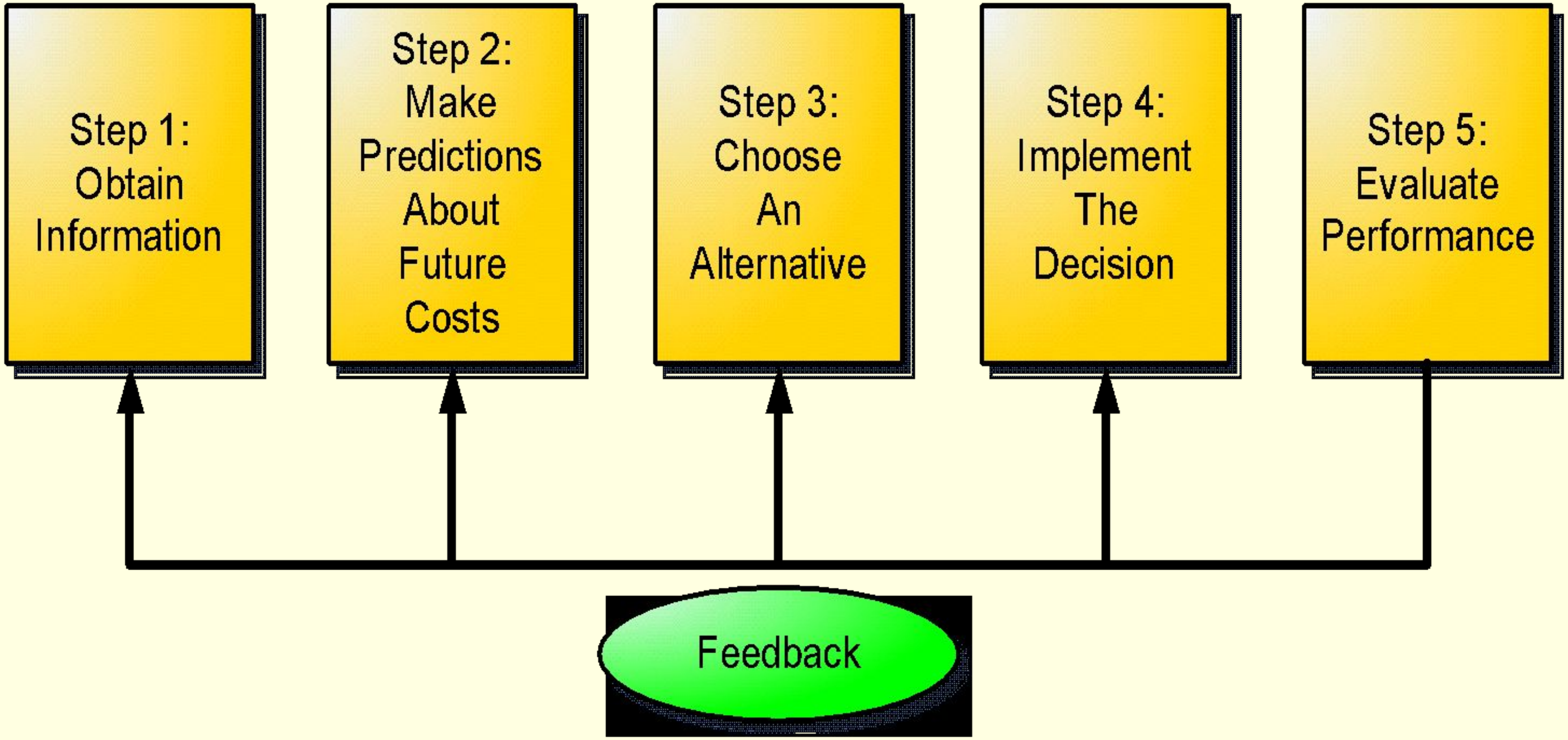
CHAPTER 11

Decision Making
and
Relevant Information

Decision Models

- A decision model is a formal method of making a choice, often involving both quantitative and qualitative analyses
- Managers often use some variation of the Five-Step Decision-Making Process

