Chapter 6
Decision-Making: The Essence of the Manager’s Job

LEARNING OUTLINE
Follow this Learning Outline as you read and study this chapter.

The Decision-Making Process
- Define decision and decision-making process.
- Describe the eight steps in the decision-making process.

The Manager as Decision Maker
- Discuss the assumptions of rational decision making.
- Describe the concepts of bounded rationality, satisficing, and escalation of commitment.
- Explain intuitive decision making.
- Contrast programmed and nonprogrammed decisions.

The Manager as Decision Maker (cont’d)
- Contrast the three decision-making conditions.
- Explain maximax, maximin, and minimax decision choice approaches.
- Describe the four decision making styles.
- Discuss the twelve decision-making biases managers may exhibit.
- Describe how manager can deal with the negative effects of decision errors and biases.
- Explain the managerial decision-making model.

Decision Making for Today’s World
- Explain how managers can make effective decisions in today’s world.
- List six characteristics of an effective decision-making process.
- Describe the five habits of highly reliable organizations.
Decision Making

- Decision
  - Making a choice from two or more alternatives.

- The Decision-Making Process
  - Identifying a problem and decision criteria and allocating weights to the criteria.
  - Developing, analyzing, and selecting an alternative that can resolve the problem.
  - Implementing the selected alternative.
  - Evaluating the decision’s effectiveness.

Step 1: Identifying the Problem

- Problem
  - A discrepancy between an existing and desired state of affairs.

- Characteristics of Problems
  - A problem becomes a problem when a manager becomes aware of it.
  - There is pressure to solve the problem.
  - The manager must have the authority, information, or resources needed to solve the problem.

Step 2: Identifying Decision Criteria

- Decision criteria are factors that are important (relevant) to resolving the problem.
  - Costs that will be incurred (investments required)
  - Risks likely to be encountered (chance of failure)
  - Outcomes that are desired (growth of the firm)

Step 3: Allocating Weights to the Criteria

- Decision criteria are not of equal importance:
  - Assigning a weight to each item places the items in the correct priority order of their importance in the decision making process.
Exhibit 6-2: Criteria and Weights for Computer Replacement Decision

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory and Storage</td>
<td>10</td>
</tr>
<tr>
<td>Battery life</td>
<td>8</td>
</tr>
<tr>
<td>Carrying Weight</td>
<td>6</td>
</tr>
<tr>
<td>Warranty</td>
<td>4</td>
</tr>
<tr>
<td>Display Quality</td>
<td>3</td>
</tr>
</tbody>
</table>

Step 4: Developing Alternatives

- Identifying viable alternatives
  - Alternatives are listed (without evaluation) that can resolve the problem.

Step 5: Analyzing Alternatives

- Appraising each alternative’s strengths and weaknesses
  - An alternative’s appraisal is based on its ability to resolve the issues identified in steps 2 and 3.

Exhibit 6-3: Assessed Values of Laptop Computers Using Decision Criteria

<table>
<thead>
<tr>
<th>Laptop Model</th>
<th>Memory and Storage</th>
<th>Battery Life</th>
<th>Carrying Weight</th>
<th>Warranty</th>
<th>Display Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toshiba Portégé 5100</td>
<td>10</td>
<td>3</td>
<td>10</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Dell Inspiron 700m</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>HP Pavilion zv5000</td>
<td>8</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Apple iBook</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Sony Vaio VGN-FST90</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Gateway MX6500</td>
<td>8</td>
<td>3</td>
<td>6</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Toshiba Qosmio S15-AV1G61</td>
<td>10</td>
<td>7</td>
<td>8</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Lenovo Thinkpad R52</td>
<td>4</td>
<td>10</td>
<td>4</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

Step 6: Selecting an Alternative

- Choosing the best alternative
  - The alternative with the highest total weight is chosen.

Step 7: Implementing the Alternative

- Putting the chosen alternative into action.
  - Conveying the decision to and gaining commitment from those who will carry out the decision.
Step 8: Evaluating the Decision’s Effectiveness

- The soundness of the decision is judged by its outcomes.
  - How effectively was the problem resolved by outcomes resulting from the chosen alternatives?
  - If the problem was not resolved, what went wrong?

