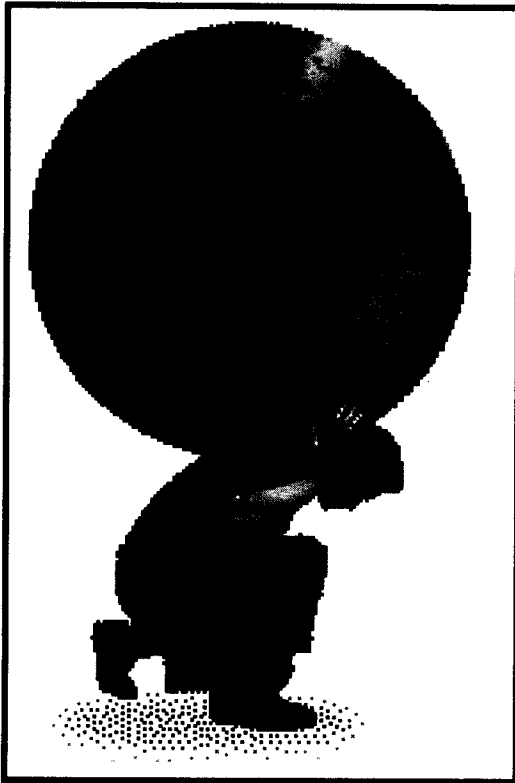


# Research Methodology and Market Research



**In this chapter, the following questions are discussed:**

- ❖ What is research?
- ❖ What are the objectives of the research?
- ❖ What are the types of research?
- ❖ What is the need for MR?
- ❖ What are the characteristics of good research?
- ❖ What are the problems encountered by researchers in India?
- ❖ What are the limitations and uses of research?

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## 1.1 THE MEANING OF RESEARCH

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Research in common man's language refers to "search for knowledge".

Research is an art of scientific investigation. It is also a systematic design, collection, analysis and the reporting the findings and solutions for the marketing problems of a company. Research is required because of the following reasons:

- To identify and find solutions to the problems
- To help making decisions

## 2 ■ Business Research Methods

- To develop new concepts
- To find alternate strategies

### **To identify and find solutions to the problem**

To understand the problem in depth. For example, "Why is that, demand for a product falling"? "Why business fluctuation takes place once in three years"? By identifying the problem precisely, it is easy to collect the relevant data to solve the problem.

### **To help making decisions**

*Example:* Should we maintain the same advertising budget as last year? Research will provide an answer to this question.

### **To find alternative strategies**

Should we follow pull strategy or push strategy to promote the product?

### **To develop new concepts**

*Example:* CRM, Horizontal Marketing, MLM etc.

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## 1.2 THE OBJECTIVES OF RESEARCH

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- Promotes better decision-making
- Research is the basis for innovation
- Research identifies the problem areas
- Research helps in forecasting, which is very useful for managers
- Research helps in formulation of policies and strategies
- Research helps in the development of new products or in modifying existing products and in understanding the competitive environment
- It helps in the optimal utilization of resources
- It helps in identifying marketing opportunities and constraints
- It helps in evaluating marketing plans.

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## 1.3 THE TYPES OF RESEARCH

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There are different types of research.

### 1.3.1 Exploratory Research

This type of research is carried out at the very beginning when the problem is not clear or is vague. In exploratory research, all possible reasons which are very obvious are eliminated, thereby directing the research to proceed further with limited options.

Sales decline in a company may be due to:

1. Inefficient service
2. Improper price
3. Inefficient sales force
4. Ineffective promotion
5. Improper quality

The research executives must examine such questions to identify the most useful avenues for further research. Preliminary investigation of this type is called exploratory research. Expert surveys, focus groups, case studies and observation methods are used to conduct the exploratory survey.

### 1.3.2 Descriptive Research

The main purpose of descriptive research is to describe the state of view as it exists at present. Simply stated, it is a fact finding investigation. In descriptive research, definite conclusions can be arrived at, but it does not establish a cause and effect relationship. This type of research tries to describe the characteristics of the respondent in relation to a particular product.

- Descriptive research deals with demographic characteristics of the consumer. For *example*, trends in the consumption of soft drink with respect to socio-economic characteristics such as age, family, income, education level etc. Another example can be the degree of viewing TV channels, its variation with age, income level, profession of respondent as well as time of viewing. Hence, the degree of use of TV to different types of respondents will be of importance to the researcher. There are three types of players who will decide the usage of TV : (a) Television manufacturers, (b) Broadcasting agency of the programme, (c) Viewers. Therefore, research pertaining to any one of the following can be conducted:
  - The manufacturer can come out with facilities which will make the television more user-friendly. Some of the facilities are– (a) Remote control, (b) Child lock, (c) Different models for different income groups, (d) Internet compatibility etc., (e) Wall mounting etc.
  - Similarly, broadcasting agencies can come out with programmes, which can suit different age groups and income.

#### 4 ■ Business Research Methods

- Ultimately, the viewers who use the TV must be aware of the programmes appearing in different channels and can plan their viewing schedule accordingly.
- Descriptive research deals with specific predictions, for example, sales of a company's product during the next three years, i.e., forecasting.
- Descriptive research is also used to estimate the proportion of population who behave in a certain way. Example: "Why do middle income groups go to Food World to buy their products?"

A study can be commissioned by a manufacturing company to find out various facilities that can be provided in television sets based on the above discussion.

Similarly, studies can be conducted by broadcasting stations to find out the degree of utility of TV programmes. *Example:* The following hypothesis may be formulated about the programmes:

- The programmes in various channels are useful by way of entertainment to the viewers.
- Viewers feel that TV is a boon for their children in improving their knowledge—especially, fiction and cartoon programmes.

### 1.3.3 Applied Research

Applied research aims at finding a solution for an immediate problem faced by any business organization. This research deals with real life situations. *Example:* "Why have sales decreased during the last quarter"? Market research is an example of applied research. Applied research has a practical problem-solving emphasis. It brings out many new facts.

#### *Examples:*

1. Use of fibre glass body for cars instead of metal.
2. To develop a new market for the product.

### 1.3.4 Pure/Fundamental Research or Basic Research

Gathering knowledge for knowledge's sake is known as basic research. It is not directly involved with practical problems. It does not have any commercial potential. There is no intention to apply this research in practice. Tata Institute of Fundamental Research conducts such studies. *Example:* Theory of Relativity (by Einstein).

### 1.3.5 Conceptual Research

This is generally used by philosophers. It is related to some abstract idea or theory. In this

type of research, the researcher should collect the data to prove or disapprove his hypothesis. The various ideologies or 'isms' are examples of conceptual research.

### 1.3.6 Causal Research

Causal research is conducted to determine the cause and effect relationship between the two variables.

*Example:* Effect of advertisement on sales.

### 1.3.7 Historical Research

The name itself indicates the meaning of the research. Historical study is a study of past records and data in order to understand the future trends and development of the organisation or market. There is no direct observation. The research has to depend on the conclusions or inferences drawn in the past.

For *example*, investors in the share market study the past records or prices of shares which he/she intends to buy. Studying the share prices of a particular company enables the investor to take decision whether to invest in the shares of a company.

Crime branch police/CBI officers study the past records or the history of the criminals and terrorists in order to arrive at some conclusions.

The main objective of this study is to derive explanation and generalization from the past trends in order to understand the present and anticipate the future.

There are however, certain shortcomings of Historical Research:

1. Reliability and adequacy information is subjective and open to question
2. Accuracy of measurement of events is doubtful.
3. Verification of records are difficult.

### 1.3.8 Ex-post Facto Research

In this type of research, an examination of relationship that exists between independent and dependent variable is studied. We may call this empirical research. In this method, the researcher has no control over an independent variable. Ex-post facto literally means "from what is done afterwards". In this research, a variable "A" is observed. Thereafter, the researcher tries to find a causal variable "B" which caused "A". It is quite possible that "B" might not have been caused "A". In this type of analysis, there is no scope for the researcher to manipulate the variable. The researcher can only report "what has happened" and "what is happening".

### 1.3.9 Action Research

This type of research is undertaken by direct action. Action research is conducted to solve a problem. *Example:* Test marketing a product is an example of action research. Initially, the geographical location is identified. A target sample is selected from among the population. Samples are distributed to selected samples and feedback is obtained from the respondent. This method is most common for industrial products, where a trial is a must before regular usage of the product.

### 1.3.10 Evaluation Research

This is an example of applied research. This research is conducted to find out how well a planned programme is implemented. Therefore, evaluation research deals with evaluating the performance or assessment of a project. *Example:* "Rural Employment Programme Evaluation" or "Success of Midday Meal Programme".

### 1.3.11 Library Research

This is done to gather secondary data. This includes notes from the past data or review of the reports already conducted. This is a convenient method whereby both manpower and time are saved.

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## 1.4 THE NEED FOR MARKET RESEARCH

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- i. *Decision-making tool:* Whenever a decision is to be made, marketing research becomes necessary in the corporate world. The degree of dependence on research is based on the cost of decisions. If the cost of decision is high, the dependence on research is high, and vice versa.
- ii. *Facilitates large-scale production:* The MR helps large scale enterprises in the areas of production to determine:
  - a) What to produce?
  - b) How much to produce?
  - c) When to produce?
- iii. *To determine the pattern of consumption:* The consumption patterns vary from place to place and time to time. The MR helps in identifying the consumption pattern and also the availability of consumer credit in that particular place.

MR helps the marketer to identify:

- ❖ Consumption pattern
  - ❖ Brand loyalty
  - ❖ Consumer behaviour
  - ❖ Market trends, etc.
- iv. **Complex market:** In a complex and dynamic environment, the role of MR is very vital. MR acts as a bridge between the consumer and the purchaser. This is because MR enables the management to know the need of the customer, the about demand for the product and helps the producer to anticipate the changes in the market.
  - v. **Problem solving:** The MR focuses on both short range and long range decisions and helps in making decisions with respect to the 4p's of marketing, namely, product, price, place and promotion.
  - vi. **Distribution:** The MR helps the manufacturer to decide about the channel, media, logistics planning so that its customers and distributors are benefited. Based on the study of MR, suitable distributors, retailers, wholesalers and agents are selected by the company for distributing their products.
  - vii. **Sales promotion:** The MR helps in effective sales promotion. It enlightens the manufacturer with regard to the method of sales promotion to be undertaken, such as advertising, personal selling, publicity etc. It also helps in understanding the attitude of the customers and helps how to design the advertisement in line with prevailing attitudes.

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## 1.5 WHAT ARE THE CRITERIA OR CHARACTERISTICS OF A GOOD RESEARCH?

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### **A Good Research should be Systematic**

This means that research should be structured. A good research will satisfy the steps to be taken in an orderly sequence according to a set of defined rules i.e., researcher uses scientific methods and therefore is systematic.

### **A Good Research should be Logical**

There should be logical reasoning in any research. This logical process used could be induction or deduction. Induction is a process of reasoning from the part to the whole. To induce means to draw conclusion from one or more facts or pieces of evidence.

An example of Induction: An advertising company gathers information about market requirements from retailers/users from a small test market. Based upon the findings, say 'price', generalization is made regarding "What is the acceptable market price" or "Is the customer price sensitive"?

Deduction is a process of reasoning some premise and then reaching the conclusion which follows from that premise. In deduction, the conclusion drawn must necessarily follow the reason stated.

*Example:* "All products manufactured by Reebok Company are good. This leather wallet is a product of Reebok, so it must be good".

### **A Good Research should be Empirical**

Empirical means the factual investigation is possible. Its validity can be checked through reliable sources and evidences. Research should be such that it can be validated, i.e., it should be possible to describe, interpret and explain the phenomenon.

### **A Good Research is Replicable**

It means the research conducted can be repeated by any number of times. A researcher can verify the results by repeating the study and thereby delivering a sound decision-making framework. For *example*, if two research organisations undertake the same study, the results should be similar and not different. If the results are similar, then the research is will be replicable.

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## **1.6 PROBLEMS ENCOUNTERED BY RESEARCHERS**

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- Inadequate interaction between academics and business entities
- The research institutions work independently, i.e., isolated from the centers of learning (University)
- Most of the business units in our country lack confidentiality i.e., the material supplied to the researchers by them are likely to be misused by researchers. Due to this paradigm of secrecy, industries often do not part with adequate data to conduct proper research. Therefore, there is an urgent need for generating adequate confidence, that the information furnished by business units will not be misused.
- Library management needs to improve, i.e., the number of books, journals, reports that carry relevant material should be made available to researchers in adequate numbers.



- In addition to the above problem, many libraries do not get copies of the latest information and reports and other government publications on time.

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## 1.7 THE MARKETING RESEARCH

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Marketing research (MR) is the systematic problem analysis, model building and fact finding method for the purpose of improved decision-making, with a view to control the marketing of goods and services.

From the above definitions, it becomes abundantly clear that marketing research is the collection and interpretation of facts that help in marketing management to channelise the product more efficiently into the hands of the consumer. It includes various types of research such as market analysis, sales research, analysis of the sales records of a company, consumer research, etc. Marketing research works through survey or sampling study.

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## 1.8 THE LIMITATIONS OF MARKETING RESEARCH

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- ***MR is not an exact science:*** Results obtained through marketing research are not very accurate compared to physical sciences. MR is carried in the open market place where there are so many variables acting upon the research settings. It is not possible to control as these can be done in a laboratory. If, for example, a company wants to measure the advertising effectiveness and conduct an experiment in certain markets, it assumes that conditions will remain the same, during the experimental period. If competitors change their strategy during this period, then the experimental results will be affected.
- ***Complex in nature:*** MR is carried out on consumers/dealers/retailers who are human beings. Human beings have the tendency to behave artificially, when they know that they are being observed. Validity of the data collected, conclusions, observations might undergo a change. This aspect of human behaviour might distort MR results. Human beings are the centre for any MR study and hence complex in nature.
- ***Inexperienced research staff:*** Subjectivity is an important limitation in MR. It is very difficult to verify the research results. Verification is the main characteristic of physical science, which is missing in MR. Also, it is not possible to repeat the same project on the same group of entities or respondents. Even if we do so, the results will be different.
- ***Limitation of time:*** MR generally takes a long time to conduct. The time by which the results are presented, there may be a change in the market situation or competitors

might enter the market, people's tastes and preferences might change. The time gap significantly affects the implementation of results.

- **Subjectivity:** However objective a person may be, while collecting the data, the researcher may not feel motivated and might engage in cheating and misrepresentation of facts. Sometimes, the researcher may be misled by the respondents, if they provide false information. Also, the researcher might draw conclusions based on his past experience.
- **Time frame:** At times, the top management may hold certain pre-conceived opinion on the outcome. They may put pressure on the researcher to come out with a particular type of research report to support their belief. The management might thrust its opinion to influence research findings.
- **Decision-making:** This is always influenced by various factors – internal and external, to the organisation. The internal factors may ensure research is not taken seriously. The external factors could include inability to consider all factors influencing the study.

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### 1.9 DISTINCTION BETWEEN MARKETING RESEARCH FOR INDUSTRIAL GOODS AND CONSUMER GOODS

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The following criteria should be considered while carrying out marketing research for industrial goods.

- **Technical orientation:** Researchers in industrial markets must have sufficient technical knowledge about the products, whereas in consumer markets, researchers need not acquire technical knowledge.
- **Concentrated information:** Since consumers are concentrated in a particular geographical area, information is also concentrated in one area in industrial market. In consumer markets, information is widespread, because customers are being scattered.
- **Survey technique:** Personal interview is the best method of data collection technique in industrial market. In consumer market, various methods are employed.
- **Respondent's co-operation:** Respondents in industrial market are not cooperative like those respondents in consumer market, due to two reasons viz: 1. Their busy schedule; and 2. The need to maintain confidentiality of information.

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### 1.10 UTILITIES OF MARKETING RESEARCH TO THE ECONOMY

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MR is useful to the economy in the following ways:

- It assists in production and distribution of the product.
- It also helps in generating employment and increases the per-capita income.
- It also helps in reducing recession and avoid any crisis for the products/services.

## **Production**

In business, if production is undertaken without assessing the requirements, it may exceed the market demand or may result in shortage. Ultimately, consumers' needs are not being met and manufacturer might have to suffer. By carrying out marketing research, the producer can avoid many problems and can channelise precious resources in the right direction. For example, OPEC countries undertake research to ascertain the demand for crude oil in different regions of the globe. A study of demand enables them to hike the oil prices.

## **Employment**

Increased production leads to widespread distribution enhancing employment opportunities. Increase in production requires more personnel; the distribution needs more entrepreneurs in the areas of wholesaling and retailing. Similarly, promotion function employs many personnel to advertise and sell goods selling. Thus MR leads to large scale employment opportunities.

## **Reduce Recession**

Recession occurs in an economy due to several factors. During recession excessive production and market demand can be avoided using the result of MR.

## **Avoids Crisis**

Similarly, scarcity of production leads to a crisis when the manufacturer is unable to meet the market demand. If a proper MR is carried out, supply and demand can be optimally matched.

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## **SUMMARY**

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Research is a scientific investigation intended to find solutions to several problems. There are different types of research, such as exploratory, descriptive, causal etc. In addition there are pure research which provides the necessary theoretical input. Research serves several purposes of which decision making is the most important of them.

Some of the characteristics of research is its logical reasoning, replicability, systematized approach. However despite all the above, market research cannot be considered as a panacea for various problems this is a misnomer market research suffers from sample and statistical error. Finally market research is the investigation of a market for the purpose of formulating efficient policies for production, sales, employment generation etc.

