Research Design

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Chapter Outline

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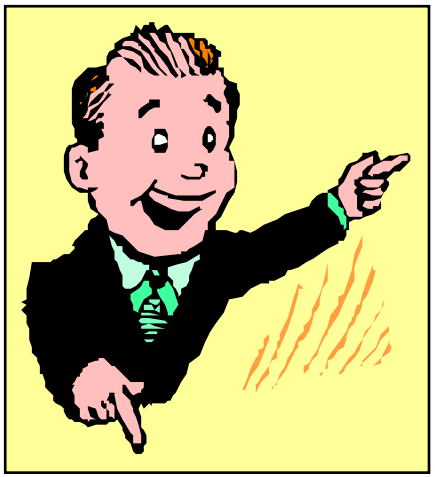
Research Design: Definition

- A **research design** is a framework or blueprint for conducting the marketing research project. It details the procedures necessary for obtaining the information needed to structure or solve marketing research problems.

A Classification of Marketing Research Designs

Fig. 3.1

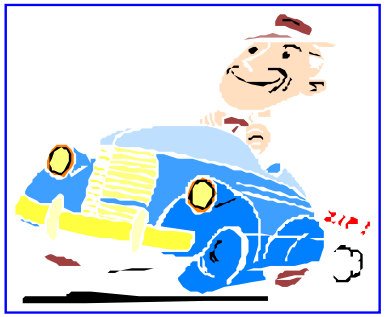


- Research Design
  - Exploratory Research Design
  - Conclusive Research Design
    - Descriptive Research
      - Cross-Sectional Design
        - Single Cross-Sectional Design
        - Multiple Cross-Sectional Design
      - Longitudinal Design
    - Causal Research

Exploratory & Conclusive Research Differences

Table 3.1

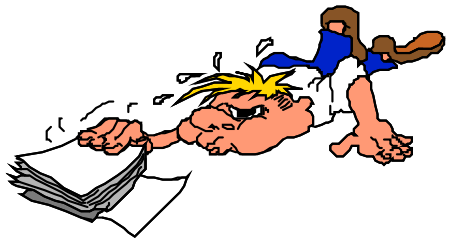
	Exploratory	Conclusive
Objective:	To provide insights and understanding.	To test specific hypotheses and examine relationships.
Character-istics:	Information needed is defined only loosely. Research process is flexible and unstructured. Sample is small and non-representative. Analysis of primary data is qualitative.	Information needed is clearly defined. Research process is formal and structured. Sample is large and representative. Data analysis is quantitative.
Findings /Results:	Tentative.	Conclusive.
Outcome:	Generally followed by further exploratory or conclusive research.	Findings used as input into decision making.



A Comparison of Basic Research Designs

Table 3.2

	Exploratory	Descriptive	Causal
Objective:	Discovery of ideas and insights	Describe market characteristics or functions	Determine cause and effect relationships
Characteristics:	Flexible, versatile	Marked by the prior formulation of specific hypotheses	Manipulation of one or more independent variables
	Often the front end of total research design	Preplanned and structured design	Control of other mediating variables
Methods:	Expert surveys Pilot surveys Secondary data Qualitative research	Secondary data Surveys Panels Observation and other data	Experiments



Uses of Exploratory Research

- Formulate a problem or define a problem more precisely
- Identify alternative courses of action
- Develop hypotheses
- Isolate key variables and relationships for further examination
- Gain insights for developing an approach to the problem
- Establish priorities for further research

Methods of Exploratory Research

- Survey of experts
- Pilot surveys
- Secondary data analyzed in a qualitative way
- Qualitative research

Use of Descriptive Research

- To describe the characteristics of relevant groups, such as consumers, salespeople, organizations, or market areas.
- To estimate the percentage of units in a specified population exhibiting a certain behavior.
- To determine the perceptions of product characteristics.
- To determine the degree to which marketing variables are associated.
- To make specific predictions

