Chapter 10 – Table of Contents

Section 1 – Decision Making in Management

Defining Decision Making

Decision making is the mental processes resulting in the selection of a course of action among several alternative scenarios.

LEARNING OBJECTIVES

- Distinguish between problem solving and decision making
- Identify the steps and analyze alternatives to optimize the decision-making process

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KEY POINTS

- Decision making is a reasoning or emotional process that can be rational or irrational.
- Problem solving and decision making are distinct. Problems are deviations from what the results actually are against what they should be.
- Most decisions are made unconsciously because it is too time consuming to methodically identify pros and cons for each alternative in decisions made on a daily basis.

TERM

- Problem A difficulty that has to be resolved or dealt with.

Decision making is the mental process resulting in the selection of a course of action among several alternatives. Every decision making process produces a final choice in an action or an opinion of choice. If a person neither takes and action nor gives an opinion, this is also decision.

Difference Between Problem Solving and Decision Making

It is important to differentiate between problem analysis and decision making. The concepts are completely distinct from each another. Traditionally, it is argued that

problem analysis must be done first, so that the information gathered in that process may be used towards decision making. A problem is a deviation from performance standards - that is, what occurred is different from what was expected to have occurred. In decision making, the objective/objective(s) are first established, and a choice is made among alternatives for action or for an opinion. A decision that results in doing nothing - no action, nor an opinion rendered - is also considered a decision.

Steps in Decision Making

Decision making can be broken down into the following steps:

- Objectives must first be established
- Objectives must be classified and placed in order of importance
- Alternative actions must be developed
- The alternative must be evaluated against all the objectives
- The alternative that is able to achieve all the objectives is the tentative decision
- The tentative decision is evaluated for more possible consequences
- The decision is implemented.

Analysis of Alternatives

Many Choices

Too many choices increase the difficulty in making a decision.

A major part of decision making involves the analysis of a finite set of alternatives using some set of criteria. These criteria may be benefit or cost oriented. For example, when choosing a place to live, some of the criteria would include the rent or mortgage cost, the cost of maintenance, and the cost and ease of access to work, shopping and friends. We see how people value ease of access from the high rents and home prices in housing located within short distance to the main business districts in a community.

The decision maker(s) may face a problem when they try to rank alternatives in terms of how attractive they are when all the criteria are considered simultaneously.

Time and emotion also play a role in the quality of decision making - the more time, the more deliberate the decision making process. Secondly, the more that is at stake, emotion will come into play, rising as the decision making timeline is reached. Another goal might be to just find the best alternative or to determine the relative total priority of each alternative (for instance, if alternatives represent projects competing for funds) when all the criteria are considered simultaneously.

Decision Making Styles: directive, analytical, conceptual, behavioral

Directive, analytical, conceptual, and behavioral decision-making styles may be used depending upon the manager and nature of the situation.

LEARNING OBJECTIVE

- Assess the four decision making styles within the context of managerial decision-making

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KEY POINTS

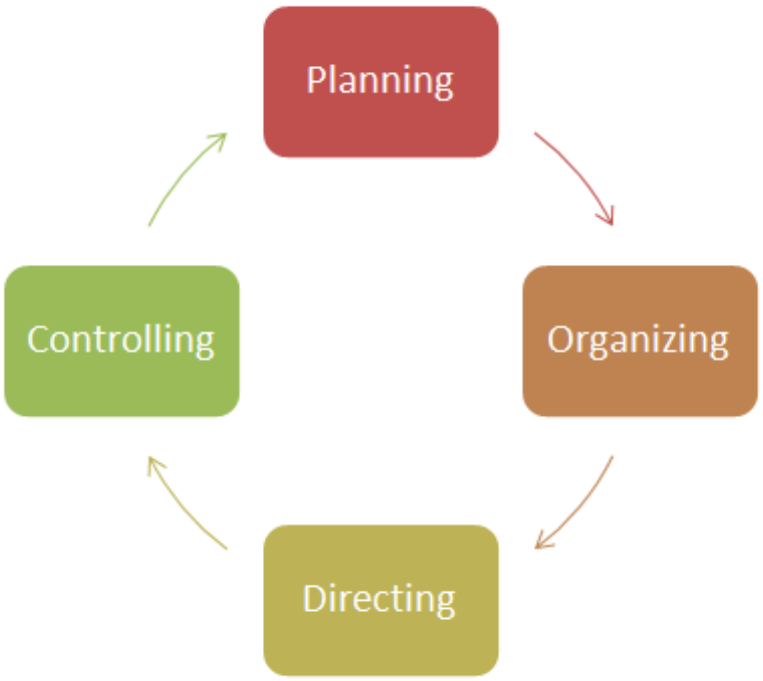
- The decision-making style used will vary by the nature of the situation and the decision that needs to be made.
- The directive style, sometimes referred to "autocratic" style, reflects an individual style where the decision maker relies on their own information, knowledge, experience and judgment.
- The other three styles of decision making entail varying degrees of involvement of others in gathering information and perspectives, and may include a direct role in making the decision.

TERMS

- empirical Pertaining to, derived from, or testable by observations made using the physical senses or using instruments which extend the senses.

- Decision making Decision making is the mental processes (cognitive process) resulting in the selection of a course of action among several alternative scenarios.
- directive An instruction or guideline that indicates how to perform an action or reach a goal.

Working with people is an art and the manager adopts different styles for their own personality, the culture of the organization, and the nature of the people they are working with.



Definition of Management

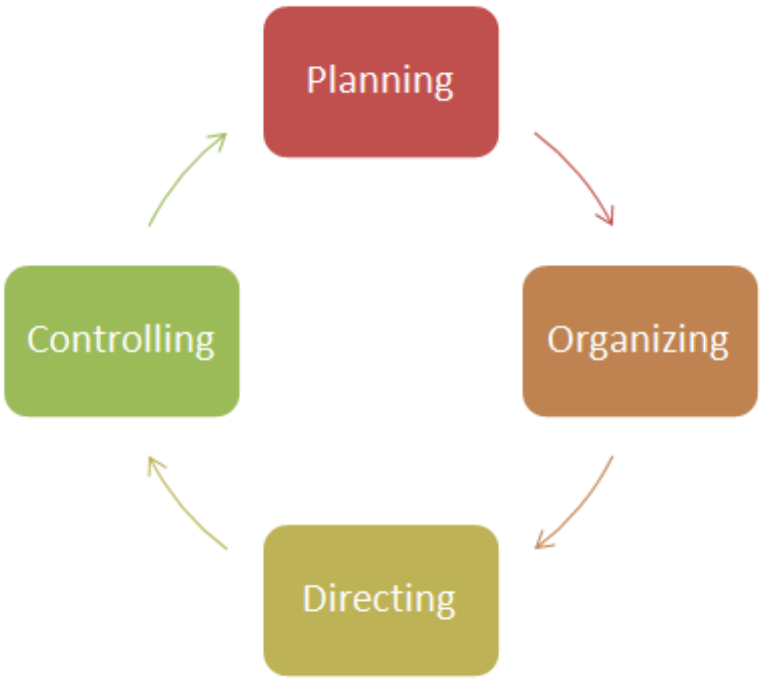
The Management Process

When we look at decision making, the style used will also vary depending upon the nature of the situation and the decision that needs to be made.

There are four essential styles of decision making:

- Directive: The group leader solves the problem, using the information he possesses. He/she does not consult with anyone else nor seek information in any form. This style assumes that the leader has sufficient information to examine all the relevant options and make an effective decision, but that is rarely the case.
- Analytical: When the leader does not possess sufficient information to make an effective decision, they will need to obtain information or skill from others. They may not tell them what the problem is; normally, they simply ask for information. The leader then evaluates the information and makes the decision.
- Conceptual: The leader explains the situation to the group or individuals whom he provides with relevant information, and together they generate and evaluate many possible solutions. This style tends to be have a long-term perspective and, as a result, will be more creative and expansive in their approach entailing a higher level of risk for the long-term benefit of the organization.
- Behavioral: The leader explains the situation to the group or individuals and provides the relevant information. Together they attempt to reconcile differences and negotiate a solution that is acceptable to all parties. The leader may consult with others before the meeting in order to prepare his case and generate alternative decisions that are acceptable to them.

