MANAGING MARKETING INFORMATION AND MEASURING MARKET DEMAND

The environment in which marketers operate is changing continuously. Changes are taking place in customers' wants, competitors' actions, distribution channels, political/legal environment and so on. To survive in this ever changing environment, marketers need information on regular interval regarding the changes as well as to mange them. By developing an advance marketing information system and putting that in place can help marketers cope with the ever changing environment. The advent of computer technology has helped marketers to a great extent in procuring and managing information. Information handling has been revolutionized using such devices as microfilming, cable television, copy machines, fax machines, tape recorders, video recorders, videodisc players, CD ROM drives, multimedia packages, internet and electronic mail and other devices. In addition, conducting marketing research carefully and forecasting and measuring both current and future demand can help marketers take measures to excel competitors and make its position solid in the marketplace.

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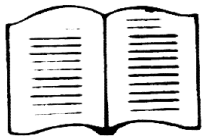
Lesson 1: Marketing Information and Intelligence System

Objectives of this lesson

After reading this lesson, you will be able to:

- Understand the need for market information
- Define Marketing Information System (MIS)
- Know the sources of information
- Know the tasks performed by an MIS
- Identify the subsystems constituting an MIS
- Identify the components of a Marketing Information System,
- Ascertain the desirable features of an MIS
- Define Marketing Intelligence System, and,
- Know the steps that may be taken to improve a company's Marketing Intelligence System.

Introduction



Modern marketing is a much more exact science than it was. In the past, marketing was essentially an art - depending almost entirely on the intuition and judgement of the entrepreneur who was an all-round expert in marketing, production, and finance. Of course, the market environment was much less complex. The number of competitors and customers was smaller, the economy was not subject to as many dynamic forces, societal and cultural patterns evolved more slowly, and technological and political change was not as sudden. Consequently, marketing executives had a more stable environment within which to operate.

In the late nineteenth century, however, conditions started to change. Decision making became more complex and choices had to be made more quickly. This situation continued to accelerate throughout the early part of the twentieth century. The 1960s and 1970s were times in which the market was almost continually in a state of flux. Periods of prosperity, inflation, recession, and shortage evolved with surprising speed. Competitors, technological change, and new social and cultural modes came and went quickly too.

Although a feel for the market and executive judgement will always play a part in the decision making process, its role had to decline as the issues became more complex. Informed management began to replace guesswork, and cold hard calculations pushed pure intuition aside.

Modern marketing management has become increasingly sophisticated.[1] Marketing executives now demand only the pertinent facts. Furthermore, they want accurate information, or at least data whose probable accuracy can be determined.

Consequently, collecting and using market information is an increasingly vital aspect of the total marketing function.

Informational Needs for Marketing Decisions

Some people believe that actually collecting pertinent and accurate marketing data is not that hard. The difficult task is determining what information is really needed. This has, indeed, been a problem in marketing research. All too often, an information gap exists between marketing researchers and decision-makers. Researchers talk in numbers, while executives speak in terms of abstract concepts.

Perhaps an even more pressing problem, however, is defining the limits on the needed information (see the table below). Determining the availability of data is also necessary.

Table –3.1: Asking the Executives to Define the Limits of Needed Information

1. What types of decisions are you regularly called upon to make?
2. What types of information do you need to make the decision?
3. What types of information do you regularly get?
4. What types of special studies do you periodically request?
5. What types of information would you like to get but are not currently receiving?
6. What information would you like to receive daily? weekly? monthly? yearly?
7. What magazines and trade journals would you like to receive regularly?
8. What types of data analysis programs would you like to receive?
9. What are four improvements you would like to see made in the present marketing information system?

Source : *Gaedeke R. M. and Tootelian D. H., Marketing- Principles and Applications, West Publishing Company, St. Paul, USA, 1983, p. 61*

What data can be collected, and from which sources? Collecting data and transforming it into information is frequently a time-consuming and expensive process. Yet there are a variety of data sources which can be utilized to make research more efficient.

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1. *Danny N Bellenger, "The Marketing Manager's View of Marketing Research" Business Horizons (June, 1979), pp. 59-65.*

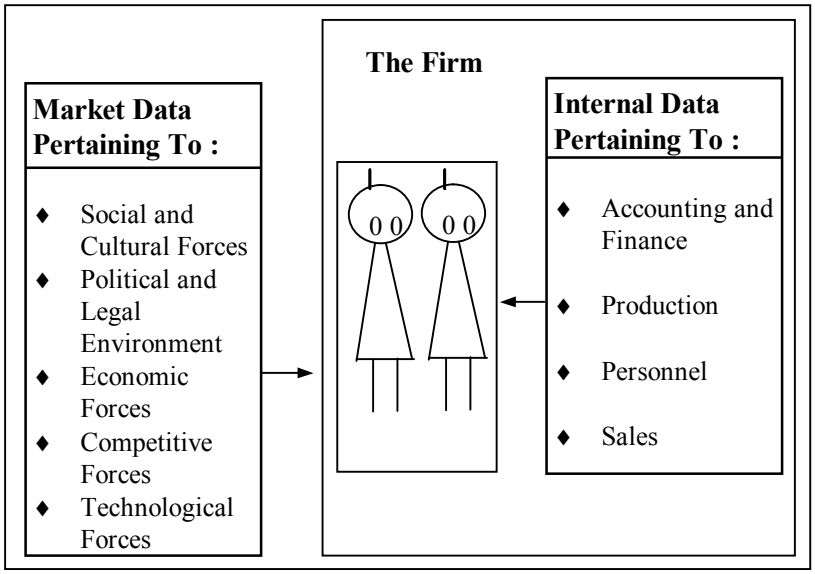
At the very minimum, marketing decisions are made in the areas of product, distribution, promotion, and price planning. For each of the four elements of the marketing mix, there are literally numerous of questions that must be answered. Some are relatively simple, while others are exceedingly complex. Marketing executives must be attuned to the social, cultural, economic, and competitive environments in order to decide on marketing mix issues. Marketing decision making should be based on solid facts and rational thought processes.

Marketing decision making should be based on solid facts and rational thought processes.

Sources of Information

Within most decision-making processes, a variety of information is utilized. In a very broad sense, two types of information sources exist: those generated within the firm, and those in the market environment. The following figure shows the sources of information to the decision makers of a firm:

Figure– 3.1: The Sources of Information



Certainly one of the most significant sources of information for marketing decisions is within the firm itself. Internally prepared economic and sales forecasts, past sales records and estimates of market shares, and assorted cost schedules typically are useful pieces of information.

The second broad type of information source is that data generated outside the firm. Private firms and public institutions collect and process data which can be useful to marketing executives in their decision making processes. Although the danger in using external sources is greater than in using company records, it often is necessary.

Marketing Information System

Marketing Information System (MIS) emerged as a critical component of the marketing process.

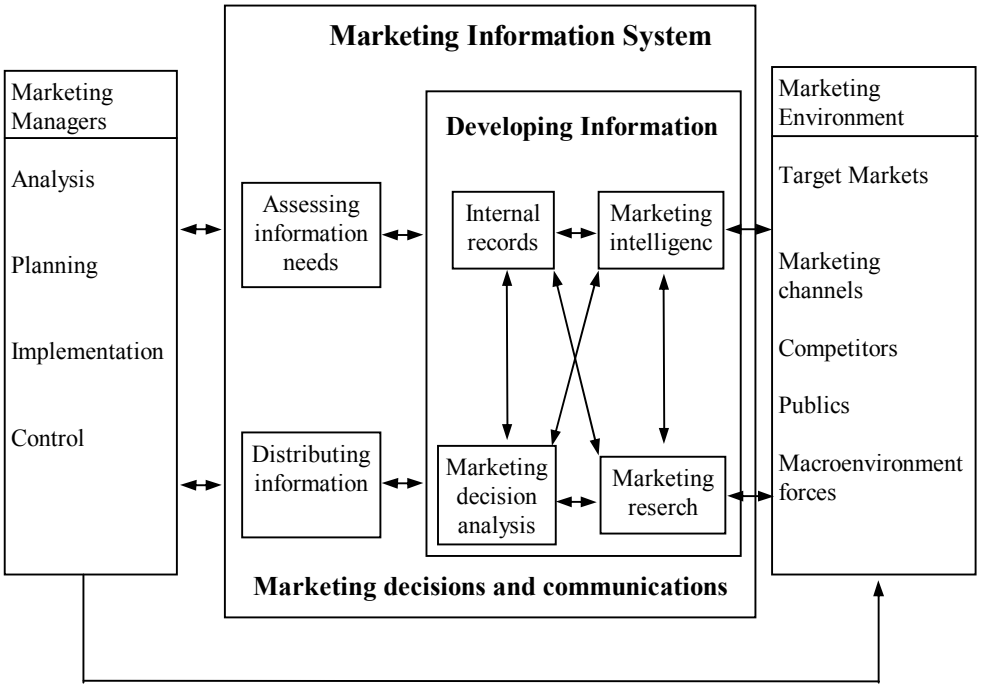
As the need for information grew, so did the need for more sophisticated means of collecting and processing data. No longer is a random, haphazard accumulation of bits and pieces of data satisfactory. To fulfill this need, a ***Marketing Information System (MIS)*** emerged as a critical component of the marketing process. More broadly-based and complex than marketing research, an MIS better satisfies the needs of executives, informing them about the internal and market environments within which they operate.

As the concept of an MIS evolved, it begun to replace marketing research as the overall data gathering process in the marketing environment. Most experts agree that an information system - whether it be a marketing information system, an accounting information system, a financial information system, or some other - should include all facets of data collecting and processing. Within each information system a variety of

activities can take place.

