

Data Collection

In Statistics, data collection is a process of gathering information from all the relevant sources to find a solution to the research problem. It helps to evaluate the outcome of the problem. The primary importance of data collection in any research or business process is that it helps to determine many important things about the company, particularly the performance. So, the data collection process plays an important role in all the streams. There are two main components by which we can gather data are as under;

- Sources of Data
- Methods of Data Collection

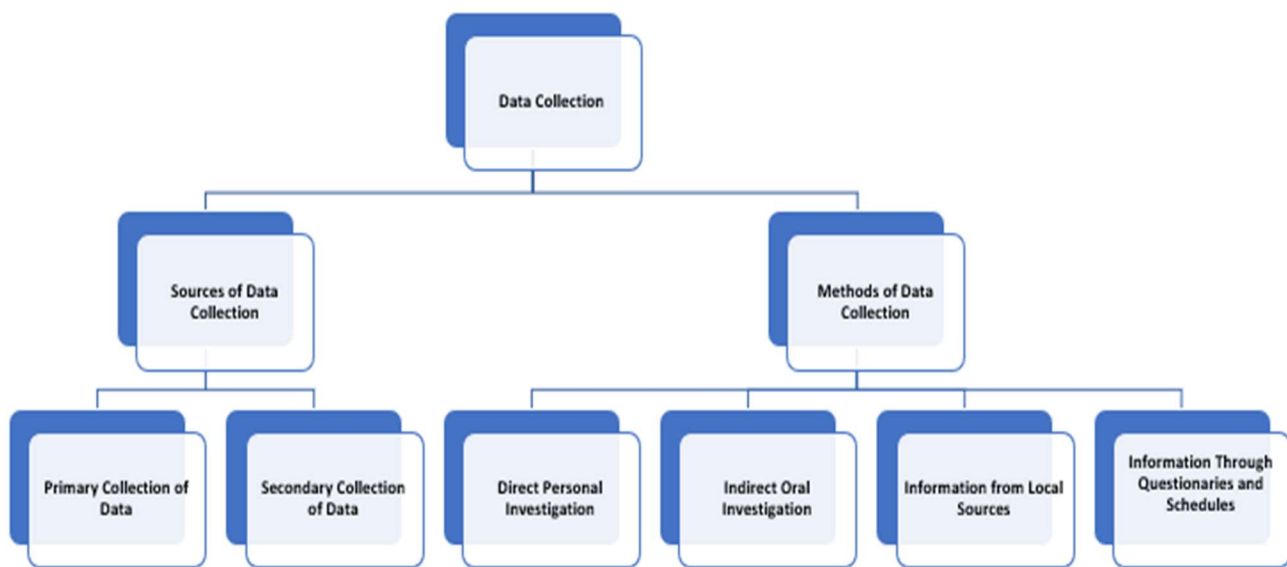


Figure: Data Collection Method & Sources of Data Collection

There are two main categories of sources of data collection;

- Primary Data Collection methods
- Secondary Data Collection methods

Primary Data:

Primary data collection involves the collection of original data directly from the source or through direct interaction with the respondents. This method allows researchers to obtain firsthand information specifically tailored to their research objectives. The features of Primary data collection are as under:

- Original
- Accurate
- Trustworthy

- Cost effective

Secondary Data Collection:

Secondary data collection involves using existing data collected by someone else for a purpose different from the original intent. Researchers analyze and interpret this data to extract relevant information. Secondary data can be obtained from various sources, including:

- a. Published Sources:** Researchers refer to books, academic journals, magazines, newspapers, government reports, and other published materials that contain relevant data.
- b. Online Databases:** Numerous online databases provide access to a wide range of secondary data, such as research articles, statistical information, economic data, and social surveys.
- c. Government and Institutional Records:** Government agencies, research institutions, and organizations often maintain databases or records that can be used for research purposes.
- d. Publicly Available Data:** Data shared by individuals, organizations, or communities on public platforms, websites, or social media can be accessed and utilized for research.
- e. Past Research Studies:** Previous research studies and their findings can serve as valuable secondary data sources. Researchers can review and analyze the data to gain insights or build upon existing knowledge.

Methods of Data Collection

There are different methods by which we can collect data are as under;

(i) Direct Personal Investigation

It is the method by which data are personally collected by the investigator from the information. Merits and demerits of this method are follows.

(a) Merits

- Originality
- Reliability
- Uniformity
- Accuracy
- Related information
- Elastic

(b) Demerits

- Difficult to cover wide areas
- Costly
- Personal bias
- Limited coverage

(ii) Indirect Oral Investigation

It is the method by which information is obtained not from the persons regarding whom the information is needed. It is collected orally from other persons who are expected to possess the necessary information.

Merits and demerits of this method are given below

(a) Merits

- Wide coverage
- Expert opinion
- Simple
- Less expensive
- Free from bias

(b) Demerits

- Less accurate
- Doubtful conclusions
- Biased

(iii) Information from Local Sources or Correspondents

Under this method, the investigator appoints local persons or correspondents at different places. Merits and demerits of this method are given below

(a) Merits

- Economical
- Wide coverage
- Continuity
- Suitable for special purpose

(b) Demerits

- Loss of originality
- Lack of uniformity
- Personal bias
- Less accurate

- Delay in collection

(iv) Information Through Questionnaires and Schedules

There are two ways of collecting information based on questionnaire

(a) Mailing Method: Under this method questionnaires are mailed to the informants. The method is most suited when

- The area of the study is very wide.
- The informants are educated.

(b) Enumerator's Methods: Under this Method enumerator himself fills the schedules after seeking information from the informants. This method is mostly used when

- Field of investigation is large.
- The investigation needs specialised and skilled investigation.
- The investigators are well versed in the local language and cultural norms of the informants.