**Case Analysis**

**And Presentation**

Although many management activities have been successfully implemented many times, numerous efforts have also ended in partial or complete failure. Several recurring problems that prevent success are:

1. The inability to recognize important problems;
2. Difficulty in formulating the central problem;
3. The inability to actually visualize or understand the situation;
4. The inability to communicate with other managers and decision makers;
5. Not meeting the assumption of the quantitative techniques being used;
6. A lack of experience of working with "messy" data; and
7. A lack of experience in working with complex organizational environments.

### The Case Approach

The case approach offers an excellent opportunity for students to consider management decisions in realistic situations. It also provides a number of advantages that are either impossible or difficult to realize using standard lectures alone. A few of the advantages of the case method are:

1. The chance to identify and isolate real problems from symptoms and trivial problems;
2. Experience in developing one or more models that embody the essential elements of a particular situation or problem;
3. Increased awareness of the organization and how it really functions;
4. The ability to understand the impact of various environmental concerns, such as political, social, and legal systems, on the organization and the application of appropriate management techniques;
5. The opportunity to ask the appropriate questions when formulating the problem and gathering relevant information;
6. Experience in applying quantitative management techniques;
7. The ability to understand barriers that have blocked the successful application of quantitative techniques;
8. The opportunity to identify and isolate qualitative factors that will have a significant impact on the application of quantitative analysis methods;
9. The ability to think clearly in ambiguous and complex situations;
10. The chance to develop recommendations and action plans that are consistent with the organization's goals and problem-solving strategy;
11. The opportunity to determine what information is required in applying one or more management techniques in an actual setting;
12. Practice making verbal presentations and participating in management discussion groups; and
13. Practice in writing formal reports that use quantitative techniques to solve problems.

### How to Analyze a Case

There is no one best approach to analysis of a management case. However, a number of general steps and guidelines can be followed to ensure better case analysis. Although the following steps are presented sequentially, it may be necessary during a specific case analysis to reorder or modify them, as they are intended to provide a general framework.

1. **Preview the case**. The purpose of the first step is to give you an overview of the case and the existing situation. You may wish to read rapidly or to skim through the case, taking notes and jotting down important ideas, key problems, and critical factors. You may even wish to write down ideas relating the main problems or issues in the case at this point.
2. **Read the Case**. Once you have previewed the case read it in detail, taking careful notes on important facts, problems, and issues found within the case. While you are reading the case in detail, you should be looking for major problems, sub-problems, controllable and uncontrollable variables, constraints and limitations, alternatives available to the organizations, and possible quantitative techniques that might be used in solving the problems facing the organization. To formulate the problem, it may be necessary to reread certain parts of the case. After the problem has been formulated, it should be summarized and recorded in writing.
3. **Formulate the Problem**. If you have done a good job with the first two steps, problem formulation will be greatly simplified. The purpose of this step is to specify the major problem or issues at hand. At this point, you should not be concerned with what techniques may be used to solve the problem. Instead, you should strive to isolate the major issues and the central problems facing the organization. To formulate the problem, it may be necessary to reread certain parts of the case. After the problem has been formulated, it should be summarized and recorded in writing.
4. **Identify Important Variables**. Once the problem has been identified, the next step is to identify important variables. These variables could be the number of people in a maintenance department, the number of items to produce in a manufacturing operation, the return from an investment, the state of the economy in six months, the outcome of future legislation or a political race, and so on. The variables that are identified in this step should be related to the problem. Only those variables that could have an impact on the problem should be identified. Furthermore, it is important to distinguish between controllable and uncontrollable variables. A controllable variable is one over which the manager or decision maker has total control. An uncontrollable variable is one over which the manager or decision maker has little or no control.
5. **Determine Organizational Objectives**. Before any problem can be solved, it is necessary to specify the goals and objectives of the organization. For most situations, this will be profit maximization or cost minimization. However, other organizational goals or objectives may be important. For example, a company may wish to avoid stockouts, or a hospital may desire a specific patient-to-doctor ratio. It is desirable to specify mathematically the objectives of the organization. For example, it may be possible to develop a mathematical expression for the organization's profit. This could be similar or identical to the objective function of a linear programming problem. If it is impossible to write a mathematical expression for the organization's objectives, a concise written statement of the organization's objectives should be prepared.
6. **Determine Organizational Restrictions or Constraints**. Typically, companies and organizations have a number of limitations or constraints over which they have little or no control, for example, short-run restriction of plant capacity or legal restraints on trade and business interactions. Whenever possible, mathematically specify these restrictions and constraints. When such specification is not possible, a concise word statement should be written.
7. **List the Alternatives**. The next step is to list the alternatives available to management in solving the problem. A common mistake is not developing a complete list. Creativity and imagination are useful talents to use in developing viable alternatives. If an alternative is not listed, it likely will not be considered during later stages of analysis. As a result, many viable alternatives may be totally overlooked. Do not forget that you will always have the alternative of doing nothing.
8. **Analyze the Assumptions**. The eighth step is to discover and specify assumptions that must be made in analyzing the case. You may have to assume, for example, that demand for a particular product over a specified time period is constant, or that the only relevant inventory costs are holding costs and carrying costs, or that the arrival of individuals at a hospital is Poisson distributed. All relevant assumptions must be concisely formulated and listed.
9. **Select a Quantitative Technique**. If a good job has been done in the previous steps, it will be easy to select the appropriate quantitative analysis technique. This technique will allow you to solve the problem and obtain the organizational objectives without violating the inherent restrictions and constraints, while operating within the assumptions of the situation.
10. **Acquire Input Data**. Once a quantitative technique has been selected, the next step is to acquire the necessary input data. To do this you simply identify what inputs are necessary and locate these data in the case. In some cases, however, the necessary input data for one or more quantitative techniques will not be presented in the case. For these situations, it may be feasible to make assumptions about the input data. If such assumptions are made, don't forget to list them in Step 8.
11. **Develop the Solution**. This usually involves the application of one or more quantitative techniques, such as linear programming, the transportation algorithm, an EOQ model, and so on. Many times the solution should also embody important qualitative and judgmental factors that cannot be quantified. Your solution should be both quantitative and qualitative. People solve problems; models do not. If the assumptions made in applying the quantitative techniques are not consistent with the situation, the techniques should not be used or should be used as an input factor along with other judgmental factors in making a sound decision.
12. **Test the Solution**. When quantitative techniques are used, the solution should be tested for both internal and external validity. Internal validity checks the extent to which the model and quantitative analysis technique are internally consistent and accurate. External validity investigates the extent to which the solution and model accurately represent the actual situation under investigation. All management science techniques can undergo sensitivity analysis. Sensitivity analysis is used to determine how sensitive the final solution is to changes in the input data or in the model itself. Solutions that are highly sensitive should be analyzed with care. If the input data could be inaccurate or if the model could be incorrectly specified, great care should be taken in interpreting the solution.
13. **Analyze the Results**. The solution of the quantitative technique may represent only one of many inputs a decision maker uses in solving the stated problem. Moreover, the model results may have to be tempered with information about the environment, the assumptions of the model, and the quality of the input data. Analyzing the results involves incorporating the management science solution with the judgmental factors that have an important bearing on the possible alternative actions. At this stage, it may become apparent that you have incorrectly formulated the problem, and thus it will be necessary to return to an earlier step to incorporate considerations not previously included. The result of this step is a written statement that integrates the quantitative techniques with all other factors deemed important to the solution of the stated problem.
14. **Formulate the Action Plan**. The formulation of the action plan is an extension of the analysis of results (the previous step). Here you must make specific recommendations aimed at solving all of the present and future problems. Undesirable situations that may occur in the future should be addressed during this state. In addition, the action plan should also embody the rationale you used in selecting alternatives for inclusion in the action plan.
15. **Present the Action Plan**. The action plan or recommendations can be presented either in writing or verbally during class discussion. Because of the importance of this presentation, the following section will be devoted to presenting the results of case analysis and, therefore, this topic will not be discussed at any length at this point.
16. **Implement, Evaluate, and Maintain the Action Plan**. Unfortunately, many people believe their job is over after the action plan has been formulated. However, for an action plan to be useful, it must be carefully implemented and periodically evaluated and maintained. Implementation is the process of placing the plan into action; it requires that you develop written procedures for making the action plan operational. Procedures should also be established to force the periodic evaluation and maintenance of the action plan. As we live in a dynamic environment, it becomes necessary to evaluate the action plan periodically and modify it as necessary. This modification is called plan maintenance.

