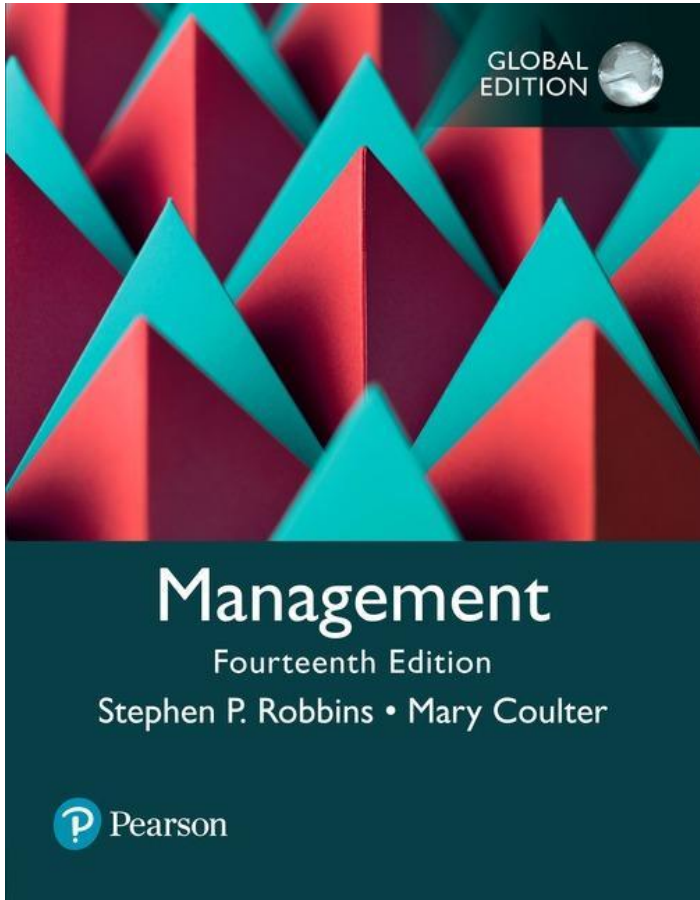


Management

Fourteenth Edition, Global Edition



Chapter 2 Decision Making

Learning Objectives

- 2.1 Describe** the eight steps in the decision-making process.
Develop your skill at being creative.
- 2.2 Explain** the four ways managers make decisions.
- 2.3 Classify** decisions and decision-making conditions.
- 2.4 Describe** how biases affect decision making.
Know how to recognize when you're using decision-making errors and biases and what to do about it
- 2.5 Identify** effective decision-making techniques.

Be A Better Decision-Maker

A key to success in management and in your career is knowing how to be an effective decision-maker.

What is a Decision?

