Chapter 4: The Business Research Process: An Overview

- The research process begins when a management dilemma triggers the need for a decision.
- The origin, selection, statement, exploration, and refinement of the management question is the most critical part of the research process.
- Regardless of the type of research, a thorough understanding of the original question is fundamental to success.

**STAGE 1: CLARIFYING THE RESEARCH QUESTION**

The **management-research question hierarchy** process of sequential question formulation leads a manager or researcher from management dilemma to investigative questions.

- The process begins with the **management dilemma**—the problem or opportunity that requires a business decision.
- The management dilemma is usually a symptom of an actual problem, such as:
  - Rising costs.
  - The discovery of an expensive chemical compound that would increase the usefulness of a drug.
  - Increasing tenant move-outs from an apartment complex.
  - Declining sales.
  - A larger number of product defects during the manufacture of an automobile.
  - An increasing number of letters and phone complaints about postpurchase.
- The management dilemma can also be triggered by an early signal of an opportunity or growing evidence that a trend may be gaining staying power.
  - Identifying management dilemmas is rarely difficult.
  - Choosing one dilemma on which to focus may be difficult.
  - Choosing incorrectly may result in a waste of time and resources.
- Subsequent stages of the hierarchy take the decision maker and his/ her research assistant through various brainstorming and exploratory research exercises to define the following:
  - Management question—the management dilemma restated in question format.

  Research question(s)—the hypothesis that best states the objective of the research; the question(s) that focuses the researcher's attention.
  - Investigative questions—questions the researcher must answer to satisfactorily answer the research question; what the decision marker feels he/she needs to know to arrive at a conclusion about the management dilemma.
  - Management questions—the questions asked of the participants or the observations that must be recorded.

- The definition of the management question sets the research task.

STAGE 2: PROPOSING RESEARCH
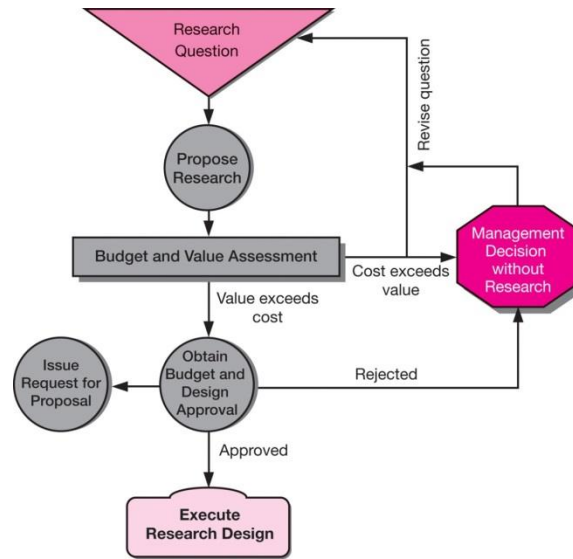
Resource Allocation and Budgets.

- Once the research question is defined, the manager must propose research in order to allocate resources to the project.
- A guide might be that (a) project planning, (b) data gathering, and (c) analysis, interpretation, and reporting each share about equally in the budget.
- Without budgetary approval, many research efforts are rejected for lack of resources.
- Types of budgets in organizations where research is purchased and cost containment is crucial include:
    - Rule-of-thumb budgeting—taking a fixed percentage of some criteria.
    - Departmental or functional-area budgeting—allocates a portion of total expenditures in the unit to research activities.
    - Task budgeting—selects specific research projects to support on an ad hoc (unplanned) basis.

Valuing Research Information.

- There is a great deal of interplay between budgeting and value assessment in any management decision to conduct research.
- In profit-making concerns, business managers are increasingly faced with proving that the research they initiate or purchase meets return-on-investment (ROI) objectives.
- Whether research is conducted by for-profit or not-for-profit organizations, the value of the research decision with research—however it is measured—must exceed the value of the decision without research.

Evaluation Methods

Ex Post Facto Evaluation.

- If there is any measurement of the value of research, it is usually an after-the-fact event.
- While the post-research effort at cost-benefit comes too late to guide a current research decision, such analysis may sharpen the manager's ability to make judgments about future research proposals.

Prior or Interim Evaluation.

- Some research projects are sufficiently unique that managerial experience provides little aid in evaluating the research proposal.

Option Analysis.

- Managers can conduct a formal analysis with each alternative research project judged in terms of estimated costs and associated benefits and with managerial judgment playing a major role.
- The critical task is to quantify the benefits from the research.
- The evaluation of alternatives requires that:
  - Each alternative is explicitly stated.
  - A decision variable is defined by an outcome that may be measured.
  - A decision rule is determined by which outcomes may be compared.

The Research Proposal.