A marketing information system consists of a structured, interacting complex of persons, machines, and procedures designed to generate an orderly flow of pertinent information, collected from both intra - and extrafirm sources, for use as the basis for decision-making in specified responsibility areas of marketing management.[2] This suggests that marketing information systems are specially designed procedures for gathering and distributing data to managers. Marketing information system can also be defined as a process in which data from the market environment is collected in a systematic and comprehensive manner, evaluated in terms of its relevancy and accuracy, transformed to make it useful and usable by the managers, and conveniently stored or expeditiously transmitted to the managers. Included in the MIS is a series of very specific and important tasks. Unless each one is conducted properly, the system will not operate effectively and efficiently. Marketing Information Systems can be understood by looking at the following diagram developed by Dr. Kotler.

Figure– 3.2 : The Marketing Information System.



Source: *Philip Kotler, Marketing Management: Analysis, Planning, Implementation, and Control, Ninth Edition, Prentice-Hall Inc., New Jersey, USA, p.111.*

Tasks Performed by an MIS

- ***Data Collection:*** The initial task in any MIS is a data-collection

[2]. Samuel V. Smith, Richard H. Brien, and Jerome E. Stafford, eds., Readings in Marketing Information Systems (Boston: Houghton Mifflin Co., 1968, p.7.

activity, which is not really a single action. Rather, it is comprised of several processes, each of which is designed to obtain particular data used for unique purposes. The type and amount of data collected depends on how much is available, and how much information executives want and are willing to pay for.

An MIS includes an activity to evaluate the relevance and accuracy of collected data

- ***Data Evaluation:*** An MIS includes an activity to evaluate the relevance and accuracy of collected data. Data are raw facts whose value to decision makers is uncertain. Information, on the otherhand, is comprised of facts whose accuracy has been measured and is in a usable form and considered useful to decision makers.
- ***Data Transformation:*** Ideally, data coming into an MIS should be in a form that can be used immediately. However, this seldom occurs. Some data must be analyzed through statistical testing, others have to be broken apart or combined in some fashion. Nearly all data will need to be condensed and placed in the formats the users desire.
- ***Data Transmission:*** All the operations of an MIS are worthless if the information is not transmitted to the right people in a timely manner. To ensure that information does not get lost, distorted, or unnecessarily delayed in transmission, a dissemination activity is required. Information can be routed by intraoffice or intracompany mail, or it can be transmitted by different sophisticated electronic mediums. If left to an informal process, information will almost surely be lost or delayed.

Subsystems Constituting the MIS

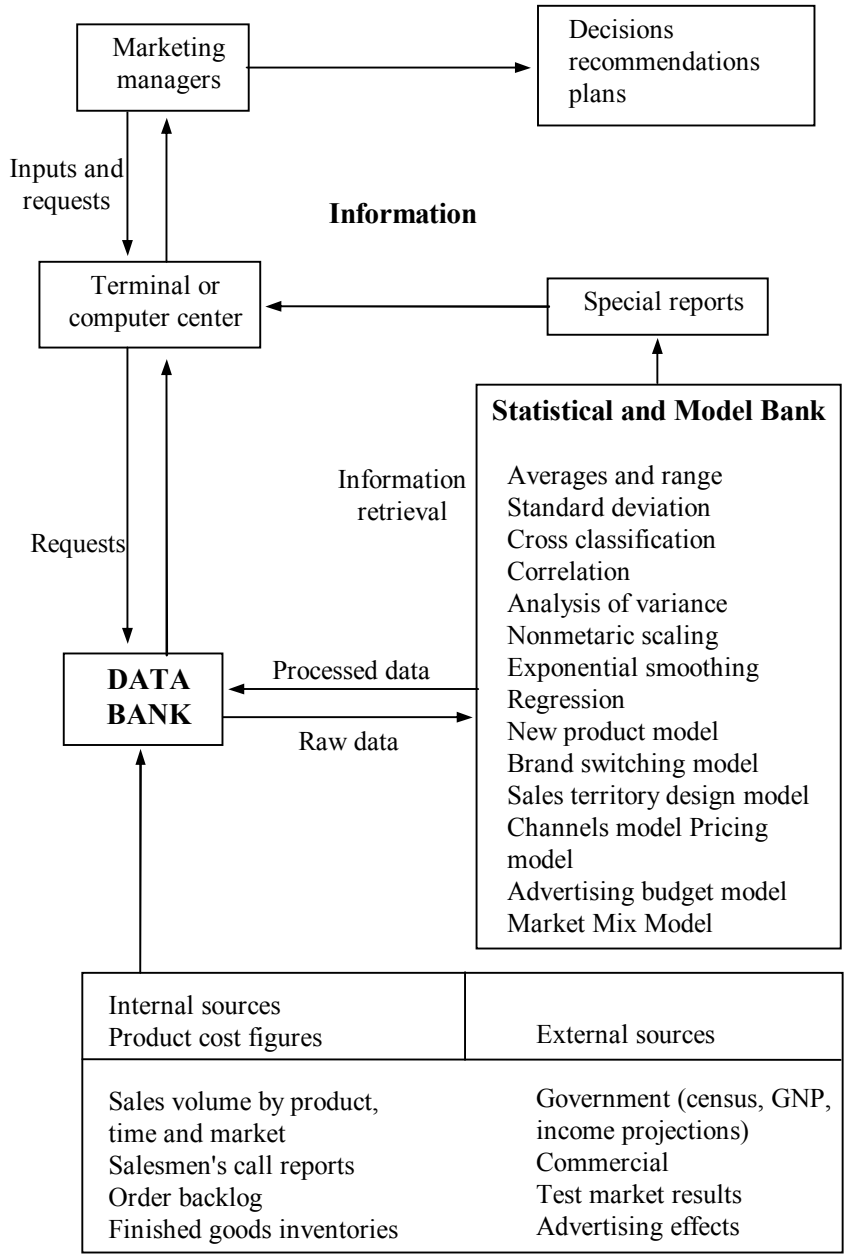
A marketing information system includes four subsystems.

A marketing information system includes four subsystems: (1) the internal accounting system, which provides measures of current activity and performance; (2) the marketing intelligence system, which gathers and makes available information on developments in the environment; (3) the marketing research system, which gathers, evaluates, and reports information required by executives for problem solving, planning, and development of marketing strategies; and (4) the marketing management science system or decision support system, which assists executives in analyzing complex marketing problems and operations, often through the use of analytical models.

Components of a Marketing Information Systems

The basic components of a marketing information system are a data bank, a set of analytical tools, and a communication network. Following diagram shows how managers interact with these components. An MIS allows managers to retrieve selected historical figures from data files,

Figure– 3.3 : Components of Marketing Information System.



process raw data with standard statistical programs, and test alternative strategies against complex planning models. Managers may also call on MIS to generate a variety of routine and special reports to help them in their day-to-day decision making. MIS, thus, can be used for both planning and controlling the marketing programs.

Data banks draw most of their historical records from internal sales figures, call reports, and external materials published by research firms and governmental agencies. The other type of data that may help managers is a record of past decisions and the assumptions used to make

these decisions. In building data bank, a key factor that is considered is determining the amount of detail or the level of aggregation that should be used.

After the needed data files have been accumulated, a number of analytical tools can be used for the information to process and summarize. Such statistical devices as programs for means, standard deviations, cross tabulations, etc., are used for processing, correlating, and summarizing data. Managers now-a-days more often use computer models such as simulation model to get the answers to various "what if" type questions. This type of questions usually arise when executives build marketing programs and attempt to solve problems after plans have been implemented.

Desirable Features of MIS

A good MIS system, in addition to have a computerized data bank, should also be flexible to adapt to the special needs of the business environment. It should be developed in such a way that generate enough data relevant to a particular problem. But, care must be exercised so that it does not load executives with overabundance of irrelevant data. In an MIS, there should have a built-in-system to filter and condense data as well as to assemble information to help managers reach accurate and timely decisions. It should also have safeguards so that chances of erasing data as well as modifying programs are eliminated. Moreover, the system should also have the provision of using passwords to prevent unauthorized access in order to ensure security of data and protect business interest.

Defining Marketing Intelligence System

Marketing intelligence system is a set of procedures and sources used by managers to obtain their everyday information about pertinent developments in the marketing environment.[3] It means that, this is a mechanism used by executives to gather data on the developments taking place in the environment - commercial, technological, legal/political and so on - to help them formulate strategies to cope up with the changes.

Marketing intelligence may be carried on by reading books, newspapers, trade journals. It may also be carried on by talking to different groups as customers, suppliers, distributors, and so on as well as with different company personnel. In contemporary marketing practices we find the formal use of an intelligence system instead of an informal or casual one. Because the casual system may provide information either too late or the information so gathered may be lost or forgotten. Therefore, steps should be taken to put in place an appropriate marketing intelligence system which involves four logical steps. In the following section we shall take up discussion on the steps involved in a good marketing intelligence system.

Steps that May be Taken to Improve a Company's Marketing

[3]. Kotler, Philip. Marketing management, Ninth edition. p. 112

Intelligence System

Following steps may be taken to improve both the quality and quantity of marketing intelligence:

Step-1: Training and motivating sales people to spot and report on developments in the environment **:** Sales people have the opportunity to relate directly to the customers, and as a result they can provide company with the invaluable intelligence information which other means have no access at all. They are called the ***"eyes and ears"*** of the company, and they should accordingly be trained on gathering relevant information on environment and immediately pass those on to the concerned person (s) of management. Management should recognize that, sales people are extremely busy with their routine work and they should therefore be reminded of the necessity of such information to the company. Some motivational steps should also be taken so that sales people feel encouraged to be involved in providing management with the necessary information.