While decision-making styles can depend on the situation, according to behaviorist Isabel Briggs Myers, a person's decision-making process depends to a significant degree on their cognitive style. For example, a manager who scored near the thinking, extroversion, sensing, and judgment ends of the dimensions would tend to have a logical, analytical, objective, critical, and empirical decision-making style.



Definition of Management

Management is an ongoing process of interrelated functions--managers may utilize a consistent cognitive style or employ different decision-making styles according to the function or situation.

Decision Making Approaches: avoiding, problem solving, or problem seeking

Three approaches to decision making are avoiding, problem solving and problem seeking.

LEARNING OBJECTIVE

- Differentiate between the three primary decision-making approaches: avoiding, problem solving and problem seeking

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KEY POINTS

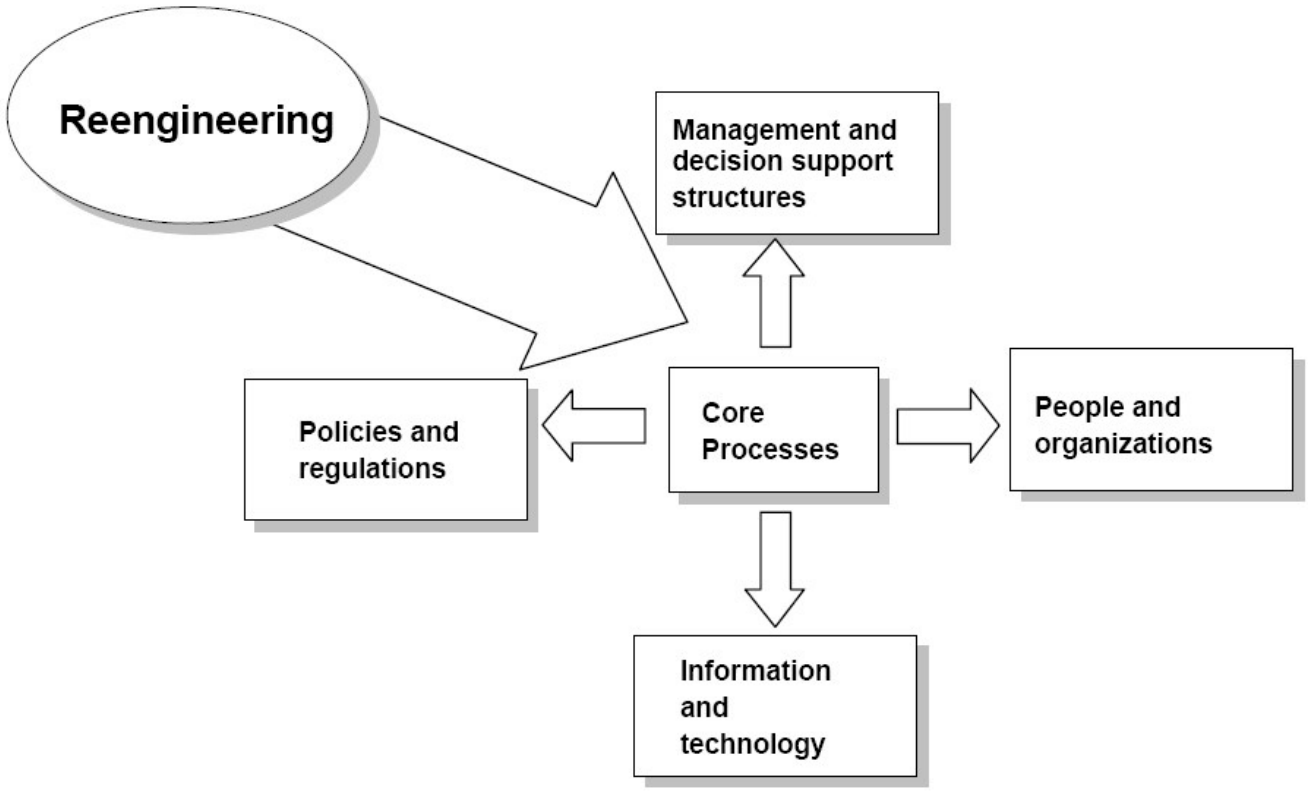
- One approach in decision making is to not make a choice - that is, to avoid making a decision for the time being.
- Decision making might be regarded as a problem solving activity which is terminated when a satisfactory solution is reached.
- The process of problem seeks to clarify, understand and state the problem(s).

TERMS

- problem solving
  Problem solving involves using generic or ad hoc methods, in an orderly manner, for finding solutions to specific problems.
- problem seeking
  The process to clarify, understand and state the problem(s).

Decision making can be regarded as the mental processes (cognitive process)

resulting in the selection of a course of action among several alternative scenarios.



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Business process

Business process re-engineering flowchart

Every decision making process produces a final choice. The output can be an action or an opinion of choice.

Three decision making approaches will be considered here:

1. Avoiding
2. Problem solving
3. Problem seeking

Avoiding

Often unspoken is that one alternative is to not make a choice - that is, to avoid making a decision for the time being. There are several reasons why the decision maker may do this:

1. Insufficient information
2. Potential consequences of making a decision (including those who disagree will resist decision, cost to the organization and consequences to others).
3. A judgment to delay making a decision to allow time for other parties to make a decision or take action.
4. The decision is not one properly made by the person asked to make a decision.
5. A judgment that a decision isn't necessary - the situation can continue without the intervention a decision might entail.

One example of avoiding a decision is routinely made by the Supreme Court of the United States (as well as by other appellate courts). The Supreme Court will decline to hear a case because, in their judgment, the issues have not been sufficiently argued in other courts and decisions rendered by other judges.

Problem solving

Decision making might be regarded as a problem solving activity which is terminated when a satisfactory solution is reached. Therefore, decision making is a

reasoning or emotional process which can be rational or irrational, and can be based on explicit assumptions or tacit assumptions.

Problem solving consists in using generic or ad hoc methods, in an orderly manner, for finding solutions to specific problems. Some of the problem-solving techniques developed and used in artificial intelligence, computer science, engineering, mathematics, medicine, etc. are related to mental problem-solving techniques studied in psychology.

In psychology, problem solving refers to a state of desire for reaching a definite goal from a present condition that either is not directly moving toward the goal, is far from it, or needs more complex logic for finding a missing description of conditions or steps toward the goal. In psychology, problem solving is the concluding part of a larger process that also includes problem finding and problem shaping.
It is important to differentiate between problem analysis and decision making. The concepts are completely separate from one another. Traditionally it is argued that problem analysis must be done first, so that the information gathered in that process may be used towards decision making.

Problem seeking

A principal task of a leader is to improve the organization. Part of the job, then, is to seek out areas for improvement through a process of problem seeking to clarify,

understand and state the problem(s). A clear problem statement is the first step in the decision making process.

How a problem is stated will drive the decision making process and the solution that is ultimately chosen.

Section 2 – Rational and Nonrational Decision Making

Rational Decision Making

Rational decision making is a multi-step model, from problem identification through solution, for making logically sound decisions.

