

Chapter 3

Method of data Collection

- Collection of data refers to a purposive gathering of information relevant to the subject matter of the study from the units under investigation.
- There are two types of data to be used in research endeavors. These are:
- Secondary data
- Primary data

- Secondary data means data that are already available i.e., they refer to the data which have already been collected and analyzed by some one else.
- Secondary data are collected by others and used by others.
- Any data that has been collected earlier for some other purpose are secondary data in the hands of an individual who is using them.

Collection of Secondary Data

- Secondary data may either be published or unpublished data.
- Usually published data are available in:
- Various publications of the central, state, or local government
- Various publications of international bodies or their subsidiaries or foreign governments
- Technical or trade journals
- Books, magazines and news papers
- Reports and publications of various organizations
- Reports of research scholars in different fields
- Public records and statistics
- Historical documents and other sources of published information.

Evaluating Secondary Data

1.AvailabilityofSecondaryData

- The first and foremost requirement is that secondary data must be available for use.
- At times, one may find that secondary data are just not available on a problem at hand.

2. Relevance/suitability of the data

- Relevance means that the data available must fit the requirements of the problem.
- This would cover several aspects
- Unit of measurement should be the same as that in the problem at hand.
- The concepts used should be the same as are envisaged in the problem.
- The data should not be obsolete.

3. Reliability of the data

- The reliability can be tested by finding out such things about the said data:
 - ☐ Who collected the data
 - ☐ What were the sources of the data
 - ☐ Were they collected by using proper method
 - ☐ At what time were they collected
 - ☐ Was there any bias of the compiler
 - ☐ What level of accuracy was desired? Was it achieved?

- **4. Accuracy**
- The other requirement is that the data should be accurate.
- **5. Sufficiency**
- The data should be sufficient.
- If the data are inadequate, then compliance with the preceding requirements will be vain.

Primary Data

- Primary data are original observations collected by the researcher or his agents for the first time.

- Methods of Primary Data Collection

1. Questionnaires

2. Schedules

3. Interview method

4. Observation method

5. Focus group discussion (FGD)

- The most common means of collecting data are the interview and the questionnaire.
- In the past, the interview has been the most popular data-collecting instrument.
- Recently, the questionnaire has surpassed the interview in popularity.

1. The Questionnaire

- **is a formulated series of questions, especially for statistical analysis.**
- The advantages
 - 1.Lower costs
 - 2.Better samples
 - 3.Standardization
 - 4.Respondent privacy (anonymity)
 - 5.It is free from the bias of the interviewers, answers are in respondents own words.
 - 6.Respondents have adequate time to give well thought out answers.
 - 7.Respondents, who are not easily approachable, can also be reached conveniently.

Disadvantages

- 1.Non-returns
- 2.Misinterpretation
- 3.Validity problems
- 4.It can be used only when respondents are educated and cooperating.
- The control over the questionnaire may be lost once it is sent.
- 5.It is the slowest of all.

The Contents of a questionnaire

- There are three portions of a questionnaire
- **the cover letter,**
- **the instructions, and**
- **the questions**
- *The cover letter*
- It should explain to the respondent the purpose of the survey and motivate him to reply truthfully and quickly.
- If possible, it should explain why the survey is important to him, how he was chosen to participate, and who is sponsoring the survey (the higher the level of sponsorship the better).
- Also the confidentiality of the results should be strongly stressed.
- It should identify the survey as official.

- The instructions
- It explains how to complete the survey and where to return it.
- **The questions**
- The third and final part of the questionnaire is the set of questions.

Types of Questionnaires

- **Based on the situation of survey**
- **1. Mail Questionnaires:** Sent through mail.

- There are many advantages to mail surveys.
- 1.They are relatively inexpensive to administer.
- 2.They allow the respondent to fill it out at their own convenience.
- There are some disadvantages as well.
- 1.Response rates from mail surveys are often very low.
- 2.Mail questionnaires are not the best vehicles for asking for detailed written responses.

- 2. Self –administered Questionnaires:
- 3. Household Drop-off
- A less familiar type of questionnaire is the **household drop-off survey**.
- In this approach, a researcher goes to the respondent's home or business and hands the respondent the instrument.

Types of questionnaire based on Variable of structure or response format

- It is how the answer from the respondent is collected.

Accordingly, we have:

- **Structured/ standardized questionnaire**
- **Unstructured/ non-structured questionnaire.**

Structured questionnaires/response formats

- are those in which there are definite, concrete and preordained questions.
- Includes:
 - **a) Fill-In-The-Blank.**
 - **b) Check The Answer.**
 - **c) Circle The Answer.**

• *Unstructured questionnaires/ Response Formats*

- Generally, it is written text.
- ☐ If the respondent writes down text as the response, you've got an unstructured response format.

Questionnaire Construction Decisions

1.Keep the language simple.