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## KEYWORDS

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Research

CRM

Horizontal Marketing

Recession

Descriptive research

Ex post facto research

Pure research

Historical research

Action research

Library research

Strategy

MLM

Validity

Exploratory research

Causal research

Empirical

Applied research

Conceptual research

Evaluation research

Subjectivity

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## REVIEW QUESTIONS

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1. What is research? What are the broad categories of research?
2. What are the various objectives of research?
3. What is marketing research? What is the role of marketing research in solving the problem?
4. Is marketing research basic or applied research? Why do you feel so?
5. What are the criteria of good research?
6. What are the limitations of MR?
7. How is MR used to solve the economic problems?
8. What factors lead us to feel that there is need for marketing research?
9. What are the factors that influence marketing research?
10. Marketing research is useful in variety of situations. Give example of any three situations?
11. What are the problems that encountered by researchers in India?
12. How will the following use marketing research? Name the specific purpose for which it is used in the following?

- a. Sports goods shop
- b. Television network
- c. Stationary shop
- d. Educational institution.
- e. Hospital
- f. University
- g. National news paper
- h. Retail outlet

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## ASSIGNMENT

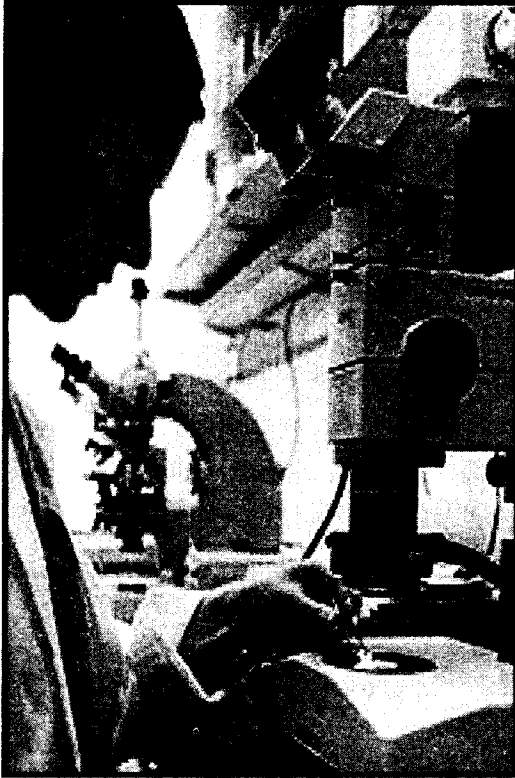
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An Indian company dealing in pesticides hires a qualified business management graduate to expand its marketing activities. Most of the current employees of the company are qualified chemists with science background. During their first review meeting, the management graduate says that the "company should be involved in market research to get a better perspective of the problem on hand." On hearing this, one of the science graduate laughs and says "There is no such thing as marketing or business research, research is confined to science alone".

*Question:* What would be your response?



# Scientific Method in Research



**In this chapter, the following questions are discussed:**

- ❖ What is scientific research?
- ❖ Why MR cannot be considered scientific?
- ❖ Distinction between scientific and unscientific methods.
- ❖ What are the difficulties in applying scientific method to MR?

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## 2.1 MARKETING RESEARCH – A DEFINITION

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Marketing research involves:

- a) Systematic problem analysis
- b) Model building and
- c) Fact finding method, used for the purpose of important decision-making and to regulate the marketing of goods and services.

## Explanation

From the above definition, it becomes clear that MR is the collection and interpretation of facts that help in marketing management to provide products and services more efficiently into the hands of consumers. It includes various types of research such as:

- a) Consumer research
- b) Sales research, etc.

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## 2.2 SCIENTIFIC METHOD IN RESEARCH

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Scientific research is one which yields the same results when repeated by different individuals. Scientific method consists of the following steps:

1. **Observation:** The researcher wants to observe a set of important factors that is related to his problem.
2. **Formulates Hypothesis:** The researcher formulates a hypothesis which will explain what he has observed.
3. **Future Prediction:** The researcher draws a logical conclusion.
4. **Testing the Hypothesis:** The researcher will arrive at the conclusion based on data.

**Example:** A simple example will highlight how a scientific method works. Let us assume that a researcher is conducting a market research for a client manufacturing men's apparel.

1. **Observation:** The researcher observes that some of the competitors are doing brisk business. The increase on sales of apparel is mainly due to round or turtle-neck shirt and narrow bottom pants.
2. **Formulation of Hypothesis:** The researcher now presumes that the product of his clients are somewhat similar and the variation in shirt and pant variety as above is the main cause for an increase in the sales of his competitors.
3. **Future Prediction:** It is predicted that if his client introduces similar products, the sales will increase.
4. **Hypothesis Testing:** The client now produces round-neck shirts and narrow bottom pants for test marketing.

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## 2.3 CHARACTERISTICS OF SCIENTIFIC METHOD

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- a) Validity
- b) Reliability.



Validity is the ability of a measuring instrument to measure what it is supposed to. A questionnaire is administered to determine the attitudes of the respondent towards a movie. As long as the questionnaire serves this purpose, we say that the instrument is valid.

In physical sciences, the instruments used such as barometer, thermometer or footruler which measures what they are meant to do. Also, the measurement can be repeated any number of times by different individuals, but the result will be the same.

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## 2.4 WHY MR CANNOT BE CONSIDERED SCIENTIFIC

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In Marketing Research, the instrument used is a questionnaire. There are five main problems faced by researcher regarding validity and reliability:

1. Different respondents interpret the same question in different manner. So the reply of the respondents will be different.
2. It is difficult to ascertain whether the sample is a representative of the population or not.
3. The same questionnaire administered by different interviewers will yield different results.
4. The measuring instrument, namely the questionnaire may not state clearly what is being measured.
5. Lab experiments are held under controlled conditions, such as temperature, humidity etc. In marketing research, it is not possible to control external factors surrounding the study.

*Example:* The respondent is interviewed on a specific subject. After 60 days, the respondent is interviewed again reply could be very different from what he said earlier. This may happen because he gathered additional information, or had discussed the subject with others during this period.

Reliability implies that we must obtain similar result again when measured.

*Example:* Linear measurements using a footruler, velocity of light and sound in a given media will be the same, when measured repeatedly.

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## 2.5 DISTINCTION BETWEEN SCIENTIFIC AND UNSCIENTIFIC METHODS

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There are three differences between scientific and unscientific methods:

- Rationality and objectivity

- Accuracy of measurement
- Maintaining continuity in investigation

### **Rationality and objectivity**

The conclusions should be based on facts. Our mindsets should not influence the decision-making. For *example*, when the Hawthorne studies began, it was thought that “employee satisfaction has improved productivity”. Later research proved otherwise. In fact, subsequent research justified that productivity and employee satisfaction are not directly related. Similarly, in marketing research, the researcher should not proceed with pre-conceived notions. He must keep an open mind and be objective. Sometimes, researchers approach the respondents, who are easy to reach, and with whom they are comfortable even though they may not represent the true sample. In this case, the objectivity is sacrificed.

### **Accuracy**

Accuracy is possible through the use of scientific instruments. For, the measuring instrument is valid and reliable. In marketing research, a questionnaire is used to measure these aspects such as attitude, preference etc. but this instrument is crude.

#### *Example:*

Habits such as smoking are measured using a scale like:

- a. Often
- b. Sometimes
- c. More often than not
- d. Rarely
- e. Regularly

There are two aspects in the above questionnaire which may lead to inaccuracy:

- (1) ‘Respondents’ perception of what is asked
- (2) What is the correct answer among the alternative

It is difficult to judge whether the respondent is answering correctly. Due to all these factors, accuracy is often sacrificed.

### **Maintaining continuity in investigation**

Science is marked by continuity. This is because, every time there is an invention, the same is carried forward for further improving the same. *Example:* Basic telephony Vs Latest mobile phones, early steam engines Vs electrically driven engines. In marketing research, there is less

continuity. The present researcher does not start from where it was left off. Each project is independent. What is learnt in one assignment is not made use of in subsequent projects.

Due to all the above three reasons, we can conclude that marketing research is not scientific.

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## 2.6 DIFFICULTIES IN APPLYING SCIENTIFIC METHODS TO MARKETING RESEARCH

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- Role of investigators
- Inaccuracy of measuring instruments
- Influence of measurement
- Pressures of time-frame
- Testing of hypothesis
- Complexity of the subject.

### **Role of investigators**

Organisations are the clients of researchers. Sometimes, the investigator tries to fit in results which are readily acceptable to clients. This is possible when the investigator manipulates the data or does not conduct an exhaustive study. In either of these circumstances, the study becomes unscientific.

### **Inaccuracy of measuring instruments**

Accuracy of measurement separates scientific and unscientific methods. Since human beings are the participants, subjectivity invariably creeps in. Most of the information obtained from the respondent is qualitative in nature. *Example:* Brand preference of a respondent. The respondent might say that "I immensely like this brand." It is difficult, if not impossible, to quantify this reply. The questionnaire used to measure attitudes is not precise. Also, each of the interviewer will administer the questionnaire differently. Added to this, the respondents casual answer may be due to pre-occupation, fatigue etc.

### **Influence of measurement**

In physical sciences, the researcher can repeat an experiment any time to get the same results. This is not the case with marketing research. When a respondent realises that he is being measured, his response and behaviour undergoes a change. Because, human reaction changes quickly. The reliability and validity of research will suffer a great deal.

## Time pressure

Marketing research must be conducted and completed within a given time-span. If more time is consumed in conducting the research, competitors might enter and capture the market. The research is concluded in a hurry, leading to lack of credibility due to the pressure exerted by the clients on the researcher.

## Testing of hypothesis

Any hypothesis formed in M.R must be tested. Thus, experimentation has to be resorted to. In marketing research, it is almost impractical to carryout experiment due to many factors which come in the way. For instance, while measuring the impact of advertising on sales, it may so happen that competitors have also advertised, resulting in lesser volume of sales. Also, it is impossible to reproduce the same experiment. The reliability of research suffers on account.

## Complexity of the subject

The subject becomes very complex, due to the fact that it is human beings, who interact with the researcher. Human reaction varies from time to time. Different individuals react differently for a given stimuli. Added to this are the environmental factors and peer influence adding to the complexity. Ads or promotions campaign held at different times yield different results due to changed perceptions and reactions by audience. Due to all these reasons, we can say that marketing research is complex.

Market researchers are subjected to pressure. The research is to be completed quickly before competitors enter the market. Due to this pressure, reliability might suffer and face difficulty in testing the hypothesis. Testing the hypothesis is the core in scientific research. In marketing, it is very difficult to control external factors in the field. *Example:* Measuring the effect of advertising on consumer behaviour. Here, the advertising factor cannot be isolated from other factors such as change in the taste of customers or action taken by competitors.

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## SUMMARY

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The essence of scientific method is validity and reliability. Scientific method consists of observation, formulate hypothesis, future prediction, testing hypothesis. And marketing research lacks the same this is because marketing research is faced with several varying factors such as, instrument used to gather data, ( Questionnaire ) data interpretation,

accuracy of sample selected etc, due to which validity and reliability suffers and hence considered unscientific. In addition, there are several other difficulties in applying scientific method in market research such as lack of continuity, investigators role, time pressure etc.

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## KEYWORDS

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Hypothesis

Validity

Reliability

Instrument

Precise

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## REVIEW QUESTIONS

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- a. What is a scientific method?
- b. What is validity and reliability? Give Example
- c. "Search for facts should be made by scientific method rather than arbitrary method" substantiate the statement.
- d. Distinguish scientific Vs unscientific method.
- e. The following words are commonly used in marketing. What is the meaning and importance of it.
- f. 1. Objective    2. Systematic    3. Decision making
- g. What is induction/deduction method of logical reasoning as applied to M.R?
- h. Why marketing research cannot be considered scientific? Give reasons?
- i. Describe the characteristic of scientific method?



# Organisation of Marketing Research



**In this chapter, the following questions are discussed:**

- ❖ What are the external organisations for conducting marketing research?
- ❖ What are the different types of MR organisations?
- ❖ What is the importance of marketing research?
- ❖ Distinguish between Market research vs Marketing research.
- ❖ What are the uses of Marketing research?

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## 3.1 INTRODUCTION

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Marketing research can be conducted by having:

a) Internal marketing departments in the organisation

or

b) By taking the help of external agencies such as ORG, Marg, AC Neilson etc.

The type of organisation selected for market research depends on how big an organisation is and the varied type of products manufactured etc. There are two types of internal

departments. Departments internal to organisation can be run by:

a) One person

or

b) A full-fledged market research department where several employees are involved.

### **One person operation**

Small companies may not be able to afford a full-fledged MR department. They may appoint one or two persons to conduct MR and report the results to the head of the company. In medium sized firms, MR reports are collected by head of the marketing department. In larger firms, an independent marketing research department is established on a permanent basis and an experienced person is appointed as the head of marketing department.

The marketing department usually has executives, secretaries, assistants and others. The marketing department can function either on a centralized or decentralized basis. The centralized marketing department has the advantage of good coordination with various departments. On the other hand, decentralized marketing departments score in gaining valuable knowledge regarding markets, products in the respective area (i.e. is localised).

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## **3.2 EXTERNAL ORGANISATIONS FOR CONDUCTING MARKETING RESEARCH**

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- a) Advertising agencies
- b) Trade associations
- c) Manufacturers
- d) Retailers and wholesalers
- e) Governmental agencies
- f) Universities and institutions.

### **3.2.1 External Organisations - Advertising Agencies**

The advertising agencies conduct marketing research for their clients. Ad agencies undertake media studies, group research etc. The ad agencies also conduct image opinion research, market potential research etc. *Example:* The ad agencies that conduct MR are Hindustan Thompson, Mudra Communications, Maa Advertising et al.



### 3.2.2 Trade Associations

Trade associations also conduct MR. For instance, the Confederation of Engineering Industries conducts MR for various engineering products. In India, many consumer goods manufacturers such as Godrej, P&G, HLL have their own MR organizations.

### 3.2.3 Manufacturers

Manufacturers of smaller industries join together and undertake marketing research for their mutual benefit. *Example:* Textile companies have the Textile Manufacturers Association, which conducts research on potential for garments made in the country.

### 3.2.4 Retailers and Wholesalers

The retailers have been predominantly concerned with shop location studies, special promotion studies, pricing, retail stores investigation and sales research and so on. The retailers also conduct a study on consumer behaviour and attitudes towards a particular product. Retailers conduct market research less frequently since they are in close proximity to the customers. The wholesalers are interested in conducting MR on retailers' behaviour. They are also interested in learning about the attitudes of the retailers towards inventories, service provided by the wholesalers etc. The latter category of researchers are lesser in number.

### 3.2.5 Government Agencies

MR is also carried out by few government agencies. The government departments collect information on subjects such as agricultural market surplus, consumer goods market surplus, price indices, imports and exports, etc. This helps them in formulating policies.

### 3.2.6 Universities and Institutions

Universities and institutions also conduct marketing research. *Example:* The institutes like the IIMs, IIFT engage themselves in doing marketing research for certain corporate entities.

#### Selection of MR agencies

The client may ask for proposals from many agencies, and will have to select one which can execute at a reasonable time frame and cost.

Guidelines for selecting an agency is as follows

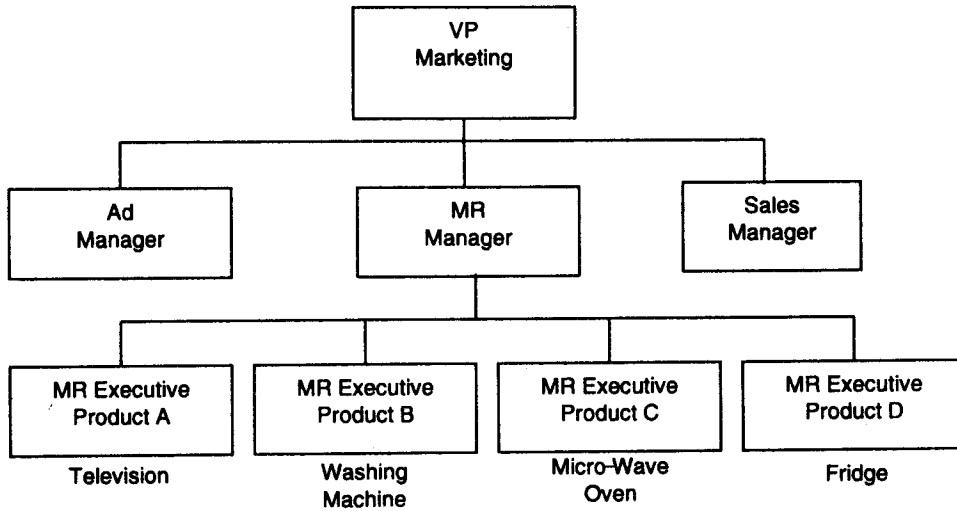
1. *Quality expertise:* the selected agency must have an established track record of high quality work.
2. *Promptness:* the agency must attend to all the needs of the client. Personal attention is to be given to the assignment.
3. *Meeting deadlines:* research report must reach the client in time i.e. before decision is made. The value of the report will be nil, if it is submitted after the agreed date.
4. *Pricing:* pricing for carrying out research must be reasonable with out sacrificing quality.
5. *Infrastructure:* agency must have good facilities. This includes experienced researchers, coders, editors etc.
6. *Professionalism:* this refers to fast track record of the agency. They must have handled variety of projects and must have well qualified faculty.