Step-2: Taking measures to involve marketing intermediaries as well as to use other techniques to have intelligence information: Marketing intermediaries are a good source that may provide a company with insights on its competitors as well as happenings in the environment. Company should motivate them so that they pass along the company with accurate and timely intelligence.

Appointing specialists to gather marketing intelligence is another technique that a company may adopt. To have marketing intelligence on company sales people, mystery shoppers may be sent to sales centres to pose as real shoppers. These mystery shoppers may provide company with information on how customers are treated by the company salespeople.

A company may learn about its competitors by several other ways as purchasing their products; attending trade shows and open houses; talking to the competitors' ex-employees, current employees, marketing intermediaries, suppliers, and shippers; studying their advertisements; reading different trade journals, and so on.

Step-3: Purchasing information from outside suppliers: There are number of outside organizations in every country that collect information on happenings in the environment and sell those to companies. Such firms collect data at a much lower cost than the company is able, and a company can save money and time if it buys data from such firms. In our country one such organization is Consumer Association of Bangladesh (CAB) which occasionally gathers consumer panel data, which firms may buy to have insights on the environment.

Step-4: Establishment of Internal Marketing Information Center: Companies may also establish an internal marketing information center to gather marketing intelligence and circulating it. The center staff may go through different publications and provide managers with the summary of findings. In addition, this center may also collect and file relevant information to supply them to managers when necessities arise.

Questions for Review

1. Why need for information is so important to a present-day marketer?
   a. To cope up with the ever-changing environment
   b. To decide quickly, what strategies to be pursued
   c. Both a & b
   d. None of the above.

2. 1960s and 1970s were the periods of –
   a. Prosperity
   b. Inflation, recession
   c. Shortages
   d. All of the above.

3. How many information sources are available there for a marketing executive?
   a. Many
   b. 2 (firm and market environment)
   c. 3
   d. None of the above.

4. Which of the following information may be obtained from within the firm?
   a. Past sales records & estimates of market shares, assorted costschedules, economic and labor forecasts
   b. Information on technological developments
   c. Changes in political/legal environment
   d. Competitive actions.

5. Marketing information systems are designed to –
   a. Help managers control employees
   b. Gather and distribute data to managers
   c. Help managers bargain with unions
   d. Both a & c.

6. Which of the following tasks are performed by an MIS?
   a. Data collection
   b. Data evaluation
   c. Data transformation and transmission
   d. All of the above opportunities, skills, and resources.

7. Which of the following subsystem(s) is/are a part of an MIS?
   a. Marketing research system
   b. Marketing intelligence system
   c. Both a & b
   d. None of the above.

8. The basic components of an MIS are –
   a. Data bank
   b. A set of analytical tools
   c. A communication network
   d. All of the above.

9. A good marketing information system should be –
   a. Rigid
   b. Flexible
   c. Manual
   d. None of the above.

10. Marketing intelligence may be carried on by –
   a. Reading books, newspapers, and journals
   b. Talking to different groups
   c. Deploying a computerized system
   d. Both a & b.

11. An appropriate marketing intelligence system involves –
   a. Training and motivating sales people
   b. Recruitment of honest salespeople
   c. Regular meeting of top management personnel
   d. Both a & c.

12. Define a marketing information system and describe the tasks it entails.

13. Define marketing intelligence system. What steps may be taken to improve a company's marketing intelligence system? Describe.

Answers

1. c, 2. d 3. b, 4. a, 5. b, 6. d. 7. c, 8. d, 9. b, 10. d, 11. a

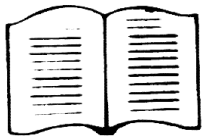
Lesson – 2 & 3 : Marketing Research System

Objectives of thess lessons

After reading thess lessons, you will be able to:

- Define marketing research
- Know how a company may obtain marketing research
- Identify the types of marketing research
- Know in detail the marketing research process, and
- The characteristics of a good marketing research.

Introduction



Marketers, from time to time, may require to undertake marketing research for collecting information on market. Knowledge on the types of research, how research should be conducted, steps involved in the marketing research process is essential for a marketer. He must also know what makes a good and appropriate research.

Defining Marketing Research

It was stated earlier that marketing research is generally considered to be a part of an MIS. Marketing research is the systematic and scientifically unbiased collection and analysis of data, and the preparation of information relevant to a particular problem or opportunity. It may also be defined as the systematic collection of information for the purpose of decision making. A firm gets and tests ideas through marketing research. You should know that, marketing research is not a part of the marketing mix, but rather an aid to management in making decisions about the marketing mix and the target market of the company. It is a process, not an institution, and as such it is a part of virtually all aspects of the research process from data collection through information transmission.

A firm gets and tests ideas through marketing research.

Marketing research processes are almost always used to collect data for recurring and unique decision making. For data evaluation, research methods are commonly used to determine the error factors in collected data when certain types of sampling techniques (e.g., purposive samples) are used. Similarly, data transformation most often occurs through the use of statistical testing methods normally used in marketing research.

How a Company Can Obtain Marketing Research?

There are a number of ways in which a company can obtain marketing research. The company may have a marketing research department. The person in charge of this department plays a multidimensional roles such as a study director, administrator, company consultant, and advocate who usually reports to the marketing head of the company. If the company cannot afford to maintain a separate marketing research department or the services of marketing research firms, it has got other affordable options. They are as follows:

There are a number of ways in which a company can obtain marketing research.

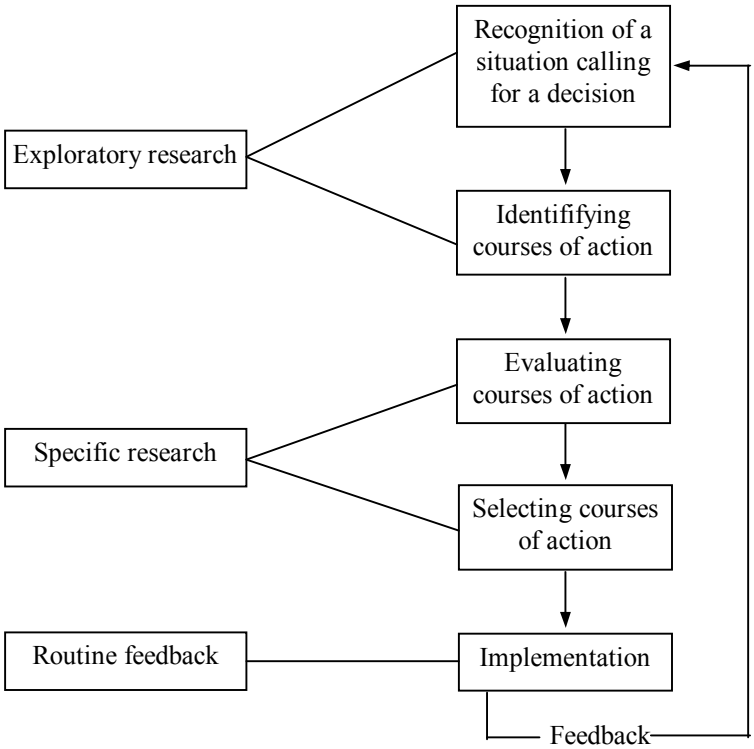
- It can engage students and professors to design and carry out marketing research project in its favor. This is the most cost effective way of carrying out marketing research activities, and even small companies may afford it.
- The other option is to use online information services from where business information may be collected at a very low cost. There are many online services available now a days on internet. Browsing internet may help a company to get many needed information very quickly and economically.
- Checking out competitors is another option which small companies may nicely exploit. Regular visit to competitors' business premises may help the company getting many important tips which may be utilized later.
- Taking help from Syndicated Service Research firms is another good option. This type of firms gather different information on trade and consumers and offer them for sale to interested companies. Information may be gathered at a relatively low cost from syndicated research firms.
- Custom marketing research firms may be hired for some specific project. This type of firms, if given responsibility, designs the study, conducts it, and reports to the clients on findings. But, it is interesting to note that the results of the study become the property of the appointing firm.
- Specialty-line marketing research firms may also be hired for getting some specialized research services. One of the example of such firms is a field interviewing service firm. This type of firms only provide field interviewers.

Types of Marketing Research

All marketing research activities are not same, and differ in many respects. They may differ in objectives, research design, area covered, depth, data analysis method, presentation and so on. Research activities may be classified in terms of whether it is ***exploratory*** in nature, aimed at a ***specific*** problem, or used to provide ***routine feedback***. Now let us look at each of them in the following section (the figure in the following page shows the types of research).

- ***Exploratory Research:*** Exploratory research is conducted when the problem is generally known but its nature and causes are not known at all or known partially. For example, if a company experiences no change in sales even after aggressive promotion, it may conduct an exploratory research in this situation. Because problem is known here but its nature and causes are unidentified. What is the problem here? Problem iss sales has not increased despite aggressive sales promotion activities that were undertaken.

Figure -3.4 : The Types of Research.



- ***Specific Research:*** This is another type of research. When a problem has been defined, a different type of information input is needed to enable management to make decisions concerning alternative ways of solving the problem. Specific questions that might be posed include: What changes should be made in the marketing mix? Is the product positioned properly? Questions such as these lead to specific research. Specific research generally involves the use of larger samples and is more costly than exploratory research. That is because while exploratory research is aimed at suggesting hypotheses, specific research is used to enable management to accept or reject hypotheses with predetermined level of confidence.
- ***Routine Feedback:*** It is an attempt to monitor on a continuous basis certain development variables such as sales, market share, or consumer sentiment. Firms with well-operating marketing information systems would be receiving such information through the marketing intelligence subsystem. Firms without such sophisticated means of conducting routine feedback research have two options. The first is to utilize marketing research department to engage in gathering and assessing routine feedback. Companies without the necessary internal resources may avail themselves of commercial services offered by different outside research organization.