Decision—a choice among two or more alternatives



Exhibit 2-1

Decision-Making Process

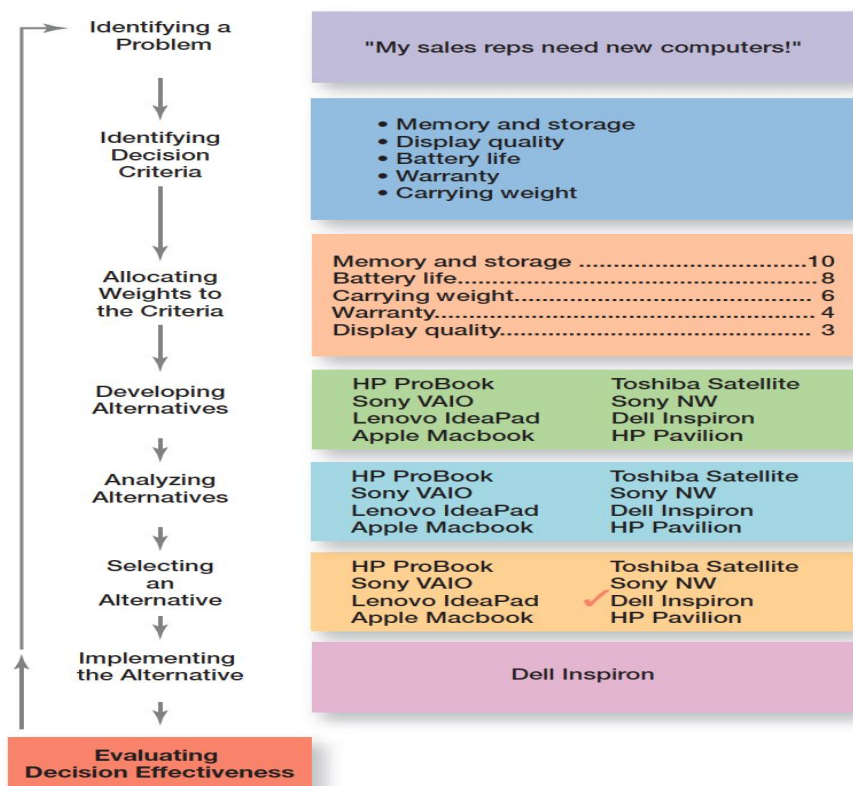


Exhibit 2-1 shows the eight steps in the decision-making process. This process is as relevant to personal decisions as it is to corporate decisions.

Decision-Making Process

Step 1: Identify a Problem

- **Problem:** an obstacle that makes it difficult to achieve a desired goal or purpose.
- Every decision starts with a **problem**, a discrepancy between an existing and a desired condition.
- Example: Amanda is a sales manager whose reps need new laptops.

Decision-Making Process

Step 2: Identify the Decision Criteria

- Decision criteria are factors that are important to resolving the problem.
- Example: Amanda decides that memory and storage capabilities, display quality, battery life, warranty, and carrying weight are the relevant criteria in her decision

Decision-Making Process

Step 3: Allocate Weights to the Criteria

- If the relevant criteria aren't equally important, the decision maker must weight the items in order to give them the correct priority in the decision.
- Example: The weighted criteria for Amanda's computer purchase are shown in Exhibit 2-2.

Exhibit 2-2

Important Decision Criteria

Criterion	Weight
Memory and storage	10
Battery life	8
Carrying weight	6
Warranty	4
Display quality	3

Decision-Making Process

Step 4: Develop Alternatives

- List viable alternatives that could solve the problem.
- Example: Amanda identifies eight laptops as possible choices (shown in Exhibit 2-3).

Exhibit 2-3

Possible Alternatives

Laptop	Memory and Storage	Battery Life	Carrying Weight	Warranty	Display Quality
HP ProBook	10	3	10	8	5
Lenovo IdeaPad	8	5	7	10	10
Apple MacBook	8	7	7	8	7
Toshiba Satellite	7	8	7	8	7
Apple MacBook Air	8	3	6	10	8
Dell Inspiron	10	7	8	6	7
HP Pavilion	4	10	4	8	10

Decision-Making Process

Step 6: Select an Alternative

- Choose the alternative that generates the highest total in Step 5.

Exhibit 2-4

Evaluation of Alternatives

Laptop	Memory and Storage	Battery Life	Carrying Weight	Warranty	Display Quality	Total
HP ProBook	100	24	60	32	15	231
Lenovo IdeaPad	80	40	42	40	30	232
Apple MacBook	80	56	42	32	21	231
Toshiba Satellite	70	64	42	32	21	229
Apple MacBook Air	80	24	36	40	24	204
Dell Inspiron	100	56	48	24	21	249
HP Pavilion	40	80	24	32	30	206

Decision-Making Process

Step 7: Implement the Alternative

- Put the chosen alternative into action.
- Convey the decision to those affected and get their commitment to it.

Decision-Making Process

Step 8: Evaluate Decision Effectiveness

- Evaluate the result or outcome of the decision to see if the problem was resolved.
- If it wasn't resolved, what went wrong?

Exhibit 2-5

Decisions Managers May Make: Planning and Organizing

Planning

- What are the organization's long-term objectives?
- What strategies will best achieve those objectives?
- What should the organization's short-term objectives be?
- How difficult should individual goals be?