#### Steps for selection of an agency

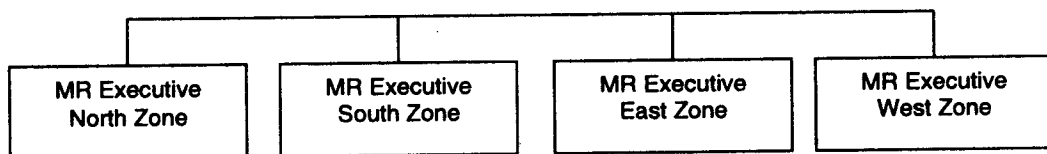
1. *Multiple agency:* invite more than one agency, select the best keeping in mind professionalism and also cost.
2. *Information provision:* the client must provide the fullest information possible regarding objectives of the study, market details, product information, competitors details etc.
3. *Treat the researcher as a member of your organization:* research agency should form integrated part of the organization. This will ensure a very high degree of involvement and commitment from the agency.
4. *Provide necessary feedback to the agency:* if the research agency has done a good job, agency must be communicated about the same, so that they feel encouraged to do a better job next time, on the contrary if the client is dissatisfied, even this must be communicated to the agency.

### 3.3 MARKET RESEARCH ORGANISATION

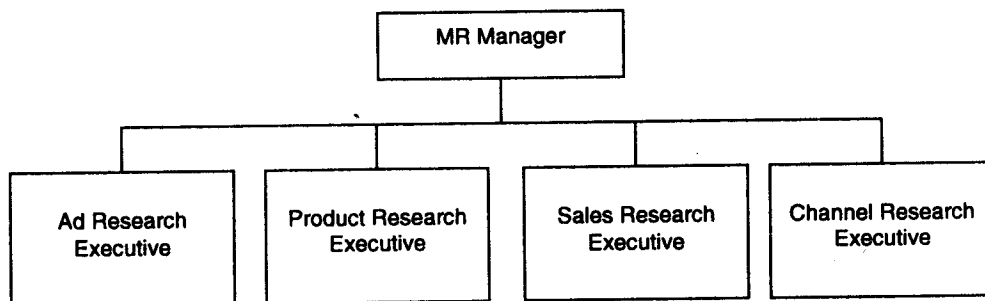
#### 3.3.1 Hierarchy according to Product



#### 3.3.2 Hierarchy according to Geography



#### 3.3.3 Hierarchy according to Functions



### 3.4 IMPORTANCE OF MARKETING RESEARCH (ROLE)

1. Marketing research serves two major functions; (i) It provides information for decision-making and (ii) develops new knowledge.

2. The use of information gathered by the marketing research reduces the risks involved in decision-making.
3. It influences decisions such as pricing of the product, scale of advertising, etc.
4. The information collected directly affects the planning of the product.
5. Market research is put to substantial use by firms that produce branded products and are in competition with other brands to know and maintain the popularity of their products among consumers.

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### 3.5 MARKETING RESEARCH AND MARKET RESEARCH DISTINGUISHED

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Marketing the research should not be confused with the market research. One of its component parts which strictly means the study of market itself. Its size, growth or decline, factors affecting it, the number of competitors in the market. The market shares of competitors, etc. Unfortunately, even experienced marketing men sometimes use these two names together frequently, confusing one with the other. Executives must use these terms correctly especially while talking to non-marketing people. Market research conveys a narrower meaning than marketing the research, which covers the entire process and not merely the market. It includes research activities in the field of marketing including Market Analysis.

Marketing the research is an inclusive term, which embraces research activities carried on with the management of marketing work. It includes various subsidiary types of research such as (1) Market Analysis, which is a study of the size, location, nature and characteristics of markets. (2) Sales Analysis or research, which is largely an analysis of sales data. (3) Consumer research of which Motivation Research is a type which is concerned chiefly with the discovery and analysis of consumer attitude, reaction and preference. (4) Advertising research, which is carried on chiefly as an aid to the management advertising work. (5) Packaging research, etc.

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### 3.6 USES OF MARKETING RESEARCH

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The uses of marketing research are as follows:

1. Research relating to markets:
  - a. To find out market potential for existing products.
  - b. Sales research - forecasting
  - c. Finding and analysing market trends

2. Research relating to products:
  - a. Comparative study of competitors' products
  - b. Identify multiple uses for existing products
  - c. Test marketing of products
  - d. Product line research
  - e. Packaging of products
  - f. Consumer grievances
3. Research related to promotion:
  - a. Measure effectiveness of advertisement
  - b. Analyse effectiveness of salesmen
  - c. Media selection studies
  - d. Study patterns of competitors pricing
  - e. Motivational studies
4. Research related to distribution:
  - a. Design and locate outlets
  - b. Handling Operation
  - c. Transportation
  - d. Storage
5. Research on pricing:
  - a. Cost Analysis
  - b. Margin Analysis
  - c. Price Analysis
  - d. Demand Analysis

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## SUMMARY

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Marketing research organization could be internal or external. It could be handled by marketing department itself or by separate department constituted for this purpose. There may not be a single form of organization suitable to all types of business operations. There are many types of organizations such as product, function or geography. External organization includes ad agencies and association of various trades, government etc.

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## KEYWORDS

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Marketing research

Advertising agency

Trade association

Market research

Motivation research

Test marketing

Packaging research

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## REVIEW QUESTION

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1. What are the external organisations for conducting marketing research?
2. What are the different types of MR organisations?
3. What is the importance of marketing research?
4. Distinguish between Market research Vs Marketing research.
5. What are the uses of Marketing research?
6. What factors influence the choice of an external agency or internal resources?

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## ASSIGNMENT

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What type of organisation structure is a research department likely to have in the following organization?

1. A large advertising agency
2. An industrial product company having five product divisions.
3. A large FMCG company
4. A proprietorship company having multiple branches.

# Research Process



In this chapter, the following questions are discussed:

- ❖ What is a research problem?
- ❖ What is research methodology?
- ❖ How to design a research plan?
- ❖ What are the steps involved in designing research?
- ❖ What is the difference between management and research problem?
- ❖ What is the difference between a manager and a researcher?

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## 4.1 WHAT IS A RESEARCH PROBLEM?

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✓ A research problem refers to some difficulty which an organisation faces and wishes to obtain a solution for the same.

While doing research, defining the problem is very important because “problem clearly stated is half-solved”. This shows how important it is to “define the problem correctly”. While defining the problem, it should be noted that definition should be unambiguous. If the problem defining is ambiguous, then the researcher will not know “what data is to be collected” or “what technique is to be used” etc.

*Example of an ambiguous definition:* “Find out by how much sales has declined recently”. Let us suppose that the research problem is defined in a broad and general way as follows:

“Why is the productivity in Korea much higher than that in India”? In this type of question, a number of ambiguities are there, such as:

- What sort of productivity is to be specified; is it men, machine, materials?
- To which type of industry is the productivity related to?
- In which time-frame are we analysing the productivity?

*Example of an unambiguous definition:* On the contrary, a problem will be as follows:-

“What are the factors responsible for increased labour productivity in Korean textile manufacturing industries during 1996-07 relative to Indian textile industries?”

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## 4.2 WHAT IS RESEARCH METHODOLOGY?

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Research methodology is a method to solve the research problem systematically. It involves gathering data, use of statistical techniques, interpretations, and drawing conclusions about the research data. It is a blueprint, which is followed to complete the study. It is similar to builders' blue-print for building a house.

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## 4.3 RESEARCH DESIGN/PLAN

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Research design is one of the important steps in marketing research. It helps in establishing the manner researchers go about to achieve the objective of the study. The preparation of a research design involves a careful consideration of the following questions and making appropriate decisions about them:

1. What the study is about?
2. Why is the study undertaken?
3. What is its scope?
4. What are the objectives of the study?
5. What are the hypotheses/proportions to be tested?
6. What are the major concepts to be defined operationally?
7. What type of literature needs to be reviewed?
8. What is the area of study?
9. What is the reference period of study?



10. What is the methodology to be used?
11. What kinds of data are needed?
12. What are the sources of data?
13. What is the sampling boundary?
14. What are the sampling units?
15. What is the sample size?
16. What are the sampling techniques?
17. What are the data collection methods?
18. How is the data processed?
19. What are the statistical techniques for analysis?
20. What is the target group, the finding are meant for?
21. What is the type of report?
22. What is the duration of time required for each stage of the research work?
23. What is the cost involved?
24. Who reads the report? *Company*

#### 4.4 STEPS INVOLVED IN PREPARING MARKET RESEARCH PLAN OR DESIGNING A RESEARCH

There are nine steps in the research process, that can be followed while designing a research project. They are as follows:

- Formulate the problem
- Evaluate the cost of research
- Prepare the list of information
- Research design decision
- Data collection
- Select the sample type
- Determine the sample size
- Organize the field work
- Analyze the data and report preparation

### 4.4.1 Formulating the problem

Problem formulation is the key to research process. For a researcher, the problem formulation means converting the management problem to a research problem. In order to attain clarity, the MR manager and the researcher must articulate clearly so that perfect understanding of each other is achieved.

*Example:* Management problem and research problem

M.P – Want to increase the sale of product A

R.P – What is the current standing of the product A?

While problem is being formulated, the following should be taken into account:

1. Determine the objective of the study.
  2. Consider various environmental factors.
  3. Nature of the problem.
  4. Stating the alternative.
1. **Determine the objective:** The objective may be general or specific. General category – It would like to know (how effective was the advertising campaign.)

The corollary looks like a statement with an objective. In reality, this is far from the case. There are two ways of determining the objectives precisely: (1) The researcher should clarify with the MR manager “what effective means”. (Does effective mean, the awareness or does it refer to an increase in sales or does it mean it has improved the knowledge of the audience, or the perception of audience about the product?) In each of the above circumstances, the questions to be asked from the audience varies (2) Another way to determine objectives is to find out from the MR Manager, “What action will be taken, given the specified outcome of the study?” For *example*, if research findings to the previous advertisement by the company was indeed ineffective, what course of action does the company intend to take? (a) Increase the budget for the next Ad (b) Use different appeal (c) Change the media (d) Go to a new agency.

If the objectives are proper, the research questions will be precise. However, we should remember that objectives do undergo a change.

2. **Consider environmental factors:** Environmental factors influence the outcome of the research and the decision. Therefore, the researcher must help his client to identify the environmental factors that are relevant.

*Example:* Assume that the company wants to introduce a new product like iced tea or frozen green peas or ready to eat chapathis.

The following environmental factors are to be considered:

1. Purchasing habits of consumers
2. Presently, who are the competitors in the market with similar product.
3. What is the perception of the people about other products of the company, with respect to price, image of the company.
4. Size of the market and target audience.

All the above factors could influence the decision. Therefore, the researcher must work very closely with his client.

3. **Nature of the problem:** By understanding the nature of the problem, the researcher can collect relevant data and help suggest a suitable solution. Every problem is related to either one or more variables. Before beginning the data collection, a preliminary investigation of the problem is necessary for a better understanding of the same. Initial investigation could be carried by using a focus group of consumers or sales representatives.

If a focus group is carried out with consumers, some of the following questions will help the researcher to understand the problem better:

- i. Did the customer ever include this company's product in his mental map?
  - ii. If the customer is not buying the company's product, the reasons for his not doing so.
  - iii. Why did the customer turn to the competitor's product?
  - iv. Is the researcher contacting the right target audience?
4. **Stating the alternatives:** The researcher would be better served by generating as many alternatives as possible during the problem formulation hypothesis. *Example:* Whether to introduce a *sachet* form of packaging with a view to increase sales. The hypothesis may state that acceptance of the *sachet* by the customer will increase the sales by 20%. Thereafter, the test marketing will be conducted before deciding whether to introduce the *sachet* variant. Therefore, for every alternative, a hypothesis has to be developed.

#### 4.4.2 Evaluate the cost of research

There are several methods to establish the value of research. Some of them are (1) Bayesian approach (2) Simple saving method (3) Return on investment (4) Cost benefit approach.

**Example 1:** Company 'X' wants to launch a product. The company's intuitive feeling is that the possibilities of the product's failure are 35%. However, if research is conducted and appropriate data is gathered, the chances of failure could be reduced to 30%. The

company has calculated that losses would be to the tune of Rs. 3,00,000 if the product fails. The company has received a quotation from an MR agency. The cost of the intended research is Rs. 75,000. The question is: "Should the company spend this money to conduct the research?"

*Calculation:*

$$\begin{aligned} \text{Loss without research} &= \text{Rs. } 3,00,000 \times 0.35 \\ &= \text{Rs. } 1,05,000 \end{aligned}$$

$$\begin{aligned} \text{Loss with research} &= \text{Rs. } 3,00,000 \times 0.30 \\ &= \text{Rs. } 90,000 \end{aligned}$$

$$\begin{aligned} \text{Value of research information} & \\ &= \text{Rs. } 1,05,000 - 90,000 \\ &= \text{Rs. } 15,000 \end{aligned}$$

Since the value of information, namely Rs. 15,000 is lower than the cost of research, i.e., Rs. 75,000, conducting this particular research is not recommended.

*Example 2:* Company 'A' would like to introduce a new product in the market. The research agencies have given an estimation of Rs. 5 lakhs and a time period of five months. According to the past experience of the company, the probability of earning Rs. 10 lakh is 0.4 and Rs. 5 lakh is 0.3 and losing Rs. 7 lakh is 0.3. Should the company undertake the research?

*Calculation:*

$$0.4 \times \text{Rs. } 10 + 0.3 \times \text{Rs. } 5 - 0.3 \times \text{Rs. } 7 = \text{Rs. } 4 + \text{Rs. } 1.5 - \text{Rs. } 2.1 = 3.4 \text{ lakh}$$

Since we find that the expected value of information i.e. Rs. 3.4 lakh, less than the cost of M.R at Rs. 5 lakh, there is no need to carry out this research.

#### 4.4.3 Preparing a list of needed information

Assume that company 'X' wants to introduce a new product (tea powder). Before introducing this product, it has to be test marketed. The company needs to know the extent of competition, price and quality acceptance from the market. In this context, following is the list of information required:

a) *Total demand and company sales*

*Example:* What is the overall industry demand? What is the share of competitors? The above information will help the management estimate the overall share and its own share in the market.

b) *Distribution coverage*

*Example:* (1) Availability of products at different outlets.

(2) Effect of shelf display on sales.

c) *Market awareness, attitudes and usage*

*Example:* “What percentage of target population are aware of the firm’s product”?

“Do customers know about the product”?

“What is the customers’ attitude towards the product”?

“What percentage of customers repurchase the product”?

d) *Marketing expenditure*

*Example:* “What has been the marketing expenditure”?

“How much was spent on promotion”?

e) *Competitors’ marketing expenditure*

*Example:* “How much did the competitor spend to market a similar product”?

#### 4.4.4 Decision on research design

a) *Should the research be exploratory or conclusive?*

*Exploratory research: Example:* “Causes for the decline in sales of a specific company’s product in a specific territory under a specific salesman”. The researcher may explore possible reasons as to why sales are failing.

- ❖ Faulty product planning
- ❖ Higher price
- ❖ Less discount
- ❖ Less availability
- ❖ Inefficient advertising/salesmanship
- ❖ Poor quality of salesman ship
- ❖ Less awareness

Not all factors are responsible for decline in sales.

*Conclusive research:* Narrow down the option. Only one or two factors are responsible for decline in sales. Therefore zero down, and use judgment and past experience.

- b) *Who should be interviewed for collecting data?:* If the study is undertaken to determine whether children influence the brand, for ready – to eat cereal (corn flakes) purchased by parents. The researcher must decide, if only adults are to be studied or children too included. The researcher must decide if data is to be collected by observation method or by interviewing. If an interview is chosen, should it be a personal interview or telephonic interview or questionnaire?
- c) *Should a few cases be studied or a large sample be chosen?:* The researcher may feel that there are some cases available which are identical and similar in nature. He may decide to use these cases for formulating the initial hypothesis. If suitable cases are not available, then the researcher may decide to choose a larger sample.
- d) *How to incorporate experiment in research?:* In an experiment, it has to be decided at the outset as to where and when measurements are to be conducted. *Example:* In a test of advertising copy, the respondents can first be interviewed to measure their present awareness, and their attitudes towards certain brands. Then, they can be shown a pilot version of the proposed advertisement copy. Following this, their attitude too has to be measured again, to see if the proposed copy had any effect on them.

If it is a questionnaire, then the following questions should be asked – (a) What are the contents of the questionnaire? (b) What type of questions are to be asked? *Example:* Pointed questions, general questions etc. (c) In what sequence should the questions be asked? (d) Should there be a fixed set of alternatives or should the question be open-ended. (e) Should the purpose be made clear to the respondents or should the same be disguised? are to be determined well in advance.

#### 4.4.5 Select the Sample Types

The first task is to carefully select which groups of people or stores are to be sampled. *Example:* Collecting the data from a fast food chain. Here, it is necessary to define what is meant by fast food chain. Also, the precise geographical location should be mentioned.

The next step is to decide whether to choose probability sampling or non-probability sampling. Probability sampling is one in which each element has a known chance of being selected. A non-probability sampling can be convenience or judgment sampling.

#### 4.4.6 Determine the Sample Size

Smaller the sample size, larger the error and vice-versa.

Sample size depends upon

- a) Accuracy required

- b) Time available
- c) Cost involved.

While selecting the sample, the sample unit has to be clearly specified. *Example:* Survey on the attitudes towards the use of shampoo with reference to a specific brand, where husbands, wives or a combination of them are to be surveyed or a specific segment is to be surveyed. The sample size depends on the size of the sample frame/universe.

