
- ❑ One of the main problems related to research is the selection of units for the study.
- ❑ The sampling has been considered a very useful method in the field of social science and social research.
- ❑ Sampling is done because you usually cannot gather data from the entire population.
- ❑ Even in relatively small populations, the data may be needed urgently, and including everyone in the population in your data collection may take too long.

□ Two types of Methods are used for compilation of facts in the research :-

❖ **Census Method** : Through this method, the whole is studied by establishing contact with all the members of the group

❖ **Sampling Method** : Sampling, the selection of some represented units from the whole units is called sampling.

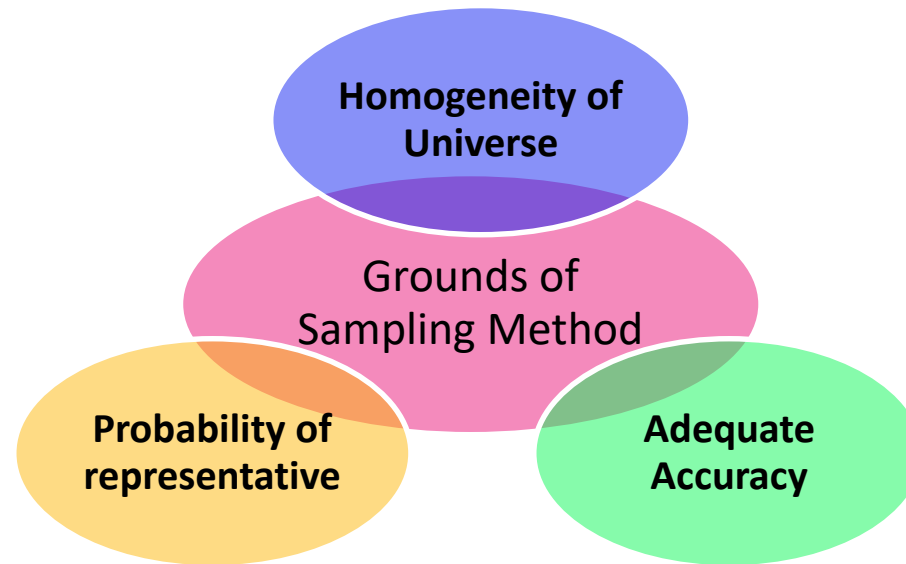
# SAMPLING METHOD

- The Sampling is a method by which the researcher select some of the unit from the entire unit based on various commonly accepted methods and principles, so that the selected units can represent the properties of the whole.
- It is often necessary to use sampling because researchers usually do not have the time, energy, money or resources to study the whole population.
- Stages of Sampling:
  - *Define or Determine the target population.* Population means either all people or group/organization/country/object/or any other entity that a researcher is ambitious to study and draw the conclusions.
  - *To choose sampling frame or technique,* means a researcher utilises his/her access to the target group of study among people. Sampling frame may not be completely representative of the whole population, for example, a researcher wants to know campaign success of "Cigarette is injurious to health". The researcher may not know all the smokers and all smokers can not be contacted, then he/her may go to a shop where cigarette is sold and he/her can choose sample from there and draw the conclusions.
  - Sampling techniques should be divided into two broad categories, Probability or random sampling or non-Probability sampling.
- The Sampling Method is the Foundation of social research and survey.

# DEFINITION OF SAMPLING METHOD

- ✓ **P.V. Young-** A statistical sample is a miniature picture or cross-section group or aggregate from which the sample is taken.
- ✓ **Goode and Hatt-** A Sampling is a small representative of a large whole.
- ✓ **Bogardus-** Sampling is the selection of certain percentage of a group of items according to a predetermined plan.
- ✓ **Hasin Pao Yang-** A statistical sample is a cross-section of the entire group.
- ✓ **Frank Yaton-** The term sample should be reserved for a set of units or portion of an aggregate of material which has been selected in belief that it will be representative of the whole aggregate