- A written proposal is often required when a study is being suggested.
  - This is especially true if an outside research supplier will be contracted to conduct the research.
  - A research proposal may be oral.
  - Research proposal contains: research question, research purpose, research methods, research timing, research budget, legal contracts and legal obligations.

STAGE 3: DESIGNING THE RESEARCH PROJECT.
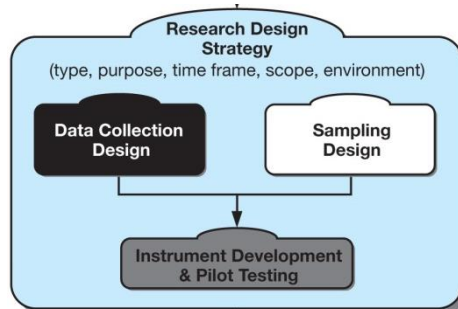
Research Design.

- The research design is the outline for fulfilling objectives and providing the insight to answer management's dilemma.

Sampling Design.

- Another step in planning the research project is to identify the **target population** (those people, events, or records that have the desired information and can answer the measurement questions) and then determine whether a sample or a census is desired.
  - Who and how many people will be interviewed?
  - What events will be observed, and how?
  - Which, and how many, records will be inspected?
- A **census** is a count of all elements in a population.
- A **sample** is a group of cases, participants, events, or records constituting a portion of the target population, carefully selected to represent that population.

- ♦ Probability sampling (every person within the target population get a nonzero chance of selection) and nonprobability sampling may be used to construct the sample.

Pilot testing.

- A **pilot test** is conducted to detect weaknesses in research methodology and the data collection instrument, as well as provide proxy data for selection of a probability sample.
    - ♦ The pilot test should approximate the anticipated actual research situation (test) as closely as possible.
    - ♦ A pilot test may have from 25 to 100 subjects and these subjects do not have to be statistically selected.
- Pilot testing has saved countless survey studies from disaster by using the suggestions of the participants to identify and change confusing, awkward, or offensive questions and techniques.
- The last step in a research design is often a pilot test.
    - • To condense the project time frame, this step can be skipped.

STAGE 4: DATA COLLECTION AND PREPARATION.

- The gathering of data includes a variety of data gathering alternatives.
    - ♦ Questionnaires, standardized tests, and observational forms (called checklists) are among the devices used to record raw data.
    - ♦ What are data?
        - − **Data** can be the facts presented to the researcher from the study's environment.
        - − Data can be characterized by their abstractness, verifiability, elusiveness, and closeness to phenomenon.
    - ♦ Data reflect their truthfulness by closeness to the phenomena.
        - − **Secondary data** are data originally collected to address a problem other than the one which requires the manager's attention at the moment. Collected from published data.
        - − **Primary data** are data the researcher collects to address the specific problem at hand—the research question. Created by the researcher through questionnaires (observation method) …..
    - ♦ Data are edited to ensure consistency across respondents and to locate omissions.
        - − In the case of a survey, editing reduces errors in the recording, improves legibility, and clarifies unclear and inappropriate responses.

STAGE 5: DATA ANALYSIS AND INTERPRETATION.

- Managers need information and insights, not raw data, to make appropriate business decisions.
    - ♦ Researchers generate information and insights by analyzing data after its collection.
    - ♦ **Data analysis** is the editing, reducing, summarizing, looking for patterns, and applying statistical techniques to data.
    - ♦ Increasingly, managers are asking research specialists to make recommendations based on their interpretation of the data.

STAGE 6: REPORTING THE RESULTS.

- As the business research process draws to a close it is necessary to prepare a report and transmit the findings, insights, and recommendations to the manager for the intended purpose of decision making.
    - The researcher adjusts the style and organization of the report according to the target audience, the occasion, and the purpose of the research.
        - The report should be manager-friendly and avoid technical jargon.
        - Reports should be developed from the manager's or information user's perspective.
    - The researcher must accurately assess the manager's needs throughout the research process and incorporate this understanding into the final product, the research report.
    - To avoid having the research report shelved with no action taken, the researcher should strive for:
        - Insightful adaptation of the information to the client's needs.
        - Careful choice of words in crafting interpretations, conclusions, and recommendations.
- At a minimum, a research report should contain:
    - An executive summary consisting of a synopsis of the problem, findings, and recommendations.
    - An overview of the research: the problem's background, a summary of exploratory findings drawn from secondary data sources, the actual research design and procedures, and conclusions.
    - A section on implementation strategies for the recommendations.
    - A technical appendix with all the materials necessary to replicate the project.

Unresearchable Questions

- Not all management questions are researchable, and not all research questions are answerable.
    - To be researchable, a question must be one for which observable or other data collection can provide the answer.
    - Many questions cannot be answered on the basis of information alone.