LEARNING OBJECTIVE

- Model the rational decision making process leveraged by businesses to properly identify and pursue business choices

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KEY POINTS

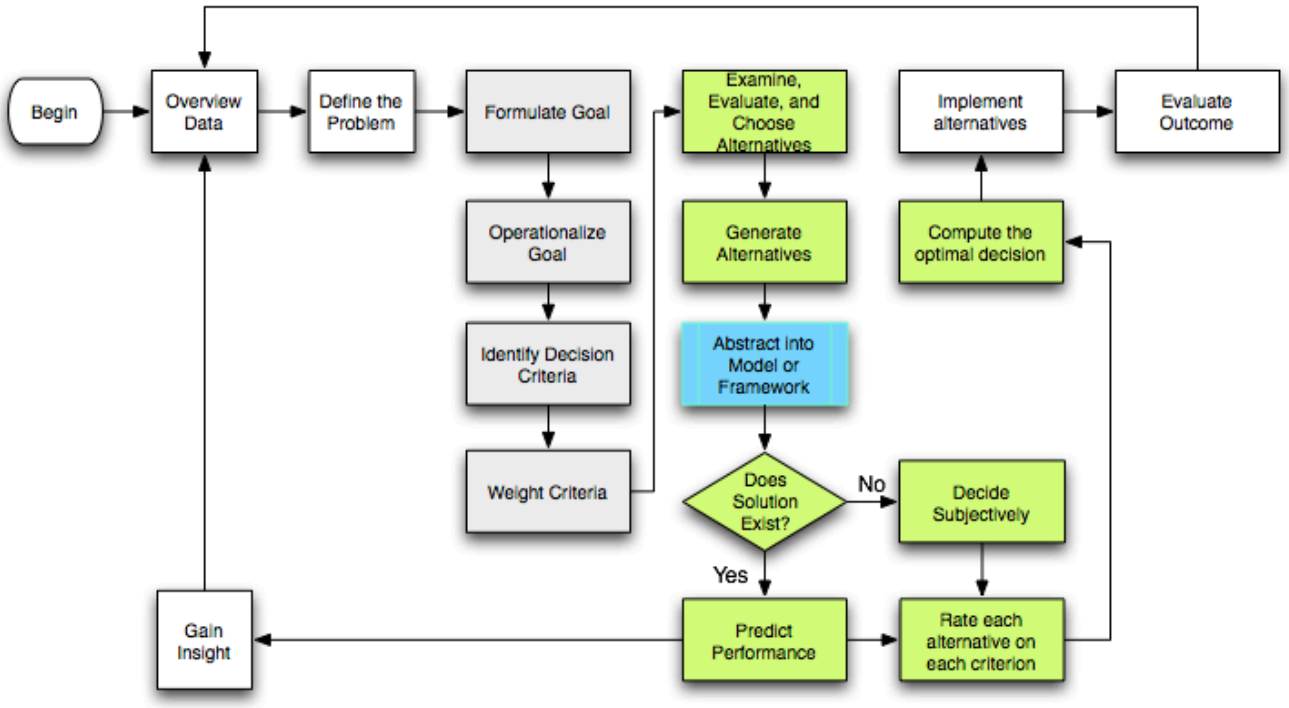
- The multi-step process begins with formulating a goal(s), identifying the criteria for making the decision, identifying alternatives, analysis, and a final decision.
- The model assumes that the decision maker has full or perfect information about exactly what will occur due to any choice made and has the cognitive ability and time to weigh every choice against every other choice.
- This model assumes that people will make choices that will maximize benefits to themselves and minimize any cost.

TERMS

- perfect information
  The situation where all information that is relevant to the decision to be made is known and available to the decision maker.

- Rational decision making
  A process for making logically sound decisions. This is a multi-step model and aims to be logical and follow the orderly path from problem identification through solution.

Rational decision making is a multi-step process for making logically sound decisions that aims to follow the orderly path from problem identification through solution. This process begins with formulating a goal(s), identifying the criteria for making the decision, identifying alternatives, analysis, and a final decision.



Rational decision making model

Flowchart showing the rational decision making model.

The "rational," as used in this context, is different from the colloquial and most philosophical use of the word. For most people, "rational" means "sane," "in a thoughtful clear-headed manner," or knowing and doing what's healthy in the long term.

Rational decision making is a model that suggests that people will make choices that will maximize benefits to themselves and minimize any costs. This model does not consider intrinsic costs, such as ethical concerns, or benefits that may derive from altruism. Key assumptions include:

- An individual has full or perfect information about exactly what will occur due to any choice made.
- An individual has the cognitive ability and time to weigh every choice against every other choice.

One model of decision making that would apply to rational decision making is as follows:

1. Outline your goal and outcome.
2. Gather data.
3. Develop alternatives (i.e., brainstorming)
4. List pros and cons of each alternative.
5. Make the decision.
6. Immediately take action to implement it.
7. Learn from and reflect on the decision.

Critical elements to successful rational decision making is the development of all possible alternative solutions to meet the goals and desired outcome, and that there

are clear and objective criteria for making the selection of one, best alternative to achieve the stated goal and outcome.

Problems with the Rational Model

Critics of rational choice theory argue that it makes unrealistic assumptions in order to simplify possible choices and predictions.

LEARNING OBJECTIVE

- Summarize the inherent flaws and arguments against the rational model of decision-making within a business context

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KEY POINTS

- Rational choice theory is widely used for modeling individual economic behavior, yet assumes a person will be able to fully understand the consequences and take all the time they need for every choice they make.
- Bounded rationality is the idea that, in decision-making, an individual's rationality is limited by the information they have, the cognitive limitations of their minds, and the finite amount of time they have to make a decision.
- Because decision-makers lack the ability and resources to arrive at optimal solutions, they apply bounded rationality after greatly simplifying the choices, meaning they are actually seeking a satisfactory solution rather than the optimal solution.

TERMS

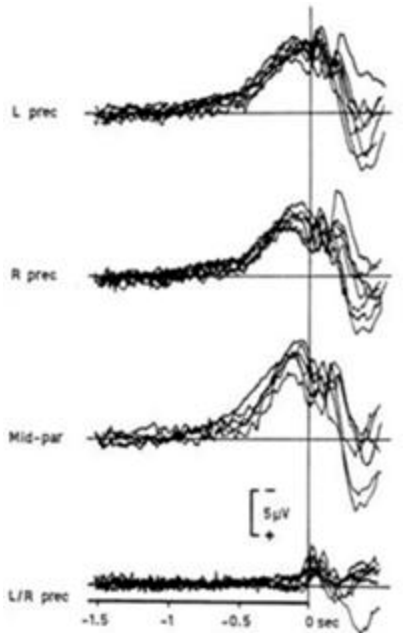
- satisficer One who seeks a satisfactory solution rather than an optimal one.
- Rational choice theory Rational choice theory is a framework for understanding and often formally modeling social and economic behavior.
- bounded rationality Bounded rationality is the idea that in decision-making, rationality of individuals is limited by the information they have, the cognitive limitations of their minds, and the finite amount of time they have to make a decision. It was proposed by Herbert A. Simon as an alternative basis for the mathematical modeling of decision-making, as used in economics and related disciplines. Bounded rationality complements rationality as optimization, which views decision-making as a fully rational process of finding an optimal choice given the information available.

It is often claimed that rational choice theory makes unrealistic assumptions in order to simplify possible choices and predictions. Criticisms of the rational model include:

- An individual is implied to have full (or perfect) information about exactly what will occur as a result of any choices. More complex models rely on probability in order to describe outcomes rather than assume a person will always know all outcomes.
- An individual must have the cognitive ability and time to weigh every single choice against every other choice, even though the time available to decide is always finite. The limitations of these assumptions are addressed in theories of bounded rationality.

More realistic theories of human behavior include elements from Amos Tversky and Daniel Kahneman's prospect theory. Prospect theory reflects the empirical finding that, contrary to rational choice theory, individuals attach extra value/">value to items that they already own compared to similar items owned by others. To rational choice theory, the amount that an individual is willing to pay for an item (such as a drinking mug) should equal the exact amount he or she is willing to be paid in order to part with it. In experiments, the latter price is usually significantly higher than the former. Behavioral economics has added many other adjustments to try to explain how human behavior often goes against pure economic rationality.

Bounded rationality is the idea that, in decision-making, rationality of individuals is limited by the information they have, the cognitive limitations of their minds, and the finite amount of time they have to make a decision. It was proposed by Herbert A. Simon as a more complete way of understanding decision-making. Bounded rationality views decision-making as a fully rational process of finding an optimal choice, given the available data that creates the boundaries. Another way to look at bounded rationality is that, since decision-makers usually lack the ability and resources to arrive at the optimal solution, they instead apply their rationality only after winnowing down the list of available choices. Thus the decision-maker is a satisficer (instead of an optimizer) because they are seeking a satisfactory solution rather than the optimal one. Simon used the analogy of a pair of scissors, where one blade is the "cognitive limitations" of human thought and the other blade is the "structures of the environment." This represents how minds with limited cognitive resources can successfully exploit preexisting structure and regularity in the environment, making decisions based on the boundaries of rational thinking rather than making 100% rational choices based on knowing every single thing about the environment and having infinite time and resources to make their decision.



Brain Activity Precedes Conscious Decisions

Our psychological makeup is integral to how we make decisions

Nonrational Decision Making

People are not truly "rational" in much of their decision-making; they frequently employ alternative, non-rational techniques.

