Chapter 07
Marketing Research, Decision Support Systems and Sales Forecasting

Learning Objective 01
The Marketing Research Function

Marketing research is the process of collecting and using information for marketing decision making.

- More than 130 have passed since the first organized research study was conducted
- Advances in computer technology have significantly changed the landscape of marketing research during the last few decades

Conducting Marketing Research

Customer Satisfaction Measurement Programs
- Firms often focus on tracking the satisfaction levels of current customers
- External research firms can facilitate this by designing and managing this process

In-house Research

In some firms, internal research units support different product lines, brands and geographic areas, while other firms organize it based on types of research they need such as sales analysis, new product development, sales forecasting, advertising evaluation.

Many firms outsource research to independent organizations due to internal expertise issues. However, cost considerations do play a vital input to this decision.

Outsource

Syndicated Services – an organization that provides standardized data to all customers. They collect data through personal interviews, exposure to advertising, and point of sales scanner data.

- Full Service Research Supplier – Marketing research organization that contracts with clients to conduct complete marketing research projects. They become the client’s marketing research arm.

- Limited Service Research Supplier – Marketing research firm that specializes in a limited number of research activities such as conducting field interviews or performing processing.

Learning Objective 05
International Marketing Research and Computer Technology in Marketing Research

International Marketing Research

- Although the research process is the same, when conducting marketing research internationally, different challenges are met
- Language and cultural issues will be an important barrier to overcome
- Data collection methods need to be adjusted depending on the circumstances in each geographical location

Computer Technology in Marketing Research

- The following are supported by computer technologies that aid marketing research

Marketing Information System (MIS) – planned computer based system designed to provide managers with a continuous flow of information relevant to their specific decisions and areas of responsibility

Marketing Decision Support System (MDSS) – marketing information system component that links a decision maker with relevant databases and analysis tools. They are interactive, investigative, flexible and accessible

Data Mining – Process of searching through customer databases to detect patterns that guide marketing decision making

Business and Competitive Intelligence – Business intelligence is the process of gathering information and analyzing it to improve business strategy, tactics and daily operations. Competitive intelligence is a form of business intelligence that focuses on finding information about competitors using published sources, interviews, observations etc.
Learning Objective 02
The Marketing Research Process

1. DATA SOURCE
   - Internal records/data will reveal important insights to further explore the research problem
   - Typical internal sources include – sales records (by product, territory, customer, salesperson), financial statements, (ratio analysis, profitability) marketing costs analysis (selling, warehousing, advertising etc)

2. SAMPLING TECHNIQUES
   - Probability Sampling – simple random, stratified, cluster sampling
   - Non Probability Sampling – convenience, quota samples

3. PRIMARY RESEARCH METHODS
   - Observation Method
     - Interpretative, Ethnographic Studies
   - Experiment Method
     - Controlled Experiments
     - Test Marketing
   - Survey & Interview Methods
     - Telephone Interviews
     - Personal Interviews
     - Focus Groups
     - Mail Surveys
     - Online Surveys and Other Internet Based Methods

4. DATA COLLECTION METHODS

Define the Problem
Conducting Exploratory Research
Formulate a Hypothesis
Create a Research Design (Research Method)
Collect Data
Interpret and Present Research Information

- A research problem should be separated from a symptom (alerts the existence of a problem)
- A well-defined problem helps formulating a research design to collect data in finding a solution
- A logical starting point will be to evaluate the target market and the marketing mix elements
- It helps to discover the cause of a specific problem by discussing a marketing problem with informed sources both within and outside the firm and examining information from secondary sources
- This is mainly an informal investigation
- It could include the evaluation of company records, (sales, profit analysis), available competitive data
- A hypothesis is arrived at after defining the problem and conduction the exploratory investigation
- A hypothesis is a tentative explanation for some specific event. It identifies important variables and its relationships
- This is a master plan, a design to conduct the research. The design should measure why is intended. It identifies data sources, research methods, data collection techniques, sampling techniques, research instruments etc.
- There are cost and time implications related to data collection. The choice between secondary and primary data collection is tied to cost, applicability and effectiveness
- Marketing research projects combine secondary and primary data collection to fully answer the research problem
- Data should be analyzed, interpreted and presented in a format that allows managers to make effective judgements
- Marketing researchers and decision makers must cooperate at every stage of the research process. Too many studies go unused when management at times think that the information is of little use

Secondary Data
- Previously published information

External Sources
- Government records, syndicated research services, industry publications, private data, online sources

Internal Sources
- Sales records, product performance reviews, sales force activity reports, marketing costs reports

Population
Sample

Primary Data
Information collected for a specific investigation

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### Definition

**Secondary Data**
- Previously Published Data. Data collected for a previous project but will have some form of use or relevance for the intended purpose.
- Information collected for the first time specifically for a marketing research study.

