

Unit- 5 DATA COLLECTION

Every research study requires information. The question however is, from where to get the information (data) and how to get them.

Sources of Data:

Data can be acquired from different sources. But different sources can be generally be categorized in two major groups as Primary and Secondary data sources.

Secondary sources of data: This data is that which has been collected by someone else and which has already been passed through the statistical processes. Thus studies made by others for another purpose represent secondary data.

Advantages of Secondary data:

1. It is found more quickly and cheaply
2. Helps much on past events and distant places, where the researcher cannot afford to collect the data right now.

Disadvantages of Secondary data:

1. The information does not meet ones specific needs, since it is collected by others for their own purpose, definitions would differ, units of measurements would differ, and different time periods may be involved.
2. It is difficult to asses the accuracy of the information because one knows little about the research design or the conditions under which the research took place.
3. It is often out of date: a study made five years ago may not be relevant today.
4. These may be free from personal bias and prejudices.
5. It may not be adequate.

Secondary data sources can be classified as:

Internal: Internal data come from internal sources related with the functioning of an organization or from where records regarding purchase, production, sales, profits etc, are kept on a regular basis. However, the internal data can be either insufficient or inappropriate for the statistical enquiry into a phenomenon. In that situation we need external data. Organizational sources, ex: department reports, producer summaries, financial and accounting reports, marketing and sales studies.

External sources of information: The external data are collected and published by external agencies. It includes to sources outside the organization Ex: books, periodicals, government documents, reference books, encyclopedia, journals, magazines, government and non-government reports.

Primary source of Data:

- It refers to those that were written or come into being by the people directly involved in the research
- Are statistical material which the investigator originates for the purpose of the inquiry at hand
- Are data collected afresh and for the first time and this happen to be original in character.

The difference between secondary and primary data is one of degree, data, which are primary in the hands of one person, may be secondary in the hands of another.

Primary data may be collected through a variety of methods. The investigator can use one of the following two methods: **Observation or Survey**

1. **The personal observation Method (non reactive research):** Much of what one knows comes from observation. While such observation may be the basis for knowledge, the collection process is haphazard. Observation includes the full range of monitoring behavioral (related to persons, body movement, motor expressions, exchange of glances) and non behavioral activities (record analysis, physical condition analysis, physical process analysis) and conditions.

Observational methods may be gathered by employing structured or unstructured methods that are either disguised or undisguised. Observations may be made in a contrived or a natural setting and may be secured by a human or mechanical observer.

- a) **Structured and unstructured observation:** *Structured observation* applies when the problem has been defined precisely enough to permit a clear specification of the behaviours that will be observed and the categories that will be used to record and analyze the observations. *Unstructured observation* is used for studies in which the formulation of the problem is not specific; a great deal of flexibility is allowed the observers in terms of what they note and record.
- b) **Disguised- undisguised observation:** Disguise in observational methods refers to whether or not the consumers know they are being observed. In the search and deliberation study, observers may assume a position well out of the way so shoppers are not aware that their behaviour is being observed. In some cases, the disguise is accomplished by observers becoming part of the situation, with the other participants unaware of it. For example, Hilton Hotels supplement guest and employee surveys with reports from secret shoppers to diagnose which features of the customer experience at the hotel (for example, the check-in process or the cleanliness of the bathrooms) should be high priority for design and improvement.
- c) **Natural setting-contrived setting observation:** Observations may be obtained in natural or contrived settings. *In natural setting*, there is an induced experimental manipulation. Natural observation involves observing behaviour as it takes place normally in the environment. Eg. Shopping in a grocery shop. We may observe customers comparing soups, or may introduce some point of purchase display materials to measure their effectiveness. *In contrived setting observation*, we bring a group of people into a controlled environment, where they could engage in some simulated shopping behaviour. It involves creating an artificial environment

and observing the behavioural patterns exhibited by persons put in this environment. E.g; having people shop in a stimulated grocery store.

- d) **Human-mechanical observation:** Much scientific observation is in the field, with researchers taking notes on the observations they make. One or more individuals are trained to systematically observe a phenomenon and to record on the observational form the specific events that took place. Some of the mechanical devices used are psychogalvanometer, tachistoscope, eye-camera, motion picture camera, audiometer and pupilometer.

The psychogalvanometer is used to measure the emotional arousal induced by an exposure to specific advertisement copy. It measures changes in perspiration rate from which inferences are drawn regarding a person's emotional reaction to the stimuli present at the time of measurement. The stimuli presented might include brand names, copy slogans or advertisements. It is assumed that stronger the reaction, the more favourable the person's attitude.

The tachistoscope is a device that provides the researcher timing control over a visual stimulus. The researcher is able to measure how a particular stimulus is perceived and interpreted.

The eye- camera is employed to study eye movements while a respondent reads advertising copy. It is used to determine how a person reads a magazine, newspaper, advertisement, package and the like. Measurements are taken on the sequence of what is observed and the time spent looking at various sections.

The motion picture camera can be used to record shopping behaviour in supermarkets, drug shops etc. The use of several observers plus repeated viewing allows more accurate measurement of behaviour.

The Audimeter is used to record when radio and television sets are turned on and the station to which they are tuned. The observations made from a sample of households are important in determining which programs are aired and which are cancelled.