LEARNING OBJECTIVES

- Recognize the inherent human tendency to act and decide in an irrational manner
- Examine alternative perspectives on decision-making, such as Herbert Simon and Gerd Gigerenzer, which outline nonrational decision making factors

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KEY POINTS

- The rationality of individuals is limited by the information they have, the cognitive limitations of their minds, and the finite amount of time they have to make a decision.
- Simon defined two cognitive styles: maximizers and satisficers. Maximizers try to make an optimal decision, whereas satisficers simply try to find a solution that is "good enough".
- Emotion appears to aid the decision-making process: decisions often occur in the face of uncertainty about whether one's choices will lead to benefit or harm.
- Some research has shown that simple heuristics frequently lead to better decisions than the theoretically optimal procedure.

TERMS

- heuristic Experience-based techniques for problem solving, learning, and discovery. Where an exhaustive search is impractical, heuristic methods are used to speed up the process of finding a satisfactory solution. Examples of this method include using a rule of thumb, an educated guess, an intuitive judgment, or common sense.
- cognitive The part of mental functions that deals with logic, as opposed to affective functions which deal with emotion.
- rational Logically sound; not contradictory or otherwise absurd.

Some models of human behavior in the social sciences assume that humans can be reasonably approximated or described as "rational" entities. Many economics models assume that people are on average rational, and can in large enough quantities be

approximated to act according to their preferences. These models often assume that people have perfect information available in making their decisions—decisions that will be their optimal choice for benefits to themselves weighed against the costs. There are other models of decision-making. Herbert A. Simon coined the phrase "bounded rationality," the idea that in decision-making, rationality of individuals is limited by:

- the information they have,
- the cognitive limitations of their minds, and
- the finite amount of time they have to make a decision.

Simon also defined two cognitive styles: maximizers and satisficers. Maximizers try to make an optimal decision, whereas satisficers simply try to find a solution that is "good enough." Maximizers tend to take longer making decisions due to the need to maximize performance across all variables and make tradeoffs carefully; they also tend to more often regret their decisions (perhaps because they are more able than satisficers to recognize that a decision turned out to be sub-optimal). Satisficers recognize that decision-makers lack the ability and resources to arrive at the optimal solution, they instead apply their rationality only after having greatly simplified the choices available. Thus the decision-maker is a satisficer, one seeking a satisfactory solution rather than the optimal one.

Emotion appears to aid the decision-making process: decisions often occur in the face of uncertainty about whether one's choices will lead to benefit or harm. For example, the somatic-marker hypothesis is a neurobiological theory of how decisions are made in the face of uncertain outcomes. This theory holds that such decisions are aided by emotions, in the form of bodily states, that are elicited during the deliberation of future consequences and that mark different options for behavior as being advantageous or disadvantageous.

Gerd Gigerenzer argues that most decision theorists who have discussed bounded rationality have not really followed Simon's ideas about it. Rather, they have either considered how people's decisions might be made sub-optimal by the limitations of human rationality, or have constructed elaborate optimizing models of how people might cope with their inability to optimize. Gigerenzer instead proposes to examine simple alternatives to a full rationality analysis as a mechanism for decision-making, and he and his colleagues have shown that such simple heuristics frequently lead to better decisions than the theoretically optimal procedure.

Robust decision making (RDM) is a particular set of methods and tools developed over the last decade, primarily by researchers associated with the RAND Corporation, designed to support decision-making and policy analysis under conditions of deep uncertainty. In Rational Decision Making, the assumption is that the decision-maker has access to perfect information. The argument against this is that perfect information is rarely, if ever, available. While often used by researchers to evaluate

alternative options, RDM is designed and often employed as a method for supporting decision-making, with a particular focus on helping decision-makers identify and design new options that may be more robust than those they had originally considered. Often, these more robust options represent decision strategies that will adapt—evolve—over time in response to new information.

Section 3 – Conditions for Making Decisions

Evidence Based Decision Making

The practice of evidence-based decision making involves making use of current information to make empirically supported decisions.

LEARNING OBJECTIVE

- Describe the concept and strategic implications of evidence-based decision making in management (EBMgt)

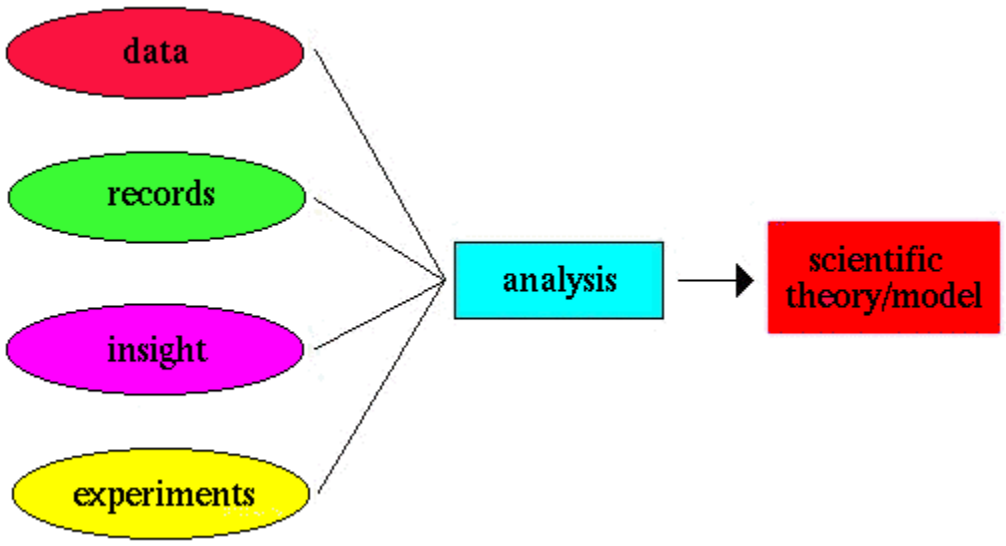
KEY POINTS

- The adoption of evidence-based protocols by other professions (healthcare, education, and law enforcement) is evidence of its usefulness in academic and research formats, however EBMgt is still a fairly new approach relative to management professionals.
- The processes involved in the implementation of EBMgt are structural in nature, requiring that managers and their organizations remain vigilant in procuring and organizing enough empirical and objective/">objective data to implement a scientific decision making process.
- Critics of this theory also exist, as it is argued that evidence and scientific approaches do not take ethics into consideration. As a result, managers must take an active role in implementation.
- Overall, EBMgt is a useful tool for managers in acquiring enough data to generate informed and intelligent perspectives, decisions, and strategies as they lead the company.

TERM

- EBMgt An acronym representing Evidence-Based decision making in Management. Likely evolved from EBM which stands for Evidence-Based Medicine, the most prominent professional application of evidence-based protocols.

The practice of evidence-based decision making in management (often represented as EBMgt) evolved from medicine and involves making use of the best current information to make rational and empirically supported decisions. This could loosely be compared to the concept of scientific theory, where the process of analyzing managerial decisions is geared at objectivity and empirical data.



Scientific Theories

This image demonstrates the way in which science draws conclusions.

The adoption of evidence-based protocols by other professions (healthcare, education, and law enforcement) is evidence of its usefulness in academic and research formats, however EBMgt is still a fairly new approach relative to management professionals. The primary basis of EBMgt is to leverage the best

available data in decision-making, in conjunction with ensuring that ethical concerns and other moral considerations are upheld.

The EBmgt Collaborative, sponsored by a number of universities and foundations throughout the U.S., U.K., and Canada, is one such organization devoted to expanding the practice of EBMgt. By way of introducing a concise definition of the practice, the EBMgt Collaborative's mission statement declares:

"Evidence-Based Management (EBMgt) enhances the overall quality of organizational decisions and practices through deliberative use of relevant and best available scientific evidence. EBMgt combines conscientious, judicious use of best evidence with individual expertise; ethics; valid, reliable business and organizational facts; and consideration of impact on stakeholders. "

The processes involved in the implementation of EBMgt are structural in nature, requiring that managers and their organizations remain vigilant in procuring and organizing enough empirical and objective data to implement a scientific decision making process. This level of organization is particularly relevant to specific types of companies, such as low-cost strategies and other similarly structured business approaches. The end-product of utilizing this model is to eventually achieve an evidence-based culture that drives experimentation and analysis of the subsequent results in order to derive the ideal possible course of action.

