

For any query on the subject, email at: messagerakesh@gmail.com



Notes Prepared By:
RAKESH AGARWAL

M.Com, MBA, FIII

E-mail: messagerakesh@gmail.com

WhatsApp No: 8486118428

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Basics of Academic Project Preparation

Unit 2

Q: Differentiate between Primary data and Secondary data?

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Ans:

There are two types of data- Primary data and Secondary data.

- 1. Primary data**:- It refers to the data which are originally collected for the first time by the investigator himself or his agent for a predetermined purpose or specific purpose.
- 2. Secondary Data**:- It refers to the data which are collected not by the user but by someone else for their own purposes or for general use. For example- the publication of data by CSO, NSS, RBI.

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The differences between Primary data and Secondary data are:

BASIS	PRIMARY DATA	SECONDARY DATA
1. Meaning	Fresh information collected for the first time by a researcher.	Information which are already collected by others and later used by researcher.
2. Originality of Data	Primary data are collection of original data for the first time.	Secondary data is basically compilation of existing data.
3. Data Collection	It is collected specifically by or for the user.	It is collected not by the user but by someone else for their own purposes or for general use.
4. Cost	Its collection is relatively more costly.	Its collection is relatively less costly.
5. Suitability	It is usually directly suitable to the purpose of enquiry.	It may or may not be directly suitable to the purpose of enquiry.
6. Need for Adjustment	It may be used as it is for the purpose of enquiry.	It may require certain adjustments to be made to suit the purpose of enquiry.
7. Personal Prejudice	There is possibility of personal prejudice in its collection.	There is no possibility of personal prejudice in its collection since such data are already collected.
8. Reliability of Data	It is more reliable.	It is not as reliable as primary data.
9. Time Consumed	Collection of primary data consumes more time.	Collection of secondary data consumes less time.
10. Need for Trained Investigator	It requires trained investigator to collect data.	It does not require trained investigator.

Q: What are the sources of secondary data?

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Ans.

Secondary data means data that are already available. They have already been collected by someone else. There are mainly two sources of secondary data. These are:

- (1) Documentary Sources: Published sources and unpublished Sources.
- (2) Electronic Sources

1. Documentary Sources of Secondary Data: The main sources of documentary data can be divided into two categories:

- (i) Published Sources, and
- (ii) Unpublished Sources.

Published Sources: This is a quick sources of data collection, but the information may not be suitable for the particular purpose. Usually published data are available in:

- (a) various publications of the central, state and local governments;
- (b) various publications of foreign governments or of international bodies and their subsidiary organizations;
- (c) technical and trade journals;
- (d) books, magazines and newspapers;
- (e) reports and publications of various associations connected with business and industry, banks, stock exchanges, etc.
- (f) reports prepared by research scholars, universities, economists, etc. in different fields;
- (g) public records and statistics, historical documents, and other sources of published information.

Unpublished Sources: The sources of unpublished data are many: they may be found in diaries, letters, unpublished biographies and autobiographies and also may be available with scholars and research workers, trade associations, labour

bureaus and other public/ private individuals and organizations. Such data can be obtained personally.

- 2. Electronic Sources:** Secondary data can also be obtained through electronic sources. Many journals and articles are available online.

Q: What are the advantages and disadvantages of secondary data?
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Ans:

Advantages of Secondary Data:

The main advantages of secondary data as a source of research information over primary data are:

- 1) Cost-effectiveness:** Collecting primary data can be prohibitively expensive. The collection of secondary data is more cost-effective, especially in the context of collecting very wide-ranging or large-scale data, such as that included in official statistics.

- 2) Time:** The collection of primary data can be very time-consuming, and that amount of time may not be at disposal. Collecting secondary data is relatively quick and enables one to spend more time on analysing and interpreting data.

- 3) Quality:** Secondary data (for example government department statistics) will often be of much higher quality than what the researcher could expect to gather himself. This is because the original collector of the information would have been able to allocate far more time and resource (especially financial resource) than the researcher. This is especially true of data that has been gathered over a long period of time, as the researcher is not in a position to gather data for years.

4) Discretion: The use of secondary data within an organisational context can be more discreet than the use of primary data. It will not be immediately obvious what one is researching, which may be of help in sensitive topic such as employee motivation.

5) A permanent source of information: Secondary data is permanent (as it has been published) and is available in a form that can be accessed and checked reasonably easily by others. The data and research findings are more open to public scrutiny and as such they inspire greater confidence in those relying on the data.