#### 4.4.7 Organize the Fieldwork

This includes selection, training and evaluating the field sales force to collect the data

- a) How to organise the field-work?
- b) What type of questionnaire – structured or unstructured to use?
- c) How to approach the respondents?
- d) Week, day and time to meet the specific respondents etc., are to be decided.

#### 4.4.8 Analysis of the Data

This involves

- a) Editing
- b) Tabulating
- c) Codifying.

*Editing:* The data collected should be scanned to make sure that it is complete and that all the instructions are followed. This process is called editing. Once these forms have been edited, they must be coded.

*Coding* means assigning numbers to each of the answers, so that they can be analysed.

The final step is called data tabulation. It is the orderly arrangement data in a tabular form. Also, at the time of analysing the data, the statistical tests to be used must be finalised such as T-Test, Z-Test, Chi-square Test, ANOVA etc.

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### 4.5 DISTINCTION BETWEEN MANAGEMENT AND RESEARCH PROBLEM

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Management problem involves "What needs to be done?" Research problem essentially involves determining "What information needs to be provided and how can the information be obtained?" For e.g.

Management Problem	Research Problem
1) Develop the package for a new product.	1) Evaluate the effectiveness of <u>alternative</u> package design.
2) To select a media for product advertising.	2) We should conduct an investigation to determine suitable media. Evaluate the impact of the media in terms of reach.
3) Increase the amount of repurchase behaviour of the customer.	3) Assess current amount of repeat purchase behaviour.
4) Introduce new product.	4) Design a test market through which the likely acceptance of new product can be gauged.

### What is a research brief?

This is prepared by the client. This will define the concept “what is the research requirement”. This will state the marketing problem specifically upon which research is to be conducted. The clearer the brief, the better will be the research conducted by the agency. Research brief gives very clear understanding of research requirements.

Benefits of research briefing:

1. It will give a clear picture of what to collect.
2. Research brief helps to avoid and reduce disputes between the client and researcher.

While preparing research brief, it is wise to hold discussions with the executives within the company, so that every one is clear on “what is to be researched”?

### Outline of a research brief

The following are the outline of research brief

1. Company background
2. Target population
3. Objectives of the research
4. Aspects to be questioned in research
5. Time frame
6. Research budget

1. **Company background:** Under company’s background, the researcher should be briefed by the client with respect to current standing of the company in the market. This would include information on market share, product/service rendered and perception



of the company. The problems faced by the company such as competitor, price, distribution or any other, should be highlighted.

2. **Target population:** This refers to persons from whom data is to be collected. This is because, if proper target population is not approached, considerable time and money might be wasted. While collecting demographic details, specifications such as gender, income, marital status, occupation etc. must be specifically told to the researcher by the client
3. **Objectives:** Objectives should be clear and specific. If there is more than one objectives on which research is to be made, the same should be known to the researcher in the beginning. Objectives could be to increase market share or company image or any other.
4. **Questions to be asked in research:** The client must tell the researcher, “what is to be asked” such as price, availability or any other. This will enable the researcher to ask specific questions to the respondents.
5. **Time:** Time schedule has to be adhered to by the researcher. Period has to be discussed and agreed between client and researcher in the very beginning. Any delay in research result might prove to be worthless, since competitor might have come out with an alternative.
6. **Budget:** Client must obtain quotation from several market research agencies before finalization. Also researcher should be clearly told about the budget constraints if any in the beginning. Scope of coverage essentially depends on budget available.

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#### 4.6 DIFFERENCE BETWEEN A MANAGER AND A RESEARCHER

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Domain of difference	Manager	Researcher
• Position in the organisation	Line function	Staff function
• Responsible	To generate profits	To generate information
• Activity involved	Make symptoms disappear	To find the truth
• Involvement	Emotional	Unemotional
• Training	All aspects of decision-making	Technicalities and application orientation
• Knowledge	Wants answers to questions	Wants to ask questions

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## SUMMARY

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Research originates in a decision process. In research process, management problem is converted into a research problem. Which is the major objective of the study. Research question is further subdivided, covering various facets of the problem that need to be solved. Research process consists of a series of steps that guide the research project from the time it is conceived till the end. The research process involves selection of a theme through collection and analysis of data and preparation of a report.

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## KEYWORDS

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Unambiguous	Blueprint
Research methodology	Research plan
Management problem	Problem formulation
Environmental factors	Mental map
Research cost	Market awareness
Distribution coverage	Market expenditure
Disguised	Probability sampling
Editing	Tabulating
Codifying	Research brief

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## REVIEW QUESTIONS

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1. What is a research problem?
2. What is research methodology?
3. What are the questions posed for self in designing the research?
4. What are the steps involved in preparing the research plan?
5. Distinguish between management problem and research problem.
6. What is research brief?
7. What are the components of research brief? Explain.
8. What is the difference between manager and researcher?

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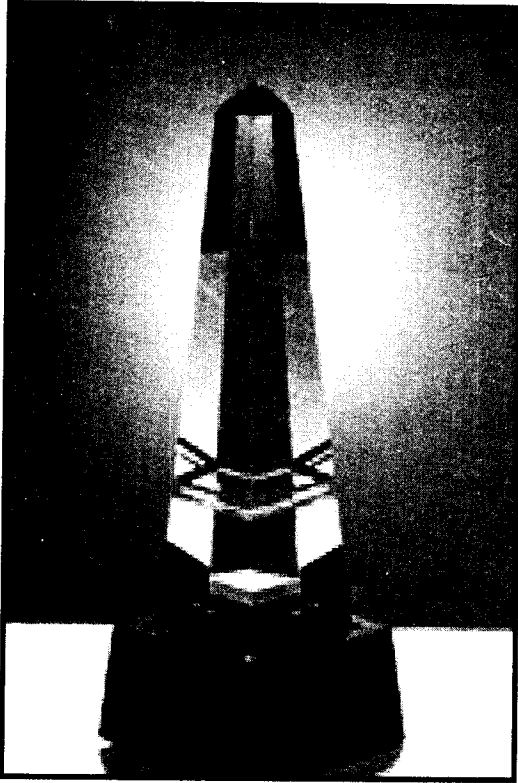
## ASSIGNMENT

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- A. Given the following decision problem, identify the research problem:
1. Whether to expand the available warehouse facilities.
  2. Whether to change the compensation package of the sales force.
  3. Whether to increase the expenditure on print advertisement.
- B. Given the following research problem, identify the corresponding decision problem for which the information will be useful:
1. Assess the level of awareness among housewives regarding the benefits of introducing a new product in the market.
  2. Assess attitudes and opinions of customers towards existing five-star hotels.
  3. Design a test market to assess the effect of particular discount scheme on the volume of sales of the product.



# Research Problem Formulation



In this chapter, the following questions are discussed:

- ❖ How to formulate a research problem?
- ❖ What are the origins of the problem?
- ❖ What questions should researchers ask themselves while defining the problem?

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## 5.1 FORMULATING THE PROBLEM

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There is a famous saying that “problem well-defined is half solved”. This statement is strikingly true in market research, because if the problem is not stated properly, the objectives will not be clear. If the objective is not clearly defined, the data collection becomes meaningless.

The first step in research is to formulate the problem. A company manufacturing television sets might think that it is losing sales to a foreign company. A brief illustration

aptly demonstrates how such problem can be ill-conceived. The management of a company felt, a drop in sales was because of the poor quality of product. Subsequently, research was undertaken with a view to improve the quality of the product. But despite an improvement in quality, sales did not pick up. In this case, we may say that the problem is ill-defined. The actual reason was ineffective sales promotion. The problem thus needs to be carefully identified. Marketing problem which needs research can be classified into two categories.

1. Difficulty related problems
2. Opportunity related problems, while the first category produces negative results such as, decline in market share or sales, the second category provides benefits

Problem definition might refer to either a real-life situation or it may also refer to a set of opportunities. Market research problems or opportunities will arise under the following circumstances— (1) Unanticipated change (2) Planned change. Many factors in the environment can create problems or opportunities. Thus, change in the demographics, technological and legal changes affect the marketing function. Now the question is how the company responds to new technology, or product introduced by the competitor or how to cope with the changes in lifestyles. It may be a problem and at the same time, it can also be viewed as an opportunity. In order to conduct research, the problem must be defined accurately.

While formulating the problem, clearly define:

1. Who is the focus?
2. What is the subject-matter of research?
3. To which geographical territory/area the problem refers to?
4. To which period does the study pertains to?

*Example:* “Why does the upper-middle class of Bangalore shop at Lifestyle during the Diwali season”?

Here all the above four aspects are covered. We may be interested in a number of variables due to which shopping is done at a particular place. The characteristic of interest to the researcher may be (1) Variety offered at Lifestyle (2) Discount offered by way of promotion (3) Ambience at the Lifestyle and (4) Personalised service offered. In some cases, the cause of the problem is obvious whereas in others the cause is not so obvious. The obvious causes are the products being on the decline. Not so obvious causes could be a bad first experience for the customer.

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## 5.2 SOURCES FOR PROBLEM IDENTIFICATION

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Research students can adopt the following ways to identify the problems:

- Research reports already published may be referred to define a specific problem.

- Assistance of any research organisation, which handles a number of projects of the companies, can be sought to identify the problem.
- Professors working in reputed academic institution can act as guides in problem identification.
- Company employees and competitors can assist in identifying the problems.
- Cultural and technological changes can act as a sources for research problem identification.
- Seminars/symposiums/focus groups can act as a useful source.

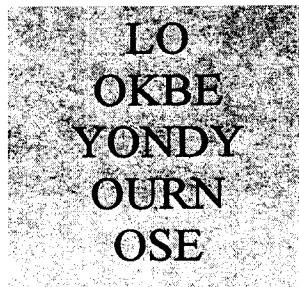
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### 5.3 SELF QUESTIONING BY RESEARCHER WHILE DEFINING THE PROBLEM

1. Is the research problem correctly defined?
2. Is the research problem solvable?
3. Can relevant data be gathered through the process of marketing research?
4. Is the research problem significant?
5. Can the research be conducted within the available resources?
6. Is the time given to complete the project sufficient?
7. What exactly will be the difficulties in conducting the study, and hurdles to be overcome?
8. Am I competent, to carry the study out?

Managers often want the results of research in accordance with their expectation. This satisfies them immensely. If one were to closely look at the questionnaire, it is found that in most cases, there are stereotyped answers given by the respondents. A researcher must be creative and should look at problems in a different perspective.

A client's perspective of the problem as under:



What does the researcher understand from the above?

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## SUMMARY

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Proper problem formulation is the key to success in research. It is vital and any error in defining the problem incorrectly can result in wastage of time and money. Several elements of introspection will help in defining the problem correctly.

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## KEYWORDS

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Research problem

Opportunity related problem

Difficulty related problem

Problem identification

Unanticipated change

Planned change

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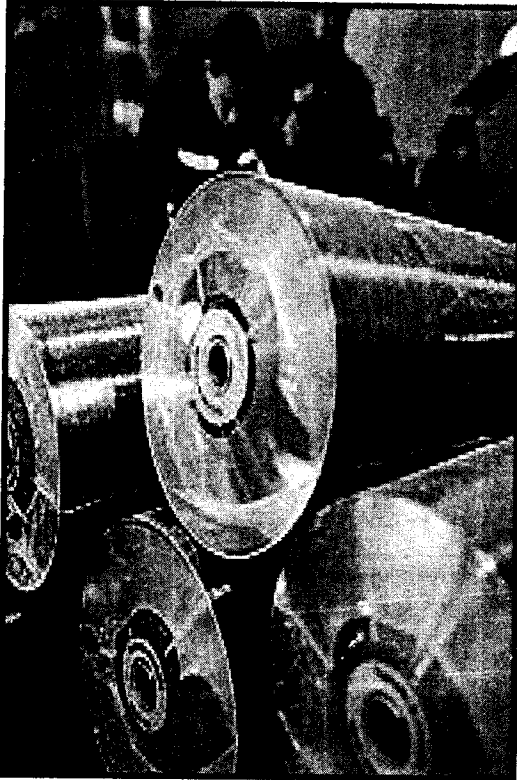
## REVIEW QUESTIONS

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1. What is a research problem?
2. What are the steps involved in formulating the problem?
3. What are the sources of problem?
4. What are the questions posed for self while formulating the problem?
5. What do you understand from the diagram given above?



# Research Design



In this chapter, the following questions are discussed:

- ❖ What are the different types of research design?
- ❖ What is exploratory research? What methods are adopted during exploratory research?
- ❖ What is descriptive research and what methods are adopted?
- ❖ What is experimental research and what are the methods of conducting experimental research?
- ❖ What are the types of errors that affect research design?

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## 6.1 MEANING

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Research design is simply a plan for a study. This is used as a guide in collecting and analyzing the data. It can be called a blue print to carryout the study. It is like a plan made by an architect to build the house, if a research is conducted without a blue print, the result is likely to be different from what is expected at the start. The blue print includes (1) interviews to be conducted, observations to be made, experiments to be conducted data analysis to be made. (2) Tools used to collect the data such as questionnaire (3) what is the sampling methods used.

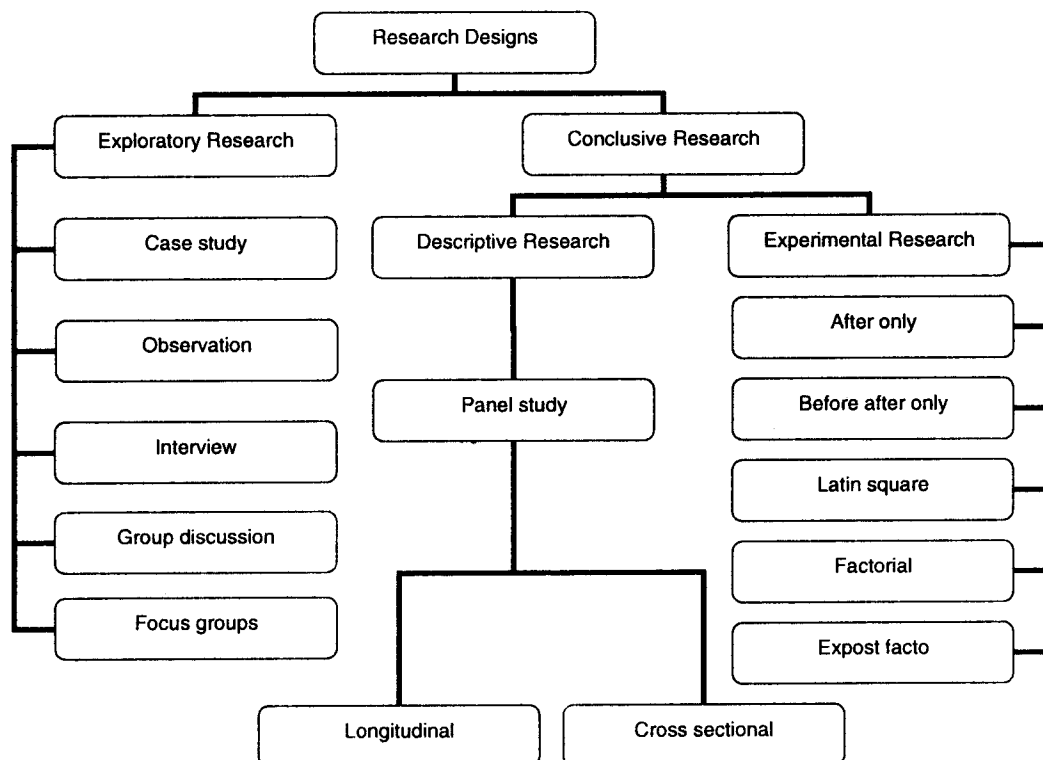
## 6.2 TYPES OF RESEARCH DESIGN

Exploratory, descriptive and causal research are some of the major types. Exploratory research is used to seek insights into general nature of the problem. It provides the relevant variable that need to be considered. In this type of research, there is no previous knowledge, research methods are flexible, qualitative and unstructured. The researcher in this method does not know “what he will find”.

Descriptive research is a type of research, very widely used in marketing research. Generally in descriptive study there will be a hypothesis, with respect to this hypothesis, we ask questions like size, distribution, etc.

Causal research, this type of research is concerned with finding cause and effect relationship. Normally experiments are conducted in this type of research.

## 6.3 RESEARCH DESIGN FRAME WORK



## 6.4 EXPLORATORY RESEARCH

The major emphasis in exploratory research is on converting broad, vague problem statements into small, precise sub-problem statements, which is done in order to formulate specific hypothesis. The hypothesis is a statement that specifies, "how two or more variables are related?"

In the early stages of research, we usually lack from sufficient understanding of the problem to formulate a specific hypothesis. Further, there are often several tentative explanations. *Example:* "Sales are down because our prices are too high", "our dealers or sales representatives are not doing a good job", "our advertisement is weak" and so on. In this scenario, very little information is available to point out, what is the actual cause of the problem. We can say that the major purpose of exploratory research is to identify the problem more specifically. Therefore, exploratory study is used in the initial stages of research.

