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.