Critics of this theory also exist, as it is argued that evidence and scientific approaches are not always neutral nor ethical. As business pertains to the leveraging of resources, including human resources, it is critical to keep the ethical and moral elements of scientific theory separate from the results of data-driven models. These

criticisms point out the importance of managers, leaders and decision makers in the data interpreting process, as the human element of social considerations must be kept intact when analyzing data.

Overall, EBMgt is a useful tool for managers in acquiring enough data to generate informed and intelligent perspectives, decisions, and strategies as they lead the company. Utilizing a scientific approach is a useful way to challenge current norms with data, as well as achieve objectivity in decision-making.

The Value of Analytics

Analytics help decision makers determine risk, weigh outcomes, and quantify costs and benefits associated with decisions.

LEARNING OBJECTIVE

- Recognize the decision-making value of utilizing statistics and analytics to create accurate predictions

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KEY POINTS

- Predictive analytics and business analytics are two methods of analytics primarily used in decision making and modeling best practices for making the best decisions possible.
- Predictive analytics encompasses a variety of statistical techniques from modelling, machine learning, and data mining that analyze current and historical facts to make predictions about future events.
- Business Analytics focuses on developing new insights and understanding of business performance based on data and statistical methods. These analytics are then used in making strategic decisions for the company.

TERMS

- Decision Trees a decision support tool that uses a tree-like graph or model of decisions and their possible consequences, including chance event outcomes, resource costs, and utility.

- Benchmarking A technique that allows a manager to compare metrics, such as quality, time, and cost, across an industry and against competitors.

Analytics are essential to decision making and making sure that the decision making process is sound and the potential options have been quantitatively analyzed against one another. Predictive analytics and business analytics are two methods of analytics primarily used in decision making and modeling best practices for making the best possible decisions.

Predictive Analytics and Decision Making

Predictive analytics encompasses a variety of statistical techniques, including modelling, machine learning, and data mining that analyze current and historical facts to make predictions about future events. In business, predictive models exploit patterns found in historical and transactional data to identify risks and opportunities. Models capture relationships among many factors to allow assessment of risk or potential associated with a particular set of conditions, thereby guiding decision making for candidate transactions.

Predictive analytics help decision makers to predict the potential outcomes of a decision before it is implemented. They can weigh the potential risks of the decision against its potential benefits and come up with precise estimates of the chance of these risks occurring. Predictive analytics focuses more on the likelihood of future events and risks associated with a decision, whereas business analytics use historical data and metrics to make decisions about the future strategic direction of a company.

Business Analytics and Decision Making

Business Analytics focuses on developing new insights and understanding of business performance based on data and statistical methods. These analytics are then used in making strategic decisions for the company. Business intelligence traditionally focuses on using a consistent set of metrics to both measure past performance and guide business planning, which is also based on data and statistical methods.

Similar to Predictive Analytics, Business Analytics helps decision makers forecast the strategic direction of a business. The quantitative analysis, metrics and benchmarks that analytics provide decision makers can be essential in helping them determine the best course of action for an organization. The use of data, mathematical modeling and tools such as decision trees and benchmarking are very useful components of analytics that can help guide decision makers.

Making Decisions Under Conditions of Risk and Uncertainty

Conditions of risk and uncertainty frame most decisions rendered by management.

LEARNING OBJECTIVES

- Outline the various risks that influence the decision-making process
- Recognize the ways in which management can react to risks through making strategic decisions

KEY POINTS

- Uncertainty and risk are not the same thing. Whereas uncertainty deals with possible outcomes that are unknown, risk is a certain type of uncertainty involving a real probability of loss for a given outcome. Risks can be accounted for more comprehensively than uncertainty.
- Decision making under conditions of risk should seek, wherever possible, to identify, quantify, and absorb risk.
- The quantity of risk is equal to the sum of the probabilities of a risky outcome (or various outcomes) multiplied by the anticipated loss as a result of the outcome.
- The ability of a firm to absorb, transfer, and manage risk will often define management's risk appetite so that once risks are identified and quantified, decisions may be made as to whether risky outcomes may be tolerated and to what extent.

TERMS

- force majeure An unavoidable catastrophe, especially one that prevents someone from fulfilling a legal obligation. An unforeseeable act of nature.
- hedge A contract or arrangement reducing one's exposure to risk.

The managerial landscape is often defined by situations of risk and uncertainty. The decision-making process is an attempt to reduce, mitigate, or even removed risks and uncertainties. As such, the decisions of managers impact the extent to which risks and uncertainties remain.

Uncertainty has a fairly linear effect on decision making in that it delays it. When confronted with uncertainty, managers will attempt to put off decisions until uncertain circumstances become more certain.

It is important to note that uncertainty and risk are not the same thing, but both play an important role in the decision-making process. Uncertainty is a probabilistic state where multiple outcomes are possible yet unknown. Risk is a state of

uncertainty whereby possible outcomes involve losses of varying degrees depending on the actual outcome.

Decision making within a risk management context should therefore seek, wherever possible, to identify, quantify, and absorb risk. Identifying risk entails an awareness of current business risks that might be facing the organization. Business risks are typically classified as follows:

1. Strategic risks: These are industrial risks that arise from competing in a specific industry and can include macroeconomic risks (the alignment of buyers and sellers consistent with the principles of supply and demand), transaction risks (the operational risks from M&A activity, divestures, or partnerships), and investor relations risk (the risks associated with communicating effectively with the investment community).
2. Financial risks: These are derived from potential losses in the financial accounts of a business. They can include risks from investing capital, risks to principal or interest value/">value, or risks to other business related transactions.
3. Operational risks: Risks that arise during the day-to-day operations of the business. This varies considerably amongst different industries.
4. Legal risks: The extent of a business' compliance with all applicable laws would dictate the overall impact of legal risks on decision making.
5. Other risks: Usually risks associated with *force majeure*. This is difficult to account for and include within decision-making criteria.

Once management has identified the appropriate risk category that may impact upon a certain decision, it may go about quantifying these risks. In other words, management will ascertain the costs incurred if a risky outcome were to happen. This can be mathematically daunting for many types of risk, especially financial risk, but generally speaking risk is equal to the sum of the probabilities of a risky outcome (or various outcomes) multiplied by the anticipated loss as a result of the outcome. This is similar to performing a sensitivity analysis if the universe of outcomes is known.

The ability of a firm to absorb, transfer, and manage risk is critical in management's decision-making process when risky outcomes are involved. This will often define management's risk appetite and helps determine, once risks are identified and quantified, whether risky outcomes may be tolerated. For example, many financial risks can be absorbed or transferred through the use of a hedge, while legal risks might be mitigated through unique contract language. If managers believe that the firm is suited to absorb potential losses in the event the risky outcome is triggered, then they will naturally have a larger appetite for risk given their capabilities to manage it.

Decisions and Risk

BP's Deepwater Horizon burns prior to sinking in the Gulf of Mexico. The Deepwater Horizon accident represents a worst case scenario of managerial decision making under conditions of risk.

Section 4 – Decision Making Process

Identify and Define the Problem

Identifying, defining, and understanding a problem is essential before proceeding to make a decision.

LEARNING OBJECTIVE

- Express the importance of properly framing and defining the problem prior to pursuing a decision

KEY POINTS

- Decision makers must first make sure that they completely understand the problem.
- It is a good idea to be able to look at a decision from the perspective of multiple people. This can be accomplished through selecting a group/">group that will look at and define the problem from their perspectives.
- Data should be gathered on how the current problem is affecting people now. Some examples of important data to gather include efficiency levels, satisfaction levels, and output-metrics/">output metrics.

TERM

- Output metrics A standard or a data point that shows the rate and speed of production over a certain period of time or production level.

Decision making is an important component in an organization's operations. Decision makers must first ensure that they completely understand the problem and are aware of all of its relevant issues.

There are a number of ways to define a problem, such as creating a team/">team to tackle it and gathering relevant data by interviewing employees and customers.