## 6.5 UNDER WHAT CIRCUMSTANCES IS EXPLORATORY STUDY IDEAL?

The following are the circumstances in which exploratory study would be ideally suited:

- ✓ ● To gain an insight into the problem.
- ✓ ● To generate new product ideas.
  - To list all possibilities. Among the several possibilities, we need to prioritize the possibilities which seem likely.
  - To develop hypothesis occasionally.
  - Exploratory study is also used to increase the analyst's familiarity with the problem. This is particularly true, when the analyst is new to the problem area. *Example:* A market researcher working for (new entrant) a company for the first time.
- ✓ ● To establish priorities so that further research can be conducted.
  - Exploratory studies may be used to clarify concepts and help in formulating precise problems. *Example:* The management is considering a change in the contract policy, which it hopes, will result in improved satisfaction for channel members. An exploratory study can be used to clarify the present state of channel members' satisfaction and to develop a method by which satisfaction level of channel members is measured

- To pre-test a draft questionnaire
- In general, exploratory research is appropriate to any problem about which very little is known. This research is the foundation for any future study.

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## 6.6 HYPOTHESIS DEVELOPMENT AT EXPLORATORY RESEARCH STAGE

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At exploratory stage:

1. Sometimes, it may not be possible to develop any hypothesis at all, if the situation is being investigated for the first time. This is because no previous data is available.
2. Sometimes, some information may be available and it may be possible to formulate a tentative hypothesis.
3. In other cases, most of the data is available and it may be possible to provide answers to the problem.

The examples given below indicates each of the above type:

Research Purpose	Research Question	Hypothesis
1) What product feature, if stated, will be most effective in the advertisement?	What benefit do people derive from this Ad appeal?	No hypothesis formulation is possible.
2) What new packaging is to be developed by the company (with respect to a soft drink)?	What alternatives exist to provide a container for soft drink?	Paper cup is better than any other forms, such as a bottle.
3) How can our insurance service be improved?	What is the nature of customer dissatisfaction?	Impersonalization is the problem.

In *example 1*, the research question is posed to determine "What benefit do people seek from the Ad?" Since no previous research is done on consumer benefit for this product, it is not possible to form any hypothesis.

In *example 2*, some information is currently available about packaging for a soft drink. Here it is possible to formulate a hypothesis which is purely tentative. The hypothesis formulated here may be only one of the several alternatives available.

In *example 3*, the root cause of customer dissatisfaction is known, i.e. lack of personalised service. In this case, it is possible to verify whether this is a cause or not.

### 6.6.1 Characteristics of exploratory research

1. Exploratory research is flexible and very versatile.

2. For data collection structured forms are not used.
3. Experimentation is not a requirement.
4. Cost incurred to conduct study is low.
5. This type of research allows very wide exploration of views.
6. Research is interactive in nature and also it is open ended.

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## 6.7 EXPLORATORY RESEARCH METHODS

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The quickest and the cheapest way to formulate a hypothesis in exploratory research is by using any of the four methods:

- Literature search
- Experience survey
- Focus group
- Analysis of selected cases

### 6.7.1 Literature Search

This refers to "referring to a literature to develop a new hypothesis". The literature referred are – trade journals, professional journals, market research finding publications, statistical publications etc. *Example:* Suppose a problem is "Why are sales down?" This can quickly be analysed with the help of published data which should indicate "whether the problem is an "industry problem" or a "firm problem". Three possibilities exist to formulate the hypothesis.

1. The company's market share has declined but industry's figures are normal.
2. The industry is declining and hence the company's market share is also declining.
3. The industry's share is going up but the company's share is declining.

If we accept the situation that our company's sales are down despite the market showing an upward trend, then we need to analyse the marketing mix variables.

*Example 1:* A TV manufacturing company feels that its market share is declining whereas the overall television industry is doing very well.

*Example 2:* Due to a trade embargo imposed by a country, textiles exports are down and hence sales of a company making garment for exports is on the decline.

The above information may be used to pinpoint the reason for declining sales.

### 6.7.2 Experience Survey

In experience surveys, it is desirable to talk to persons who are well informed in the area being investigated. These people may be company executives or persons outside the organisation. Here, no questionnaire is required. The approach adopted in an experience survey should be highly unstructured, so that the respondent can give divergent views. Since the idea of using experience survey is to undertake problem formulation, and not conclusion, probability sample need not be used. Those who cannot speak freely should be excluded from the sample.

*Example 1:*

- (1) A group of housewives may be approached for their choice for a "ready to cook product".
- (2) A publisher might want to find out the reason for poor circulation of newspaper introduced recently. He might meet (a) Newspaper sellers (b) Public reading room (c) General public (d) Business community, etc.

These are experienced persons whose knowledge researcher can use.

### 6.7.3 Focus Group

Another widely used technique in exploratory research is the focus group. In a focus group, a small number of individuals are brought together to study and talk about some topic of interest. The discussion is co-ordinated by a moderator. The group usually is of 8-12 persons. While selecting these persons, care has to be taken to see that they should have a common background and have similar experiences in buying. This is required because there should not be a conflict among the group members on the common issues that are being discussed. During the discussion, future buying attitudes, present buying opinion etc., are gathered.

Most of the companies conducting the focus groups, first screen the candidates to determine who will compose the particular group. Firms also take care to avoid groups, in which some of the participants have their friends and relatives, because this leads to a biased discussion. Normally, a number of such groups are constituted and the final conclusion of various groups are taken for formulating the hypothesis. Therefore, a key factor in focus group is to have similar groups. Normally there are 4-5 groups. Some of them may even have 6-8 groups. The guiding criteria is to see whether the latter groups are generating additional ideas or repeating the same with respect to the subject under study. When this shows a diminishing return from the group, the discussions stopped. The typical focus group lasts for 1-30 hours to 2 hours. The moderator under the focus group has a key role. His job is to guide the group to proceed in the right direction.

The following should be the characteristics of a moderator/facilitator:

*Listening:* He must have a good listening ability. The moderator must not miss the participant's comment, due to lack of attention.

*Permissive:* The moderator must be permissive, yet alert to the signs that the group is disintegrating.

*Memory:* He must have a good memory. The moderator must be able to remember the comments of the participants. *Example:* A discussion is centered around a new advertisement by a telecom company. The participant may make a statement early and make another statement later, which is opposite to what was said earlier. *Example:* The participant may say that s(he) never subscribed to the views expressed in the advertisement by the competitor, but subsequently may say that the "current advertisement of competitor is excellent".

*Encouragement:* The moderator must encourage unresponsive members to participate.

*Learning:* He should be a quick learner.

*Sensitivity:* The moderator must be sensitive enough to guide the group discussion.

*Intelligence:* He must be a person whose intelligence is above the average.

*Kind/firm:* He must combine detachment with empathy.

#### Variation of focus group

- *Respondent moderator group:* Under this method, the moderator will select one of the participants to act as a temporary moderator.
- *Dualing moderator group:* In this method, there are two moderators. They purposely take opposing positions on a given topic. This will help the researcher to obtain the views of both groups.
- *Two way focus group:* Under this method one group will listen to the other group. Later, the second group will react to the views of the first group.
- *Dual moderator group:* Here, there are two moderators. One moderator will make sure that the discussion moves smoothly. The second moderator will ask a specific question.

#### 6.7.4 Case Studies

Analysing a selected case sometimes gives an insight into the problem which is being researched. Case histories of companies which have undergone a similar situation may be available. These case studies are well suited to carry out exploratory research. However, the result of investigation of case histories are always considered suggestive, rather than conclusive. In case of preference to "ready to eat food", many case histories may be available in the form of previous studies made by competitors. We must carefully examine the

already published case studies with regard to other variables such as price, advertisement, changes in the taste etc.

## A CASE IN POINT

A company manufacturing electric shavers, known for its brand, wanted to introduce the product in Japan. Before the launch, the company made sure that all the 4Ps are acceptable to customers. When the product was launched, it met with failure. The company wondered what went wrong. Later investigations revealed that Japanese palms were very small and hence the product was not convenient for use. All possible causes were not listed and examined. This shows the importance of listing all factors during an exploratory research.

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## 6.8 CONCLUSIVE RESEARCH

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*Meaning:* This is a research having clearly defined objectives. In this type of research, specific courses of action are taken to solve the problem.

In conclusive research, there are two types:

- a) Descriptive research
- b) Experimental research or Causal research.

### 6.8.1 Descriptive Research

#### Meaning

- a) The name itself reveals that, it is essentially a research to describe something. *Example:* It can describe the characteristics of a group such as—customers, organisations, markets etc. Descriptive research provides "association between two variables" like income and place of shopping, age and preferences.
- b) Descriptive inform us about the proportions of high and low income customers in a particular territory. What descriptive research cannot indicate is that it cannot establish a cause and effect relationship between the characteristics of interest. This is the distinct disadvantage of descriptive research.
- c) Descriptive study requires a clear specification of "*Who, what, when, where, why and how*" of the research. *Example:* Consider a situation of convenience stores (food world) planning to open a new outlet. The company wants to determine, "How people come to patronize a new outlet?" Some of the questions that need to be answered before data collection for this descriptive study are as follows:



**Who?** Who is regarded as a shopper responsible for the success of the shop, whose demographic profile is required by the retailer.

**What?** What characteristics of the shopper should be measured?

Is it the age of the shopper, sex, income or residential address?

**When?** When shall we measure?

Should the measurement be made while the shopper is shopping or at a later time?

**Where?** Where shall we measure the shoppers?

Should it be outside the stores, soon after they visit or should we contact them at their residence?

**Why?** Why do you want to measure them?

What is the purpose of measurement? Based on the information, are there any strategies which will help the retailer to boost the sales? Does the retailer want to predict future sales based on the data obtained?

Answer to some of the above questions will help us in formulating the hypothesis.

**How to measure?** Is it a 'structured' questionnaire, 'disguised' or 'undisguised' questionnaire?

#### **When to use descriptive study?**

- To determine the characteristics of market such as:
  - a) Size of the market
  - b) Buying power of the consumer
  - c) Product usage pattern
  - d) To find out the market share for the product
  - e) To track the performance of a brand.
- To determine the association of the two variables such as Ad and sales
- To make a prediction. We might be interested in sales forecasting for the next three years, so that we can plan for training of new sales representatives
- To estimate the proportion of people in a specific population, who behave in a particular way. *Example:* What percentage of population in a particular geographical location would be shopping in a particular shop?

**Hypothesis study at the descriptive research stage** (to demonstrate the characteristics of the group)

Management problem	Research problem	Hypothesis
How should a new product be distributed?	Where do customers buy a similar product right now?	Upper class buyers use 'Shopper's Stop' and middle class buyers buy from local departmental stores
What will be the target segment?	What kind of people buy our product now?	Senior citizens buy our products. Young and married buy our competitors products.

*Types of descriptive studies:* There are two types of descriptive research:

- a) Longitudinal study
  - b) Cross-sectional study
- a) *Longitudinal Study:* These are the studies in which an event or occurrence is measured again and again over a period of time. This is also known as 'Time Series Study'. Through longitudinal study, the researcher comes to know how the market changes over time.

Longitudinal studies involve panels. Panel once constituted will have certain elements. These elements may be individuals, stores, dealers etc. The panel or sample remains constant throughout the period. There may be some dropouts and additions. The sample members in the panel are being measured repeatedly. The periodicity of the study may be monthly or quarterly etc.

Example for longitudinal study, assume a market research is conducted on ready to eat food at two different points of time T1 and T2 with a gap of 4 months. Each of the above two times, a sample of 2000 household is chosen and interviewed. The brands used most in the household is recorded as follows.

Brands	At T1	At T2
Brand X	500(25%)	600(30%)
Brand Y	700(35%)	650(32.5%)
Brand Z	400(20%)	300(15%)
Brand M	200(10%)	250(12.5%)
All others	200(10%)	250(12.5%)
	200	100%

As can be seen between period T1 and T2 Brand X and Brand M has shown an improvement in market share. Brand Y and Brand Z has decrease in market share, where as all other categories remains the same. This shows that Brand A and M has gained market share at the cost of Y and Z.

There are two types of panels:

- True panel
- Omnibus panel.

*True panel:* This involves repeat measurement of the same variables. *Example:* Perception towards frozen peas or iced tea. Each member of the panel is examined at a different time, to arrive at a conclusion on the above subject.

*Omnibus panel:* In omnibus panel too, a sample of elements is being selected and maintained, but the information collected from the member varies. At a certain point of time, the attitude of panel members "towards an advertisement" may be measured. At some other point of time the same panel member may be questioned about the "product performance".

#### Advantages of panel data

- We can find out what proportion of those who bought our brand and those who did not. This is computed using the brand switching matrix.
- The study also helps to identify and target the group which needs promotional effort.
- Panel members are willing persons, hence a lot of data can be collected. This is because becoming a member of a panel is purely voluntary.
- The greatest advantage of panel data is that it is analytical in nature.
- Panel data is more accurate than cross-sectional data because it is free from the error associated with reporting past behaviour. Errors occur in past behaviour because of time that has elapsed or forgetfulness.

#### Disadvantages of panel data

- The sample may not be representative. This is because sometimes, panels may be selected on account of convenience.
- The panel members who provide the data, may not be interested to continue as panel members. There could be dropouts, migration etc. Members who replace them may differ vastly from the original member.
- Remuneration given to panel members may not be attractive. Therefore, people may not like to be panel members.
- Sometimes the panel members may show disinterest and non-committed.
- A lengthy period of membership in the panel may cause respondents to start imagining themselves to be experts and professionals. They may start responding like experts

and consultants and not like respondents. To avoid this, no one should be retained as a member for more than 6 months.

b) *Cross-sectional study*

Cross-sectional study is one of the most important types of descriptive research, it can be done in two ways

- ❖ Field study
- ❖ Field survey

*Field study:* This includes a depth study. Field study involves an in-depth study of a problem, such as reaction of young men and women towards a product. *Example:* Reaction of Indian men towards branded ready-to-wear suit. Field study is carried out in real world environment settings. Test marketing is an example of field study.

*Field survey:* Large samples are a feature of the study. The biggest limitations of this survey are cost and time. Also, if the respondent is cautious, then he might answer the questions in a different manner. Finally, field survey requires good knowledge like constructing a questionnaire, sampling techniques used, etc.

*Example:* Suppose the management believes that geographical factor is an important attribute in determining the consumption of a product, like sales of a woolen wear in a particular location. Suppose that the proposition to be examined is that, the urban population is more likely to use the product than the semi-urban population. This hypothesis can be examined in a cross-sectional study. Measurement can be taken from a representative sample of the population in both geographical locations with respect to the occupation and use of the products. In case of tabulation, researcher can count the number of cases that fall into each of the following classes:

- Urban population which uses the product - Category I
- Semi-urban population which uses the product - Category II
- Urban population which does not use the product - Category III
- Semi-urban population which does not use the product - Category IV

Here, we should know that the hypothesis need to be supported and tested by the sample data i.e., the proportion of urbanities using the product should exceed the semi-urban population using the product.

## 6.9 DIFFERENCE BETWEEN EXPLORATORY RESEARCH AND DESCRIPTIVE RESEARCH

Exploratory research	Descriptive research
It is concerned with the "Why" aspect of consumer behaviour i.e., it tries to understand the problem and not measure the result.	It is concerned with the "What", "When" or "How often" on the consumer behaviour.
This research does not require large samples.	This needs large samples of respondents.
Sample need not be represent the population.	Sample must be representative of population.
Due to imprecise statement, data collection is not easy.	Statement is precise. Therefore data collection is easy
Characteristics of interest to be measured is not clear.	Characteristics of interest to be measured is clear.
There is no need for a questionnaire for collecting the data.	There should be a properly designed questionnaire for data collection.
Data collection methods are: Focus group Literature Searching Case study	Use of panel data Longitudinal Cross-sectional studies

### SUMMARY

Chapter deals with two types of research namely exploratory research and descriptive research. Exploratory research helps the researcher to become familiar with the problem. It helps to establish the priorities for further research. It may or may not be possible to formulate Hypothesis during exploratory stage. To get an insight into the problem, literature search, experience surveys, focus groups, and selected case studies assist in gaining insight into the problem. The role of moderator or facilitator is extremely important in focus group. There are several variations in the formation of focus group.

Descriptive research is rigid. This type of research is basically dependent on hypothesis. Descriptive research is used to describe the characteristics of the groups. It can also be used forecasting or prediction. Panel data is used in longitudinal studies. There are 2 different types of panels. True panel and Omni bus panel.

In true panel same measurement are made during period of time. In Omni bus panel different measurement are made during a period of time. cross sectional studies involves field study and field survey, the difference being the size of sample.

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## KEYWORDS

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Exploratory research	Descriptive research
Conclusive research	Focus group
Moderator	Longitudinal study
Cross sectional study	True panel
Omni bus panel	Field study
Field survey	

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## REVIEW QUESTIONS

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1. Why is research design necessary to conduct a study?
2. What are the various types of research design? Explain with examples.
3. What is exploratory research? Give Example Under what circumstances, exploratory research is ideal?
4. What are the sources available for data collection at exploratory stage?
5. What are the different variations in the focus group?
6. What are the characteristic that a moderator should possess while conducting the focus group?
7. What are the uses of descriptive research and when will it be used?
8. What are the various types of descriptive studies?
9. What are the Longitudinal and cross sectional studies?
10. Describe the various types of panels and its use?
11. What is a Sample survey? What are its benefits?
12. What the various types of cross sectional studies?
13. What are the benefits and limitations of each?
14. Distinguish exploratory from descriptive research?
15. What are the advantages and disadvantages of panel data?

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## ASSIGNMENT-1

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For each of the situation mentioned below, state whether the research should be exploratory, descriptive or causal:

1. To find out the relationship between promotion and sales.
2. To find out the consumer reaction regarding use of new detergents which are economical.
3. To identify the target market demographics, for a shopping mall.
4. Estimate the sales potential for ready-to-eat food in the northeastern parts of India.