The Marketing Research Process (Designing the Research

Project)

Most marketing managers delegate the detailed design and implementation of research projects to specialists either within or outside their organizations. The principal reason for such delegation is that most marketing managers do not have the time or the expertise to engage in market research activities. They must, to a greater or lesser extent, depend on the efforts of others. It is therefore most important that managers know enough about research process, design, as well as methods of implementing research to be effective in commissioning research and to be capable of appraising the quality and cost effectiveness of its results.

Marketing research must be conducted in a systematic and unbiased manner.

Because marketing research is an element vital in an MIS, it must be conducted in a systematic and unbiased manner. The information it generates is too important to be haphazardly collected, analyzed, and disseminated. The methodology can be elaborate and comprehensive depending on the significance of the problem or opportunity needing study. Underlying any research study, then, is the need to obtain the best information possible, given environmental and company limitations (e.g., time and money). But the more scientifically based, the more expensive and time-consuming the marketing research process will be.

Although there is always a risk of collecting and processing useless data, the seven-step research process described below and in the following exhibit will minimize these risks :

Exhibit : Steps in the Marketing Research Process

Step - 1:	Determine needed information
Step - 2 :	Conduct a preliminary investigation. Secondary data sources: Internal company records, Government documents, Marketing research firms, Trade and professional associations, Advertising agencies and media firms, University research centers, Published sources Primary data sources: Interviews with people inside the firm, Interviews with people outside the firm
Step - 3 :	Weigh the costs and benefits of formal research
Step - 4 :	Develop the research design-how data will be collected: Survey method, Observation method, Experimental method, Sample size determination Sample selection: Probability samples, Non-probability samples
Step 5:	Develop the questionnaire or other data collection forms. Question design: Open-ended, Multiple choice, Dichotomous choice, Question sequencing Questionnaire design
Step 6:	Conduct the formal study
Step 7:	Analyze the data and report the results

Step - 1 : Determining the Needed Information/Problem

Definition

The best research on the wrong study is as useless as conducting the worst research on the right study. If we fail to do a thorough job at this stage, no amount of sophisticated research will save us. Often, the rush for answers leads to research based on vaguely defined objectives and unspecified information needs. When this happens, decision makers typically receive only part of the information they actually must have, and the research tends to take longer and costs more to collect than is necessary.

The process begins with clearly defined objectives. What is the research supposed to accomplish? Why is a study going to be made? Although research studies are conducted for a variety of reasons, the most common ones are determining if a problem or opportunity exists, or obtaining information pertinent to a problem or opportunity. Whatever the reason, there must be a purpose involved - research is too costly to conduct for idle curiosity. When objectives are clearly defined, specific informational needs can be determined.

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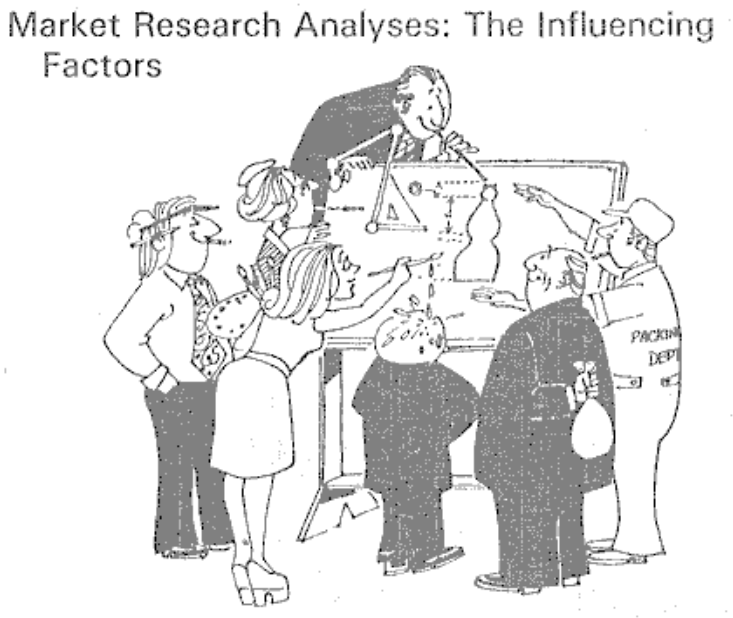


Step -2 : Conduct a Preliminary Investigation

A preliminary investigation is necessary before any formal data collection is actually undertaken. This investigation tends to be informal, relatively inexpensive, and beneficial for three reasons. ***First,*** the activities in step two define the objectives of the study and the informational needs. ***Second,*** a preliminary investigation sometimes provide the decision maker with enough information, making further study necessary. ***Third,*** preliminary investigations help familiarize the researchers with the issues involved. Researchers often are not experts in the fields they study, and they need to develop a feel for the problems or opportunities if they are to prepare and conduct a useful study.

Whatever the reasons, researchers frequently make preliminary investigations, using a variety of sources to obtain the data they need. The most likely sources used in this particular collection process are secondary data sources, interviews with people inside the firm, and observation of, or interviews with, people outside the firm.

Sources of data : Public institutions and private agencies collect a tremendous amount of data that can frequently prove useful to a researcher. Data which have already been collected for some other purpose are known as **secondary data.** That which is collected by the researcher from the original source for the particular purpose of the study are called **primary data.** Quite obviously, secondary data are usually easier, quicker, and cheaper to obtain than primary data.

Unfortunately, secondary data are not always readily available and desirable. Data may be free or for sale, handily indexed and in a useable form or buried within volumes of other extraneous data. The accuracy of secondary data frequently cannot be assessed, and information on how they were collected might not be available, so the researcher will never really know if they were obtained in a systematic and unbiased manner.

Despite these problems, secondary data are still generally preferred because of time, trouble, and cost savings. Among the more important and useful sources of secondary data are:

- ***Internal Company Records:*** The company's own records are one of the best sources. Data on sales volume, market shares, competitive tactics, etc., are nearly always maintained.

- ***Government Documents:*** Certainly the largest single source of secondary data is the government. ***One of the most popular sources, the statistical year book of Bangladesh*** is published annually showing assorted statistics on such subjects as the population's demographic distributions, manufacturing outputs and so on.
- ***Marketing Research Firms:*** A number of private businesses collect and analyze market data and sell them to other firms. In addition, a number of firms known for their public opinion surveys, can provide specialized types of market data.
- ***Trade and Professional Associations:*** Local and national associations frequently collect and publish data pertaining to their particular trades and professions. Since these associations so closely match their industries, they are usually good sources of information.

Activity :

Find out a national professional or trade journal and summarize information on the specific trade. Show how that can help you as a prospective businessman in that field.

- ***Advertising Agencies and Media Firms:*** Advertising agencies, television stations, and large newspapers and radio stations often collect data on the market areas they serve. Researchers may take help from such data in the course of their research.
- ***University Research Centres:*** Many of the larger universities have developed research bureaus providing published data useful to marketing researchers. In our country, Dhaka university has two such bureaus conducting research on contemporary topics from which marketers may take help. They are ***Bureau of Business Research, Dhaka University, and, Bureau of Economic Research, Dhaka University.*** One advantage of using university research data is that the methodology tends to be good and the resulting data reasonably accurate.
- ***Published Sources:*** There are a variety of business and trade publications that are accessible, inexpensive, and usually very timely.

The primary data can be obtained mainly from two sources. Now we shall mention these two sources/ways of collecting primary data :

- ***Interviews with People Inside the Firm:*** Marketing researchers frequently turn to knowledgeable people within the firm during a preliminary investigation. Salespeople and sales managers, brand managers, senior marketing executives, and other top marketing and nonmarketing personnel have considerable experience and vast amounts of expertise.
- ***Interviews with People Outside the Firm:*** Researchers prefer not to go outside the firm to conduct interviews unless they find it absolutely necessary. Not only this process more time-consuming and expensive,

but these interviews can alert customers and competitors to problems and opportunities within the firm. Despite these drawbacks, present and potential customers, suppliers, and even competitors undoubtedly can provide valuable data for the preliminary investigation.

The most frequently used methods to collect these data are the ***informal_interview*** and ***observation.*** Informal interviews are more popular because they are simpler. They are used in a manner similar to interviews conducted with people inside the firm, by obtaining the attitudes and opinions of a variety of people. The other method, observation will be discussed later in this lesson.

Step -3 : Weigh the Costs and Benefits of Formal Research

Very few issues are destined to be the subject of formal data collection. The researcher must determine whether further research is necessary or justified. Step two may yield enough information for the executive to make the decisions without the need for more formal research.

The process of weighing the costs and benefits is somewhat subiective.

When enough information is not available, the researcher must determine whether the benefits of added study would justify the costs. The costs of a formal study must be determined, including the costs of data collection, data analysis, data interpretation, and report preparation and presentation. If the researcher believes that additional information could be used by decision maker, the value of better information must be estimated. Admittedly, the process of weighing the costs and benefits is somewhat subjective. It depends heavily on the estimates of the executive and researcher.

Step - 4 : Develop the Research Design

Once it has been decided that a formal research study is needed, the detailed plans for it can be developed. Among the most important questions are: How will the data be collected? How will respondents be selected? How many respondents will data be collected from? Answers to these questions form the ***research design*** - the formal plans for the conduct of the study.

*Data collection methods are : **survey**, **observational**. or*

How data will be collected? The initial decision in the development of a research design is the choice of a data collection method. Researchers usually use the ***survey***, ***observational***, or ***experimental method***. Each approach has its unique strengths and weaknesses.

- ***Survey Method:*** Here researcher gathers data from only a portion of all the people it would be appropriate to collect data from. Those included in the survey are known as the ***sample*** and the entire group is called the ***population***.