Making Decisions

- Rationality
  - Managers make consistent, value-maximizing choices with specified constraints.
  - Assumptions are that decision makers:
    - Are perfectly rational, fully objective, and logical.
    - Have carefully defined the problem and identified all viable alternatives.
    - Have a clear and specific goal
    - Will select the alternative that maximizes outcomes in the organization's interests rather than in their personal interests.
Assumptions of Rationality

- The problem is clear and unambiguous.
- A single, well-defined goal is to be achieved.
- All alternatives and consequences are known.
- Preferences are clear.
- Preferences are constant and stable.
- No time or cost constraints exist.
- Final choice will maximize payoff.

Bounded Rationality

Managers make decisions rationally, but are limited (bounded) by their ability to process information.

Assumptions are that decision makers:

- Will not seek out or have knowledge of all alternatives.
- Will *satisfice*—choose the first alternative encountered that satisfactorily solves the problem... rather than maximize the outcome of their decision by considering all alternatives and choosing the best.

Influence on decision making

- Escalation of commitment: an increased commitment to a previous decision despite evidence that it may have been wrong.

The Role of Intuition

- Intuitive decision making
  - Making decisions on the basis of experience, feelings, and accumulated judgment.

What is Intuition?

Exhibit 6-7

Exhibit 6-6

Exhibit 6-7

Exhibit 6-6
Types of Problems and Decisions

- **Structured Problems**
  - Involve goals that are clear.
  - Are familiar (have occurred before).
  - Are easily and completely defined—information about the problem is available and complete.

- **Programmed Decision**
  - A repetitive decision that can be handled by a routine approach.

Types of Programmed Decisions

- **Policy**
  - A general guideline for making a decision about a structured problem.

- **Procedure**
  - A series of interrelated steps that a manager can use to respond (applying a policy) to a structured problem.

- **Rule**
  - An explicit statement that limits what a manager or employee can or cannot do.

Policy, Procedure, and Rule Examples

- **Policy**
  - Accept all customer-returned merchandise.

- **Procedure**
  - Follow all steps for completing merchandise return documentation.

- **Rules**
  - Managers must approve all refunds over $50.00.
  - No credit purchases are refunded for cash.

Problems and Decisions (cont’d)

- **Unstructured Problems**
  - Problems that are new or unusual and for which information is ambiguous or incomplete.
  - Problems that will require custom-made solutions.

- **Nonprogrammed Decisions**
  - Decisions that are unique and nonrecurring.
  - Decisions that generate unique responses.
### Decision-Making Conditions

- **Certainty**
  - A situation in which a manager can make an accurate decision because the outcome of every alternative choice is known.

- **Risk**
  - A situation in which the manager is able to estimate the likelihood (probability) of outcomes that result from the choice of particular alternatives.

### Exhibit 6-8 Programmed versus Nonprogrammed Decisions

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Programmed Decisions</th>
<th>Nonprogrammed Decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of problem</td>
<td>Structured</td>
<td>Unstructured</td>
</tr>
<tr>
<td>Managerial level</td>
<td>Lower levels</td>
<td>Upper levels</td>
</tr>
<tr>
<td>Frequency</td>
<td>Repetitive, routine</td>
<td>New, unusual</td>
</tr>
<tr>
<td>Information</td>
<td>Readily available</td>
<td>Ambiguous or incomplete</td>
</tr>
<tr>
<td>Goal</td>
<td>Clear, specific</td>
<td>Vague</td>
</tr>
<tr>
<td>Time frame for solution</td>
<td>Short</td>
<td>Relatively long</td>
</tr>
<tr>
<td>Solution relies on</td>
<td>Procedures, rules, policies</td>
<td>Judgment and creativity</td>
</tr>
</tbody>
</table>

### Exhibit 6-9 Expected Value for Revenues from the Addition of One Ski Lift

<table>
<thead>
<tr>
<th>Event</th>
<th>Expected Revenues</th>
<th>Probability</th>
<th>Expected Value of Each Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy snowfall</td>
<td>$850,000</td>
<td>0.3</td>
<td>$255,000</td>
</tr>
<tr>
<td>Normal snowfall</td>
<td>725,000</td>
<td>0.5</td>
<td>362,500</td>
</tr>
<tr>
<td>Light snowfall</td>
<td>350,000</td>
<td>0.2</td>
<td>70,000</td>
</tr>
</tbody>
</table>

### Exhibit 6-9 Expected Value for Revenues from the Addition of One Ski Lift

- **Uncertainty**
  - Limited information prevents estimation of outcome probabilities for alternatives associated with the problem and may force managers to rely on intuition, hunches, and “gut feelings”.
    - **Maximax**: the optimistic manager’s choice to maximize the maximum payoff
    - **Maximin**: the pessimistic manager’s choice to maximize the minimum payoff
    - **Minimax**: the manager’s choice to minimize maximum regret.
Decision-Making Styles