Organizing

- How many employees should I have report directly to me?
- How much centralization should there be in an organization?
- How should jobs be designed?
- When should the organization implement a different structure?

Exhibit 2-5

Decisions Managers May Make: Leading and Controlling

Leading

- How do I handle employees that appear to be unmotivated?
- What is the most effective leadership style in a given situation?
- How will a specific change affect worker productivity?
- When is the right time to stimulate conflict?

Controlling

- What activities in the organization need to be controlled?
- How should those activities be controlled?
- When is a performance deviation significant?
- What type of management information system should the organization have?

Rationality

- **Rational Decision-Making:** choices that are logical and consistent and maximize value
- Assumptions of rationality:
 - Rational decision maker is logical and objective
 - Problem faced is clear and unambiguous
 - Decision maker would have clear, specific goal and be aware of all alternatives and consequences
 - The alternative that maximizes achieving this goal will be selected
 - Decisions are made in the best interest of the organization

Bounded Rationality

- **Bounded rationality:** decision making that's rational, but limited by an individual's ability to process information
- **Satisfice:** accepting solutions that are “good enough”
- **Escalation of commitment:** an increased commitment to a previous decision despite evidence it may have been wrong

Intuition

- **Intuitive decision-making:** making decisions on the basis of experience, feelings, and accumulated judgment

Exhibit 2-6

What is Intuition?