### How to Present a Case

After you analyze a case, you may be asked to present the case in a written report, or verbally to the class. During your presentation you have two overall objectives. First, you should inform your instructor and classmates, whether in writing or through the verbal presentation, of the results of your case analysis. Here you will discuss the steps you completed during case analysis, including

* formulation of the problem and the sub problems,
* identification of important variables, objectives and the goals of organization,
* constraints and restrictions to be considered,
* alternatives facing the organization, important assumptions,
* technique(s) employed,
* input data for and solution from the quantitative technique(s),
* how the solution was tested and analyzed,
* how the action plan was formulated, and
* suggestions for action plan implementation, evaluation, and maintenance.

Your second objective is to convince your instructor and classmates that your approach is better and will help the organization discussed in the case to obtain its goals and objectives while solving its inherent problems.

If you are preparing a written case, you should have a well-organized report. Although there is no one best way of organizing the written report, the following outline may be used as a model in preparing major sections of your written report:

* Table of Contents
* Summary of Findings
* Background Information
* Problem Statement
* Analysis of Alternatives
* Detailed Recommendations
* Implementation and Evaluation
* Appendices

In developing the written report, you should develop a draft and then revise the draft in producing the final report. Before you write the draft, you should consider the level and needs of the reader, carefully organize and outline the report, and determine what you plan to say and how you will be persuading others to accept your action plan. When writing the draft, do the following: write quickly and without hesitation, not worrying about spelling or grammar; use paragraphs that contain only one or two major ideas; use familiar and simple words; support all statements with fact; and use forceful and convincing arguments. In revising the draft, you need to check the organization of the paper to make sure it is logical and clear, correct, and accurate, and free from grammatical errors and problems.

The same outline employed with the written report can be used for an oral presentation. When making an oral presentation, you should keep a number of points in mind:

* Adequately prepare the case before class.
* Keep an open mind.
* Market and sell your idea.
* Incorporate outside experiences.
* Listen to others.
* Be brief.
* Take an offensive position, not a defensive position.
* Listen to and learn from other students.
* Be courteous and constructive.
* Do not repeat yourself.
* Do not repeat others.
* Do not overemphasize one particular point.
* Avoid changing the topic suddenly.