- **Dimensions of Decision-Making Styles**
  - Ways of thinking
    - Rational, orderly, and consistent
    - Intuitive, creative, and unique
  - Tolerance for ambiguity
    - Low tolerance: require consistency and order
    - High tolerance: multiple thoughts simultaneously

Decision-Making Styles (cont’d)

- **Types of Decision Makers**
  - Directive
    - Use minimal information and consider few alternatives.
  - Analytic
    - Make careful decisions in unique situations.
  - Conceptual
    - Maintain a broad outlook and consider many alternatives in making decisions.
  - Behavioral
    - Avoid conflict by working well with others and being receptive to suggestions.

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**Exhibit 6-10 Payoff Matrix**

<table>
<thead>
<tr>
<th>(in millions of dollars) Visa Marketing Strategy</th>
<th>MasterCard’s Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CA₁</td>
</tr>
<tr>
<td>𝑆₁</td>
<td>13</td>
</tr>
<tr>
<td>𝑆₂</td>
<td>9</td>
</tr>
<tr>
<td>𝑆₃</td>
<td>24</td>
</tr>
<tr>
<td>𝑆₄</td>
<td>18</td>
</tr>
</tbody>
</table>

**Exhibit 6-11 Regret Matrix**

<table>
<thead>
<tr>
<th>(in millions of dollars) Visa Marketing Strategy</th>
<th>MasterCard’s Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CA₁</td>
</tr>
<tr>
<td>𝑆₁</td>
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<tr>
<td>𝑆₂</td>
<td>15</td>
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<tr>
<td>𝑆₃</td>
<td>0</td>
</tr>
<tr>
<td>𝑆₄</td>
<td>6</td>
</tr>
</tbody>
</table>
**Decision-Making Biases and Errors**

- **Heuristics**
  - Using “rules of thumb” to simplify decision making.

- **Overconfidence Bias**
  - Holding unrealistically positive views of one’s self and one’s performance.

- **Immediate Gratification Bias**
  - Choosing alternatives that offer immediate rewards and that to avoid immediate costs.

**Decision-Making Biases and Errors (cont’d)**

- **Anchoring Effect**
  - Fixating on initial information and ignoring subsequent information.

- **Selective Perception Bias**
  - Selecting organizing and interpreting events based on the decision maker’s biased perceptions.

- **Confirmation Bias**
  - Seeking out information that reaffirms past choices and discounting contradictory information.
Decision-Making Biases and Errors (cont’d)

- Framing Bias
  - Selecting and highlighting certain aspects of a situation while ignoring other aspects.
- Availability Bias
  - Losing decision-making objectivity by focusing on the most recent events.
- Representation Bias
  - Drawing analogies and seeing identical situations when none exist.
- Randomness Bias
  - Creating unfounded meaning out of random events.

Decision-Making Biases and Errors (cont’d)

- Sunk Costs Errors
  - Forgetting that current actions cannot influence past events and relate only to future consequences.
- Self-Serving Bias
  - Taking quick credit for successes and blaming outside factors for failures.
- Hindsight Bias
  - Mistakenly believing that an event could have been predicted once the actual outcome is known (after-the-fact).

Guidelines for making effective decisions:

- Understand cultural differences.
- Know when it’s time to call it quits.
- Use an effective decision-making process.

Habits of highly reliable organizations (HROs)

- Are not tricked by their success.
- Defer to the experts on the front line.
- Let unexpected circumstances provide the solution.
- Embrace complexity.
- Anticipate, but also anticipate their limits.
Characteristics of an Effective Decision-Making Process

• It focuses on what is important.
• It is logical and consistent.
• It acknowledges both subjective and objective thinking and blends analytical with intuitive thinking.
• It requires only as much information and analysis as is necessary to resolve a particular dilemma.
• It encourages and guides the gathering of relevant information and informed opinion.
• It is straightforward, reliable, easy to use, and flexible.

Terms to Know

• decision
• decision-making process
• problem
• decision criteria
• rational decision making
• bounded rationality
• satisficing
• escalation of commitment
• intuitive decision making
• structured problems
• programmed decision
• procedure
• rule
• policy
• unstructured problems
• nonprogrammed decisions
• certainty
• risk
• uncertainty
• directive style
• analytic style
• conceptual style
• behavioral style
• heuristics
• business performance management (BPM) software