Disadvantages of Secondary Data:

Some of the disadvantages of secondary data are:

1) Access: Where the original collector of the secondary data has incurred a lot of expense in gathering it, it is unlikely that they will provide it for free. Large-scale market research reports, for example, may cost thousands of rupees.

2. Relevance: As the secondary data has been originally collected by someone else for his or her specific purpose, under conditions unknown to the researcher, they may not exactly match the research objective. The secondary data may be old and the information may not be sufficiently current. The researcher might have to engage in primary research to bring the data up to date.

3) Reliability: It may not be apparent who collected the secondary data and for what purpose. If the researcher does not know who has done the research, it may be unwise to rely on it. The authenticity of the source of the secondary data and the procedures used to collect the data need to be evaluated in order to establish its credibility as a source of information.

Q: What precautions should be taken while using secondary data?

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Ans:

PRECAUTIONS IN USING SECONDARY DATA

The researcher must be careful in using secondary data. It is never safe in using secondary data without knowing their limitations. While using secondary data the following points should be kept in mind:

1. Adequacy of Data: The data must be sufficient for the research work. For example, if the objective is to study the production of tea in Assam, then the data for the entire state is needed. If secondary data is available on only few districts in Assam, then the data would not serve the purpose.

2. Suitability: The secondary data available must be suitable for the purpose of the enquiry.

3. Reliability: The researcher must ensure that the data are reliable. He should check:

- (i) Unbiasedness of the collecting person.
- (ii) The accuracy of field work.
- (iii) Reliability of sources of information.
- (iv) The method used for analysis of data.

Q: Explain the different methods of collecting primary data.

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Ans:

Primary Data (qualitative or quantitative) collected by the researcher is unique to his research and, until he publishes, no one else has access to it. The different methods of collecting primary data are:-

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- 1) Mailed Questionnaire Method
- 2) Schedule sent through Enumerator
- 3) Interviews
- 4) Indirect Oral Investigation
- 5) Information through Local Correspondents:-
- 6) Observations

1. MAILED QUESTIONNAIRE METHOD

In this method, a questionnaire is sent (usually by post) to the respondents with a request to answer the questions and return the questionnaire. A questionnaire contains a number of questions in a definite order on a form or set of forms.

MERITS:

The merits claimed on behalf of this method are:

1. It is economical in terms of time, money and labour. There is low cost even when the population is large and is widely spread geographically.
2. It is free from the bias of the interviewer, as the answers are in respondents' own words.
3. Respondents have adequate time to give well thought out answers.
4. Respondents, who are not easily approachable, can also be reached conveniently. Thus, wide geographical coverage is possible.
5. Large samples can be made use of and thus the results can be made more dependable and reliable.
6. It does not require prior arrangements or appointments with the respondents.
7. It covers a large number of people or organizations;

DEMERITS:

The main demerits of this system are:

1. Low rate of return of the duly filled in questionnaires; bias due to no-response is often indeterminate.
2. It is not suitable where majority of respondents is illiterate. It can be used only when respondents are educated and cooperating.
3. There is a problem of designing questionnaire
4. The control over questionnaire may be lost once it is sent.
5. There is waiting time for responses to be returned
6. There is inbuilt inflexibility because of the difficulty of amending the approach once questionnaires have been despatched.
7. There is a problem of incomplete questionnaire. There is also the possibility of ambiguous replies to certain questions, which makes interpretation difficult
8. It is difficult to know whether willing respondents are truly representative.
9. This method is likely to be the slowest of all.
10. Responses are not spontaneous
11. Many reminders have to be given
12. The information supplied may not be reliable.

2. SCHEDULE SENT THROUGH ENUMERATOR

Under this method the trained enumerators personally contact the informants, ask questions and record the replies to questions contained in the schedule.

This method of data collection is very much like the collection of data through questionnaire, with little difference which lies in the fact that schedules (proforma containing a set of questions) are filled in by the enumerators who are specially appointed for the purpose. These enumerators, along with schedules, go to

respondents, put to them the questions from the proforma in the order the questions are listed and record the replies in the space meant for the same in the proforma. In certain situations, schedules may be handed over to respondents and enumerators may help them in recording their answers to various questions in the said schedules.

MERITS:-

1. It can be used even where the informants are illiterates
2. The chances of response are more
3. The information received is more reliable and accurate.
4. This method of data collection is very useful in extensive enquiries and can lead to fairly reliable results.

LIMITATIONS:-

1. It is a costly method
2. It is time consuming

3. INTERVIEWS

Interview is, basically, a meeting between two persons to obtain information relating to research study. The information is collected not only by simple conversation but also by observing the gestures, facial expressions, etc.