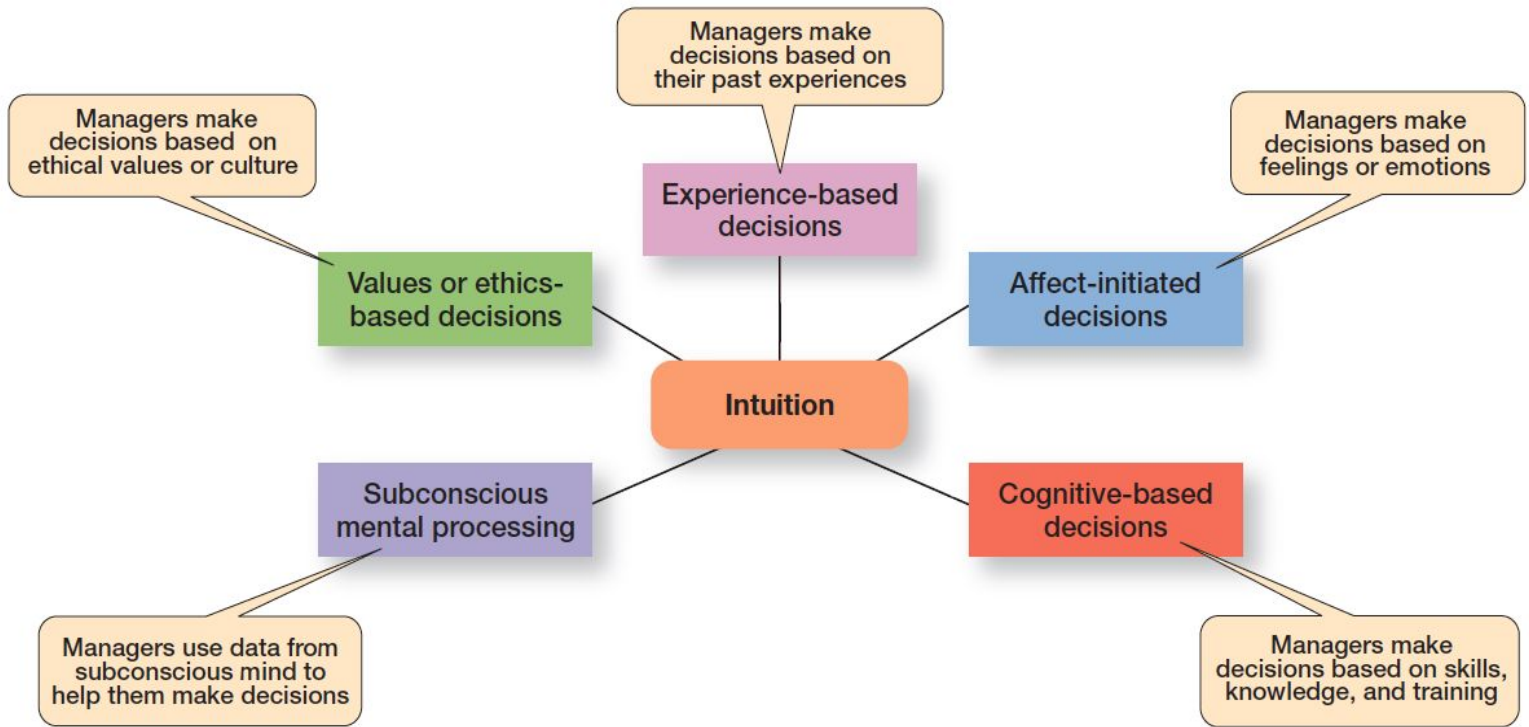


Exhibit 2-6 shows the five different aspects of intuition identified by researchers studying managers' use of intuitive decision-making.

Evidence-Based Management

- **Evidence-based management (EBMgt):** the systematic use of the best available evidence to improve management practice.

Types of Decisions: Structured Problems and Programmed Decisions

- **Structured problems:** straightforward, familiar, and easily defined problems
- **Programmed decisions:** repetitive decisions that can be handled by a routine approach

Types of Programmed Decisions

- **Procedure**: a series of sequential steps used to respond to a well-structured problem
- **Rule** : an explicit statement that tells managers what can or cannot be done
- **Policy**: a guideline for making decisions

Types of Decisions: Unstructured Problems and Nonprogrammed Decisions

- **Unstructured problems:** problems that are new or unusual and for which information is ambiguous or incomplete
- **Nonprogrammed decisions:** unique and nonrecurring and involve custom made solutions

Exhibit 2-7

Programmed vs Nonprogrammed Decisions

Characteristic	Programmed Decisions	Nonprogrammed Decisions
Type of problem	Structured	Unstructured
Managerial level	Lower levels	Upper levels
Frequency	Repetitive, routine	New, unusual
Information	Readily available	Ambiguous or incomplete
Goals	Clear, specific	Vague
Time frame for solution	Short	Relatively long
Solution relies on...	Procedures, rules, policies	Judgment and creativity

Decision-Making Conditions

- **Certainty:** a situation in which a manager can make accurate decisions because all outcomes are known
- **Risk:** a situation in which the decision maker is able to estimate the likelihood of certain outcomes
- **Uncertainty:** a situation in which a decision maker has neither certainty nor reasonable probability estimates available

Managing Risk

- Managers can use historical data or secondary information to assign probabilities to different alternatives
- This is used to calculate expected value—the expected return from each possible outcome—by multiplying expected revenue by the probability of each alternative

Exhibit 2-8

Expected Value

Event	Expected Revenues	Probability	Expected Value of Each Alternative
Heavy snowfall	\$850,000	0.3	\$255,000
Normal snowfall	\$725,000	0.5	\$362,000
Light snowfall	\$350,000	0.2	\$70,000
Total expected revenue:			\$687,500

For each Event in the table, Expected Revenues multiplied by Probability gives the Expected Value of Each Alternative.

Exhibit 2-9

Payoff Matrix

Visa Marketing Strategy (in millions of dollars)	MasterCard CA 1	MasterCard CA 2	MasterCard CA 3
Strategy 1	13	14	11
Strategy 2	9	15	18
Strategy 3	24	21	15
Strategy 4	18	14	28

Exhibit 2-9 shows the various Visa strategies and the resulting profit, depending on the competitive action (CA) used by MasterCard.

Exhibit 2-10

Regret Matrix

Visa Marketing Strategy (in millions of dollars)	MasterCard CA 1	MasterCard CA 2	MasterCard CA 3
Strategy 1	11	7	17
Strategy 2	15	6	10
Strategy 3	0	0	13
Strategy 4	6	7	0

Exhibit 2-10 shows the regret for each category, which is found by subtracting all possible payoffs in each category from the maximum possible payoff for each given event, in this case for each competitive action.