The pupilometer measures changes in the diameter of the pupil of the eye. An increase in pupil diameter is assumed to reflect the person's favourable reaction to the stimuli being observed.

- e) **Direct and indirect observation:** Direct observation refers to observing behaviour as it actually occurs. Indirect observation refers to observing some record of past behaviour. This involves the examination of physical traces, a process which includes such things as counting the number of empty liquor containers in trash cans to estimate the liquor consumption of houses. A *pantry audit* is an example of the use of physical traces. The observer asks the respondent if the pantry can be inspected for certain types of products. The successful use of the indirect observation approach rests with the ability of the researcher to identify creatively those physical traces which can provide useful data for the problem at hand.

2. **The Survey Method:** The survey is to ask people questions in written questionnaire (mailed or handed to people) or during an interview and then record the answer the researcher is not able to manipulate the situation but simply records

the answer. Therefore to survey is to question persons and record their responses as the data for analysis.

Purposes of survey: There are different reasons for conducting surveys. Generally three objectives can be identified:

- **Description:** making a descriptive statements or assertions about some population. The sample survey provides a vehicle for providing the information
- **Explanation:** making explanatory assertions about the population.
- **Exploration:** provides a research drive when the researcher is only beginning his inquiry into a particular topic, this is a kind of pretest.

The use of Questioning:

Almost any topic can be investigated by asking questions about it. The most appropriate application are those where conditions indicated that respondents are uniquely qualified to provide the desired information to questions can be used to inquire also about subjects that are exclusively internal to respondents.

Questions can be carried out by:

- **Face to face personal interview**
- **By telephone interview**
- **By mail**
- **By a combination of all these**

Personal surveys: This method allows excellent control over who actually answers the questions and maximum flexibility in the questionnaire design. This is conducted at respondent's home or work place. Since interviewers must travel to the workplace or home, it is relatively costly.

(Intercept surveys) Face to face personal interview: It is a two way communication initiated by an interviewer to obtain information form the respondent. These are done by intercepting visitors at some public place such as a shopping mall or a city street. The respondent is asked to provide information with little hope of any immediate or direct benefit from this cooperation.

Advantages: high depth and detail information, the interviewer has more control, they can set up control question, and the interviewer can make adjustment to the language of the interviewer.

Limitation: costly both in terms of time and money, biases in the form of sampling, non response and response errors may creep into the process.

Success of this method requires:

1. Availability of the needed information: implying the respondent's role of information providers and an understanding by the respondent of his or her role, and adequate motivation by the respondent to cooperate.

2. Ensuring respondent's receptiveness: The first goal in an interview is to establish a friendly relationship with the respondent. These factors will help to bring about respondents receptiveness. The respondent must feel that the experience will be pleasant and satisfying, i.e., they should feel free, believe that the survey is import and worthwhile, and the role of the interviewer in explaining the purpose of study, how the information issued and what is expected form the respondent.

3. Personal interview problems and biases: results out of sampling errors, non response errors and response errors.

4. Non-response errors: It occurs when the interviewer is not able to find those whom they are supposed to study, i.e., in probability sampling, there are pre-designed persons to be interviewed.

5. Response errors: Occurs when the data reported differ from the actual data. These errors may occur when processing and tabulating data, when respondents fail to fully and accurately respond to the questions, and cheating by the enumerators or the interviewers etc.

Telephone Interviews: Telephone surveys are widely used in market research. They offer better population coverage than intercept surveys but are limited by the fact that there is no direct contact between interviewers and respondents.

Advantages:

- Moderate cost i.e., cost in administration and travel can be minimized.
- Faster completion of the study
- Responses can be directly entered to the computer
- Fewer interviewer biases.
- Respondents not willing to reveal their identity would be encouraged with this method.

Disadvantages: Respondents must be having a telephone facility, the length of interview is short or limited, the adjustments and advantages which are available with the face to face kind of interview is lacking in this method.

Interviewing by mail: Inexperienced researchers almost think of self-administered mail surveys when considering a survey. Mail is perceived to be inexpensive, and mail surveys don't require an interviewing staff.

Self-administered questionnaires may be used by surveys.

Advantages:

- Lower cost than personal interviews
- Persons who might otherwise be inaccessible can be contacted

Disadvantages:

- Respondents can take more time to collect facts.
- Non-response error is expected
- Large amount of information may not be acquired.
- This method has the least response rate.

Focus groups:

A focus group is a small discussion group without a fixed questionnaire. It is unstructured without a fixed questionnaire. It is unstructured so that spontaneous thoughts and ideas can surface. A focus group moderator is a person trained to conduct an unstructured discussion on a pre-specified list of topics. The topics will be broadly stated.

Uses of focus groups:

1. Focus groups are used for concept testing (whether buyers like a new product concept).
2. Focus groups are also good for learning how people use a product and what it means to them.
3. Focus groups are good for exploring problems or complaints that people had in connection with a product, as well as ways of addressing these problems or complaints. In this regard, focus groups can be a good source of ideas about product improvements.
4. Focus groups are good for exploring why people hold certain views about a brand or why they evaluate a package or an advertisement the way they do.
5. Focus groups can be used to show researchers the issues to cover in a survey questionnaire.