An 'interview' is a kind of conversation with a purpose. This method involves presentation of oral-verbal stimuli and reply in terms of oral-verbal response.

Types of Interview

- (i) Personal Interview
- (ii) Telephone Interview

(i) **Personal Interview:**

In this method, the interviewer asks questions in a face –to-face contact with the other person or persons. Personal Interview can be structured, semi-structured or unstructured.

Structured interviews involve the use of predetermined questions and of highly standardized techniques of recording. In such interviews, pre-determine or standard set of questions are asked. The wording of the questions and their order are pre-determined. The respondent is invited to limited-option responses, i.e pre-coded answers. Responses are recorded on a standardised schedule . Also, the questions are read out in the same tone of voice so as not to suggest any bias.

In a semi-structures interview, the interviewee is asked certain specific questions but gives the respondent scope to express himself at length. Questions are worked out in advance, but depending on the context of the conversation, the interviewer may change the wording and sequence of the questions, and provide explanations.

Unstructured or in-depth interview do not follow a system of pre–determined questions. There is no list of questions. The interviewer has more flexibility. If needed he can ask supplementary questions or may omit certain questions if the situation so requires. Here the direction of the interview is decided by the respondent’s initial responses. Responses are open-ended and there is more emphasis on the interviewee elaborating points of interest.

MERITS:

The chief merits of the interview method are as follows:

1. More information and that too in greater depth can be obtained.

2. Interviewer can overcome the resistance, if any, of the respondents by his own skill.
3. There is greater flexibility under this method as the opportunity to restructure questions is always there, especially in case of unstructured interviews.
4. Non-response rate is generally very low.
5. It avoids the possibility of misinterpretation. The language of the interview can be adopted to the ability or educational level of the person interviewed and as such misinterpretations concerning questions can be avoided.
6. The interviewer can collect supplementary information about the respondent's personal characteristics and environment which is often of great value in interpreting results.
7. Observation method can as well be applied while recording verbal answers to various questions.
8. Personal information can as well be obtained easily under this method.
9. It ensures high degree of accuracy
10. It helps the investigator to adjust the interview suitably, depending upon the informant's reaction.

DEMERITS:

There are certain weaknesses of the interview method. Important among them are:

1. It is a costly method where the number of persons to be interviewed is large and they are spread over a wide area.
2. Selecting, training and supervising the field-staff is a difficult task.
3. For effective interview, interviewer must have proper rapport with respondents so as to facilitate free and frank responses. This is often a very difficult requirement.

4. There is a chance of biasness. There remains the possibility of the biasness of the interviewer as well as that of the respondent;
5. Certain types of respondents such as important officials or executives or people in high income groups may not be easily approachable under this method.
6. This method is relatively more-time-consuming, especially when the sample is large.

(ii) **TELEPHONE INTERVIEW:**

In this method of collecting information, the respondents are contacted over the telephone itself.

MERITS:

The chief merits of such a system are:

1. It is more flexible in comparison to mailing method.
2. It is faster than other methods i.e., a quick way of obtaining information.
3. It is cheaper than personal interviewing method. Here the cost per response is relatively low.
4. Recall- is easy; call backs are simple and economical.
5. There is a higher rate of response than what we have in mailing method; the non-response is generally very low.
6. At times, access can be gained to respondents who otherwise cannot be contacted for one reason or the other.
7. No field staff is required.
8. Possible to contact respondents spread over a wide area.

DEMERITS:

This system of collecting information has some demerits. Some of these are:

1. Little time is given to respondents for considering answers.
2. Surveys are restricted to respondents who have telephone facilities.
3. It is not suitable for intensive surveys where comprehensive answers are required to various questions.
4. Possibility of the bias of the interviewer is relatively more.
5. Questions have to be short and to the point; probes are difficult to handle.

4. INDIRECT ORAL INVESTIGATION

Under this method, investigator contact third parties who are suppose to possess the information on the problem under investigation. For example- this method is used to find out the cause of the fire, clues about the murders, etc. Under this method questions are put to different person and their answers are recorded. Enquiry commission usually adopts this method.

MERIT:-

- a) It helps us to collect information about the persons who is reluctant to supply the required information.

LIMITATION:-

- a) The information collected from some persons may not be reliable.

5. INFORMATION THROUGH LOCAL CORRESPONDENTS:-

Under this method, the investigator appoints local agents or correspondents in different areas to collect information. These local agents and correspondents collect and transmit information to the central office where data are processed and finally analysed. For Example- Newspaper agencies, TV channels adopt this method.