Heuristics

- Heuristics or “rules of thumb” can help make sense of complex, uncertain, or ambiguous information.
- However, they can also lead to errors and biases in processing and evaluating information.

Exhibit 2-11

Common Decision-Making Biases



Exhibit 2-11 identifies 12 common decision errors of managers and biases they may have.

Decision-Making Biases and Errors (1 of 4)

- **Overconfidence Bias:** holding unrealistically positive views of oneself and one's performance
- **Immediate Gratification Bias:** choosing alternatives that offer immediate rewards and avoid immediate costs
- **Anchoring Effect:** fixating on initial information and ignoring subsequent information

Decision-Making Biases and Errors (2 of 4)

- **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 while discounting contradictory information
- **Framing Bias:** selecting and highlighting certain aspects of a situation while ignoring other aspects

Decision-Making Biases and Errors (3 of 4)

- **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 (4 of 4)

- **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)

Exhibit 2-12

Overview of Managerial Decision Making

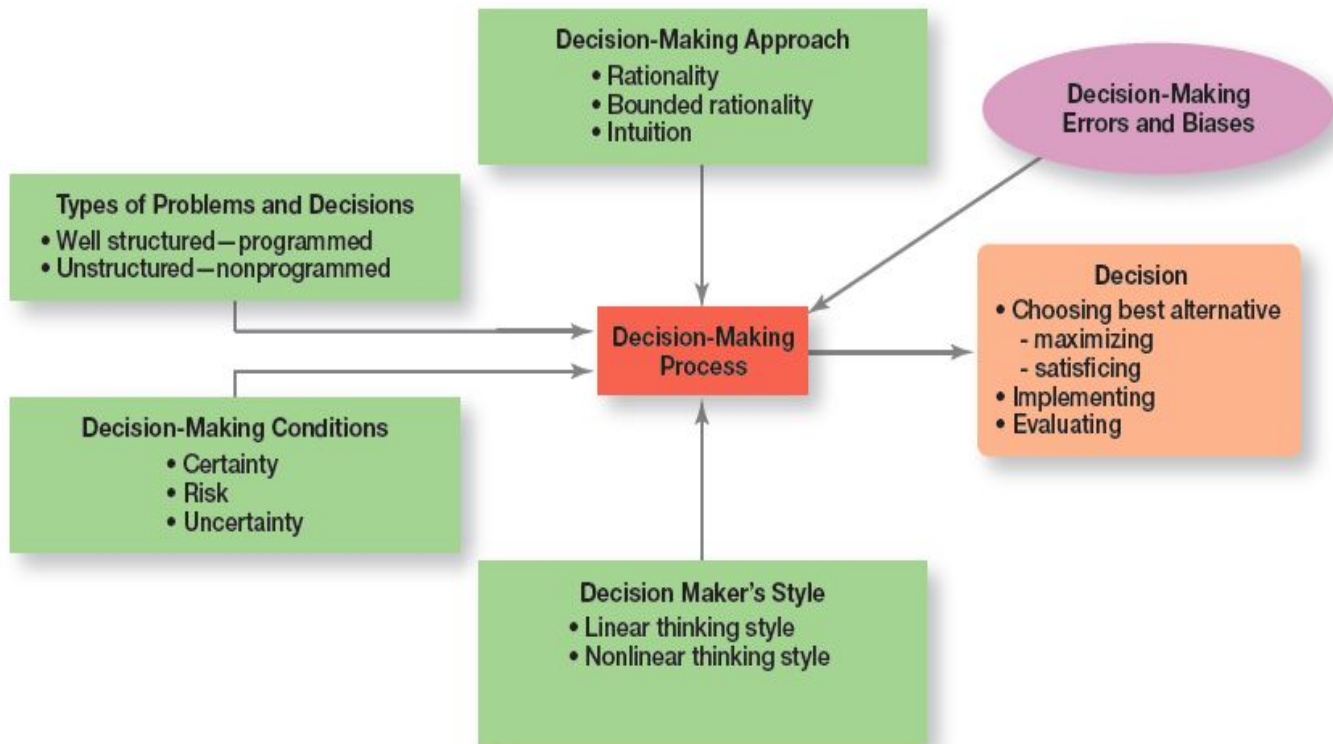


Exhibit 2-12 provides an overview of managerial decision making.

