

Sampling and Non-Sampling Errors.

Sampling Errors - Sampling errors have their origin in sampling and arise due to the fact that only sample has been used to estimate population parameters and draw inferences about the population. These errors are absent in complete enumeration survey. These errors can be reduced on increasing the sample size and adopting proper sampling technique.

These errors may be due to following reasons-

1. Faulty Selection of Sample:- Sometimes we use defective sampling to select a sample such as purposive or judgement sampling in which the investigator ~~del~~ deliberately select a sample to obtain certain results.
2. Substitution:- Some bias ~~error~~ arises when investigator substitute some sampling units of his convenience in place of original sampling units.
3. Faulty Demarcation of Sampling Unit:- In agricultural experiments (crop cutting survey), while dealing with border line cases, it depends more or less on the discretion of the investigator whether to include them in the sample or not.
4. Error due to bias in the Estimation method:- Sampling method consists in estimating the parameters of population by appropriate statistics computed from sample. Improper choice of estimation method may introduce error.

Non-Sampling Errors! - These errors can occur at

every stage of the planning or execution of census or sample survey. This type of errors occurs both in complete enumeration and in sample surveys. These errors can not be avoided at all. These errors can be due to:

1. Faulty planning or Definitions: Here these errors can be due to:

(a) Data specifications being inadequate and inconsistent w.r.t. the objectives of survey.

(b) Error due to actual measurement of characteristics and error in recording the measurements.

(c) Lack of trained and qualified investigators.

2. Response Error: - These errors are introduced as a result furnished by respondents and may be due to any of the following reasons:

(i) Response errors may be accidental

(ii) Response errors may be due to self interest

(iii) These errors may be due to failure of respondent's memory

(iv) Response errors may be due to Prestige of Respondent

3. Non-Response Errors: - In door to door survey, non-response usually results if respondent is not found at home even after repeated calls or if he refuses to answer of investigator.

4. Errors in Coverage

5. Computing errors: - Errors during punching or card tabulation and summarizing of original data.

6. Publication errors - Errors committed during presentation and tabulation of results.