8 Decision Making

> It is not that people can't see the solution. It is that they can't see the problem.
>
> *Charles F. Kettering, writer*

CHAPTER THEME

- To understand the concept of decision and decision making with a view to make effective decisions.
- To understand the process and issues involved in decision making.
- To understand various decision-making conditions and different techniques which can be used for making decisions in these conditions.

CHOICE OF A BUSINESS

Ramesh and Shyam joined MBA course in a university to acquire knowledge of management with a view to equip themselves to start their own business after completing their studies. Both came from a small town and studied up to 12th class together. Both were quite ambitious and wanted to do something different.

Background of Ramesh. Ramesh was son of a businessman who was involved in retail business of textiles: suiting, shirting, dress materials, *sarees*, knitwear garments, etc. After passing 12th class, he joined B.Com. in a college. Thereafter, he joined MBA course. After MBA first year examination, Ramesh joined a textile company for his summer training for two months in New Delhi.

Background of Shyam. Shyam was son of an agriculturist with substantial land holding. After passing 12th class, he joined B.Sc. in a college. Thereafter, he joined MBA course. After MBA first year, Shyam joined an agro-product company also in New Delhi.

During the summer training period, both discussed prospect of starting a business jointly. After coming back from the summer training, they discussed their proposal with their fathers who knew each other quite well. Both appreciated the proposal and promised to finance the business. As a part of MBA final year course, they choose project on preparation of feasibility report. For this purpose, Ramesh chose project on "feasibility of a knitwear unit" and Shyam chose "feasibility of a cold storage." Brief descriptions of feasibility reports are as follows:

Knitwear Unit. Capacity: 10,000 doz. of socks, 10,000 doz. of underwears, 10,000 doz. of panties, 10,000 doz. of banyans and 8,000 doz. of T-shirts; project cost: ₹ 65.45 lakh; sources of finance: ₹ 25.00 lakh owned funds and ₹ 40.45 lakh borrowed funds; profit before tax: ₹ 30.20 lakh; return on owned funds before tax: 120.8 per cent.

Cold Storage. Capacity: 60,000 bags of potato of 85 kg. each; 10.000 boxes of other vegetables/fruits; project cost: ₹ 63.00 lakh; sources of funds: ₹ 20.00 lakh owned funds and ₹ 43.00 lakh borrowed funds; profit before tax: ₹ 24.00 lakh; return on owned funds before tax: 120 per cent.

Though investment and profitability of both the businesses were quite similar, their nature differed significantly.

After Ramesh and Shyam completed their MBA course, there were long sittings of Ramesh, Shyam, and their parents. While Ramesh and his father insisted on undertaking knitwear project, Shyam and his father insisted on undertaking cold storage project. Both groups of persons insisted that there would be lesser risks in the business suggested by them.

Decision making is an indispensible component of management process and a manager's life is filled with making decisions after decisions. Managers see decision making as their central job because they constantly choose what is to be done, who is to do, when to do, where to do, and how to do. Decision making, though permeates all managerial functions, is at the core of planning because it is the planning where major decisions are made which set the organizational tone. It is the stage at which major decisions regarding setting of organizational objectives, formulating major plans, laying down of policies, procedures, rules, etc. are made. Collectively, the decisions of managers give form and direction to organizational functions.

Concept of Decision and Decision Making

Before we go through the various aspects of decision making, it is essential to go through the concept of decision and decision making. The word 'decision' has been derived from the Latin word '*decidere*' which means a cutting away or a cutting off, or in a practical sense'. Thus, a decision involves a cut of alternatives between those that are desirable and those that are not desirable. The decision is a kind of choice of a desirable alternative. Decision making is a process to arrive at a decision; the process by which an individual or organization selects one position or action from several alternatives.

Decision making, thus, is an act of projecting one's own mind upon an opinion or a course of action. In decision making, three aspects of human behaviour are involved: (1) cognition—activities of mind associated with knowledge; (2) conation—the action of the mind implied by such words as willing, desire, and aversion; and (3) affectation the aspect of mind associated with emotion, feeling, mood, and temperament. Based on the above concept of decision making, its features can be derived as follows:

1. Decision making implies that there are various alternatives and the most desirable alternative is chosen to solve the problem or to arrive at expected results. A problem situation which does not have alternatives is not really a problem requiring solution though the problem may by quite injurious.
2. Existence of alternatives suggests that the decision maker has freedom to choose an alternative of his liking through which his purpose is served.

