

# 1) Define Problem Definition. Discuss the Problem Definition process.

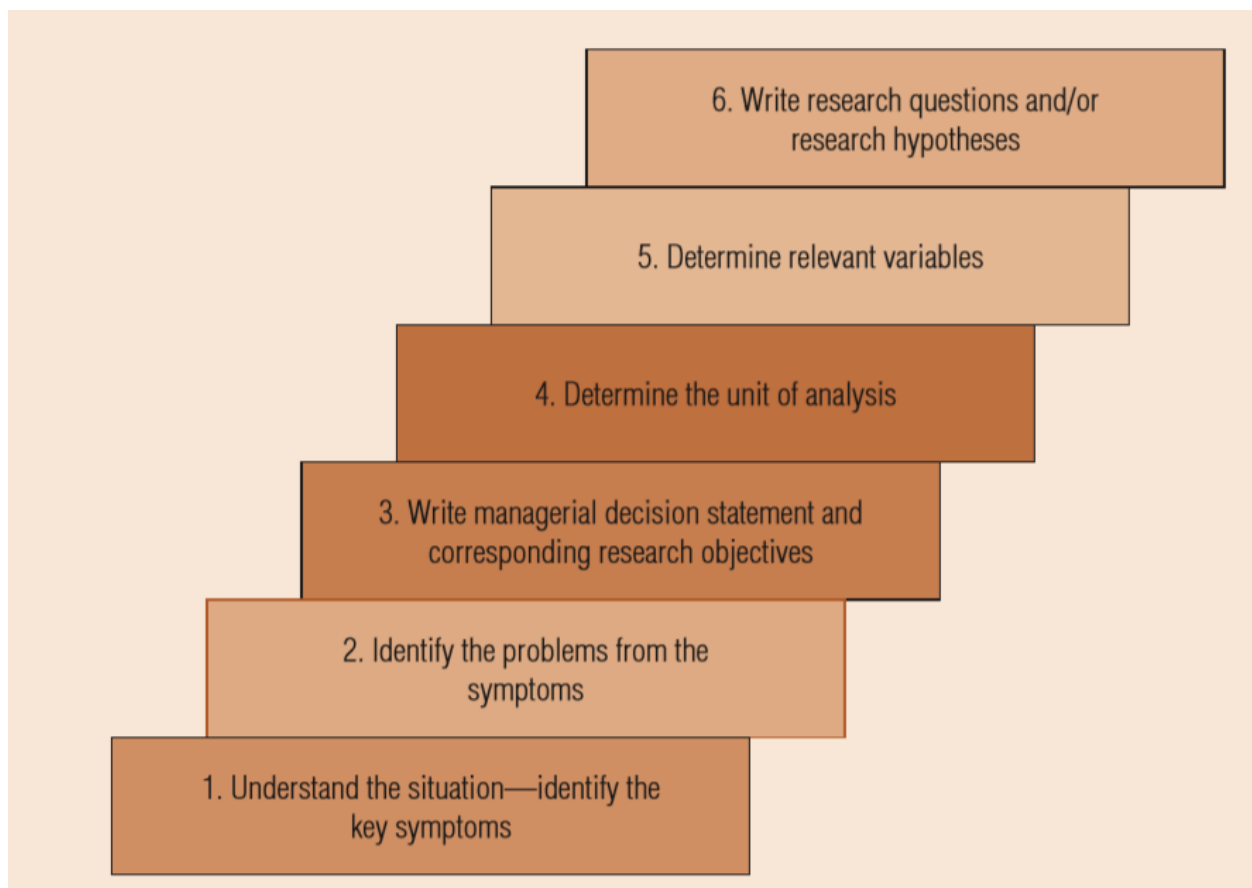
## PROBLEM DEFINITION

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.

## PROBLEM

Occurs when there is a difference between the current conditions and a more preferable set of conditions.

In other words, a gap exists between the way things are now and a way that things could be better.



## SITUATION ANALYSIS

The gathering of background information to familiarize researchers and managers with the decision-making environment.

Gaining an awareness of marketplace conditions and an appreciation of the situation often requires exploratory research

Researchers sometimes apply qualitative research with the objective of better problem definition

The situation analysis begins with an interview between the researcher and management.

### Identifying symptoms

- ▶ The researcher needs to be doubly certain that the research attacks real problems and not superficial symptoms
- ▶ For instance, when a firm has a problem with advertising effectiveness, the possible causes of this problem may be low brand awareness, the wrong brand image, use of the wrong media, or perhaps too small a budget.
- ▶ Certain occurrences that appear to be the problem may be only symptoms of a deeper problem.