Guidelines for Making Effective Decisions

- Understand cultural differences
- Create standards for good decision making
- Know when it's time to call it quits
- Use an effective decision-making process
- Develop your ability to think clearly

Characteristics of an Effective Decision-Making Process

- Focuses on what's important
- Is logical and consistent
- Acknowledges subjective and analytical thinking, blends analytical with intuitive thinking
- Requires only as much information as is needed to resolve particular dilemma
- Encourages the gathering of relevant information
- Is straightforward, reliable, easy-to-use, flexible

Design Thinking and Decision Making

- **Design thinking:** approaching management problems as designers approach design problems

Big Data and Decision-Making

- **Big data:** the vast amount of quantifiable data that can be analyzed by highly sophisticated data processing
- Can be a powerful tool in decision making, but collecting and analyzing data for data's sake is wasted effort

Review Learning Objective 2.1

- **Describe the eight steps in the decision-making process.**
 - 1. Identify problem
 - 2. Identify decision criteria
 - 3. Weight the criteria
 - 4. Develop alternatives
 - 5. Analyze alternatives
 - 6. Select alternative
 - 7. Implement alternative
 - 8. Evaluate decision effectiveness

Review Learning Objective 2.2 (1 of 2)

- **Explain the four ways managers make decisions.**
 - Assumptions of rationality
 - The problem is clear and unambiguous
 - A single, well-defined goal is to be achieved
 - All alternatives and consequences are known
 - The final choice will maximize the payoff

Review Learning Objective 2.2 (2 of 2)

- **Satisficing:** when decision makers accept solutions that are good enough
- **Escalation of commitment:** managers increase commitment to a decision, even when they have evidence it may have been a wrong decision
- **Intuitive decision making:** making decisions on the basis of experience, feelings, and accumulated judgment
- **Evidence-based management:** a manager makes decisions based on the best available evidence

Review Learning Objective 2.3 (1 of 2)

- **Classify decisions and decision-making conditions.**
 - Programmed decisions are repetitive decisions that can be handled by a routine approach and are used when the problem being resolved is straightforward, familiar, and easily defined (structured).
 - Nonprogrammed decisions are unique decisions that require a custom-made solution and are used when the problems are new or unusual (unstructured) and for which information is ambiguous or incomplete.

Review Learning Objective 2.3 (2 of 2)

- **Classify decisions and decision-making conditions.**
 - Certainty is a situation in which a manager can make accurate decisions because all outcomes are known.
 - Risk is a situation in which a manager can estimate the likelihood of certain outcomes.
 - Uncertainty is a situation in which a manager is not certain about the outcomes and can't even make reasonable probability estimates

Review Learning Objective 2.4

- **Describe how biases affect decision-making.**
 - The 12 common decision-making errors and biases:
 - Overconfidence
 - Immediate gratification
 - Anchoring effect
 - Selective perception
 - Confirmation
 - Framing
 - Availability
 - Representation
 - Randomness
 - Sunk costs
 - Self-serving
 - Hindsight

Review Learning Objective 2.5 (1 of 2)

- Identify effective decision-making techniques.
 - An effective decision-making process:
 1. Focuses on what's important
 2. Is logical and consistent
 3. Acknowledges subjective and objective thinking and blends analytical and intuitive approaches
 4. Requires only “enough” information as is needed to solve a problem
 5. Encourages and guides gathering relevant information and informed opinions
 6. Is straightforward, reliable, easy to use, and flexible

Review Learning Objective 2.5 (2 of 2)

- **Design thinking:** approaching management problems as designers approach design problems
- **Big Data:** when tempered with good judgment, it can be a powerful tool in decision making