3. Decision making may not be completely rational but may be judgemental and emotional in which personal preferences and values of the decision maker play significant role.
4. Decision making, like any other management process, is goal-directed. It implies that the decision maker attempts to achieve some results through decision making.

TYPES OF DECISIONS

Decision making is involved in every walk of life; it is relevant in organizational as well as non-organizational context. In organizational context, decisions may vary from the major ones like determination of organizational objectives or deciding about major projects to specific decisions about day-to-day operations. Therefore, there are different types of decisions which are made by managers in organizations and for each type of decision, decision-making variables and conditions differ. There are different ways in which organizational decisions may be classified. One way of classifying these decisions is to group them into routine and repetitive or non-routine. In another way, these decisions are classified as programmed or non-programmed. These are further classified as strategic and tactical decisions. Understanding of programmed and non-programmed decisions and strategic and tactical decisions is necessary for managers to enhance their decision-making skills.

Programmed and Non-programmed Decisions

Herbert Simon has grouped organizational decisions into two categories based on the decision factors which are taken into consideration. These are programmed and non-programmed decisions.[1]

Programmed Decisions. Programmed decisions are routine and repetitive and are made within the framework of organizational policies and rules. These policies and rules are established well in advance to solve recurring problems in the organization. For example, the problem relating to promotion of employees is solved by promoting those employees who meet promotion criteria. These criteria are established by promotion policy and the managers have just to decide which employees meet criteria for promotion and the decision is made accordingly. Programmed decisions are comparatively easy to make as these relate to the problems which are solved by considering internal organizational factors. Such decisions are made by personnel at lower levels in the organization where the environment affecting decision making is static and well structured.

Non-programmed Decisions. Non-programmed decisions are relevant for solving unique/unusual problems in which various alternatives cannot be decided in advance. For such decisions, the situation is not well structured and the outcomes of various alternatives cannot be arranged in advance. For example, if an organization wants to take actions for growth, it may have several alternative routes like going for a grass-route project or taking over an existing company. In each situation, the managers have to evaluate the likely outcomes of each alternative to arrive at a decision. For evaluating the likely outcomes of these alternatives, the managers have to consider various factors, many of which lie outside the organization. A common feature of non-programmed decisions is that they are novel and non-recurring and, therefore, readymade solutions are not available. Since these decisions are of high importance because of their long-term consequences, these are made by managers at higher levels in the organization.

Strategic and Tactical Decisions

Organizational decisions are classified as strategic and tactical or operational. The distinction between strategic and tactical decisions is required because authority for tactical decision may be delegated to lower levels in the organization while for strategic decision, it cannot be delegated lower than a particular level in the organization. However, the distinction between strategic and tactical decisions is not as fine as a manager would wish because both these decisions attempt to achieve organizational objectives. Moreover, what might be a strategic decision for one organization may be tactical decision for another. Therefore, the nature of both decisions can be understood by analyzing them in detail.

Strategic Decision. Strategic decision concept is based on strategy which is a major action plan in an organization. Thus, strategic decision is a major choice of action concerning allocation of resources and contribution to the achievement of organizational objectives.

In a strategic decision, following characteristics are present:

1. The decision is a major one which affects the whole or major part of the organization.
2. It contributes directly to the achievement of organizational objectives. Though all decisions try to contribute in this direction, strategic decisions contribute directly and other decisions are derived from these.
3. A strategic decision may involve major departure from earlier ones concerning some organizational practices; for example, change in product mix, expansion of business, change in personnel policies, etc.
4. The strategic decision has normally three elements: (*i*) a course of action or plan which specifies the work to be done to achieve the result, known as action element; (*ii*) a desired result or objective to be achieved through the implementation of the decision, result element; and (*iii*) a commitment which directs some part of the organization to undertake the course of action, makes the personnel involved responsible for attaining the objective, and allocates resources to them, commitment element.
5. The strategic decision is normally a non-programmed decision which is made under the condition of partial ignorance. The alternatives involved and the outcomes of these alternatives cannot be known in advance. This is so because strategic decision is to be taken in the context of environmental factors which are quite dynamic and uncertain.