Developing a Group to Define the Problem

It is a good idea to be able to look at a decision from the perspective of multiple people. This can be accomplished through selecting a group that will look at and define the problem from their perspectives. The rational decision-making model is a group-based decision-making process. If the group members cannot agree to the nature of a problem, then they cannot possibly approach a solution. It is therefore very important that the definition of the problem is the same among all group

members. Only then is it possible for the group members to identify the options necessary to solving the problem in an effective manner.

Gathering Data to Define the Problem

While a group will help to further define and understand the problem, it will also be important to further define the problem by looking at all parties that will be affected by the decision. Data should be gathered on how the current problem is affecting people now. Some examples of important data to gather include efficiency levels, satisfaction levels, and output metrics. In addition, interviews should be conducted to determine how people involved in the decision-making process think that the problem can best be defined. All of this information needs to be collected and considered by the decision maker or the group of decision makers before the decision-making process can begin.

Generate Alternatives

By generating alternatives, a decision maker may improve their option set or expose their biases; a decision tree is a good way to generate these options.

LEARNING OBJECTIVE

- Discuss the basic methodology behind decision trees, alongside the potential risks and drawbacks inherent in generating alternatives to a decision

KEY POINTS

- A decision tree is a decision support tool that uses a tree-like graph or model of decisions and their possible consequences, including chance event outcomes, resource costs, and utility. A decision tree can help lay out the alternatives and determine the best ones to consider.
- When dealing with information in decision analysis, there are often biases and errors in judgment, such as the fact that people pay more attention to information that is easily available.
- It is important for a decision maker to receive plenty of input from others to avoid any bias.

TERMS

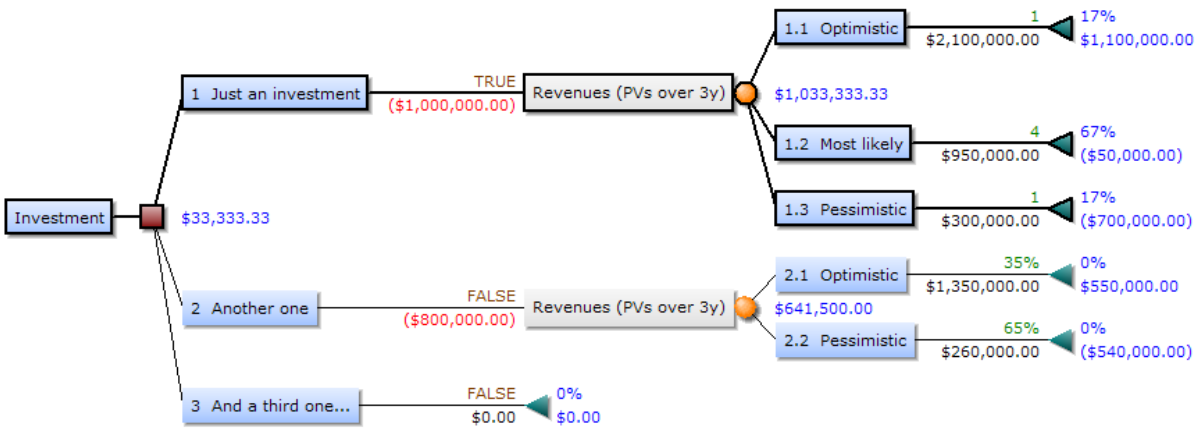
- bias An inclination towards something; predisposition, partiality, prejudice, preference, predilection.
- utility In economics, utility is a representation of preferences over some set of goods and services. Preferences have a utility representation so long as they are transitive, complete, and continuous.
- decision tree A visualization of a complex decision-making situation in which the possible decisions and their likely outcomes are organized in the form of a graph that resembles a tree.

Before making a decision, a decision maker needs to be able to consider alternatives that may be better or worse than the current options. Of course, this is where defining the problem becomes important. If the problem is not defined correctly, the decision maker will not generate the correct alternatives. In turn, the decision maker will not be able to analyze the problem effectively and make a good decision. One way to evaluate alternatives is through a decision tree.

Decision Tree Basics

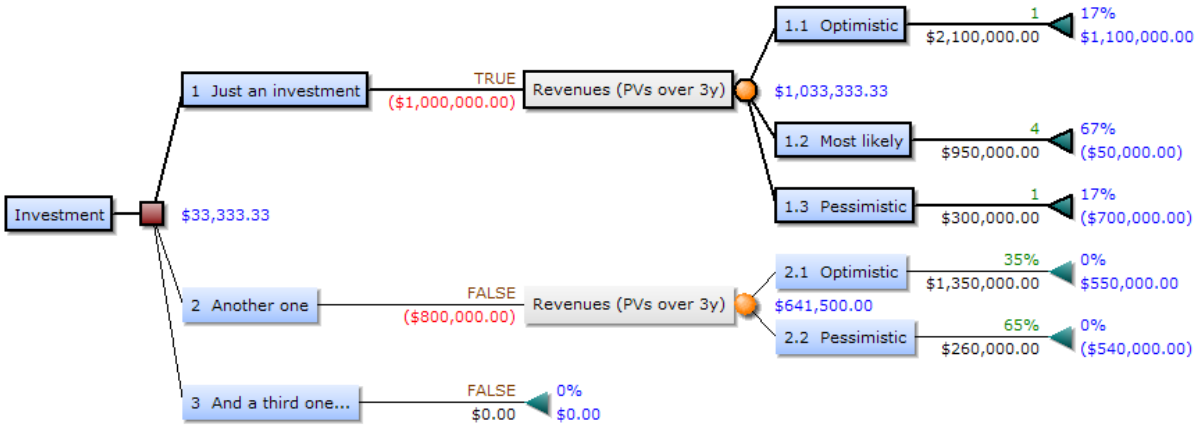
A decision tree is a decision support tool that uses a tree-like graph or model of decisions and their possible consequences, including chance event outcomes, resource costs, and utility. It is one way to display an algorithm. Decision trees are

commonly used in operations research, specifically in decision analysis, to help identify the strategy most likely to reach a goal.



Applied Decision Tree

Decision trees can improve investment decisions by optimizing them for maximum pay-off.



Applied Decision Tree

Decision trees can improve investment decisions by optimizing them for maximum pay-off.

Decision trees have three types of nodes at each part of the diagram:

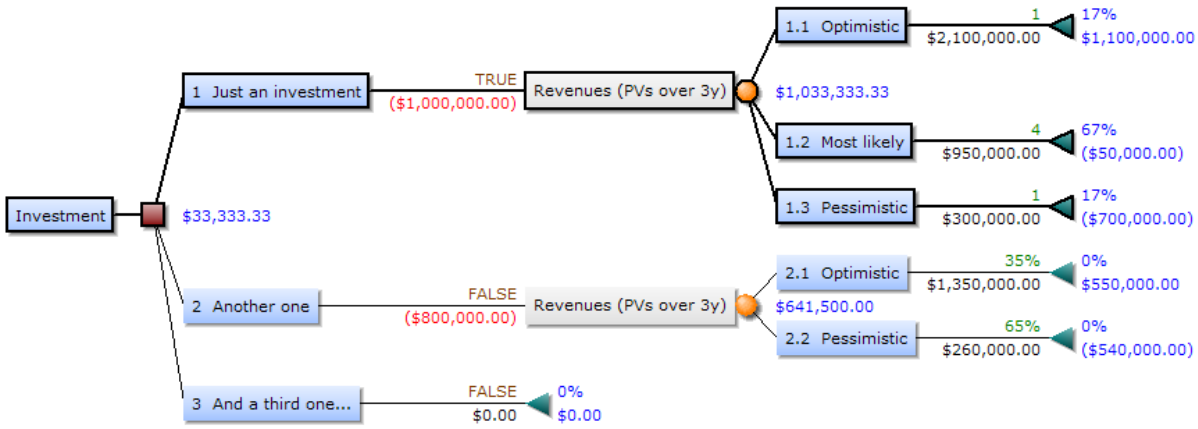
- Decision nodes
- Change nodes
- Conclusion or end nodes.

Laying out the alternatives to a decision can be one way for a decision maker to contemplate the probability of each occurring.

Risks When Preparing a Decision Tree

When generating alternatives, the decision maker will be creating the alternatives based on the information gathered when defining the problem. Unfortunately, when dealing with information in decision analysis, there are often biases and errors in judgment. These biases and judgment errors can include the fact that people pay more attention to information that is easily available, such as memories that are more personally relevant or vivid. This can result in decision makers not thinking about all of the potential alternatives because they fixated on the ones that make the most sense to them.