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## ASSIGNMENT-2

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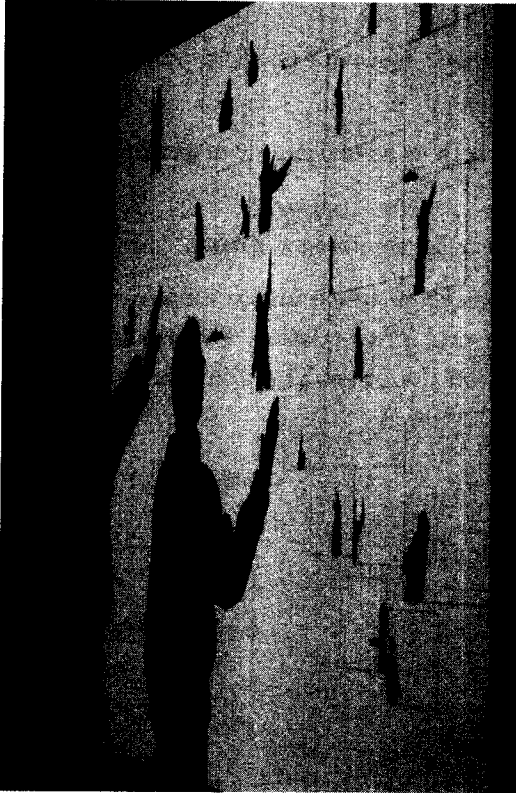
For the below mentioned scenario, lay down your recommendation of the most suitable type of research. Explain the reasons for your choice.

- (1) Exploratory
- (2) Descriptive
- (3) Experimentation
- (4) Longitudinal
- (5) Cross-sectional.
  - a) A tyre manufacturer is expecting recession in the next two years. The firm would like to know the changes that are to be made in the current marketing strategy, so as to minimize the adverse effect of the company's performance on account of recession.
  - b) A company manufacturing cell phones is concerned about a new brand being introduced by a competitor. The company would like to monitor how the new brand of the competitor will affect its market share in the next one year.
  - c) A ready-to-eat food major would like to introduce iced tea. The company feels that this product is superior to what is already available in the market. The company wants to develop a unique promotional theme for the new product so that it may be clearly differentiated by the consumer and should appeal to broader section of the population.
  - d) A co-operative bank has 4,000 customers who have taken personal loan or vehicle loan. Of late, the bank feels that there has been an increase in the number of defaulters. The bank would like to know whether people who are regular (no default) and defaulters differ in terms of characteristics such as age, income, occupation, sex, marital status.





# Causal Research



**In this chapter, the following questions are discussed:**

- ❖ What is causal research?
- ❖ How to solve the research problem systematically?
- ❖ What are the different types of experimental designs?
- ❖ What are the errors that affect the research design?
- ❖ What is the systemic approach to research design?

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## 7.1 CAUSAL RESEARCH OR EXPERIMENTAL RESEARCH

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Descriptive research will suggest a relationship if any between the variables, but it will not establish the cause and effect relationship between them. *Example:* The data collected may show that the number of people who own a car and their incomes have risen over a period of time. Despite this, we cannot definitely say “that the increase in number of cars is due to rise in people’s income.” Perhaps improved road conditions or increase in number of banks offering car loans have caused an increase in the ownership of cars.

(a) Sometimes, the marketing manager wants to draw certain conclusions such as:

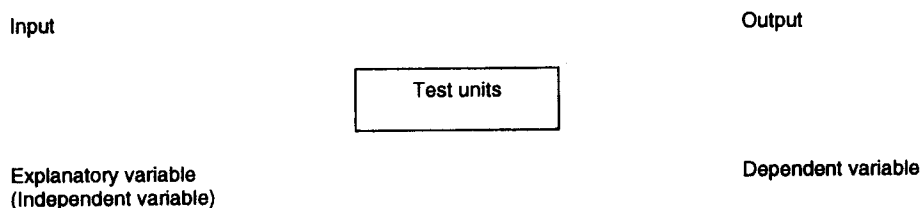
- (1) Impact of retail price on sales
- (2) Effect of advertising on the sales of a product
- (3) Effect of improved packing upon sales.

To ascertain the causal relationship between the variables, the researcher has to carry out an experiment.

*Examples of experimentation:*

- ❖ Which print advertisement is more effective? Is it the front page, middle page or the last page?
- ❖ Among several promotional measures, such as advertisement or personal selling, “which one is more effective”?
- ❖ Can we increase the sales of our product by obtaining additional shelf space?

(b) What is **experimentation**? It is a research process in which one or more variables are manipulated, which demonstrate the cause and effect relation. Experimentation is done to find out the effects of one factor on the other. The different elements of experiment are explained below.



### 7.1.1 Test Units

These are units on which the experiment is carried out. It is done with one or more independent variables controlled by a person to find out its effect on a dependent variable.

### 7.1.2 Explanatory Variable

These are the variables whose effects the researcher wishes to examine. *Example:* Explanatory variables may be advertising, pricing, packaging etc.

### 7.1.3 Dependent Variable

This is a variable which is under study. *Example:* Sales, Consumer attitudes, Brand loyalty etc.

*Example:* Suppose a particular colour TV manufacturer reduces the price of the TV by 20%. Assume that his reduction is passed on to the consumer and expect the sales will go up by 15% in next one year. These types of experiments are done by leading TV companies during the festival season.

The causal research finds out whether the price reduction causes an increase in sales.

#### 7.1.4 Extraneous Variables

These are also known as blocking variables. Extraneous variables affect the results of the experiments. *Example:* Suppose a toffee manufacturing company is making an attempt to measure the response of the buyers to two different types of packaging, at two different locations. The manufacturer needs to keep other aspects the same, for each group of buyers. If the manufacturer allows the extraneous variable, namely, the price to vary between two buyer groups, then he will not be sure as to which particular packaging is preferred by the consumers. Here the price change is an **extraneous** factor.

There are two possible course of action with respect to extraneous variables.

Extraneous variables may be physically controlled. *Example:* Price in the above example.

In the second category, extraneous variables may totally elude the researcher's control. In this case, we say that the experiment has been confounded i.e., it is not possible to make any conclusions with regard to that experiment. Such a variable is known as "**Confounding variable**".

*Example:* A company introduces a product in two different cities. It would like to know the impact of advertising on sales. Simultaneously, the competitors' product in one of the cities is not available during this period due to a strike in the factory. Now, the researcher cannot conclude that sales of their product in that city has increased due to advertisement. Therefore, this experiment is confounded. In this case, the strike is the confounding variable.

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## 7.2 TYPES OF EXTRANEIOUS VARIABLES

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The following are the various types of extraneous variables:

- History
- Maturation
- Testing
- Instrument variation
- Selection bias
- Experimental mortality

### 7.2.1 History

History refers to those events which are external to the experiment, but occur at the same time as experiment is being conducted. This may affect the result. *Example:* Let us suppose that, a manufacture makes a 20% cut in the price of a product and monitors sales in the coming weeks. The purpose of research is to learn about the impact of price on sales. Meanwhile, if the production of the product declines due to a shortage of raw materials, then the sales will not increase. Therefore, we cannot conclude that the price cut did not have any influence on sales because the **history** of external events have occurred during the period and we cannot control the event. The event can only be identified.

### 7.2.2 Maturation

Maturation is similar to history. Maturation specifically refers to the changes occurring within the test units and not due to the effect of the experiment. Maturation takes place due to passage of time. It refers to the effect of people growing older. Persons who use a particular product may discontinue using that product and may switch over to an alternate product. *Example 1:* Pepsi is consumed when people are young. Due to passage of time, the consumer might prefer to consume Diet Pepsi or even avoid it altogether.

*Example 2:* Assuming that a training programme is conducted for salesmen, the company wants to measure the impact of its sales programme. If the company finds that the sales have improved, it may not be due to its training programme. It may be because their salesmen have gained more experience now and know the customer better. Better understanding between salesmen and customer may be the reason for increased sales.

Maturation effect is not just limited to test unit, composed of people alone. Organisations also change, dealers grow, become more successful, diversify, and so on.

### 7.2.3 Testing

Pre-testing effect occurs, when the same respondents are measured more than once. Responses given at a later stage will have a direct bearing on the responses given during an earlier measurement.

*Example:* Consider a respondent, who is given an initial questionnaire, intended to measure brand awareness. After examining him, if a second questionnaire similar to the initial questionnaire is given to the respondent, he will respond quite differently, because of the respondent's familiarity with the earlier questionnaire.

Pretest suffers from limitations of internal validity. This can be understood through an example. Assume that a respondent's opinion is measured before and after exposure to a

TV commercial of Hyundai car with Shahrukh Khan as brand ambassador. When the respondent replies for second time, he may remember, how he rated Hyundai during the first measurement. He may give the same rating to simply prove that he is consistent. In that case, the difference between the two measurements will reveal nothing about the real impact.

Alternately, some of the respondents might give a different rating during the second measurement. This may not be due to the fact that the respondent has changed his opinion about Hyundai and the brand ambassador. He has given different rating because he does not want to be identified as a person with no change of opinion to the said commercial.

In both cases above, the internal validity suffers.

### 7.2.4 Instrument Variation

Instrument variation effect is a threat to internal validity when human respondents are involved. *Example:* An equipment such as vacuum cleaner is left behind for the customer's use for two weeks. After two weeks, respondents were given a questionnaire to answer. The reply may be quite different from what was before the trial of the product. This may be because of two reasons:

- (1) Some of the questions have been changed.
- (2) The interviewers for pre-testing and post-testing periods are different.

The measurement in experiments will depend upon the instrument used for measurement. Also, results may vary due to the application of instruments, where there are several interviewers. Thus, it is very difficult to ensure that all the interviewers will ask the same questions with the same tone and develop the same rapport. There may be difference in response, because each interviewer conducts the interview differently.

### 7.2.5 Bias in Selection

Bias in selection occurs because two groups selected for experiment may not be identical. If the two groups are asked various questions, they will respond differently. If multiple groups participate this error recurs frequently. There are two promotional advertisements, A and B, for 'ready to eat food'. The idea is to gauge the effectiveness of two advertisements. Assume that the respondent exposed to 'A' are the dominant users of the product. Now, suppose 50% of those who saw Advertisement A bought the product and only 10% of those who saw Advertisement B bought the product. From the above, one should not conclude that advertisement 'A' is more effective than advertisement 'B'. The main difference may be due to food preference habits between the groups; even in this case, the internal validity might suffer but to a lesser degree.

### 7.2.6 Experimental Mortality

Some members may leave the original group and some new members may join the old group. This is because some members might migrate to another geographical area. This change in composition of the members will alter the composition of the group itself.

*Example:* Assume that a vacuum cleaner manufacturer wants to introduce a new version. He interviews hundred respondents who are currently using the older version. Let us assume that, these 100 respondents have rated the existing vacuum cleaner on a 10 point scale (1 for lowest and 10 for highest). Let the mean rating of the respondents be 7.

Now the newer version is demonstrated to the same hundred respondents and the equipment is left with them for two months. At the end of two months, only 80 participants respond, since the remaining 20 refused to answer. Now the mean score of 80 respondents is 8 on the same 10 point scale. From this, can we conclude that the new vacuum cleaner is better?

The answer to the above question depends on the composition of 20 respondents who dropped out. Suppose the 20 respondents who dropped out displayed negative reaction to the product, then the mean score would not have been 8. It would have been even lower than 7. The difference in mean rating does not give the true picture. It does not indicate that the new product is better than the old one.

One might wonder, why not we leave the 20 respondents from the original group and calculate the mean rating of the remaining 80 and compare the two? But this method will also not solve the mortality effect. Mortality effect will occur in an experiment, irrespective of whether human beings are involved or not.

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## 7.3 CONCOMITANT VARIABLE

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Concomitant variable is the extent to which a cause 'X' and the effect 'Y' vary together in a predicted manner. *Example 1:* Electrical cars are new to India. People may or may not hold a positive attitude about electrical cars. Assume that the company has undertaken a new advertising campaign "to change the attitude of the people towards this car" so that the sale of this car could increase. Suppose, in verifying the result of this campaign, the company finds that both aims have been achieved i.e., the attitude of the people towards electrical car has turned positive and also the sales have increased. We can then say that there is a **concomitant** variation between attitude and sales, both variables move in the same direction.

*Example 2:* Suppose an educational institute introduces a new course which it claims as job-oriented. The college authorities advertise this course in leading newspapers. They

would like to know the perception of students to this course, and how many are willing to enroll. If upon, verifying it is found that the perception towards this course as positive and majority of the respondents are willing to enroll, then we can say that there is a concomitant variation between perception and enrolment. Both variables move in the same direction.

Points to remember
<p>a) For causal research, the method of data collection is by experiment. The purpose is to measure the effect of the independent variable on the dependent variable.</p> <p>b) For descriptive research, the main method of data collection is by questioning respondents using personal interviews, telephone interviews and mail questionnaire.</p> <p>c) For exploratory research, secondary data is most useful.</p>

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## 7.4 SYSTEMATIC APPROACH IN SOLVING A RESEARCH PROBLEM

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*Example:* State transport authorities are seeking to understand: “Why is it that the number of people travelling by a particular bus route has declined suddenly?” The first step is exploratory research. It could be due to any of the following reasons:

- Bad weather
- Increase in fares
- Poor frequency of the bus service
- Bad condition of the vehicle
- Duration of the journey is more, relative to other means of transport.

*First step:* By a process of elimination, proceed as follows:

Check the weather records from the meteorological department for the period when the occupancy declined. If there was change, eliminate weather as the cause and so on.

*Second step:* Meet the commuters to know the factor which they think as most important. If the passengers are not sensitive to fare or frequency, proceed to the next step. Information can be collected by designing a small questionnaire.

*Third step:* This is causal research. Under causal research, the researcher will find out how one variable influences the other. In this case, he can find out whether the duration of the journey and the number of people travelling are related to each other.

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## 7.5 EXPERIMENTAL DESIGNS

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The various experimental designs are as follows:

- Purely post-design
- Before – after design
- Factorial design
- Latin square design
- Ex-post facto design

### 7.5.1 Purely post-design

In this design, the dependent variable is measured after exposing the test units to the experimental variable. This can be understood with the help of following example:

Assume M/s Hindustan Lever Ltd wants to conduct an experiment on the “Impact of free sample on the sale of toilet soaps”. A small sample of toilet soaps are mailed to selected customers in a locality. After one month, a coupon of 25 paise off on one cake of soap is mailed to each customer to whom free samples were sent earlier. An equal number of these coupons are also mailed to people in another locality in the neighborhood. The coupons are coded to keep an account of the number of coupons redeemed from each locality. Suppose, 400 coupons were redeemed from the experimental group and 250 coupons were redeemed from the control group. The difference of 150 is supposed to be the effect of free samples. In this method, the conclusion can be drawn only after conducting the experiment.

### 7.5.2 Before – After Design

In this method, measurements are made before as well as after the design. *Example:* Let us say that, an experiment is conducted to test an advertisement which is aimed at reducing alcoholism.

Attitudes and perceptions towards consuming liquor are measured before exposure to the advertisement. The group is exposed to an advertisement, which tells them the consequences, and their attitudes are again measured after several days. The difference, if any, shows the effectiveness of that advertisement.

The above example of “Before-after” suffers from validity threat due to the following.

#### Before Measure Effect

It alerts the respondents to the fact that they are being studied. The respondents may discuss the topics with friends and relatives and modify their behaviour accordingly.



## Instrumentation Effect

This can be due to two different instruments being used – one before and one after. A change in the interviewers before and after, results in the instrumentation effect.

### 7.5.3 Factorial Design

Factorial design permits the researcher to test two or more variables at the same time. Factorial design helps to determine the effect of each of the variables and measure the interacting effect of many variables.

**Example:** A departmental store wants to study the impact of price reduction for a product. Given that, there is also promotion (POP) being carried out in the stores (a) near the entrance (b) at usual place, at the same time. Now assume that there are two price levels namely regular price  $A_1$  and reduced price  $A_2$ . There are three types of POP namely  $B_1$ ,  $B_2$  and  $B_3$ . There are  $3 \times 2 = 6$  combinations possible. The combinations possible are  $B_1A_1$ ,  $B_1A_2$ ,  $B_2A_1$ ,  $B_2A_2$ ,  $B_3A_1$ ,  $B_3A_2$ . The combinations is best suited is what the researcher is interested in. Support departmental stores of the chain divided into groups of 10 stores each. Now, randomly assign the above combination to each of these 10 stores as follows:

Combinations	Sales
$B_1A_1$	$S_1$
$B_1A_2$	$S_2$
$B_2A_1$	$S_3$
$B_2A_2$	$S_4$
$B_3A_1$	$S_5$
$B_3A_2$	$S_6$

$S_1$  to  $S_6$  represents the sales resulting from each variable. The data gathered will provide details on product sales on account of two independent variables.

The two questions that will be answered are.

Is the reduced price more effective than regular price?

Is the display at the entrance more effective than the display at the usual location? Also, the research will tell us about the interaction effect of the two variables.

Outcome of this experiment on sales is as follows:

1. Price reduction with display at the entrance.
2. Price reduction with display at the usual place.
3. No display and regular price applicable.
4. Display at the entrance with regular price applicable.

### 7.5.4 Latin Square Design

The researcher chooses three shelf arrangements in three stores. He would like to observe the sales generated in each of these stores at different periods. The researcher must make sure that one type of shelf arrangement is used in each store only once.