- Analyze your audience and write on their level.
- It is usually suggested that writing at the sixth grade level may be appropriate.
- Avoid the use of technical terms or jargon.

2. Keep the questions short

- Long questions tend to become ambiguous and confusing.
- A respondent, in trying to comprehend a long question, may leave out a clause and thus change the meaning of the question.

3. Keep the number of questions to a minimum

- There is no commonly agreed on maximum number of questions that should be asked, but research suggests higher return rates correlate highly with shorter surveys.
- Ask only questions that will contribute to your survey. Apply the “So what?” and “Who cares?” tests to each question.

4. Limit each question to one idea or concept

- A question consisting of more than one idea may confuse the respondent and lead to a meaningless answer.
- Consider this question: “Are you in favor of raising pay and lowering benefits?”
- What would a “Yes (or No)” answer mean?

5. Do not ask leading questions

- Leading questions are worded in a manner that suggests an answer.
- Some respondents may give the answer you are looking for whether or not they think it is right.
- Such questions can alienate the respondent and may open your questionnaire to criticism.
- A properly worded question gives no clue as to which answer you may believe to be the correct one.

- **6. Use subjective terms such as good, fair, and bad sparingly/economically, if at all**
- These terms mean different things to different people.
- One person's “fair” may be another person's “bad.”
- How much is “often” and how little is “seldom?”

7. Allow for all possible answers

- Respondents who cannot find their answer among your list will be forced to give an invalid reply or, possibly, become frustrated and refuse to complete the survey.
- Wording the question to reduce the number of possible answers is the first step.

- **8. Avoid emotional or morally charged questions and too direct questions**
- There are times when asking a question too directly may be too threatening or disturbing for respondents. The respondent may feel your survey is getting a bit too personal!
- **9. Formulate your questions and answers to obtain exact information and to minimize confusion**
- The survey author has to always be on the lookout for questions that could be misunderstood or confusing. Some terms are just too vague to be useful. For instance, if you ask a question about the "mass media," what do you mean? The newspapers? Radio? Television? "How old are you?" mean on your last or your nearest birthday? Does "What is your (military) grade?" mean permanent or temporary grade? As of what date?

- **10. Include a few questions that can serve as checks on the accuracy and consistency of the answers as a whole**
- Have some questions that are worded differently, but are soliciting the same information, in different parts of the questionnaire.
- These questions should be designed to identify the respondents who are just marking answers randomly or who are trying to game the survey (giving answers they think you want to hear).

- **11. Understand the “should-would” question**
- Usually respondents answer “should” questions from a social or moral point of view while answering “would” questions in terms of personal preference.
- **12. Organize the pattern of the questions appropriately:**
- Place demographic questions at the beginning of the questionnaire.
- Have your opening questions arouse interest.
- Ask easier questions first.

- If you must use personal or emotional questions, place them at the end of the questionnaire.
- Thank the respondent at the beginning and at end
Assure the respondent that you will send a copy of the final results.
- **13. Pretest (pilot test) the questionnaire.**
- **14. Have your questionnaire neatly produced on quality paper.**
- **15. Be realistic in assuming about the respondents.**
- **16. Finally, make your survey interesting!**

2. Schedules

- Schedules are questionnaires filled by the enumerators.

Advantages

- 1.It can be adopted even in those cases where informants are illiterates.
- 2.It eliminates to a great extent the problem of non-response
- 3.The enumerator can explain the significance of the inquiry and the questions in the questionnaire personally to the informants and thus ensuring collection of accurate and reliable information.

Limitations

- 1.The enumerator might be biased one and may not enter the answers given by the respondents truthfully.
- 2.Where there are many enumerators, they may interpret various terms in the questionnaire according to their own understanding of the terms.
- 3. The bias might be arising due to the state of mind of the informant or the environment in which he is placed.
- 4.It is some what costly and time consuming.

Difference between questionnaires and Schedules

- a) The questionnaire can be sent through mail whereas the schedule is filled out by the research worker or the enumerator.
- b) Questionnaire is relatively economical.
- c) Non-response is usually high in case of questionnaire.
- d) In case of questionnaire, it is not always clear as to who replies, but in case of schedule the identity of the respondent is known.
- The questionnaire method is likely to be slow than schedule.
- f) Personal contact is generally not possible in case of the questionnaire method, but in case of schedules direct personal contact is established with respondents.

- g) Questionnaire method is only used when respondents are literate and cooperative, but in case of schedules the information can be gathered even when the respondents happen to be illiterate.
- Wider and more representative sample coverage is possible in case of questionnaire method, whereas in schedule this may not be easy.
- i) Risk of collecting incomplete and wrong information is relatively high in case of questionnaire method than in case of schedule.
- The success of questionnaire method lies more on the quality of the questionnaire itself, but in case of schedules much depends upon the honesty and competence of enumerators.
- i) Along with schedules observation method can be used but such thing is not possible in case of questionnaire method.