Tactical Decision. Tactical or operational decision, which is a programmed decision, is derived out of strategic decision. It relates to day-to-day working of the organization and is made in the context of well-set policies and procedures. The various features of a tactical decision are as follows:

1. Tactical decision relates to day-to-day operations of the organization and has to be taken very frequently. The decision is mostly repetitive; for example, purchase of raw materials, assigning duties to employees, etc.
2. Tactical decision is mostly a programmed one. The decision is programmed through the prescription of policies, rules, procedures, etc. Therefore, the decision can be made within the context of these variables. Such prescriptions provide what to do in a particular case. When the case for decision making comes, the decision maker simply applies those prescriptions and decides the things.
3. The outcome of tactical decision is of short-term nature and affects a narrow part of the organization. For example, purchase of raw materials in routine manner will

affect production department for a short period because raw materials are purchased very frequently in the context of well-set policies.

4. The authority for making tactical decisions can be delegated to lower-level managers. This is done because of two reasons: *First*, the impact of tactical decision is narrow and of short-term nature. Therefore, the lower-level managers have adequate perspective to make such decisions. *Second*, by delegating authority for such decisions to lower-level managers, higher-level managers are free to devote more time on strategic decisions which are more important.

DECISION-MAKING PROCESS

When a manager makes a decision, it is in effect the organization's response to a problem. As such, decisions should be thought of as means rather than ends. Every decision is the outcome of a dynamic process which is influenced by multiple forces. This process is presented in Figure 8.1.[2]

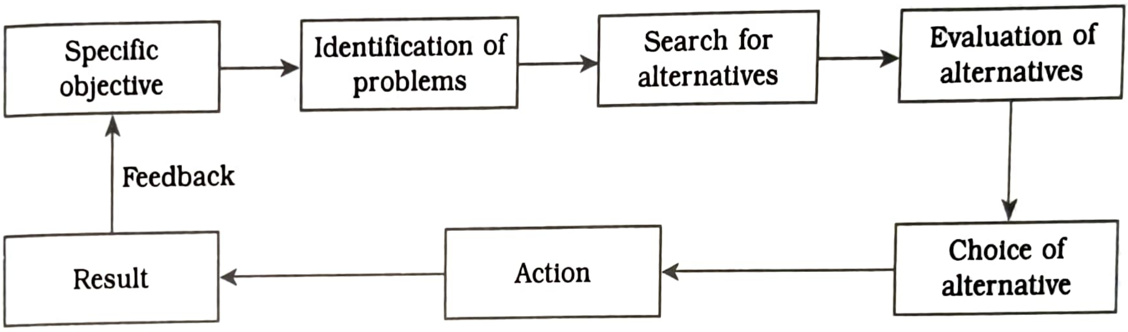

FIGURE 8.1: Decision-making process

However, this process should not be interpreted to mean that decision making is a fixed process. A process is basically a dynamic concept rather than static. Events and relationships are dynamic, continuous, and flexible and must be considered as a whole in which many forces interact; a force affecting others and being affected by others. Therefore, the decision-making process as presented in Figure 8.1 should be seen as sequential process rather than a series of steps to enable the decision maker to examine each element in the progression that leads to a decision. Moreover, the process reveals that it is more applicable to non-programmed decisions than to programmed ones. Problems that occur infrequently are unstructured, and are characterized by a great deal of uncertainty regarding their outcome, require the manager to utilize the entire process. For frequently occurring, structured problems, it is not necessary to consider the entire process. If a policy is established or a specific rule or procedure developed to handle such problems, it will not be necessary to develop and evaluate various alternatives each time the problem arises. In the light of this, let us go through various steps of decision-making process.

1. Specific Objective. The need for decision making arises in order to achieve certain specific objective. Every action of human beings is goal directed. This is true for decision making also which is an action. Therefore, the starting point in any analysis of decision making involves the determination of whether a decision needs to be made. In fact, setting of specific objective itself is an outcome of an earlier decision. However, since the objective setting is an outcome of an earlier decision, this may not be considered truly as the first step of decision process but provides framework for further decisions.