MERITS:-

1. It is economical.
2. Timely information is available.

LIMITATIONS:-

1. It may not ensure high degree of accuracy because of the personal prejudice and biasness of the correspondent.
2. The data obtained may not be reliable.

6. OBSERVATIONS

The Oxford Dictionary defines observation as, “accurate watching and noting of phenomena in nature in respect to cause and effect relations”.

Under the observation method, the information is collected by the researcher’s own direct observation without asking from the respondents. For example, the researcher may, instead of asking the brand of shoes used by the respondents, may himself look at the shoe.

There may be various forms of observations: Structured or unstructured, Disguised or undisguised, Natural or contrived, Personal or Mechanical, participant and non-participant.

In **structured** observations, the researcher specifies in detail and in advance what will be observed and how the measurements will be recorded.

In **unstructured** observations, the researcher himself monitors all the relevant aspects of the phenomenon, without specifying in advance what will be observed and how the measurement will be recorded.

When the observer is observing in such a way that his presence is unknown to the people he is observing, such an observation is **disguised observation**.

In an **undisguised** observation, respondents are aware that they are being observed.

In a **natural** observation, behaviour of the respondents is observed as it takes place in the natural environment.

In a **contrived** observation, the behaviour of the respondents is observed in an artificial environment, according to a definite pre-arranged plan.

In a **personal** observation, a researcher himself observes and records actual behaviour as it takes place.

In a **mechanical** observation, mechanical devices such as closed circuit television, audio-video aids, are used to record what is being observed

In a **participant observation**, the observer observes by making himself a member of the group he is observing in order to experience what the members of the group are experiencing.

In a **non-participant observation**, the observer observes, without making any effort to experience through participation what the members of the group are experiencing.

MERITS: -

1. Subjective bias is eliminated, if observation is done accurately.
2. The information obtained under this method relates to what is currently happening; it is not complicated by either the past behaviour or future intentions or attitudes.

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3. This method is independent of respondents' willingness to respond and as such is relatively less demanding of active cooperation on the part of respondents.
4. This method is particularly suitable in studies which deal with subjects (respondents) who are not capable of verbally expressing their feelings for one reason or the other.

DEMERITS: -

1. In many cases, the researcher can't predict when the event will occur. And so, when the event actually happens, there may not be any observer present to record it.
 2. Due to lack of training observer may not record the event properly.
 3. This method can't be used if the area is large.
 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.
 7. At times, the fact that some people are rarely accessible to direct observation creates obstacle to collect data effectively.
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Q: Differentiate between Questionnaire and Schedule.

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Ans:

Sl. No.	Questionnaire	Schedule
1.	Non-response is usually high as many people do not respond and may return the questionnaire without answering all questions.	Non-response is generally very low in case of schedules because these are filled by enumerators who are able to get answers to all questions.
2.	No field staff is required	Enumerators need to be appointed and trained.

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3.	Collection of data through questionnaire is relatively cheap and economical	Collection of data through schedules is relatively more expensive.
4.	The questionnaire is generally sent through mail to informants to be filled by them, without any personal assistance from the sender.	The schedule is generally filled out by the research worker or the enumerator, who can interpret questions when necessary
5	Risk of collecting incomplete and wrong information is relatively more, particularly when people are unable to understand questions property.	The information collected is generally complete and accurate as enumerators can remove the difficulties, if any, faced by respondents in correctly understanding the questions
6	Personal contact is generally not possible as questionnaires are sent to respondents by post who also return the same by post.	Direct personal contact is established with respondents.
7	This method can be used only when respondents are literate and cooperative.	The information can be gathered even when the respondents are illiterate.
8	In case of questionnaire, it is not always clear as to who replies.	In case of schedule the identity of respondent is known
9	The questionnaire method is likely to be very slow since many respondents do not return the questionnaire in time despite several reminders.	The information is collected well in time as they are filled in by enumerators.
10	Wider and more representative distribution of sample is possible under the questionnaire method.	There usually remains the difficulty in sending enumerators over a relatively wider area.

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11	The success of questionnaire method lies more on the quality of the questionnaire itself.	The success of the method depends much upon the honesty and competence of enumerators.
12	Observation method cannot be used while collecting data through questionnaires.	Along with schedules, observation method can also be used.
13	In order to attract the attention of respondents, the physical appearance of questionnaire must be quite attractive.	This is not necessary in case of schedules as they are to be filled in by enumerators and not by respondents.