Testing Reliability and Validity of Questionnaire

- Reliability refers to consistency or reliability of findings.
- Validity refers to the truthfulness of findings.
- Questionnaire validity asks whether the questionnaire measures what it is intended to measure.
- A study can be reliable but not valid -a consistently wrong finding.
- But a study cannot be valid without first being reliable.
- You cannot assume validity no matter how reliable your measurements are.
- The Cronbach's Alpha Coefficient is the most commonly used one.

3. Interviews

- Interviews are among the most challenging and rewarding forms of data collection technique.

Types of Interviews

- Among the major techniques and approaches to interviewing are the following.
- **a. Face-to Face Interviews /Personal Interviews**
- In the **personal interview, the interviewer works directly with the respondent.**

Advantages of Personal Interviews

- 1.It has the highest response rates.
- 2.Quick response can be attained.
- 3.Personal contacts are involved
- 4.Follow up questions can be asked.
- 5.It permits the longest questionnaire.

- 6. Higher flexibility.
- 7. Interviewers can observe the surroundings and can use nonverbal communication and visual aids.
- 8. The interviewer can control who answers the questions.
- 9. All types of questions can be asked including complex questions using illustrations and extensive probes.

Disadvantages of Personal Interviews

- 1. Interviews can be very time consuming
- 2. Interviews are resource intensive or very expensive as training, travel, supervision cost are added.
- 3. Interviewer bias is greatest.
- 4. The interviewer's wording, tone of voice, appearance may matter.

b. Telephone interview

- It is a popular survey method.

Advantages

- 1.Telephone interviews enable to gather information rapidly.
- 2.They allow some contact between the interviewer and the respondent.
- 3.They allow the interviewer to ask follow-up questions.
- 4. They are cheaper than the personal interview.
- 5.No field staff is required.
- 6.Representative and wider distribution of sample is possible.

- Disadvantages
- 1.Many people don't have publicly-listed telephone numbers. Some don't have telephones.
- 2.People often don't like the intrusion of a call to their homes.
- 3.Telephone interviews have to be relatively short or people will feel imposed upon.
- 4. Noise may interrupt the process.
- 5.Possibility of the bias of the interviewer is relatively more.
- 6.It is not suitable for intensive surveys where comprehensive answers are required to various questions.

Focus Group Discussion

- In some areas of management research the focus group has become the most widely used form of interview technique.
- The term *focus group* has superseded the old term used to describe this kind of research which was *group discussion*.
- Focus groups normally consist of between six and ten participants.
- A trained researcher or *moderator steers the group to discuss predetermined areas or aspects that the researcher is interested in exploring*.
- This is where the term ‘focus’ comes from in that the interviewer will focus the discussion between members of the group into these areas.
- This focusing usually takes the form of a prompt or some sort of stimulus introduced by the moderator that is relevant to the researcher’s interest. For example, the moderator might ask the group to consider *attitudes towards female managers in the organization*.

4. Observation Method

- Observation is one of the methods of collecting data.
- It is the most commonly used method especially in studies related to behavioral sciences.

Advantages of observation method

- 1.The direct observational technique enables the investigator to record the behavior as it occurs.
- 2.It can be used regardless of whether the respondent is willing to report or not.
- 3.It can be used even when it pertains to those who are unable to respond, such as an infants and animals.

Limitations of Observation method

- 1.Only the current behavior of a person or group of persons can be observed.
- 2.It doesn't help us in gauging a person's attitude or opinion or knowledge on a certain subject.
- 3.The observational method is very slow
- 4. It is an expensive method
- 5.The information provided by this method is very limited.
- 6.Sometimes unforeseen factors may interfere with the observational task.

Selecting the Data collection Method

- Selecting the type of survey you are going to use is one of the most critical decisions in many social research contexts.
- There are some points that may be considered in selecting the appropriate method of data collection.

Population/sample Issues

- ☐ The first set of considerations has to do with the population and its accessibility.
- ☐ Can the population be enumerated/listed?
- ☐ Is the population literate?
- ☐ Are there language issues?
- ☐ Will the population cooperate?

Question Issues

- [?] Sometimes the nature of what you want to ask respondents will determine the type of survey you select.
- [?] What types of questions can be asked?
- [?] How complex will the questions be?
- [?] Will lengthy questions be asked?

Content Issues

- [?] The content of your study can also pose challenges for the different survey types you might utilize.
- [?] Will respondent need to consult records?

- ***Bias Issues***

- ☐ People come to the research endeavor with their own sets of biases and prejudices.
- ☐ Can social desirability be avoided?
- ☐ Can interviewer distortion and subversion be controlled?
- ☐ Can false respondents be avoided?

Administrative Issues

- ☐ Last, but certainly not least, you have to consider the feasibility of the survey method for your study.
- ☐ costs
- ☐ facilities
- ☐ time
- ☐ personnel