It is therefore important for a decision maker to receive plenty of input from others to avoid any bias. This is especially true when generating alternatives. The alternatives considered will set the stage for how the final decision is made as well as what criteria will be used to examine its effectiveness.



Applied Decision Tree

Decision trees are used to examine the options a decision maker has available.

Evaluate Alternatives

In order to eliminate bias in a decision, one can use tools such as an influence diagram and a decision tree to evaluate alternatives.

LEARNING OBJECTIVE

- Model potential decision alternatives through utilizing pro/con analysis, influence diagrams, decision trees and Bayesian networks

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KEY POINTS

- There are a few tools available to decision makers that can be used in helping to quantify the potential alternatives and outcomes to a decision. These tools include a simple pro/con analysis, an influence diagram, and a decision tree.
- A decision tree is used to lay out the alternatives and then assign a "utility" or a relative value/">value of importance to a particular alternative.
- Another tool that decision makers can use to quantify a decision is an influence diagram, which is a compact graphical and mathematical representation of a decision situation.

TERMS

- Bayesian network A probabilistic graphical model that represents a set of random variables and their conditional dependencies. For example, a network/">Bayesian network could be made to calculate the probabilities between symptoms and a disease.

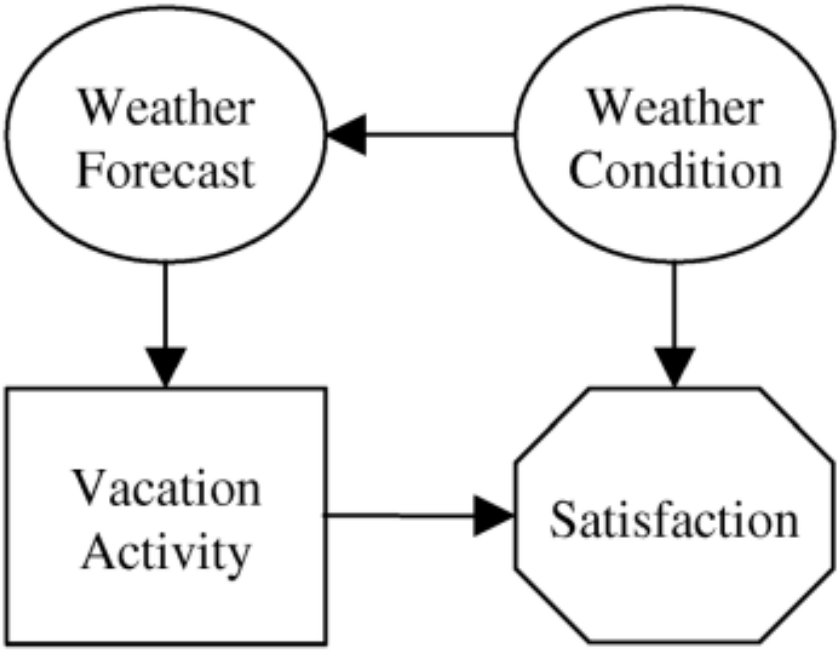
- decision tree A visualization of a complex decision-making situation in which the possible decisions and their likely outcomes are organized in the form of a graph that resembles a tree.

After a decision maker has successfully and accurately defined the problem and generated the alternatives to the decision as well as the alternative and consequences that may arise as a result of the decision, he or she can then evaluate the alternatives that have been generated. There are a few tools available that can be used to help quantify the potential alternatives and outcomes to a decision. These tools include a simple pro/con analysis, an influence diagram, and a decision tree.

For a relatively unimportant decision, a decision maker may conduct a simple pro/con analysis mentally to decide which alternatives may be the best or worst. However, for more complex decisions, a decision maker will want to use a tool that will help quantify the cost or riskiness of the decision. A decision tree can do this by laying out the alternatives and then assigning a "utility" or a relative value of importance to a particular alternative, either in dollar amounts or in a different metric. Laying out these options and calculating the actual utility or dollars saved is important to make a decision without bias based on the most important factors. Decision trees can also be combined with other financial projections such as Net Present Value calculations, which determine the present or current value of a stream of incoming cash flows that a project will bring in sometime in the future.

Another tool that decision makers can use to quantify a decision is an influence diagram. An influence diagram is a compact graphical and mathematical

representation of a decision situation. It is a generalization of a Bayesian network, in which not only probabilistic inference problems but also decision making problems can be modeled and solved. Influence diagrams have been adopted widely and are becoming an alternative to decision trees, which typically suffer from increasingly difficult calculations when a lot of alternatives are available. Influence diagrams are directly applicable in team/">team decision analysis, because they allow incomplete sharing of information among team members to be modeled and solved explicitly.



Influence Diagram Example

This is a simple example of an influence diagram used to evaluate the alternatives of a decision.

These tools can be used to combat bias when making decisions about complicated alternatives. Having the alternatives laid out in a quantitative way can eliminate bias that influences decisions, such as availability of information or ease of information,

which may make a decision maker prefer the alternative that is the easiest to implement. Influence diagrams and decision trees can help in evaluating alternatives in an unbiased manner.

Evaluate Alternatives

In order to eliminate bias in a decision, one can use tools such as an influence diagram and a decision tree to evaluate alternatives.

LEARNING OBJECTIVE

- Model potential decision alternatives through utilizing pro/con analysis, influence diagrams, decision trees and Bayesian networks

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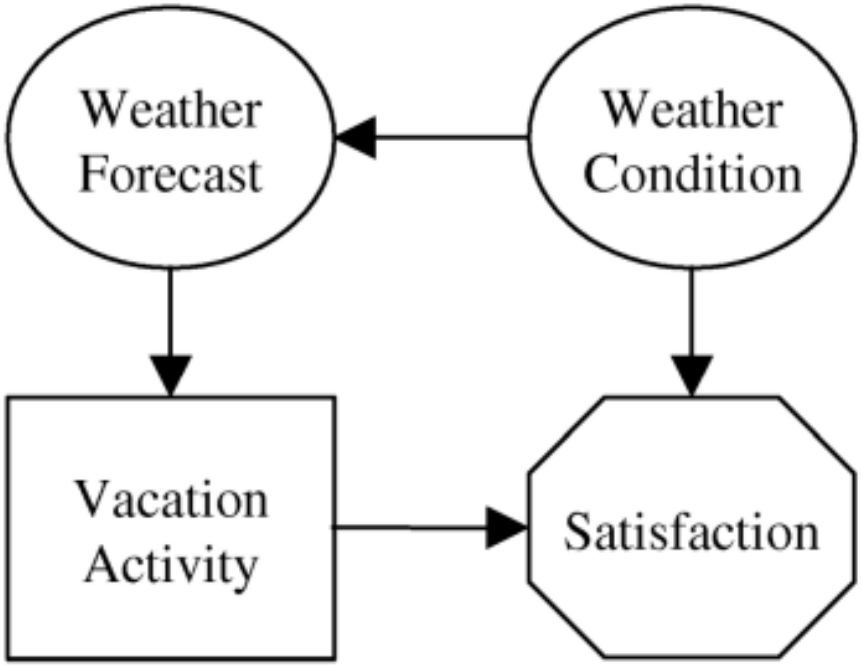

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Determine a Course

A good decision maker will always try to eliminate personal biases and understand his personal risk tolerance when determining a course.

LEARNING OBJECTIVE

- Understand the importance of bias and prospect theory in effectively ensuring decision makers arrive at the ideal option

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KEY POINTS

- Even after using a number of tools to help eliminate bias in a decision, the ultimate determination of a course is almost always still influenced by bias in judgment and decision making.
- Decision makers are typically biased in their decision based on how much they like or do not like risk. If they are risk seekers or dare devils, they may be more likely to make a more risky decision than an individual who is risk.
- How risk averse a person is generally depends on the circumstances; few people are always risk averse or risk seeking.