2. Problem Identification. Since a particular decision is made in the context of a certain given objective, identification of problem is the real beginning of decision-making process.

A problem is a felt need, a question thrown forward for solution. It is the gap between present and desired state of affairs on the subject-matter of decision. It is just like the diagnosis of patient by the doctor. When a doctor makes a diagnosis, he has a normal, healthy person in his mind and he also has a fairly clear concept of what a healthy person is. With this model as the desired result, he looks for disparities in the patient's actual state of health or factors which indicate that his future health will fall short of normal. In the case of management decision, however, a manager cannot rely on a commonly accepted norm such as a healthy person. The objective, if set precisely and specifically on the subject-matter of decision, will provide clue in identifying the problem and its possible solution. Further, in management, a problem exists whenever one faces a question whose answer involves doubt and uncertainty. If there is no solution to the problem, it cannot be treated as problem from decision point of view, though the consequences of not solving this problem may be terrible. A problem can be identified much clearly, if managers go through diagnosis and analysis of the problem.

(i) *Diagnosis.* The term 'diagnosis' has come from Medical Science where it is used as the process of identifying a disease from its signs and symptoms. A symptom is a condition or set of conditions that indicates the existence of a problem. For example, a patient has certain symptoms on the basis of which his disease can be identified. Symptoms occupy an essential place in the problem-solving process for they signal the existence of problem and guide the search for the underlying problem. For example, if an organization has high turnover of its employees, it indicates that something is wrong with the organization. The symptom of high turnover may provide the clue to the real problem and managers can overcome the problem by taking appropriate action (decision making involves in taking action). Often, managers fail to diagnose the problem correctly and sometimes they treat symptom as problem. Therefore, they should do this exercise very carefully. Diagnosing the real problem implies knowing the gap between what is and what ought to be, identifying the reasons for the gap, and understanding the problem in relation to higher objectives of the organization.

(ii) *Analysis.* While the diagnosis of problem gives the understanding of what should be done in terms of decision making, analysis of problem takes it a step further. The analysis of the problem requires to find out who would make decision, what information would be needed, and from where the information is available. This analysis may provide managers with revealing circumstances that help them to gain an insight into the problem. The whole approach of analysis of problem should, however, be based around critical factors like the availability of information for making decision, criticality of decision, and the time available for making decision. For example, information may be available from external and internal sources and some of the information may not be available at all. Similarly, the criticality of decision will determine the level at which the decision can be made. Thus, diagnosis and analysis of problem requiring decision will clarify what is needed and where the alternatives for doing the thing can be sought.

3. Search for Alternatives. A thorough diagnosis defines both a specific problem and the situation in which the problem exists. With this definition in mind, a decision maker seeks possible solutions. A problem can be solved in several ways, however, all the ways cannot be equally satisfying. Further, if there is only one way of solving a problem, no question of decision arises. Therefore, the decision maker must try to find out the various alternatives in order to get the most satisfactory result of a decision. However, while generating alternatives, the concept of limiting factor should be applied. A limiting factor is one which stands in the way of accomplishing a desired objective. If these factors are identified, managers will confine their search for alternatives to those which will overcome the limiting factors. For example, if an organization has limitation in raising sizable finances, it cannot consider projects involving high investment. A decision maker can use several sources for identifying alternatives: his own past experience, practices followed by others, and using creative techniques.

4. **Evaluation of Alternatives.** After the various alternatives are identified, the next step is to evaluate them and select the one that will meet the choice criteria. However, all alternatives available for decision making will not be taken for detailed evaluation because of the obvious limitations of managers in evaluating all alternatives. The energy of managers is limited and psychologically most of them prefer to work on alternatives that have good prospect of being carried out. In narrowing down the number of alternatives, two approaches can be followed: constraint on alternatives and grouping of alternatives of similar nature. The decision maker develops a list of limits that must be met by a satisfactory solution. He may treat these limits as constraints, that is, he may check proposed alternatives against limits, and if an alternative does not meet them, he can discard it. In the second approach, various alternatives can be grouped into classes on some specific criteria important to decision making. A representative alternative from one group may be selected for future analysis. Then having found the group that shows up the best, decision maker can concentrate on alternatives within this group. This method is very helpful in decision making regarding the location of plant, warehouse, etc. Having narrowed down the alternatives which require serious consideration, the decision maker will go for evaluating how each alternative may contribute towards the objectives supposed to be achieved by implementing the decision. For determining the impact of a factor, various quantitative techniques have been developed which will be discussed in a separate section of the chapter.