Methods of Descriptive Research

- Secondary data analyzed in a quantitative as opposed to a qualitative manner
- Surveys
- Panels
- Observational and other data

Cross-sectional Designs

- Involve the collection of information from any given sample of population elements only once.
- In **single cross-sectional designs,** there is only one sample of respondents and information is obtained from this sample only once.
- In **multiple cross-sectional designs**, there are two or more samples of respondents, and information from each sample is obtained only once. Often, information from different samples is obtained at different times.
- **Cohort analysis** consists of a series of surveys conducted at appropriate time intervals, where the cohort serves as the basic unit of analysis. A cohort is a group of respondents who experience the same event within the same time interval.

Consumption of Various Soft Drinks by Various Age Cohorts

Table 3.3

Percentage consuming on a typical day

Age	1950	1960	1969	1979	
8-19	52.9	62.6	73.2	81.0	
20-29	45.2	60.7	76.0	75.8	C8
30-39	33.9	46.6	67.7	71.4	C7
40-49	23.2	40.8	58.6	67.8	C6
50+	18.1	28.8	50.0	51.9	C5
		C1	C2	C3	C4

C1: cohort born prior to 1900
C2: cohort born 1901-10
C3: cohort born 1911-20
C4: cohort born 1921-30
C5: cohort born 1931-40
C6: cohort born 1940-49
C7: cohort born 1950-59
C8: cohort born 1960-69

Longitudinal Designs

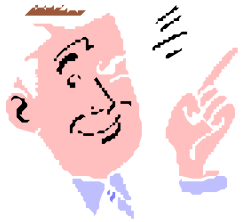
- A fixed sample (or samples) of population elements is measured repeatedly on the same variables
- A longitudinal design differs from a cross-sectional design in that the sample or samples remain the same over time

Relative Advantages and Disadvantages of Longitudinal and Cross-Sectional Designs

Table 3.4

Evaluation Criteria	Cross-Sectional Design	Longitudinal Design
Detecting Change	-	+
Large amount of data collection	-	+
Accuracy	-	+
Representative Sampling	+	-
Response bias	+	-

Note: A "+" indicates a relative advantage over the other design, whereas a "-" indicates a relative disadvantage.



Uses of Casual Research

- To understand which variables are the cause (independent variables) and which variables are the effect (dependent variables) of a phenomenon
- To determine the nature of the relationship between the causal variables and the effect to be predicted
- METHOD: Experiments

Potential Sources of Error in Research Designs

Fig. 3.2

- **Total Error**
  - **Random Sampling Error**
  - **Non-sampling Error**
    - **Response Error**
      - **Researcher Error**
        - Surrogate Information Error
        - Measurement Error
        - Population Definition Error
        - Sampling Frame Error
        - Data Analysis Error
      - **Interviewer Error**
        - Respondent Selection Error
        - Questioning Error
        - Recording Error
        - Cheating Error
      - **Respondent Error**
        - Inability Error
        - Unwillingness Error
    - **Non-response Error**

Errors in Marketing Research

- The **total error** is the variation between the true mean value in the population of the variable of interest and the observed mean value obtained in the marketing research project.
- **Random sampling error** is the variation between the true mean value for the population and the true mean value for the original sample.
- **Non-sampling errors** can be attributed to sources other than sampling, and they may be random or nonrandom: including errors in problem definition, approach, scales, questionnaire design, interviewing methods, and data preparation and analysis. Non-sampling errors consist of non-response errors and response errors.

Errors in Marketing Research

- **Non-response error** arises when some of the respondents included in the sample do not respond.
- **Response error** arises when respondents give inaccurate answers or their answers are misrecorded or misanalyzed.

Research Proposal

- Executive Summary
- Background
- Problem Definition/Objectives of the Research
- Approach to the Problem
- Research Design
- Fieldwork/Data Collection
- Data Analysis
- Reporting
- Cost and Time
- Appendices