In the Latin Square design, only one variable is tested. As an example of Latin Square design, assume that a supermarket chain is interested in the effect of in-store promotion on sales. Suppose there are 3 promotions considered as follows:

1. No promotion.
2. Free sample with demonstration.
3. Window display.

Which of the three will be effective may be affected by the size of the stores and the time period. If we check the total number of combination is  $3 \times 3 = 9$ .

Time period			
	1	2	3
1	B	C	A
2	C	A	B
3	A	B	C

### 7.5.5 Ex-post Facto Design

This is a variation of “after only design”. The groups such as experiment and control are identified only after they are exposed to the experiment.

Let us assume that a magazine publisher wants to ascertain the impact of advertisement on knitting in ‘*Women’s Era*’ periodical. The subscribers were asked whether they have seen this advertisement on ‘knitting’. Those who have read and not read were asked about the price, design etc. of the product. The difference indicates the effectiveness of the advertisement. In this design, the experimental group is set to receive the treatment rather than exposing it to the treatment by its choice.

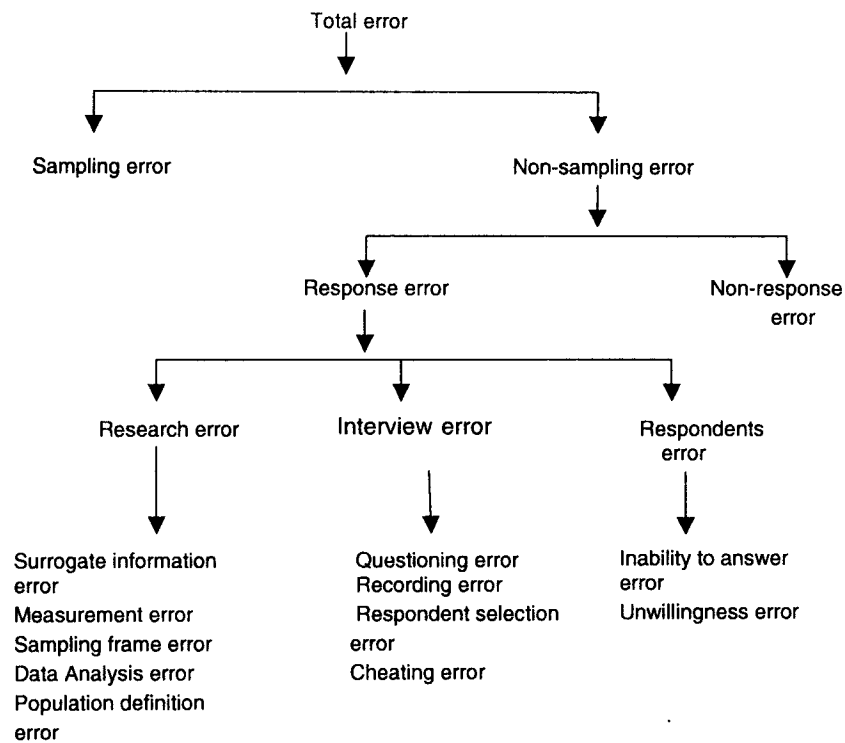
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## 7.6 TYPES OF ERRORS AFFECTING RESEARCH DESIGN

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There are several sources of errors. Attempts should be made to keep the errors down to a minimum. The total error is made up of sampling error and non-sampling error. The total error is the variation between the true mean value of the population and the observed mean value obtained in the market research.

*Example:* If the average age of the population is 28 as per census and market research figure indicates 23, this variation (five) is the error.



### 7.6.1 Non-sampling Error

This is an error occurring for reasons other than sampling. This error could be due to factors such as interviewing method, design of questionnaire etc.

*Example:* If the questionnaire is poorly designed with many ambiguities, the response will be poor. Non-sampling errors consists of non-response errors and response errors.

### 7.6.2 Non-response Error

This happens when chosen respondents do not respond. This may be due to (1) Non-availability of the respondent (2) Refusal to answer. Non-response will cause the resulting sample to be of a different size compared to original sample.

### 7.6.3 Response Error

Response error occurs due to any of the eventualities– (1) Misrecording (2) Inaccurate answer (3) Wrong analysis errors made by the researcher include (i) Surrogate

information (ii) Measurement (iii) Population definition (iv) Sampling frame and data analysis error.

#### **7.6.4 Surrogate Information**

It is defined as a variation between the information needed and that sought by the researcher

*Example:* Instead of obtaining information on consumer choice of a **new brand**, the researcher obtains information on **consumer preference** because the process of choice is difficult to observe.

#### **7.6.5 Measurement Error**

This happens due to the use of a wrong scale. The measurement required may be consumer preference but the scale employed is such that it measures perception instead of preference.

#### **7.6.6 Population Definition Error**

This is the difference between the actual population and the population defined by the researcher.

*Example:* The population needed is affluent people but researcher defines them by taking the upper middle class. This may be due to an incorrect definition of 'affluent group'.

#### **7.6.7 Sampling Frame Error**

Assume that a telephone directory is used as a sampling frame. Where there may be omissions, migration of people, new additions, disconnected lines etc. this will cause an error.

#### **7.6.8 Data Analysis Error**

This occurs when the data is transferred from the questionnaire. This could be any of the following (1) Graphical illusion (2) Mix up in row and column percentages (3) Difficulty in recording open-ended questions (4) Misuse of arithmetic operations and wrong interpretation. Open-ended questions do not focus on what the response is; in fact, open-ended questions are well-suited for qualitative research, but inappropriate for quantitative measurements.

#### **7.6.9 Respondent Selection Error**

This occurs when the interviewer selects a respondent other than the individual specified as a sample. *Example:* While surveying newspaper or periodical readership, a non-reader is selected for interview.

### 7.6.10 Questioning Error

This occurs during the process of interviewing a respondent. This may occur out of not using the same word or context with respect to the questionnaire. It could also be due to ambiguity in the question.

### 7.6.11 Recording Error

Errors in interpreting or failing to concentrate when the respondent replies. *Example:* “When do you think, you will switch over to the new brand” may be the question. The answer perhaps could be ‘shortly’. The researcher may misinterpret this as ‘immediate’ and project an immediate demand for the product.

### 7.6.12 Cheating Error

This is because the interviewer fills the questionnaire without interviewing anybody. Sometimes, the interviewer may find it very delicate to ask questions about sensitive issues such as habits, debts etc. He may fill up the questionnaire based on his own judgement.

Response error comprises of (1) Inability (2) Unwillingness

### 7.6.13 Inability Error

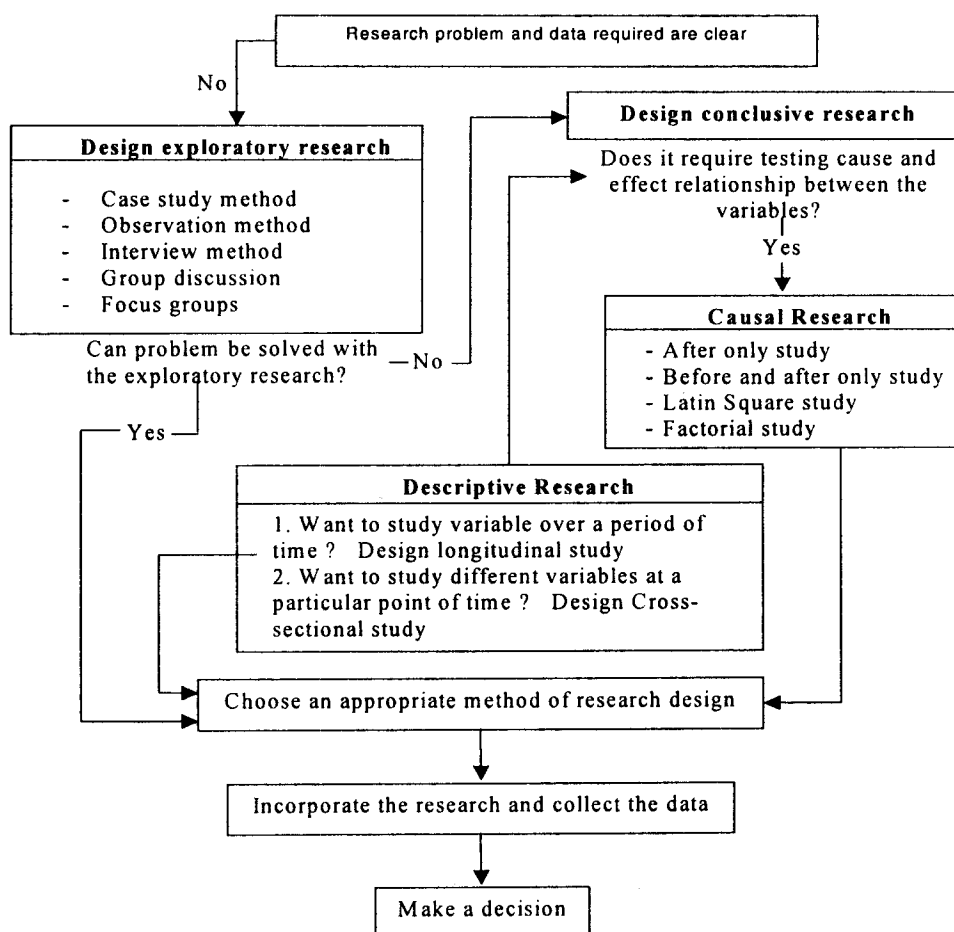
Inability may be due to (1) Respondent not being familiar with the subject (2) Boredom (3) Fatigue on the part of the respondent (4) Faulty recall of what is being asked (5) Question content (6) Passage of time. “What shirt were you wearing on your birthday last week”. The respondent may not be able to recall.

### 7.6.14 Unwillingness Error

This may be due to the fact that the respondent wants to avoid embarrassment for the interviewer or alternatively, impress the interviewer.

Non-sampling errors are more problematic than sampling errors. Sampling errors can be computed, but non-sampling errors are difficult to compute.

## 7.7 SYSTEM APPROACH TO RESEARCH DESIGN



### SUMMARY

This chapter deals with causal research design. Causal research is conducted mainly to prove the fact that one factor "X" the cause was responsible for the effect "Y". While conducting experiment, the researcher must guard against extraneous source of error. This may confound the experiment. Some of the extraneous factors, affecting the experiments are history, maturation, testing instrument, selection bias and experimental mortality concomitant variation refers to the extent to which variable X is related to variable "Y". Also it is to be understood that no one type of research can solve all the problems. All 3 type of research need to be put into use to solve the problem, in the order of exploratory,

descriptive and causal. There are several experimental design such as Latin square design, Factorial design etc each of which is used by the researcher under a particular circumstances. Latin square is appropriate when 2 extraneous factors are there, which causes distortion of results. Factorial design involves only one experimental variable.

Research design is affected by various types of errors such as sampling and non sampling error. At the end of the chapter, system approach to research design is diagrammatically shown.

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## KEYWORDS

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Causal research	Explanatory variable
Dependent variable	Independent variable
Extraneous variable	Maturation History
Selection Bias	Experiment, Mortality
Concomitant variable	Ex post facto design
Latin square design	Factorial design
Instrumentation effect	

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## REVIEW QUESTIONS

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1. What is casual research? Give Example
  - a) What is experimentation? Give Example
2. What are Extraneous variables and Explanatory variables? Give Example
3. What are confounding and concomitant variable. Give Example
4. Explain briefly
  - a. After only design
  - b. Before after design
  - c. Factorial design
  - d. Latin square design.
5. What the positive and negatives of a laboratory experiment?
6. What are the limitation of experimentation?
7. What is the difference between a laboratory experiment and field experiment?

8. What is a test unit give example?
9. Explain the advantages of Experimental design
10. What are the various extraneous variables which affects internal validity?
11. Explain each of the following with examples
  - a) Maturation
  - b) History
  - c) Instrument variation.
  - d) Mortality
12. What is ex post facto design. Explain with an example.
13. What type of research is used to solve the following problems
  - a) Study on declining sales in a Geographical territory.
  - b) Study to choose location for establishing a shopping mall
  - c) To estimate the demand for computer for the next 10 yrs.
14. Which type of research is used to solve which kind of market research problem?
15. What type of data collection would you recommend for each type of research?

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### ASSIGNMENT-1

A medium-size manufacturer of calculators was introducing a new scientific model. The company wants to communicate the same through an advertising programme. There was a discussion between the Marketing Manager and Vice-President — Marketing regarding this. The Marketing Manager was of the opinion that emphasis in the advertisement should be on features, since that would generate more sales. The Vice-President was of the opinion that the advertisement should emphasise on price, discounts etc. Since there was a difference in opinion, a market research agency was called and told to suggest a research design which would aid in making a final decision about the advertising programme.

If you were to head the Ad agency, what research design would you recommend and why?

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### ASSIGNMENT-2

A leading, food manufacturer inserted a full-page advertisement in a Metro, offering a double coupon deal i.e. the retail store will redeem the company coupon at twice its face



value to customers who shopped in Ahar between 8 AM to 9 PM the next day. A random sample of 200 consumers on the following day of promotion produced the results as below:

- a. 100 of the 200 respondents had been to Ahar between 8 AM to 9 PM.
- b. Of these 100 respondents, 85 had seen the company's full-page advertisement.
- c. Of the remaining 100 respondents, who had not been to Ahar, only 50 had seen the company's ad.

On the basis of the above findings of the survey, the company claimed that, the promotion was a "big success". Do you agree? If so, explain why do you think so?

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### **ASSIGNMENT-3**

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Discuss the extent of surrogate information present in each of the following research situations:

**Information required**

- (a) Consumer purchase of medium-priced shirts during the next 12 months
- (b) Purchase of a health drink in the next 12 months

**Information sought**

- Consumers' purchase intentions over the next 12 months
- Actual purchases during the past 12 months

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### **ASSIGNMENT-4**

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You are the manager of product planning and marketing research for a home appliance stores. Your company is considering a proposal to manufacture and market an emergency lamp in which segment the company currently does not have any product. You have assigned this project to one of your subordinates.

- (a) Is this an exploratory, descriptive, or a causal study?
- (b) What data would be useful for deciding whether to develop an emergency lamp or not?
- (c) How will you design a study to obtain the needed data?



# Secondary Data



In this chapter, the following questions are discussed:

- ❖ What is secondary data?
- ❖ What are the sources of secondary data?
- ❖ What are the types of syndicated data?
- ❖ What are the advantages and disadvantages of secondary data?

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## 8.1 SECONDARY DATA

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Secondary data are statistics that already exist. They have been gathered not for immediate use. This may be described as “those data that have been compiled by some agency other than the user”. Secondary data can be classified as:

- Internal secondary data
- External secondary data

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## 8.2 INTERNAL SECONDARY DATA

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Internal secondary data is a part of the company's record, for which research is already conducted. Internal data are those that are found within the organisation. *Example:* (Sales in units, credit outstanding, call reports of sales persons, daily production report, monthly collection report, etc.)

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## 8.3 EXTERNAL SECONDARY DATA

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The data collected by the researcher from outside the company. This can be divided into four parts:

- Census data
- Individual project report being published
- Data collected for sale on a commercial basis called syndicated data
- Miscellaneous data
- **Census data** is the most important data among the sources of data. The following are some of the data that can be obtained by census records.
- Census of the wholesale trade
- Census of the retail trade
- Population Census
- Census of manufacturing industries
- Individual project report being published
- Encyclopedia of business information sources
- Product finder
- Thomas registers etc.

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## 8.4 SPECIAL TECHNIQUES OF MARKET RESEARCH OR SYNDICATED DATA

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These techniques involve data collection on a commercial basis i.e., data collected by this method is sold to interested clients on payment. Examples of such organisations are A.C. Neilson, ORG Marg, IMRB etc. These organizations provide NRS called National Readership Survey to the sponsors and advertising agencies. They also provide business relationship survey called BRS which estimates the following:

- (a) Rating
- (b) Profile of the company etc.
- (c) These people also provide TRP rating namely television rating points on a regular basis. This provides:
  - (i) Viewership figures
  - (ii) Duplication between programmes, etc. Some of the interesting studies made by IMRB are SNAP- Study of Nations Attitude and Awareness Programme. In this study, the various groups of India's population and their lifestyles, attitudes of Indian housewives were detailed.
    - (a) There is also a study called FSRP which covers children in the age group of 10-19 years. Beside their demographics and psychographics, the study covers areas such as:
      - ❖ Children as decision-makers
      - ❖ Role models of Indian children
      - ❖ Pocket money and its usage
      - ❖ Media reviews
      - ❖ Favoured personalities and characteristics
      - ❖ Brand awareness and advertising recall.

Syndicated sources consist of market research firms offering syndicated services. These market research organisations collect and update information on a continuous basis. Since data is syndicated, its cost is spread over a number of client organisations and hence is cheaper. For *example*: A client firm can give certain specific question to be included in the questionnaire, which are used routinely to collect syndicated data. The client will have to pay extra charges for these. The data generated from additional questions and analysis will be revealed only to the firms submitting the questions. Therefore we can say that the customization of secondary data is possible. Some areas of syndicated services are newspapers, periodical readership, popularity of TV channels, etc. Data from syndicated sources are available on a weekly or monthly basis.

Syndicated data may be classified as:

- (a) Consumer purchase data
- (b) Retailer and wholesaler data
- (c) Advertising data.