5. **Choice of Alternative.** The evaluation of various alternatives presents a clear picture as to how each one of them contributes to the objectives under question. A comparison is made among the likely outcomes of various alternatives and the most acceptable one is chosen. Thus, it is not necessary that the chosen alternative is the best one. This concept is based on the satisficing approach rather than the maximizing approach of decision making, to be discussed later in detail. In choosing an alternative, the decision maker can go through three approaches: experience, experimentation, and research and analysis.

(i) ***Experience.*** Decision maker can choose an alternative based on his past experience if he has solved similar problems earlier.

(ii) ***Experimentation.*** Experimentation which is generally used in scientific enquiry involves that a particular alternative is put in practice, result is observed, and the alternative giving the best result is selected. For example, many organizations go for test marketing of their products before the products are really introduced in the market.

(iii) ***Research and Analysis.*** This approach entails solving a problem first by comprehending it which involves a search for relationships between the more critical variables, constraints, and planning premises that bear the objective sought. In the second stage, the alternative is broken into various components. Their individual impact on objective is evaluated and the impact of all factors of an alternative is combined to find out the total impact of the particular alternative. The one having the most positive impact is chosen.

Though various approaches are available for choosing an alternative, the decision maker's personal values and aspirations affect what alternative will be chosen. In fact, in one way, the decision making is the translation of one's values and aspirations into action. Thus, the rational process of decision making is considerably affected by the personal factors (see the situation presented in the beginning of the chapter). Further, managers should take into account the uncertainty of outcome of a decision.

6. Action. Once the alternative is selected, it is put into action. Truly speaking, the actual process of decision making ends with the choice of an alternative through which the objective can be achieved. However, decision making, being a continuous and ongoing process, must ensure that the objective has been achieved by the chosen alternative. Unless this is done, managers will never know what way their choice has contributed. Therefore, the implementation of decision may be seen as an integral aspect of decision. Implementation of a decision requires the communication to subordinates, getting acceptance of subordinates over the matters involved in the decision, and getting their support for putting the decision into action. The decision should be effected at appropriate time and in proper way to make the action more effective. The effectiveness of action is important because it is only effective action through which organizational objectives can be achieved, and right decisions help in effective action.

7. Result. When the decision is put into action, it brings certain result. The result must correspond with the objective, the starting point of decision-making process, if good decision has been made and implemented properly. Thus, result provides indication whether decision making and its implementation is proper. Therefore, managers should take up a follow-up action in the light of feedback received from the result. If there is any deviation between objective and result, this should be analyzed and factors responsible for this deviation should be located. The feedback may also help in reviewing the decision when conditions change which may require change in decision. Therefore, a successful manager is one who keeps a close look at the objective and result of the decision and modifies his decision according to the changes in the circumstances.

EFFECTIVE DECISION

The decision-making process goes through the various stages and the basic objectives of all these stages are to solve problem through the decision. The solution of the problem depends on how effectively the decision is made and implemented. Thus, an effective decision is one which is action-oriented, goal-directed, and provides efficiency in implementation. These three aspects of effective decision are as follows:

1. Action Orientation. Decisions are action-oriented and are directed towards relevant and controllable aspects of the environment. Decisions are totally pragmatic in nature and their value is dependent on the success of the actions that follow. Decisions may be treated as an intervening variable which may ultimately lead to the end-result variables. From this point of view, decisions should ultimately find their utility in implementation. Therefore, the decision to be effective must specify the various actions which are to be taken to achieve the objective necessitating decision making.

2. Goal Directed. Organizations are goal-directed units and, therefore, any organizational process, including decision making, should be goal-directed to enable the organization to meet its objectives. Thus, the value of a decision and the associated action is related to goal achievement. While the value of a decision is dependent on the attainment of a given goal or set of goals, such attainment is a function of both the accuracy of the decision and its implementation. In evaluating a decision, then, a distinction should be made between the effects of goal attainment brought about by better decision and those attainments arising out of execution.