Problem Definition: The Foundation of Business Research

LEARNING OUTCOMES

1. Explain why proper “problem definition” is essential to useful business research
2. Know how to recognize problems
3. Translate managerial decision statements into relevant research objectives
4. Translate research objectives into research questions and/or research hypotheses
5. Outline the components of a research proposal
6. Construct dummy tables as part of a research proposal

Good Decisions Start with a Good Problem Definition

• Decision Statement
  • A written expression of the key question(s) that the research user wishes to answer.

• Problem Definition
  • The process of defining and developing a decision statement and the steps involved in translating it into more precise research terminology, including a set of research objectives.
EXHIBIT 6.1  Defining Problems Can Be Difficult

The Problem-Definition Process

- **Problem**
  - When there is a difference between the current conditions and a more preferable set of conditions.

- **Problems Mean Gaps**
  - Business performance is worse than expected business performance.
  - Actual business performance is less than possible business performance.
  - Expected business performance is greater than possible business performance.

Poor Questions Result in Poor Research in Japan!

- A French yogurt manufacturer noted that the Japanese were becoming more Westernized.
- A survey supported this and appeared to offer a strong market potential for yogurt.
- Wrong!
  - The “Yes/No” question was too simplistic and most respondents were too polite to say “No.”
  - They wouldn’t offend the researcher by criticizing ads featuring a spoon as an eating utensil.
EXHIBIT 6.2 The Problem-Definition Process

1. Understand the Business Decision
   • Situation Analysis
     • The gathering of background information to familiarize researchers and managers with the decision-making environment.
   • Interview Process
     • Develop many alternative problem statements
     • Think about possible solutions to the problem
     • Make lists
     • Be open-minded

2. Identify key problems from symptoms
   • Identifying Symptoms
     • Interrogative techniques
       • Asking multiple what, where, who, when, why, and how questions about what has changed.
     • Probing
       • An interview technique that tries to draw deeper and more elaborate explanations from the discussion.
3. Writing Managerial Decision Statements into Corresponding Research Objectives

- Decision statements must be translated into research objectives.
  - Once the decision statement is written, the research essentially answers the question, “What information is needed to address this situation?”
- Research objectives are the deliverables of the research project.

4. Determine the Unit of Analysis

- Unit of Analysis
  - Indicates what or who should provide the data and at what level of aggregation.
  - Individuals (such as customers, employees, and owners)
  - Households (families, extended families, and so forth)
  - Organizations (businesses and business units)
  - Departments (sales, finance, and so forth)
  - Geographical areas
  - Objects (products, advertisements, and so forth).
  - Multi-level analysis studies variables measured at more than one unit of analysis.

5. Determine the Relevant Variable

- What is a Variable?
  - Anything that varies or changes from one instance to another; can exhibit differences in value, usually in magnitude or strength, or in direction.
- What is a Constant?
  - Something that does not change; is not useful in addressing research questions.
Types of Variables

- **Continuous variable**
  - Can take on a range of quantitative values.

- **Categorical variable**
  - Indicates membership in some group.
  - Also called classificatory variable.

- **Dependent variable**
  - A process outcome or a variable that is predicted and/or explained by other variables.

- **Independent variable**
  - A variable that is expected to influence the dependent variable in some way.

6. Writing Research Objectives and Questions

- **Research Questions**
  - Express the research objectives in terms of questions that can be addressed by research.
  - Help to develop well-formulated, specific hypotheses that can be empirically tested.
  - Help the researcher design a study that will produce useful results.

Pricing Turbulence

- **Decision statement:** "In what ways could revenues be increased by altering pricing policies across customers?"
- Led to several hypotheses.
- Study revealed that business segments where time is of critical importance are less price sensitive.
- In turbulent markets, buyers are less price sensitive.
Clarity in Research Questions and Hypotheses

- **Research Questions**
  - The researcher’s translation of the problem into a specific inquiry.
    - Provide input that can be used as a standard for selecting from among alternative solutions.

- **Hypotheses**
  - Statements that can be empirically tested.
    - State what is expected to be found through the study.

- **Managerial Action Standard**
  - A specific performance criterion upon which a decision can be based.

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How Much Time Should Be Spent on Problem Definition?

- Budget constraints usually influence how much effort is spent on problem definition.
- The more important the decision faced by management, the more resources should be allocated toward problem definition.
- The time taken to identify the correct problem is usually time well spent.

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EXHIBIT 6.7 Influence of Decision Statement of Marketing Problem on Research Objectives and Research Designs

- Statement of marketing problem
- Broad research objectives
- Specific objectives
- Research design
- Results

Explanatory research options

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The Research Proposal

- Research Proposal
  - A written statement of the research design.
- Uses for the Proposal
  - As a planning tool
  - As a contract
- Funded Business Research
  - Basic research usually performed by academic researchers that is financially supported by some public or private institution as in federal government grants.