



• Basic Survey Design

- [Introduction](#)
- [The Set up Stage of a Survey](#)
- [Samples and Censuses](#)
- [Data Collection Methods](#)
- [Frames & Population](#)
- [Errors in Statistical Data](#)
- [Sample Design](#)
- [Questionnaire Design](#)
- [Survey Testing](#)
- [Design Data Processing](#)
- [Analysis](#)
- [Presentation of Results](#)
- [Confidentiality](#)

SAMPLES AND CENSUSES

Surveys are used as a tool to collect information from some or all units of a population and compile the information into a useful form. There are two different types of surveys that can be used to collect information in different circumstances to satisfy differing needs. These are sample surveys and censuses.

SAMPLE SURVEYS

In a sample survey, only part of the total population is approached for information on the topic under study. These data are then 'expanded' or 'weighted' to make inferences about the whole population. We define the sample as the set of observations taken from the population for the purpose of obtaining information about the population.

Advantages of Sample Surveys compared with Censuses:

- Reduces cost - both in monetary terms and staffing requirements.
- Reduces time needed to collect and process the data and produce results as it requires a smaller scale of operation.
- (Because of the above reasons) enables more detailed questions to be asked.
- Enables characteristics to be tested which could not otherwise be assessed. An example is life span of light bulbs, strength of spring, etc. To test all light bulbs of a particular brand is not possible as the test needs to destroy the product so only a sample of bulbs can be tested.
- Importantly, surveys lead to less respondent burden, as fewer people are needed to provide the required data.
- Results can be made available quickly

Disadvantages of Sample Surveys compared with Censuses:

- Data on sub-populations (such as a particular ethnic group) may be too unreliable to be useful.
- Data for small geographical areas also may be too unreliable to be useful.

- (Because of the above reasons) detailed cross-tabulations may not be practical.
- Estimates are subject to sampling error which arises as the estimates are calculated from a part (sample) of the population.
- May have difficulty communicating the precision (accuracy) of the estimates to users.

Sample Survey Design Considerations

When running a sample survey, there are several design considerations that need to be taken into account that are specific to sample surveys. These additional factors include: sample size, sample design, the mode of estimation based on survey results and, where applicable, stratification, allocation of the sample across the strata and the selection of the sample within the strata. These factors, however, depend on many other factors such as the objectives of the survey, nature of target population, data items to be collected, level of accuracy required etc.

CENSUSES

A census is a collection of information from all units in the population or a 'complete enumeration' of the population. We use a census when we want accurate information for many subdivisions of the population. Such a survey usually requires a very large sample size and often a census offers the best solution.

Advantages of Censuses compared with Sample Surveys:

The advantages of a census are that:

- Data for small areas may be available, assuming satisfactory response rates are achieved.
- Data for sub-populations may be available, assuming satisfactory response rates are achieved.
- (Because of the above reasons) detailed cross-tabulations may be possible.
- The estimates are not subject to sampling error.

An examination of these shows that these closely reflect the disadvantages of a sample survey.

Similarly, the disadvantages of censuses relate to the advantages of sample surveys.