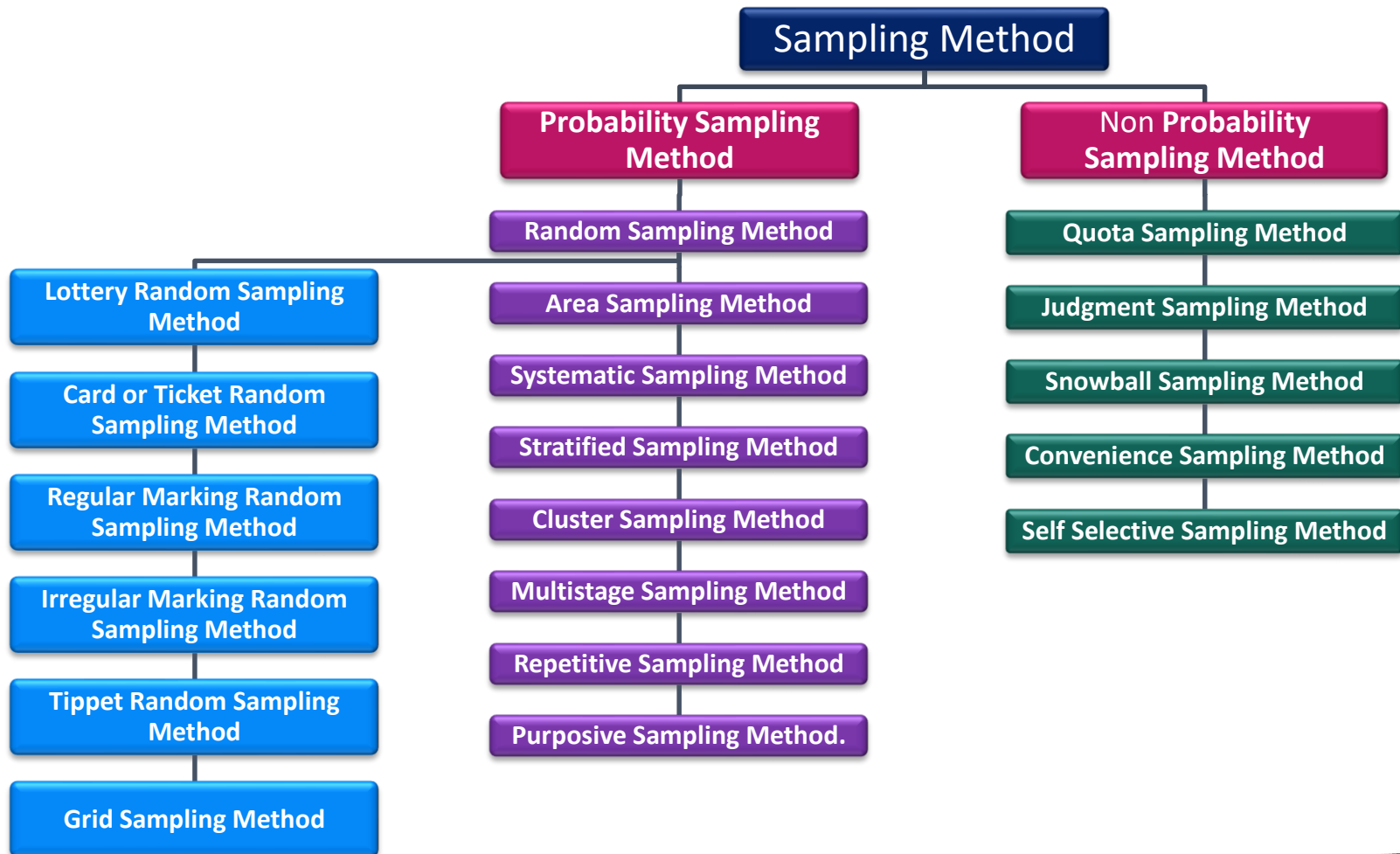
- The sampling method is the method in which only a few representative units of the overall population are studied by selecting them.
- This method has some grounds which are indicated as diagram:



- Sampling can be used to make inference about a population or to make generalization in relation to existing theory.
- In essence, this depends on choice of sampling technique.

# TYPE OF SAMPLING METHOD

- In general, sampling techniques can be divided into two types:
  - Probability sampling
  - Non-probability sampling



# PROBABILITY SAMPLING METHOD

- Probability sampling means that every item in the population has an equal chance of being included in sample.
- Probability sampling has the greatest freedom from bias but may represent the most costly sample in terms of time and energy for a given level of sampling error
- Thus the Probability Sampling Methods include **Random Sampling Method, Area Sampling Method, Systematic Sampling Method, Stratified Sampling Method, Cluster Sampling Method, Multistage Sampling Method, Repetitive Sampling Method and Purposive Sampling Method.**



# RANDOM SAMPLING METHOD

- Random sampling is a part of the sampling technique in which each sample has an equal probability of being chosen.
- A sample chosen randomly is meant to be an unbiased representation of the total population.
- Under this, the researcher has no freedom to select some units from the group, but the selection of units is done on the basis of certain methods.
- This means that all the units of the whole get equal opportunity to be selected for selection of a representative sample under daily sampling.
- Types of random Sampling Method:-
  - ✓ Lottery Random Sampling Method
  - ✓ Card or Ticket Random Sampling Method
  - ✓ Regular Marking Random Sampling Method
  - ✓ Irregular Marking Random Sampling Method
  - ✓ Tippet Random Sampling Method
  - ✓ Grid Random Sampling Method

## **AREA SAMPLING METHOD**

- Area sampling involves sampling from a map, an aerial photograph, or a similar area frame. Area frames can be used for multiple variables at the same time.
- There's no overlap between sampling units.
- Every unit has an equal chance of being selected.
- This complete coverage results in unbiased estimates.

## **SYSTEMATIC SAMPLING METHOD**

- Systematic sampling is where every  $n$ th case after a random start is selected.
- The advantage of this sampling technique is its simplicity.