  Three specific techniques are used to collect data - ***personal, telephone, and mail interviews.*** Personal interviews involve a direct interface between the researcher and the interviewee or respondent.

  Telephone interviews are another technique providing direct

interaction between the researcher and the respondent, although a telephone contact is only vocal. Althoughs rapport is harder to build over a telephone, it is still better than a mail survey. It also tends to be fairly inexpensive to administer since no travel is involved, and even long-distance calls are relatively cheap when compared to personal interviews. Finally, the telephone survey has the special advantage of speed, which can make it most appropriate when time is short.

Mail surveys are also popular in business research. Researchers send respondents printed questionnaires to complete and return within a specified period of time. This technique is very efficient when respondents are dispersed geographically, as in the case of a national survey.

Refusing to cooperate!

- ***Observation Method:*** This method allows the researcher to watch the actions (or listen to the words) of people or events to obtain the desired data. Normally, this is done within the people's own environment without their knowledge. Trained observers are needed here to ensure that the data is collected accurately and that people's actions are properly interpreted. Additionally, the events they monitor have to occur with sufficient frequency to make this method feasible. Finally, there are some ethical considerations pertaining to monitoring people without their knowledge or consent.

- ***Experimental method:*** Historically, this method has been used mostly in the natural sciences and not in business. With this method, the researcher tries to determine causes and effect relationships. By controlling some variables and varying others, the results can be measured and relationships identified.

Sample Size Determination: Deciding on sample size is one of the more important issues in the research design. Although a census - interviewing all members of the population - is always preferable from an accuracy viewpoint, it is usually not feasible. The costs involved and the difficulty in reaching everybody are just too great. Executives and researchers must trade accuracy for cost savings.

Most nonresearchers mistakenly believe that the sample size depends on the size of the sample population. Actually, the main determinant of sample size is how the sample population varies on the issues under study. The more they vary, the greater the sample size needed to obtain accurate data.

There are a number of formulas researchers use to determine sample size. One of the simplest is:

$$N = \frac{k2\ \sigma 2}{E2}$$

where:

k = the number of standard deviations the researcher allows (the confidence level)

$\sigma 2$ = the variance of the sample population

E = the allowable error the researcher will accept, in terms of the units measured..

Sample Selection: Once the sample size has been determined, the researcher can plan for the sample selection. This is an especially important element in the research design since the people selected might have a significant impact on the research results. The objective of the researcher is to make the sample just like the sample population in terms of its mean, median, and mode. It is, however, very difficult to obtain a sample that is a perfect miniature of the sample population. The researcher has to select a sample that is as close as possible, given time and cost limitations. The researcher must decide between ***probability*** or ***nonprobability sampling*** plans, as a method in selecting the sample.

*The basic probability sampling plan is known as the **simple random sample**.*

- ***Probability Samples:*** In a probability sampling plan, chance determines whether an individual member of the population is included or excluded from the sample. The basic probability sampling plan is known as the ***simple random sample***. Here each member of the sample population has a known and equal chance of being included in the sample. This plan is called simple, but it is not always so. In fact, researchers frequently find it very difficult or expensive to

obtain a full list of the population from where the sample is drawn. To reduce some of the problems associated with simple random sample, area ***cluster sample*** is often used, where a population is grouped into smaller units (clusters). Then, some of those units are selected in a purely random manner. Finally, some of the members of the selected units are also chosen in a purely random fashion.

Although both the simple random and area cluster sampling plans are commonly used, neither can assure the researcher that the sample actually selected will indeed be representative of the population. To maximize the likelihood of obtaining a representative sample, a ***stratified sampling*** plan should be used. In stratified sampling plan, the population is grouped on the basis of characteristics that are relevant to the study. Based on the size of each group, specified numbers will be randomly selected from each.

*To maximize the likelihood of obtaining a representative sample, a **stratified sampling** plan should be used.*

- ***Nonprobality Samples:*** Although probability samples can be more exact because they eliminate interviewer bias in the selection of respondents, they frequently are either too costly or impossible to use. In those instances, researchers turn to nonprobability sampling plans, where they or others select the final sample instead of it being done on a random-chance basis.

  The easiest nonprobability sampling plan for a researcher to use is a ***convenience sample.*** The researcher may choose people who are closest to each other or a group gathered in one place. No consideration is given to whether the sample group reflects the entire sample population.

  To refine this method, a researcher will sometimes use a ***judgement sample,*** choosing respondents who are thought to match the population.

  The most sophisticated nonprobability plan is the ***quota sample,*** similar to the stratified sample. The researcher identifies the relevant characteristics of the population and tries to select a sample that is roughly proportional. If, for example, it is known that 51 percent of the population are men, the researcher would make sure that 51 percent of the sample selected are men.

Step - 5 : Develop the Questionnaire or Other Data Form

Although not all marketing research involves surveys, much of it does. Accordingly, the process of survey research will be described here. Developing a good data collection instrument, or questionnaire is one of the more difficult tasks.

There are many different types of questionnaires. Initially, the researcher must decide whether to use one that is structured or unstructured. If a personal or telephone interview is used, the most common is the ***structured questionnaire,*** where every question is worded and sequenced, and the interviewer does not depart from it at all. No other questions can be asked nor different sequences used.

An ***unstructured questionnaire*** contains a limited number of questions allowing the interviewer some freedom to vary the wording, after the sequence, or probe for more data based on the respondent's answers. The advantage is that some valuable data may be obtained by the additional questions. Now we shall present some of the important issues in this regard :

- ***Question Design:*** Each question must be carefully prepared, whether it is in a structured or unstructured questionnaire. Most importantly, questions must be appropriately formed and worded for the specific data being sought. The researcher can use ***open-ended, dichotomous choice,*** *or* ***multiple choice*** questions. Open-ended questions allow the respondent to answer in his or her own words so that exact data can be collected. Dichotomous choice questions limit respondents to two choices - yes or no, agree or disagree, etc. Multiple choice questions force respondents to select one of several pre-established answers.

Questions must be sequenced logically to get the information correctly and truthfully.

- ***Question Sequencing:*** A questionnaire is not simply an assortment of questions that happened to be grouped together. If they are improperly ordered, respondents may not answer any of the questions, or they may not answer them accurately. The questions are interrelated but must be sequenced logically so that they flow together, assisting the respondent to answer correctly and truthfully. In general, questions should be ordered in the following manner :
  - from easy to difficult
  - from general to specific
  - from insensitive to sensitive (or confidential)
  - in groups by topical area
  - with demographic questions toward the end
- ***Questionnaire Design:*** A questionnaire consists of four parts: the introduction, the set of instructions to the interviewer and respondent, the set of questions, and the closing.

  The introduction is especially important because it helps the

interviewer gain rapport with the respondent. It also gives the respondent some general information on what the study is about, and why it is being conducted.

Instructions are often ignored by inexperienced researchers. Interviewers and respondents need to know how the interview will proceed and how responses are recorded on the questionnaire.

The set of questions was discussed earlier, but after the questions, a courteous closing is called for in deference to the respondent's cooperation.

Physical layout is a final consideration in questionnaire design. Proper use of white space, quality printing, and paper are all important. Location and spaces for responses to the questions are also a concern, and should be arranged to simplify transferring the data to punch cards or tape.

Step - 6 : Conduct the Formal Study

The formal study is a three phase process. ***First,*** the questionnaire must be pre-tested to ensure that it is defect-free. ***Second***, trained interviewers are needed to properly collect the data. ***Finally,*** the formal study can be conducted, but only after the first two phases have been completed.

Even the most experienced researcher pretests the questionnaire before using it in a formal study. Omitting an important question, wording a question ambiguously, or making some other mistake is very easy. As a safeguard, the questionnaire is tested on a relatively small group of people.

When the questionnaire has been finalized, the interviewers - if they are using a personal or telephone survey - must be familiarized with the questionnaire and the overall study. Interviewers need to know the type of people they will meet and the questionnaire they will use. Finally, beginning and ending dates for the study must be established and adhered to.

Step - 7 : Analyze the Data and Report the Results

Once the data has been collected, the researcher can begin making an analysis. For relatively large studies, the data will be transferred from the questionnaires directly into a computer or recorded on punch cards or tape. With small studies it is common for the data to be tallied by hand, although this method is becoming less frequent.

The particular analysis conducted on the data depends on the study's objectives.

The particular analysis conducted on the data depends on the study's objectives. Most often, the analysis will begin with a simple tabulation of the mean, median, mode, and frequencies. Although this is certainly the least sophisticated step, it frequently provides valuable information. If a probability sampling plan has been used, further analysis through some of the higher level statistical tests can be conducted, such as regression analysis, chi-square, correlation analysis, and analysis of variance. Most

of the quantitative analyses have been computerized so the actual computations can be completed quickly and easily.

Before the information obtained from the data analysis is sent to an executive, it is usually translated into a more useful form for decision-making purposes. The value of the entire project depends on how well the executive understands and uses the results. Reports are usually prepared describing the purpose, methodology, limitations, analysis, and findings of the study. Many executives not only demand the full report, but also an ***"Executive Summary"*** capsulizing the study in one or two pages.

Questions for Review

1. The person in charge of marketing research department plays the role of a –
   a. Study director
   b. Administrator
   c. Company consultant
   d. All of the above.

2. What options a company has if it cannot afford to maintain a separate marketing research department?
   a. Engage students and professors to design and carry out marketing research projects in its favor
   b. Taking help from syndicated service research firms
   c. Both a & c
   d. None of the above.

3. Marketing research activities may differ in –
   a. Oobjectives, research design, presentation, and so on
   b. Amount spent
   c. Both a & b
   d. None of the above.

4. Exploratory research is conducted when –
   a. The problem is generally unknown
   b. The problem is generally known
   c. The nature and causes of the problem are not known at all or known partially
   d. Both b & c.