**Advantages**
- Less expensive to gather
- Spend less time to locate and use secondary data
- Can collect richer, detailed information specifically required for the intended study
- The collected data would be more current

**Disadvantages**
- Published information can quickly become obsolete due to rapidly changing demographic and market conditions
- May not be relevant to the specific study at hand
- More costly to collect
- Takes more time to collect data since it requires planning, collection, analysis etc.
- Requires specialized knowledge and skills to design, collect and analyze data and not all organizations may have the expertise to do it

### Sources/Methods of Collecting Data

#### Internal Sources
- Sales records - by product, territory, customer, salesperson, transactions by customer type, sales method, type of order
- Financial/Accounting Data - Ratio analysis, current vs. previous year performance, comparison with industry benchmarks
- Marketing costs analysis - selling, warehousing, advertising, delivery

#### External Sources
- Government Data – federal, provincial and at municipal level. Census data, national household survey, industry Canada on industrial and economic data, Bank of Canada
- Private Data – data collected by private organizations, business and trade magazines, research undertaken in universities, subscription based information sources, information collected by radio frequency techniques
- Online Sources – access to hundreds of online databases searchable by key words, search engines, online analytics (Google analytics). Caution needs to be taken in evaluating the validity of some online data sources

### Learning Objective 03

**Data Sources**

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#### Observation Method
- Researchers view the overt actions of subjects being studied
- Useful to find out how consumers behave in certain situations
- Technological advances have provided techniques to carry out observational studies more effectively
- Interpretative research/ethnographic studies – a method in which customers are observed in their natural setting and their behaviour is interpreted based on an understanding of social and cultural characteristics

#### Experimental Method
- Controlled experiments – the researcher manipulate a test group and compares with the results of a controlled group.
- Test marketing – This technique involves introducing a new product in a specified area and then measuring the degree of the success of the associated marketing mix strategies. (see page 219 for issues related to test marketing)

#### Survey and Interview Method
- Researchers ask questions from the respondents to get specific information on attitudes, motives, opinions etc.
- Researchers use questionnaires or interviews to collect information through this method

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Create a Research Design (Research Method)

1. DATA SOURCES

   Secondary Data

   Primary Data

2. SAMPLING TECHNIQUES

   - Population/Universe – Total groups that researchers want to study
   - Sampling – Process of selecting survey respondents or research participants. The sample should include participants who accurately reflect the total target market. They could be classified as probability samples of non-probability samples
   - Probability Sample – sample that gives every member of the population an equal chance of being selected. Includes different types
     1. Simple Random Sample – a sample that provides every member of the population an equal opportunity to be selected for the sample
     2. Stratified Sample – randomly selected subsamples of different groups are represented in the total sample
     3. Cluster Sample – researchers select clusters (diverse sub groups) from which they draw a sample
   - Nonprobability Sample – sample that involves personal judgement somewhere in the selection process. Includes several types
     1. Convenience sample – a nonprobability sample selected from among readily available respondents
     2. Quota sample - a nonprobability sample that is divided to maintain the proportion of certain characteristics among different segments or groups as is seen in the population as a whole

3. PRIMARY RESEARCH METHODS

4. DATA COLLECTION METHODS

   - Telephone Interviews
     - Quick and inexpensive method for obtaining a small quantity of relatively impersonal information
     - While they have the potential to have a high response rate, refusal to respond, there being ‘do not call’ lists - pose challenges
   - Personal Interviews
     - Best means to collect detailed information. While personal interviews could be done in a wide variety of locations, mall intercepts (interviews conducted inside retail malls) are popular
     - It is fairly a time consuming and a costly method
   - Focus Groups
     - Simultaneous personal interview of a small group of individuals which relies on group discussion about a certain topic
     - Requires a moderator. Can get deep insights but difficult to collect representative data
   - Mail Surveys
     - Are very cost effective. Provides anonymity that may encourage a response
     - The response rates are very low and take a considerable amount of time to carry out
   - Online Surveys & Other Internet Based Methods
     - Can speed the survey process, increase sample size, ignore geographic boundaries and can reduce costs
     - Businesses are increasingly using quick feedback questionnaires in their own websites
     - Social media is also providing increased opportunities to use online methods to collect consumer behaviour patterns
Learning Objective 06
Sales Forecasting Techniques

Sales Forecasting

Sales Forecast is an estimate of a firm’s revenue for a specified future period. They play a vital role in new product decisions, product scheduling, financial planning, inventory planning, procurement, distribution etc.

Quantitative Forecasting
Use of statistical computation techniques such as trend extensions based on past data, computer simulations and economic models

- Test Markets
  - Helps planners to assess customer responses to new product offerings
  - It permits experiments to evaluate the effects of different prices, alternative promotional strategies and other marketing mix variables
  - It is time consuming, expensive and will communicate marketing plans to competitors

- Trend Analysis
  - Method that estimates future sales through statistical analyses of historical sales patterns
  - It implicitly assumes the collective causes of past sales will continue to exert similar influences in future
  - Cannot be used if historical data is not available. It also makes dangerous assumptions that future events will continue in the same manner as the past

- Exponential Smoothing
  - It is a more sophisticated method of trend analysis
  - A technique that assigns weights to historical sales data, giving the greatest weight to the most recent data
  - It is the most commonly used quantitative forecasting technique

Qualitative Forecasting
Techniques rely on subjective data that report opinions rather than exact historical data

- Jury of Expert Opinion
  - A method that assesses the sales expectations of various executives and experts
  - Works well for short term forecasting. Relatively easy and very cost effective to carry out

- Delphi Technique
  - A method that gathers and redistributes several rounds of anonymous forecasts until the participants reach a consensus
  - Used to predict long term issues. It is expensive and time consuming

- Sales Force Composite
  - A method based on the combined sales estimates of the firm’s sales people. It is a bottom up method
  - Consequently it provides good estimates that combine other methods
  - Sales force at times may project conservative estimates

- Survey of Buyer Intentions
  - A method that samples opinions among groups of present and potential customers concerning their purchasing intentions. Provides first hand intentions
  - Customer intentions at times will not translate into actions. It is time consuming and also expensive

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