Five-Step
Decision-Making Process



Relevance

- Relevant Information has two characteristics:
  - It occurs in the future
  - It differs among the alternative courses of action
- Relevant Costs – expected future costs
- Relevant Revenues – expected future revenues

Irrelevance

- Historical costs are past costs that are irrelevant to decision making
  - Also called Sunk Costs

Types of Information

- Quantitative factors are outcomes that can be measured in numerical terms
- Qualitative factors are outcomes that are difficult to measure accurately in numerical terms, such as satisfaction
  - Are just as important as quantitative factors even though they are difficult to measure

Terminology

- Incremental Cost – the additional total cost incurred for an activity
- Differential Cost – the difference in total cost between two alternatives
- Incremental Revenue – the additional total revenue from an activity
- Differential Revenue – the difference in total revenue between two alternatives

Types of Decisions

- One-Time-Only Special Orders
- Insourcing vs. Outsourcing
- Make or Buy
- Product-Mix
- Customer Profitability
- Branch / Segment: Adding or Discontinuing
- Equipment Replacement

One-Time-Only Special Orders

- Accepting or rejecting special orders when there is idle production capacity and the special orders have no long-run implications
- Decision Rule: does the special order generate additional operating income?
  - Yes – accept
  - No – reject

One-Time-Only Special Orders

- Compares relevant revenues and relevant costs to determine profitability

Potential Problems with Relevant-Cost Analysis

- Avoid incorrect general assumptions about information, especially:
  - “All variable costs are relevant and all fixed costs are irrelevant”
  - There are notable exceptions for both costs

Potential Problems with Relevant-Cost Analysis

- Problems with using unit-cost data:
  - Including irrelevant costs in error
  - Using the same unit-cost with different output levels
    - Fixed costs per unit change with different levels of output

Avoiding Potential Problems with Relevant-Cost Analysis

- Focus on Total Revenues and Total Costs, not their per-unit equivalents
- Continually evaluate data to ensure that they meet the requirements of relevant information

Insourcing vs. Outsourcing

- Insourcing – producing goods or services within an organization
- Outsourcing – purchasing goods or services from outside vendors
- Also called the “Make or Buy” decision
- Decision Rule: Select the option that will provide the firm with the lowest cost, and therefore the highest profit.

Qualitative Factors

- Nonquantitative factors may be extremely important in an evaluation process, yet do not show up directly in calculations:
  - Quality Requirements
  - Reputation of Outsourcer
  - Employee Morale
  - Logistical Considerations – distance from plant, etc.

Opportunity Costs

- Opportunity Cost is the contribution to operating income that is forgone by not using a limited resource in its next-best alternative use
  - "How much profit did the firm 'lose out on' by not selecting this alternative?"
- Special type of Opportunity Cost: Holding Cost for Inventory. Funds tied up in inventory are not available for investment elsewhere

Product-Mix Decisions

- The decisions made by a company about which products to sell and in what quantities
- Decision Rule (with a constraint): choose the product that produces the highest contribution margin per unit of the constraining resource

Adding or Dropping Customers

- Decision Rule: Does adding or dropping a customer add operating income to the firm?
  - Yes – add or don't drop
  - No – drop or don't add
- Decision is based on profitability of the customer, not how much revenue a customer generates

Adding or Discontinuing Branches or Segments

- Decision Rule: Does adding or discontinuing a branch or segment add operating income to the firm?
  - Yes – add or don't discontinue
  - No – discontinue or don't add
- Decision is based on profitability of the branch or segment, not how much revenue the branch or segment generates

Equipment-Replacement Decisions

- Sometimes difficult due to amount of information at hand that is irrelevant:
  - Cost, Accumulated Depreciation, and Book Value of existing equipment
  - Any potential Gain or Loss on the transaction – a Financial Accounting phenomenon only
- Decision Rule: Select the alternative that will generate the highest operating income

Behavioral Implications

- Despite the quantitative nature of some aspects of decision making, not all managers will choose the best alternative for the firm
- Managers could engage in self-serving behavior such as delaying needed equipment maintenance in order to meet their personal profitability quotas for bonus consideration