5. Specific research generally involves –
   a. The use of larger sample
   b. Fewer sample
   c. Lot of desk work
   d. Both b & c.

6. Routine feedback is an attempt to monitor –
   a. Certain development variables as sales, and market shares
   b. Changes in the political environment
   c. Competitors' strategies
   d. Changes in technological fields.

7. Which of the following is a step of the marketing research process?
   a. Problem definition
   b. Develop the research design
   c. Conduct the formal study
   d. All of the above.

8. Which of the following may be a reason for conducting marketing research?
   a. To determine if a problem or opportunity exists
   b. To obtain information pertinent to a problem
   c. Both a & b
   d. None of the above.

9. Preliminary investigations help –
   a. Familiarize the researcher with issues involved
   b. Obtain necessary information
   c. Define the problem
   d. Identify the opportumities.

10. Data which have been already collected for some other purpose are known as –
    a. Primary data
    b. Processed data
    c. Unbiased data
    d. Secondary data.

11. Which of the following is a source of secondary data?
    a. Consumers
    b. Government documents
    c. Both a & b
    d. None of the above.

12. Observation method allows the researcher to –
    a. Watch the actions of people
    b. Watch the events
    c. Both a & b
    d. None of the above.

13. Briefly describe the seven-step marketing research process

14. List the three approaches to data collection and describe some of the advantages and disadvantages of each.

Answers

1. d, 2. c, 3. a, 4. d, 5. a, 6. a. 7. d, 8. c, 9. a, 10. d, 11. b, 12. c.

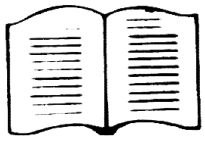
Lesson 4 : Demand Forecasting and Demand Measurement

Objectives of this lesson

After reading this lesson, you will be able to:

- Understand the types of markets and decide which market to measure
- Develop a vocabulary for demand measurement
- Understand how to estimate current demand
- Understand how to estimate future demand (sales forecasting), and, finally
- Understand the main concepts of forecasting and demand measurement

Forecasting and Demand Measurement : An Overview



The marketing opportunities of a company are basically identified by conducting marketing research. After opportunities are identified by the research, target markets should be selected very carefully evaluating the opportunities so identified. To begin with, the size, growth, and profit potential of each of the opportunities must me measured and forecasted by the management. Number of departments in the company use the sales forecasts of which finance, manufacturing, purchasing, and human resources departments are important. Each has its special interest in forecasts of sales. Manufacturing department, for example, uses it to establish capacity and output levels, purchasing needs it to acquire the appropriate amount of supply, human resources to hire the needed number of workers, and, finance uses it to raise the needed cash for investment and operations. Sales forecasts are prepared by the marketing department. It is crucial for a company to make forecasts as real as possible to get rid of the problems of either stock pile up or markets being underserved. In both of these situations company looses money. Demand estimates are used as a basis in sales forecasts, and it is , therefore, necessary to define market demand very carefully.

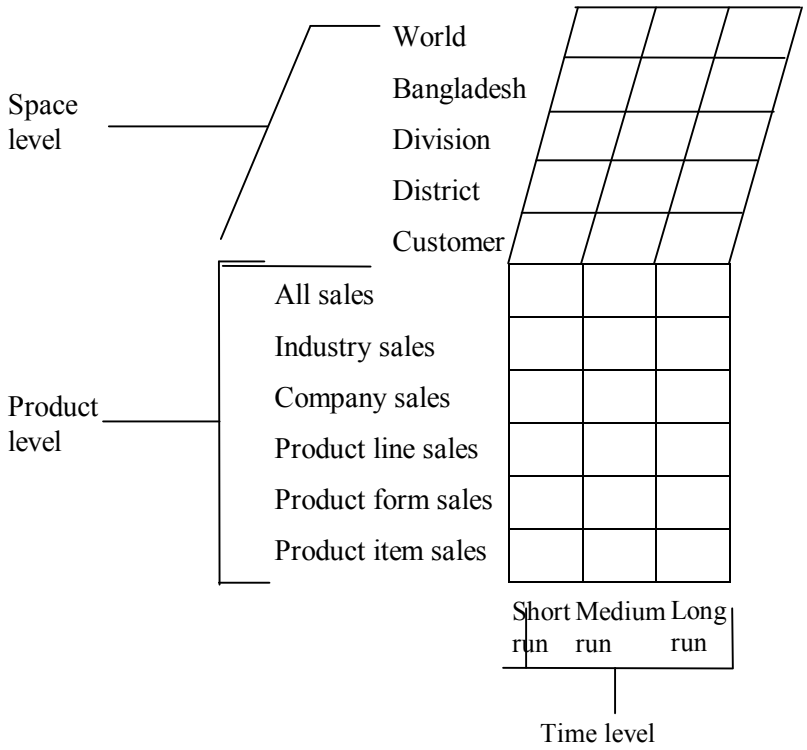
Demand estimates are used as a basis in sales forecasts.

Estimates of Market Demand

A company can make many different types of demand estimates or measurements. There are 90 different types of demand estimates that a company can make as identified by Dr. Kotler. Diagram on the next page shows this. It can be measured for five different space levels, six different product levels, and three different time levels, and thus a company can have 90 types of demand estimates (5 x 6 x 3). Why a company goes for so many different types of demand measurement? The answer is: since each serves a specific objective. For the purpose of ordering raw materials, planning production, and borrowing cash, a company may

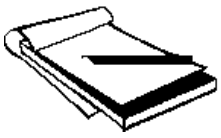
forecast short-run demand (time level) for a specific product. Again, to decide whether to set up regional distribution network, it may forecast regional demand for its major product line.

Figure–3.5: Ninety Types of Demand Measurement (5x6x3)



Source: *Philip Kotler, Marketing Management: Analysis, Planning, Implementation, and Control, Ninth Edition, Prentice Hall of India private Limited, 1997. p. 131.*

Demand can be measured along several dimensions as you see in the above figure. With respect to product level, demand can be estimated for specific product items (such as frozen orange juice) or for a product line (such as frozen foods). With respect to geographic level, demand can be measured for a neighborhood, town, district, division, or nation. In relation to time, demand measurement can be short range (one year or less), medium range (one to five years), or long range (longer than five years). If you make permutation and combination calculation using three different levels of demand you will come up with 90 different types of demand estimates.



Activity :

Calculate 27 different types of demand estimates for ball point pen using the figure above.

Deciding on which market to measure

There are many different market terms discussed in marketing literatures such as potential markets, available markets, served markets, and penetrated markets. In order to understand these terms, it is imperative to understand the term ***'market'*** in its true perspective.

Market is a set of all actual and potential buyers of a product.

Market is a set of all actual and potential buyers of a product. This definition suggests that the size of market of a particular product depends on the number of people who may accept the offer of the said product. The ***potential market***, on the otherhand, is the set of consumers who show sufficient level of interest in the offer made through the product. Mere interest of people does not serve the purpose of marketers. People must have sufficient income to buy the product as well as access to the offer. To have access to the product offer by a certain group of people, the product must be distributed or made available to the area where these people live. This gives the rise to the concept of ***available market***. It is the set of consumers who have interest, income and access to a specific market offer. Every individual in the available market of a particular product may not qualify to buy it either because the company may discourage some of them or the law may restrict some to buy. Individuals excluding the above mentioned groups qualify to buy the product who constitute the ***qualified available market.*** From the qualified available market, the company may decide to target a part of it or the whole available market. If it decides to go for a part of the total qualified available market, the part is called the ***target or served market***. There is no guarantee that everybody in the target market will buy the company's product. The set of customers who have already bought the company's product is called the ***penetrated market***. Understanding the above market terms may help a company plan its market planning activities efficiently.

- ## Demand Measurement - Useful Vocabulary

Two major concepts in demand measurement to which you should be familiar are total market demand and company demand. Here we shall take up discussion on these two concepts at some length :

- **Total Market Demand:** Philip Kotler defines total market demand for a product as the total volume that would be bought by a defined consumer group in a defined geographical area in a defined time period in a defined marketing environment under a defined level and mix of industry marketing effort. Let us examine the components and projections of an estimate of total market demand of a particular product, say, PBX in Bangladesh in the year 2000. PBXs are sophisticated electronic switching systems that handle not only voice conversations but also computer data, telex messages, and facsimile images. Sometimes called the computerized switchboard, the PBX is considered the hub of the automated office.

Level and Mix of Industry Marketing Effort: Let us assume that there are five players (producer/marketer) in the market for PBXs. Also assume that each firm is expected to spend promotion monies aggressively.

Marketing Environment: Projected favorable economic conditions for capital investments. Bangladesh's gross national product (GNP) expected to grow at an average rate of 3 percent per year.

Time period: 2000 calendar year sales.

Geographical area: Bangladesh

Customer group: Large companies upgrading telecommunications networks.

Total Market Demand for PBXs in Bangladesh in 2000: Projected at Tk. 500 million (2000 PBX systems at average price of Tk.2,50,000/-)

Note that the Tk. 500 million figure represents estimated sales for all marketers of PBXs in Bangladesh in the year 2000. But this figure is valid only for the conditions laid out above. Should economic conditions change, should a new competitor enter the market, or should the competitors increase their marketing efforts, the projection would need to be revised to reflect such changes.