Most of these data collection methods as mentioned above are also known as syndicated data. Syndicated data can be classified into:

### 8.4.1 Consumer Purchase Data or Panel Type Data

This is one type of syndicated data. In this method there are consumer panels. Members of this panel will be representative of the entire population. Panel members keep diaries in which they record all purchases made by them. Products purchased range from packaged food to personal care products. Members submit the dairies every month to the organisations for which they are paid. This panel data can be used to find out the sales of the product. These panel data also provides an insight into repeat purchases, effect of free samples, coupon redemption etc.

The consumer panel data also provides profile of the target audience. Nowadays, dairies are replaced by hand-held scanners. Panels also provide data on consumer buying habits on petrol, auto parts, sports goods etc.

#### *Limitations*

- ✓ Low-income groups are not represented
- Some people do not want to take the trouble of keeping records of their purchases. Therefore, relevant data is not available.

#### *Advantages*

- Use of scanner tied to the central computer helps the panel members to record their purchases early (almost immediately).
- It also provides reliability and speed.
- Panel can consist only of senior citizens or only children.

We also have the consumer mail panel (CMP). This consists of members who are willing to answer mail questionnaires. A large number of such households are kept on the panel. This serves as a universe through which panels are selected.

### 8.4.2 Retail and Wholesale Data

Marketing research is done in a retail store. These are organisations that provide continuous data on grocery products. The procedure does not involve questioning people and also does not rely on their memory. This requires cooperation from the retailer to allow auditing to be carried out. Generally, retail audit involves counting of stocks between two consecutive visits. It involves inspection of goods delivered between visits. If the stock of any product in the shop is accurately counted during both the visits and data on deliveries are accurately taken from the records, the collection of sales of a product over that period can be determined accurately as follows:

$$\text{Initial stock} + \text{Deliveries between successive visits} - \text{second time stock} = \text{sales}$$

If this information is obtained from different shops from the representative sample of shops, then the accurate estimates of sales of the product can be made. To do this, some shops can be taken as a “Panel of shops” representing the universe.

#### *Advantages*

- It provides information between audits on consumer purchase over the counter in specific units. For *example*, KGs, bottles, No's etc.
- It provides data on shop purchases i.e., the purchases made by the retailer between audits.
- The manufacturer comes to know how competitor is doing?
- It is a very reliable method.

#### *Disadvantages*

- Experience is needed by the market researcher
- Cooperation is required from the retail shop
- It is time consuming

### **8.4.3 Advertising Data**

Since a large amount of money is being spent on advertising, data needs to be collected on advertising. One way of recording is by using passive meter. This is attached to a TV set records when the set was 'On'. It will record “How long a channel is viewed”. By this method, data regarding audience interest in a channel can be ascertained. One thing to be noticed from the above is that it only tells you that someone is viewing television at home. But it does not tell you “who is viewing at home”. To find out “who is viewing” a new instrument called 'People's Meter' is introduced. This is a remote-controlled instrument buttons. Each household is given a specific button. When that button is pressed, it signals the control box that a specific person is viewing. This information is recorded electronically and sent to a computer that stores this information which is subsequently analysed.

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### **8.5 MISCELLANEOUS SECONDARY DATA**

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This data includes trade associations such as FICCI, CEI, Institution of Engineers, Chamber of Commerce, libraries such as public library, university libraries, etc, literature, state and central government publications, private sources such as All India Management Association (AIMA), Financial Express and financial dailies, world bodies and international organizations such as IMF, ADB etc.

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## 8.6 ADVANTAGES AND DISADVANTAGES OF SECONDARY DATA

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### *Advantages*

- It is economical, without the need to hire field staff.
- It saves time; (normally 2 to 3 months). If data is available on hand it can be tabulated in minutes.
- They provide information, which retailers may not be willing to reveal to researcher.
- No training is required to collect this data, unlike primary data.

### *Disadvantages*

Because secondary data has been collected for some other projects, it may not fit in with the problem that is being defined. In some cases, the feed is so poor that the data becomes completely inappropriate. It may be ill-suited because of the following three reasons:

- Unit of measurement
- Definition of a class
- Recency

### **Unit of Measurement**

It is common for secondary data to be expressed in units. *Example:* Size of the retail establishments, for instance, can be expressed in terms of gross sales, profits, square feet area and number of employees. Consumer incomes can be expressed in variables the individual, family, household etc. Secondary data available may not fit in easily.

Assume that the class intervals is quite different from those which are needed. *Example:* Data available with respect to age group is as follows :

<18 year

18 – 24 years

25 – 34 years

35 – 44 years

Suppose the company needs a classification less than 20, 20–30 and 30–40, the above classification of secondary data cannot be used.

### **Problem of Accuracy**

The accuracy of secondary data available is highly questionable. A number of errors are possible in the collection and analysis of the data. Accuracy of secondary data depends upon:



- (a) Who has collected the data?
- (b) How is the data collected?
- (a) *Who has collected the data:* The reliability of the source determines the accuracy of the data. Assume that a publisher of a private periodical conducts a survey of his readers. The main aim of the survey is to find out the opinion of readers about advertisements appearing in it. This survey is done by the publisher in the hope that other firms will buy this data before inserting advertisements.

Assume that a professional M.R agency has conducted a similar survey and has sold its syndicated data on many periodicals.

If you are an individual who wants information on a particular periodical you buy the data from M.R agency rather from the periodical's publisher. The reason for this is trust of the M.R agency. The reasons for trusting the M.R agency are as follows:

1. Being an independent agency there is no bias. The M.R agency is likely to provide an unbiased data.
2. The data quality of MR agency will be good since they are professionals.

(b) *How the data collected?*

1. What instruments were used?
2. What type of sampling was done?
3. How large was the sample?
4. What was the time period of data collection? *Example:* days of the week, time of the day.

### Recency

This pertains to "how old was the information?" If it is five years old, it may be useless. Therefore, the publication lag is a problem.

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### SUMMARY

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Secondary data are statistics that already exists. These may not be readily used because these data are collected for some other purpose. There are 2 types of secondary data (1) Internal and (2) External secondary data. Census is the most important among secondary data. Syndicated data is an important form of secondary data which may be classified into (a) Consumer purchase data (b) Retailer and wholesale data (c) Advertising data. Each has advantages and disadvantages. Secondary data has its own advantages and disadvantages.

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## KEYWORDS

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Internal data

External data

Syndicated data

Census panel

Retail / Wholesale data

Consumer purchase data

C.M.P

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## REVIEW QUESTIONS

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1. What is meant by secondary data?
2. Differentiate between internal and external secondary data.
3. What are the sources of secondary data?
4. What are the types of secondary data?
5. What are the special techniques of secondary data?
6. What are the classification of syndicated data?
7. What are the advantages and limitations of syndicated data?
8. What are the advantages and disadvantages of secondary data?
9. Discuss the sources of secondary data for the study on “consumer purchasing a white good”.
10. What is Omnibus Survey?
11. Briefly describe the retail panels, consumer surveys, audits.
12. What are the advantages and disadvantages of Omnibus survey?
13. What is a consumer panel? What are the main problems faced while using consumer panels for collecting market research data?
14. Differentiate between omnibus and syndicated panel.

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## ASSIGNMENT

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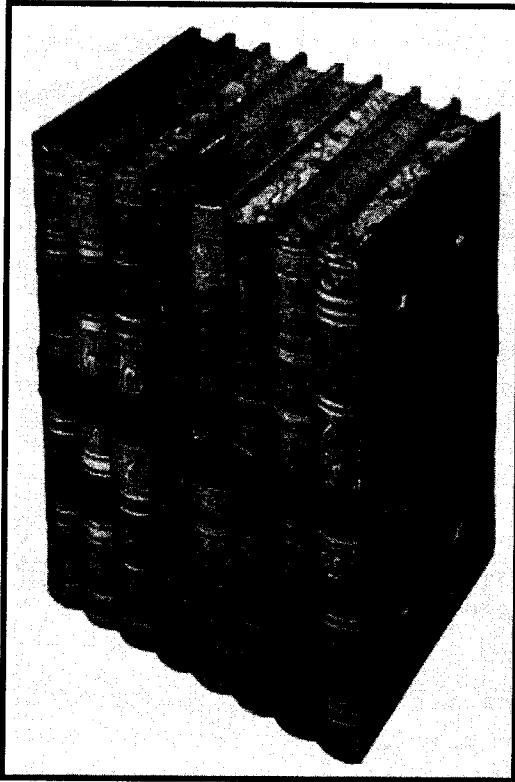
List some major secondary sources of information for the following:

- a. Market research manager of a tea manufacturing company has to prepare a comprehensive report on the tea industry as a whole.

- b. M.T.R has several product ideas on ready-to-eat products. It wishes to convert ideas into products and enter the market. Before entering, the company needs to find necessary information to assess the market potential.
- c. An MNC wishes to open a showroom in a Metro. The first step that the company would like to take is to collect the information about suitability.
- d. Number of residential houses less than 10 years old in a given locality.
- e. Number of consultancy/recruitment firms in a city.
- f. Percentage of families with children less than 15 years in a given locality.
- g. Citizens who have electoral I.D cards in a local city.
- h. Annual sales figures of a multi-retail outlet.



# Literature Review



In this chapter, the following questions are discussed:

- ❖ What is literature review?
- ❖ What are the uses of literature review?
- ❖ How to search, read and write literature review?
- ❖ What is the process of literature review?

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## 9.1 REVIEW OF THE LITERATURE

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A literature review is an evaluative report of information found in the literature related to your selected area of study. The review should describe, summarise, evaluate and clarify this literature. It should provide a theoretical base for the research and help you (the author) determine the nature of your research. Works which are irrelevant should be discarded and those which are peripheral should be looked at critically.

In writing the literature review, the purpose is to convey to the reader what knowledge and ideas have been established on a topic, and what their strengths and weaknesses are. As a piece of writing, the literature review must be defined by a guiding concept (e.g., research objective, the problem or issue being discussed). It is not just a descriptive list of the material available, or a set of summaries.

Besides enlarging the body of knowledge about the topic, writing a literature review leads the writer to gain and demonstrate skills in the following areas:

1. *Searching skills*: It improves the ability of the researcher to sift the literature efficiently, using manual or computerized methods, to identify a set of useful articles and books.
2. *Analysing skills*: It is the ability to apply principles of analysis to identify the unbiased and valid studies?
3. *Application of new approaches and methods*: It helps the researcher to understand new approaches and methods to deal with the research problems.

### Objectives of Literature Review

Information in literature review should be organised and related directly to the research problem.

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## 9.2 USE OF LITERATURE REVIEW

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As researcher, it is important to understand the purpose of investigating the literature related to the research project. The literature review assists the researcher in knowing the ways and means to deal with the research problem.

- It helps the researcher to learn about the studies similar to his own study and the research design and methodology adopted to carry out those studies by earlier researchers.
- It provides useful source of data related to the subject being studied.
- It helps in introducing important and useful research personalities.
- It provides an opportunity to see the study in a historical perspective.
- Literature review provides new ideas, methods and approaches to deal with research problems.
- It helps the researcher to compare his own study with other relevant studies.
- It helps in anticipating the problems arising during the collection of data. The researcher can therefore take precautions to overcome those problems.

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### 9.3 SEARCH FOR RELATED LITERATURE

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When beginning a search for related literature, practical research suggests travelling to the library and looking at the selection of indices, abstracts and available bibliographies. Information available on microfilm must also be considered.

World Wide Web (internet) a boon for researchers help in identifying useful and relevant data to the research project.

Association of Indian Universities periodical *University News* publishes the thesis of the month in the last page of the periodical. It includes the research projects completed in that particular month, and is an important source of literature review.

Research agencies conduct various studies which comprises abundant data that may be helpful in searching the literature.

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### 9.4 READING THE LITERATURE

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1. Record the problem at the top of a sheet of paper.
2. Record each sub-problem in full, serially, across the page.
3. Study each sub-problem, separating out the keywords.
4. Record the keywords or phrases in a column under the sub-problem.
5. Consult the index, bibliographies and abstracts to find books, articles etc., armed with the “identified keywords” of your problem.
6. Read! Read! Read!

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### 9.5 GUIDELINES FOR INFORMATION PRESENTATION

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1. *Discuss fairly and clearly:* The review of literature should be like a discussion with a friend concerning the studies, research reports, and writings that bear directly on your own efforts. Be very clear in your thinking.
2. *Organize a plan:* Begin the discussion from a broad perspective and narrow it down to the specific problem of the research.
3. *Do not copy information as it is:* Emphasise over what the study interprets rather to what content has been produced. So, the researcher should critically evaluate and present the information in his own words.

4. ***Establish the relationship between literature and research project:*** This can be done by charting each study in relation to the problem or sub- problem it addresses. Study carefully before beginning to write. Literature discussed should have a link to the research problem.
5. ***Summarise:*** Summarise major contributions of significant studies and articles to the body of knowledge under review, maintaining the focus established in the introduction. Evaluate the current “state of the art” for the body of knowledge reviewed, pointing out major methodological flaws or gaps in research, inconsistencies in theory and findings, and areas or issues pertinent to any future study.  
  
Conclude by providing some insight into the relationship between the central topic of the literature review and a larger area of study such as a discipline, a scientific endeavour, or a profession.

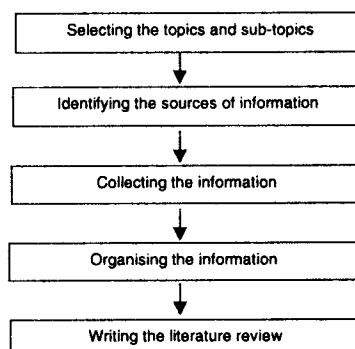
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## 9.6 PROCESS OF LITERATURE REVIEW

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Review of literature is a process of systematic selection, evaluation, correlation and present information relevant to a research question being studied. There are five steps in writing a literature review.

1. ***Selecting the topics and sub-topics:*** The researcher needs to select the topics and sub-topics related to the research question being studied. It helps to direct the literature search in the right direction. If the topics and sub-topics are not chosen, the researcher may end up with lot of unrelated information.
2. ***Identifying the sources of information:*** The sources of information for specific topics are to be identified and a list of the sources along with the specific topic should be made.
3. ***Collecting the information:*** Collect information systematically one after the other from the reliable sources. The information about each topic should be recorded separately. This helps the researcher to organise the information properly.





4. *Organise the information:* Information about each topic should be recorded and maintained separately. It has to be categorised based on the topics and sub-topics. The categorised information may be used appropriately in writing a literature review.
5. *Writing the literature review:* It consists of three steps, which are explained below:

*Introduction:* Define the topic, issues or areas of research being studied, thus providing an appropriate context for reviewing the literature.

*Body:* Critically evaluate the information and make appropriate comparison of the studies reviewed.

*Conclusion:* State what is your view point about the study, but not what the study says.

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## SUMMARY

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Market researcher can avail wealth of data from secondary data. This chapter explores the benefits that could accrue from literature review. literature review provides useful data which aids the researcher for better focus. Literature review helps the researcher to move from management question to research question. Literature research enable to gather data for the current project which otherwise has been collected for some other purpose. This if found useful for current study will save time and cost.

It is advised always, to refer to original source. Examine and scrutinise the relevance of data . Check the accuracy of the data. Avoid bias if any. Sometimes the secondary data through literature review may not be entirely suitable, however it can be a useful pointer, on how to design a good research study.

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## KEYWORDS

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Literature

Literature review

Research agency

Research

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## REVIEW QUESTIONS

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1. What is meant by literature review?
2. What are the benefits of literature review?
3. Enumerate guidelines to incorporate various information gathered by researcher.
4. What steps involved in the process of research?



# Primary Data



**In this chapter, the following questions are discussed:**

- ❖ What is primary data and what are the methods adopted for collecting primary data?
- ❖ What is the observation method and what are the various types of observation?
- ❖ What is a questionnaire and what are the different types of questionnaires?
- ❖ What are the various steps involved in designing a questionnaire?
- ❖ What are the advantages/ limitations of a mail questionnaire?

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## 10.1 MEANING OF PRIMARY DATA

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The data directly collected by the researcher, with respect to the problem under study, is known as primary data. Primary data is also the first-hand data collected by the researcher for the immediate purpose of the study.

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## 10.2 METHODOLOGY FOR COLLECTION OF PRIMARY DATA

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Observation and questioning are two broad approaches available for primary data collection. The major difference between the two approaches is that in the questioning process, the respondents play an active role because of their interaction with the researcher.

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### 10.3 OBSERVATION METHOD

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In the observation method, only present/current behaviour can be studied. Therefore, many researchers feel that this is a great disadvantage. A causal observation could enlighten the researcher to identify the problem. Such as the length of the queue in front of a food chain, price and advertising activity of the competitor etc. Observation is the least expensive mode of data collection.

*Example:* Suppose a Road Safety Week is observed in a city and the public is made aware of advance precautions while walking on the road. After one week, an observer can stand at a street corner and observe the number of people walking on the footpath and those walking on the road during a given period of time. This will tell him whether the campaign on safety is successful or unsuccessful.

Sometimes, observation will be the only method available to the researcher.

*Example:* Behaviour or attitude of the children, and also of those who are inarticulate.

#### 10.3.1 Types of Observation Methods

There are several methods of observation of which any one or a combination of some of them, could be used by the observer. Some of these are:

- Structured or unstructured method
- Disguised or undisguised method
- Direct-indirect observation
- Human-mechanical observation

##### Structured-Unstructured Observation:

Whether the observation should be structured or unstructured depends on the data needed.

*Example 1:*

A manager of a hotel wants to know “how many of his customers visit the hotel with their families and how many come as single customers.” Here, the observation is structured,