### Writing Managerial Decision Statements and Corresponding Research Objectives

- ▶ The situation analysis ends once researchers have a **clear idea of the managerial objectives from the research effort.**
- ▶ Decision statements capture these objectives in a way that invites multiple solutions.
- ▶ Ultimately, research may provide evidence showing results of several ways a problem can be attacked.

## **Determine the Unit of Analysis**

### **Unit of analysis**

A study indicates what or who should provide the data and at what level of aggregation

Researchers who think carefully and creatively about situations often discover that a problem can be investigated at more than one level of analysis.

For example, a lack of worker productivity could be due to problems that face individual employees or it could reflect problems that are present in entire business units

## **Determine Relevant Variables**

### **variable**

Anything that varies or changes from one instance to another; can exhibit differences in value, usually in magnitude or strength, or in direction.

### **constant**

Something that does not change; is not useful in addressing research questions.

Q2) What are the Problem-Definition Process Steps.

The steps are

1. Understand the business situation—identify key symptoms
2. Identify key problem(s) from symptoms
3. Write managerial decision statement and corresponding research objectives
4. Determine the unit of analysis
5. Determine the relevant variables
6. Write research questions and/or research hypotheses

Q 3) Define

- 1) Probing: Probing is an interview technique that tries to draw deeper and more elaborate explanations from the discussion. This discussion may involve potential problem causes. This probing process will likely be very helpful in identifying key variables that are prime candidates for study.
- 2) Interrogative techniques: It simply involve asking multiple what, where, who, when, why, and how questions. They can also be used to provoke introspection, which can assist with problem definition

#### Q 4) Explain the UNIT OF ANALYSIS.

The unit of analysis for a study indicates what or who should provide the data and at what level of aggregation. Researchers specify whether an investigation will collect data about 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, or objects (products, advertisements, and so forth). In studies of home buying, for example, the husband/wife dyad typically is the unit of analysis rather than the individual because many purchase decisions are made jointly by husband and wife.

Researchers who think carefully and creatively about situations often discover that a problem can be investigated at more than one level of analysis. For example, a lack of worker productivity could be due to problems that face individual employees or it could reflect problems that are present in entire business units. Determining the unit of analysis should not be overlooked during the problem-definition stage of the research.

#### Q 5)WHAT IS A VARIABLE?

What things should be studied to address a decision statement?

Researchers answer this question by identifying key variables. A variable is anything that varies or changes from one instance to another. Variables can exhibit differences in value, usually in magnitude or strength, or in direction. In research, a variable is either observed or manipulated, in which case it is an experimental variable.

The converse of a variable is a constant. A constant is something that does not change. Constants are not useful in addressing research questions. Since constants don't change, management isn't very interested in hearing the key to the problem is something that won't or can't be changed.

In causal research, it can be important to make sure that some potential variable is actually held constant while studying the cause and effect between two other variables. In this way, a spurious relationship can be ruled out. At this point however, the notion of a constant is more important in helping to understand how it differs from a variable.

## ■ TYPES OF VARIABLES

There are several key terms that help describe types of variables. The variance in variables is captured either with numerical differences or by an identified category membership. In addition, different terms describe whether a variable is a potential cause or an effect.

**A)A continuous variable** is one that can take on a range of values that correspond to some quantitative amount. Consumer attitude toward different airlines is a variable that would generally be captured by numbers, with higher numbers indicating a more positive attitude than lower numbers. Each attribute of airlines' services, such as safety, seat comfort, and baggage handling can be numerically scored in this way. Sales volume, profits, and margin are common business metrics that represent continuous variables.

**B)A categorical variable** is one that indicates membership in some group.

**C)A dependent variable** is a process out-come or a variable that is predicted and/or explained by other variables.

**D)An independent variable** is a variable that is expected to influence the dependent variable in some way. Such variables are independent in the sense that they are determined outside of the process being studied. That is

another way of saying that dependent variables do not change independent variables.

### **E) classificatory variable**

Another term for a categorical variable because it classifies units into categories. The term classificatory variable is sometimes also used and is generally interchangeable with categorical variable. Categorical variables sometimes represent quantities that take on only a small number of values (one, two, or three). However, categorical variables more often simply identify membership.

Q 6) Define

#### **■ DUMMY TABLES**

One such tool that is perhaps the best way to let management know exactly what kind of results will be produced by research is the dummy table.

Dummy tables are placed in research proposals and are exact representations of the actual tables that will show results in the final report with one exception: The results are hypothetical. They get the name because the researcher fills in, or “dummies up,” the tables with likely but fictitious data. Dummy tables include the tables that will present hypothesis test results. In this way, they are linked directly to research objectives.