Total Market Potential: Should all other market factors remain unchanged (time period, geographical area, economic conditions, and so forth) while each competitor makes a maximum marketing effort, we can estimate a ***total market potential*** - the total possible sales of the product by all competitors. Total market potential is rarely realized or sought. The additional expenditures necessary to reach marginally interested buyers would very likely to lower the profits on such sales (between estimated demand and total market potential) to an unattractive level. Using the following formula, total market potential may be measured:

Total market potential - *the total possible sales of the product by all competitors.*

$$Q = nqp$$

Where:

Q = total market potential

n = number of buyers in the specific product/market under the given assumptions

q = quantity purchased by an average buyer

p = price of an average unit

- **Company Demand**: Company demand is the company's estimated share of market demand at alternative levels of company marketing effort.[4] Company demand for a particular company may be shown

[4]. *Philip Kotler, Marketing Management: Analysis, Planning, Implementation, and Control, 9th edition, Prentice-Hall of India Private Limited, New Delhi, p. 134*

symbolically as Qi = siQ

Where:

Qi = company i's demand

si = company i's market share

Q = total market demand

People's perception of a number of things relative to the competitors, determines a company's market demand. They are the product itself, services offered by the company, prices, communications etc.

Company Sales Forecast: A company sales forecast represents realistic expectations of a company's sales of a particular product or product line to the chosen target market, over a specified time, in a chosen geographic area, and under a defined marketing program. Forecasts are basically the projections used to formulate the action plans for implementation of marketing strategies. These forecasts are most often short-term and quite specific. Marketing managers and statisticians have developed a number of techniques for making sales forecasts. In relation to company sales forecast, you should be familiar with two other relevant concepts. They are ***sales quota***, and ***sales budget***. Let us now define them.

Philip Kotler defines a ***sales quota*** as the sales goal set for a product line, company division, or sales representative. To define and stimulate sales effort, managements use sales quota as a device. Based on sales forecasts, management sets sales quota by adding a percentage to it to stretch sales force so that they put some extra efforts.

A sales budget, on the otherhand, is defined as a conservative estimate of the expected volume of sales and is used primarily for making current purchasing, production, and cash-flow decisions. The usual practice is to set sales budgets slightly lower than the sales forecasts.

Company Sales Potential: Company sales potential may be defined as the sales limit approached by company demand as company marketing effort increases relative to competitors. A company's sales potential may be equal to the company market potential if it can achieve cent percent of the market.

- **Estimating Current Demand (Methods used)**

There are several methods of estimating current demand. They are: estimation of total market potential, estimation of area market potential, and estimation of industry sales and market shares. Hence, estimation of total market potential is discussed before, we will focus here on estimation of area market potential and estimation of industry sales and market shares.

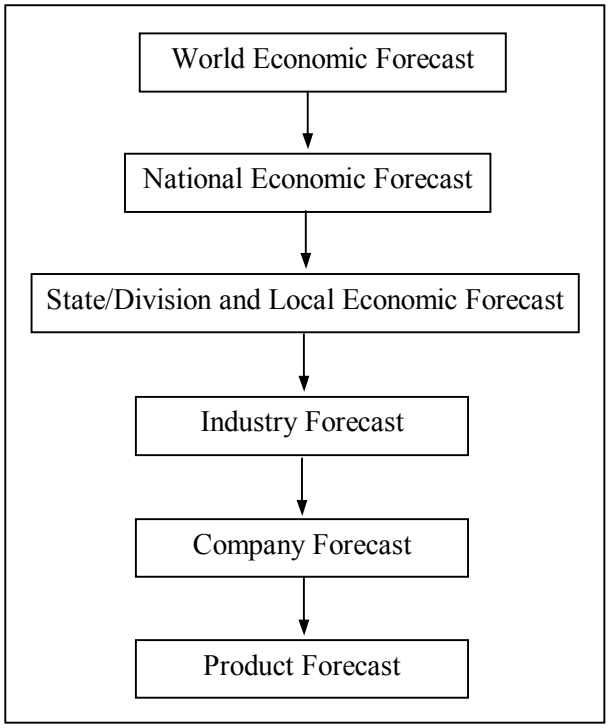
- **Estimation of Area Market Potential**: Characteristics of market vary from area to area. And, in order to be successful, a company needs to pursue different strategy in different area. To decide on strategies, a company needs to estimate market potential area-wise. There are two methods available to estimate area market potential. They are: the (i) ***Market-buildup method***, and the (ii) ***Multiple-factor index method***. Let us now discuss them in brief.
    - ***Market-buildup method:*** In this method, the potential buyers in a particular area are identified first, and than, potential purchases by them are estimated. But it is very difficult to identify the potential buyers, particularly in a country like Bangladesh, and hence use of this method here is very uncommon.
    - ***Multiple-factor Index Method:*** This method measures market potential along different factors such as population, per capita income, age, gender and so on. For each factor, a specific weight is assigned and the marketing manager estimates market potential of a particular area by taking into account the factors and their corresponding weights.
- **Estimation of industry sales and market shares:** To estimate industry sales and market shares, a company first identifies its competitors, and than estimates sales of them. The sum of competitors' sales estimates and that of the company constitute the industry sales. It helps a company to assess its performance with that of the industry average. Here, a company may take help from publications of different trade associations as well as reports of different research organizations.

- **Sales Forecasting (Estimating Future Demand)**

Any process of selecting and targeting on specific market segments and identifying which sub-markets are both viable and attractive, requires the sales forecast or estimating future demand. Without a sales forecast, the marketing executive could not determine what sales volume to expect, how much to produce, and how much money and effort to spend on the entire marketing program.

Forecasting levels: A firm's marketing efforts are affected by world, national, and local economies. Because economic factors can have such a great impact on a firm's sales, marketing executives may develop their forecasts through a ***top-down*** approach. Starting at the national, or possibly world level, the analysis moves down to the local area and then to the industry. Ultimately, the forecasts are narrowed to the firm's products or services, as shown in the following figure :

Figure – 3.6: Sales Forecasting - the Top-Down Approach

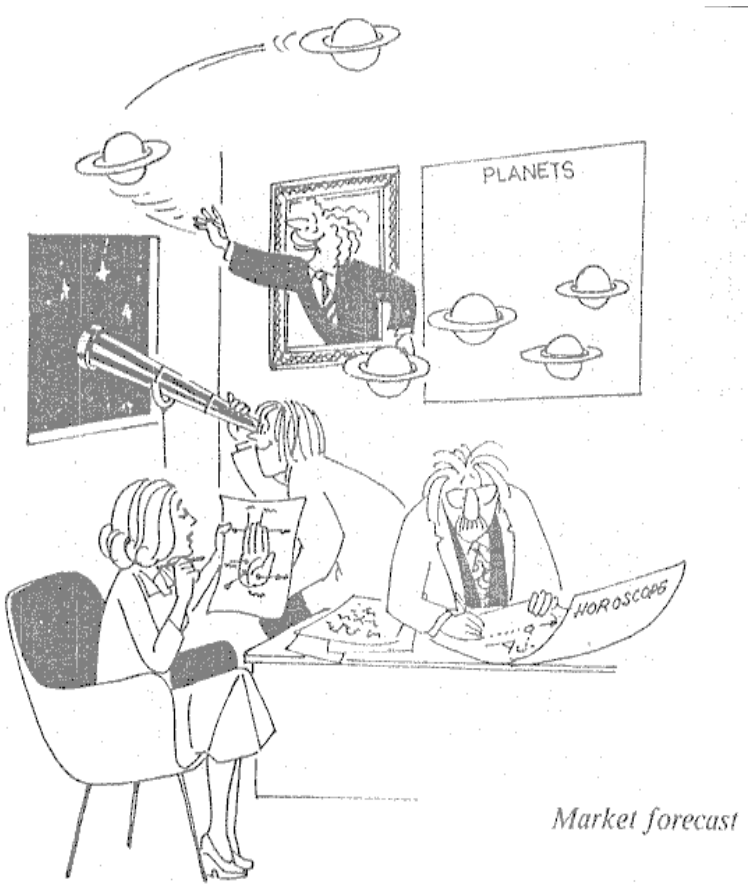


While a top-down approach provides a good analysis of conditions affecting a firm's sales, it is sometimes criticized because forecasts are built on forecasts, and estimates are made of estimates. The results can be a gross error in the firm's sales forecasts if the preceding forecasts are not accurate.

To avoid this problem, some marketing executives prefer the ***bottom-up*** approach. Usually using salespeople who are closest to the buying public and more knowledgeable about the people in their sales areas, sales estimates are made for each local area. These estimates are then combined into one overall forecast.

National and local levels : A marketing executive will frequently begin sales forecasting by examining the national economy. While very large businesses often have their own forecasts for the national economy, most other firms do not. Instead, they use forecasts prepared and published by the government, banks and other institutions.

Once the national economic forecasts have been made or obtained from some other source, projections are needed for specific geographic areas where the firm will market its product or service. Although it is increasingly common for businesses to have their own local forecasts, most still use those developed by local governments and other sources.



Market forecast

Industry and company levels: Based on the general estimates of national and local economic conditions, the marketing executive then begins to forecast sales for the industry and the company. The industry forecast is synonymous with the market potential for the firm's product or service, reflecting the total expected sales volume for the firm and all its direct competitors.

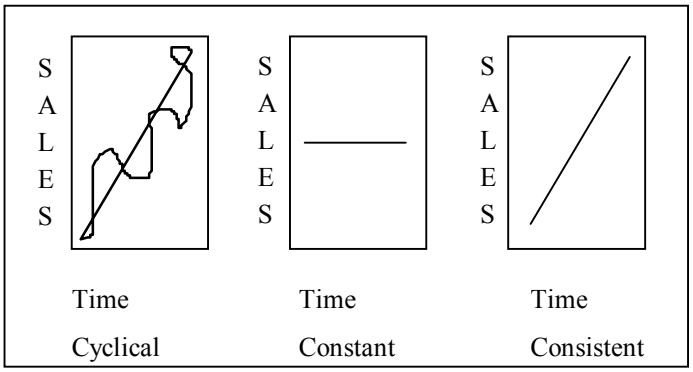
In some instances industry forecasts are obtained from trade associations, suppliers, government agencies, and privately published sources. The marketing executive may develop these industry forecasts by using the techniques described next. The company sales forecast, of course, is more important. The firm's operations - including its production facilities, personnel, and financial plans - are geared to that level of sales.