# STRATIFIED RANDOM SAMPLING

- Stratified sampling is where the population is divided into strata (or subgroups) and a random sample is taken from each subgroup.
- A sub group is a natural set of items. Subgroups might be based on company size, gender or occupation (to name but a few).
- Stratified sampling is often used where there is a great deal of variation within a population.
- Its purpose is to ensure that every stratum is adequately represented.

# CLUSTER SAMPLING METHOD

- Cluster sampling is where the whole population is divided into clusters or groups. Subsequently, a random sample is taken from these clusters, all of which are used in the final.
- Cluster sampling is advantageous for those researchers whose subjects are fragmented over large geographical areas

# MULTI-STAGE SAMPLING METHOD

- Multi-stage sampling is a process of moving from a broad to a narrow sample, using a step by step. Obviously, this is both expensive and time consuming.
- A cheaper alternative would be to use multi-stage sampling.
- The main purpose of multi-stage sampling is to select samples which are concentrated in a few geographical regions.

# REPETITIVE SAMPLING METHOD

- For the study of research content, the selections are made at different times instead of simultaneously.
- Sampling at different stages during research studies are inappropriate. Then, other substitutions are selected in place of these adhesions.
- At the stage at which the sampling will be useful for research studies, instead of the unusable sampling, the other samples which have a higher probability of usefulness are selected.
- This method is commonly used to correct mistakes in adhesions.

# PURPOSE SAMPLING METHOD

- When the researcher selects some of the units from the aggregate on his own basis based on a particular objective, such sampling is called objective sampling.
- This sampling method requires researchers to have prior knowledge about the purpose of their studies so that they can properly choose and approach eligible participants.
- Purposive sampling, also known as judgmental, selective, or subjective sampling, is a form of non-probability sampling in which researchers rely on their own judgment when choosing members of the population to participate in their study.

# NON PROBABILITY SAMPLING METHOD

- Non probability sampling is often associated with case study research design and qualitative research.
- In non-probability sampling, the sample group is selected from the population and the how the sample differs from the population cannot be determined.
- The sampling of the case studies tend to focus on small samples and are intended to examine a real life phenomenon, not to make statistical inferences in relation to the wider population.
- Thus the Non-probability Sampling methods include **Convenience Sampling Method, Self Selective Sampling Method, Judgment Sampling Method, Snowball Sampling Method and Quota Sampling Method.**

# QUOTA SAMPLING METHOD

- Quota sampling is a sampling methodology wherein data is collected from a homogeneous group. It involves a two-step process where two variables can be used to filter information from the population.
- the comparative importance of different classes, the number of units to be selected from each class is determined. While determining the number of units to be taken from different categories, it is not necessary for the researcher to determine them only in percentage of the number of different categories.
- Even if the number of units in a class is more, if its functional effect is comparatively less, then fewer units can be selected from it.



# JUDGMENT SAMPLING METHOD

- Judgmental sampling is a strategy in which particular settings persons or events are selected deliberately in order to provide important information that cannot be obtained from other choices.
- It is where the researcher includes cases or participants in the sample because they believe that they warrant inclusion.
- The process of selecting a sample using judgmental sampling involves the researchers carefully picking and choosing each individual to be a part of the sample.

# SNOWBALL SAMPLING

- Snowball sampling is a non random sampling method that uses a few cases to help encourage other cases to take part in the study, thereby increasing sample size.
- This approach is most applicable in small populations.

# CONVENIENCE SAMPLE METHOD

- Convenience Sample is a type of non-probability sampling method where the sample is taken from a group of people easy to contact or to reach.
- This type of sampling is also known as grab sampling or availability sampling. There are no other criteria to the sampling method except that people be available and willing to participate.
- In addition, this type of sampling method does not require that a simple Random sample is generated, since the only criteria is whether the participants agree to participate
- Convenience sampling is when researchers leverage individuals that can be identified and approached with as little effort as possible. These are often individuals that are geographically close to the researchers.

# SELF SELECTION SAMPLING METHOD

- Self Selection sampling method is a non-probability sampling method, that is based on the judgment of the researcher.
- This is a useful tool for researchers, who want people or organizations (units), to participate (or volunteer) as part of a study on their own accord.
- Sometimes the researcher is not required to choose a sample, but some individuals become part of the sampling based on their own interests.
- The sampling is usually achieved by various means of communication.



# CONCLUSION

- ⦿ The sampling should be a proper and complete representation of all the units related to the research study.
- ⦿ The sampling should correspond to the content related to the research study.
- ⦿ The choice of sampling should go beyond personal favoritism.
- ⦿ As far as the sampling should be, which has almost the same characteristics.
- ⦿ The choice of sampling should be based on the reasoning and knowledge of the researcher.
- ⦿ It is also necessary to include practical experiences of the researcher in the choice of sampling.
- ⦿ The units under sampling should conform to the nature and size of the aggregate. According to PV Young, "a useful sampling is one that involves enough cases (units) to present reliable conclusions."



thank  
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