Forecasting Methods

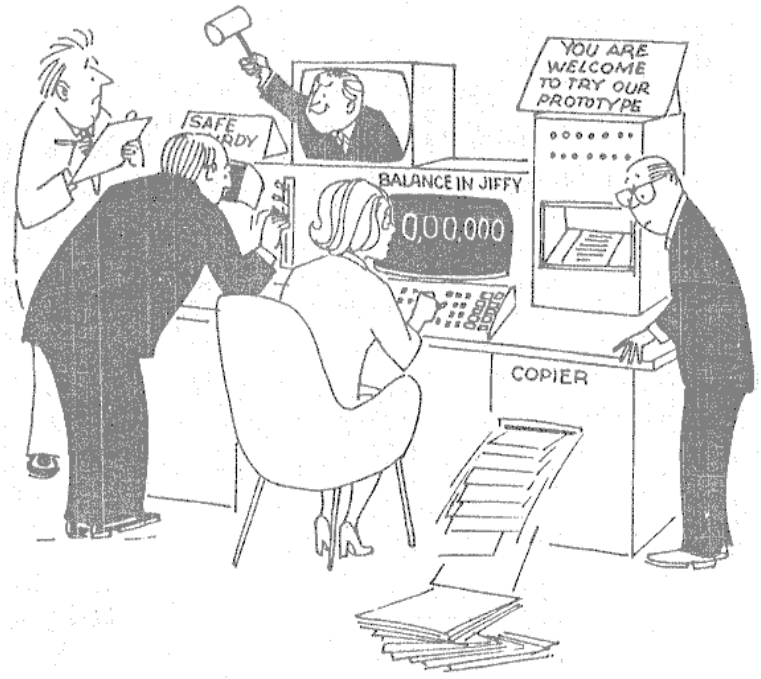
Forecasting methods range from the judgmental to the highly quantitative, from the fairly simple and inexpensive to the quite costly and time-consuming. In selecting one or more methods to use, the marketing executive must take into consideration the time and money available as well as the level of accuracy desired. The common methods are discussed below.

(i) **Trend Analyses:** This is one of the most commonly used methods for forecasting sales. The marketing executive attempts to identify a pattern in sales volume by using past sales data. The pattern may be cyclical, constant, or consistent in movement, as illustrated in the following exhibit.

Figure – 3.7: Sales Trend Analyses



In a cyclical pattern, sales have recurring peaks and valleys based on a time dimension, like months or seasons of the year. A constant pattern, on the otherhand, remains unchanged over the course of a time frame. Finally, in a consistent pattern, sales follow some predictable path.



Trend analysis is advantageous because it is simple and inexpensive to use. In some instances it can be sufficiently accurate, especially in stable industries. However, a simple trend analysis usually does not provide highly accurate forecasts. Seldom is the past an especially

good predictor of the future because environmental variables change frequently and significantly, and the firms marketing efforts certainly do not remain constant. For reasonably stable and consistent trends, a ***least square*** line is used, resulting simply in a trend line that is statistically closest to all of the past data used. Cyclical sales require a number of techniques such as ***weighted moving*** averages and ***exponential smoothing.*** A weighted moving average typically places more emphasis on the recent past than earlier time periods. A more accurate and elaborate extension on this is exponential smoothing which uses more quantitatively developed weights rather than subjective ones by the marketing executive. ***These techniques can be found in any basic mathematics or statistics book. There are other statistical techniques also available there that can help make trend analyses.***

- **Market Factor Analysis:** The market factor method is another technique commonly used for sales forecasting. The marketing executive finds another variable - usually another product - that has related sales patterns and for which the executive believes accurate sales forecasts have already been developed. This other sales estimate is the basis for the product's sales forecast. This method has the same advantages as trend analysis. If there is a logical relationship between the market factor and the firm's product, the forecast will be quite accurate. Unfortunately, however, the relationships are sometimes thin at best and subject to sudden change.

- **Correlation Analysis:** A more sophisticated version of the market factor method is correlation analysis. Instead of using judgement, several variables are statistically tested to determine how closely they correspond to the sales volume of the firm's product. ***The procedures can be found in any basic statistics book.***

  The actual equation used to make the sales forecast is derived from analyzing past data on the variables and product sales. Weights, or coefficients, are attached to the variables and a regression equation is then developed.

  Correlation analysis is advantageous because it more precisely measures the accuracy of the regression equation created, so the marketing executive knows in advance of a forecast just how accurate it is likely to be. This method also is relatively easy and inexpensive to use.

  One of the weaknesses of correlation analysis is the considerable amounts of historical data needed to make the comparisons. Usually, twenty past periods are considered necessary. It is sometimes difficult to obtain sales figures that far back, making it impossible to use correlation analysis for new and near-new products. Moreover, it relies on past trends that are questionable, especially in rapidly changing items.

- **Customer Surveys:** The trend analysis, market factor, and correlation methods all rely on past data and variables to derive sales forecasts for a firm's product. Marketing executives often prefer to survey consumers directly in their target market to determine what and how much they will purchase. Instead of guessing about people's buying patterns for an upcoming period, why not just ask them? Despite its attractiveness, however, a customer survey often does not provide the information the marketing executive needs. Asking customers what they will buy actually only measures their intentions, and intentions are frequently very different from actions during the course of a year. Many buyers do not know how much they plan to purchase, and others simply will not participate in surveys.

- **Test Marketing:** A test market is perhaps a more realistic approach to including customer actions in the sales forecast. Instead of measuring buyer intentions, the marketing executive sells the product in one or more limited areas and monitors the sales volume. These test results are then projected to all market areas. Depending on the type of test market used, the results will indicate who the buyers are, how much they purchase, and what strategies competitor can be expected to use. Test markets are most commonly used to forecast sales for new products where no past sales figures are available.

  Test markets are most commonly used to forecast sales for new products.

  Despite the usefulness of test markets, they do contain several distinct disadvantages. They are expensive to conduct and must be completed in a relatively short time. Moreover, first-time purchases are not always good indicators of future sales because buyers may try a product but not like it. Another disadvantage of a test market is that it exposes the product and the firm's marketing strategies to the scrutiny of competitors. Finally, it is sometimes difficult to find a good test market for the product. The area should be reasonably well populated, have the appropriate overall demographic profile of a target market, have good communication facilities, and consist of average users of the firm's product.

- **Executive Judgement:** Some marketing executives prefer using executive judgements, instead of scientifically-based methods of developing sales forecast. Supporters of this method contend that top-level executives frequently have a feel for the firm's markets and customers, a skill developed through years of experience and knowledge of the firm and its competitive environment. They further argue that there can be no substitute for the seasoned judgement of top-caliber experts.

  This method's primary advantages are that it is somewhat simple and inexpensive. But it may involve more than just a few quick questions to key personnel. When properly done, executives hold a number of meetings after extensive individual study of market conditions. All too often, however, executives do not take the time to make a careful, informed judgement but rather, a spur-of-the-moment guess.

- **Sales Force Composite:** A variation of the executive judgement method is the sales forecast composite, where the firm's sales personnel make the forecasts. The rational for this approach is that the salespeople are the firm's closest link to the marketplace and its target market. The salespeople are asked to estimate sales for their particular territories and these are then added together forming the overall sales forecast. ***This process actually is bottom-up approach mentioned earlier.***

  One of the principal advantages of this method is that the forecast is made by people who are attuned to the marketplace everyday. Probably the greatest dangers of this method are its lack of scientific base and its possible bias.

- **Multiple Methods:** Each of the methods described here can be used to forecast the sales for a firm's product or service. Each has rather some unique strengths and weaknesses. To take advantage of the strengths and nullify some of the weaknesses, marketing executives sometimes use several forecasting methods at the same time. In this way a system of checks and balances is developed, ensuring that the firm does not use an offbeat forecast.

In some cases, the firm will use an average of forecasts. In others, a single method will be used as the primary one and several others used for verification purposes. Overall, sales forecasting methods should be as simple and inexpensive as possible, and marketing executives must experiment to find the one(s) that best suits their needs, and one in which the top executives have confidence.

Questions for Review

1. Which of the following department uses the sales forecasts?
   a. Finance
   b. Manufacturing
   c. Purchasing
   d. All of the above.

2. Which department prepares the sales forecasts?
   a. Purchasing
   b. Manufacturing
   c. Marketing
   d. Personnel.

3. What is a potential market?
   a. A set of all actual and potential buyers
   b. A set of consumers who show sufficient level of interest in the offer made through the product
   c. A set of consumers who have interest, income, and access to a specific market offer
   d. None of the above.

4. Company demand for a particular company may be shown symbolically as –
   a. Qi = SiQ
   b. Siq = Q1
   c. CD = qisi
   d. CD = Sqi.

5. Why forecasts are used?
   a. To know people's perception
   b. To know competitors' action
   c. To assess company's strengths
   d. To formulate the action plans for implementation of marketing strategies.

6. Market-build-up method and multiple factor index method are used to estimate –
   a. Total market potential
   b. Company sales potential
   c. Area market potential
   d. Industry sales potential.

7. In some instances, industry forecasts are obtained from –
   a. Trade associations
   b. Suppliers
   c. Government agencies
   d. All of the above.

8. Discuss the strengths and weaknesses of the forecasting techniques described in this lesson.

Answers

1. d, 2. c, 3. b, 4. a, 5. d, 6. c. 7. d.