TERMS

- bias A cognitive bias is the human tendency to make systematic decisions in certain circumstances based on cognitive factors rather than evidence. Bias arises from various processes that are sometimes difficult to distinguish. These processes include information-processing shortcuts, motivational factors, and social influence. Such biases can result from information-processing shortcuts called heuristics. They include errors in judgment, social attribution, and memory.
- Risk Averse This term describes individuals who do not like risk and tend to make decisions that are the least risky decisions available.

Depending on the alternatives that have been evaluated so far in the decision-making process, the decision maker will either have a clear preferred choice or will still need to evaluate the options.

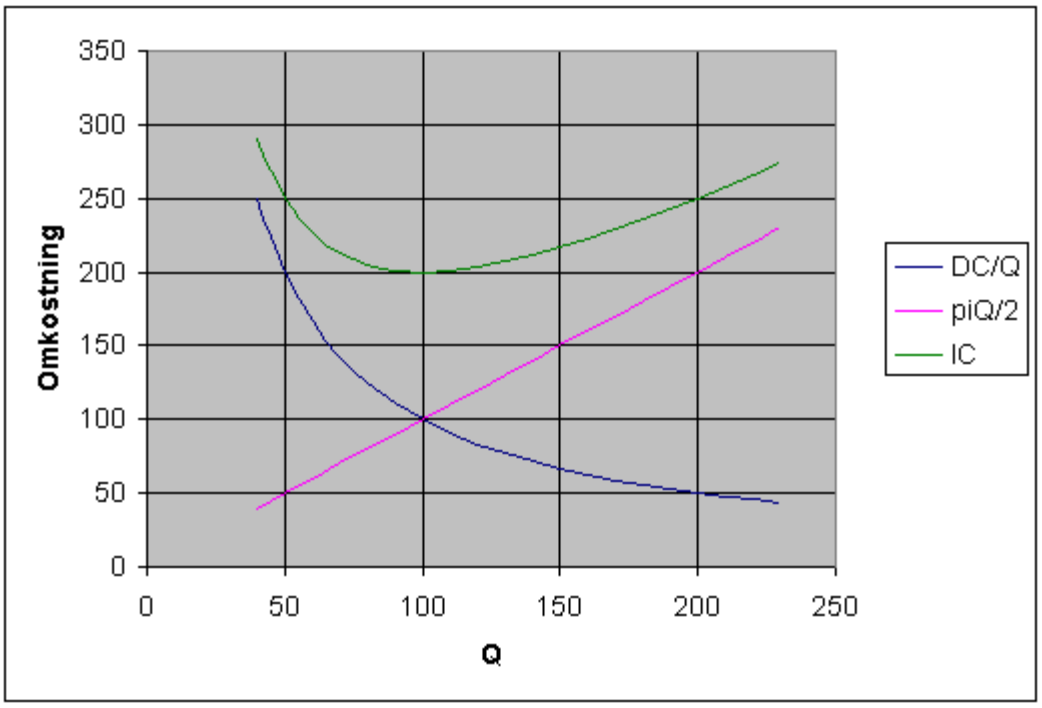
When determining a specific course, people will try to eliminate their inherent biases to arrive at the best option given the circumstances. A bias is the human

tendency to make decisions based on cognitive shortcuts as opposed to evidence and factual data. This can lead to sub-optimal or even bad decisions. Biases are specific to the decision-making individual, so they will vary.

People may be unable to eliminate all of their biases, especially when it comes to risk. All people have a bias in relation to how much risk they can tolerate. It is therefore important to understand how people arrive at conclusions when risk is involved.

Bias and Prospect Theory

One of the most popular theories about bias in decision making is Kahneman and Tversky's prospect theory, which describes the combination of risk and loss aversion in a decision. This means that decision makers are typically biased in their decision based on how much they like or do not like risk. If they are risk seekers or dare devils, they may be more likely to make a more risky decision than an individual who is risk averse. The risk averse individual may be more likely to make a safer decision.

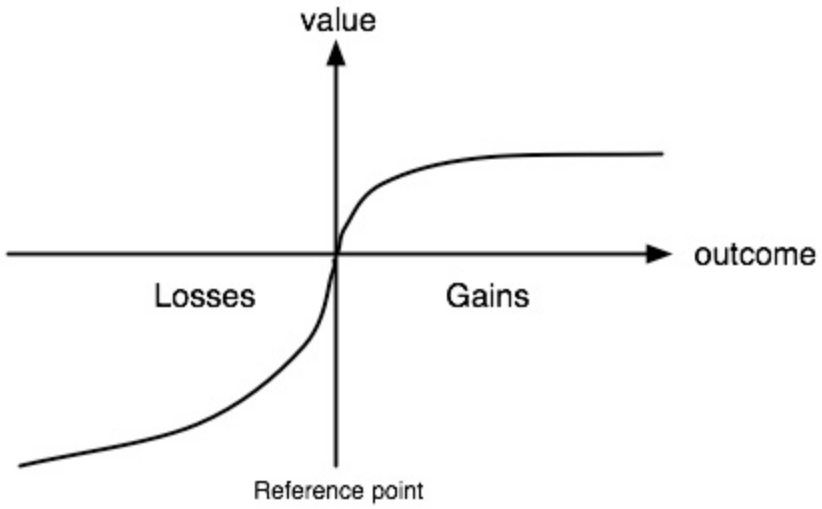


Inventory control

Inventory control - inventory cost elements (holding cost, order cost, total)Parameters: Order-cost (C) 10, demand (D) 1000, holding cost (i) 20% (of price), price (p) 10 => EOQ = 100

But a person is rarely purely a risk seeker or risk averse. A person will often be daring or cautious based on the circumstances of the situation. This explains why some people might buy a lottery ticket (risk seeking) and still have insurance (risk averse).

Prospect theory also suggests that people consider how others would benefit or be hurt by the outcome of their decision. This contradicts traditional economic theory, which states that a person makes decisions based only on his own well-being.



Prospect Theory and Risk Aversion

This graph shows how Kahneman and Tversky's theory describes that some people are more averse to risk and other people have a greater preference for risk. This can result in people having bias in their decision-making processes.

Implement the Course

Implementing a decision requires the decision-maker to make and execute an implementation plan.

LEARNING OBJECTIVE

- Describe the three central steps to effectively implementing a decision upon the selection of a particular perspective or course

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KEY POINTS

- Three essential actions to implementing a decision include creating an implementation plan, informing stakeholders and finally adjusting the decision to make compromises as necessary.
- Compromising is another essential component of the implementation process. Through implementing the decision, there may be situations and issues that the decision-maker did not consider initially.
- During the implementation phase, decision-makers should be aware that they may be persuaded by pressures from stakeholders and employees to change the decision that they have made or to reconsider their decision.

TERM

- stakeholder a person, group, organization, member or system who affects or can be affected by an organization's actions.

After all of the alternatives have been analyzed and a final decision has been reached, there are steps that should be taken during the implementation process for that decision. Three essential actions to implementing a decision include creating an implementation plan, informing stakeholders, and finally, adjusting the decision to make compromises as necessary.

Creating an implementation plan requires understanding how the decision may affect others and the most efficient way to present and follow through with that decision. This may require talking with the workforce and management in order to understand how the decision may affect employees. The implementation plan would also determine how information about the decision would be passed down through the organization.

Informing the stakeholders that were involved in the decision making process is another essential component of implementing the decision. This includes informing all of the groups that worked to evaluate the alternatives to the decision, as well as the primary people would be affected, including all of the employees and managers.

Finally, compromise in the implementation process is also an essential component. Through the implementation, there may be situations and issues that the decision-maker did not initially consider. This will require the decision-maker to reevaluate

the decision while the implementation process is taking place. It also may require a few adjustments to the implementation process if any issues arise.

During the implementation phase, decision-makers should be aware that they may be persuaded by pressures from stakeholders and employees to change their decision, or to reconsider. A few of these pressures include coercive pressures and normative pressures. Coercive pressures come from the social sanctions that can be applied if one does not act in socially legitimate ways. Normative pressures concern what an individual thinks they 'should' do. Normative pressures concern values and the broader social values. Both coercive and normative pressures will likely be felt by the decision-maker during the implementation of the decision, especially if the decision is an unpopular one. However, it is essential that the decision-maker consider the tools used and previously conducted analyses that originally brought them to this decision, and to strive not to be biased by these pressures.

Evaluate Results

Decision makers must evaluate the results of a decision to improve the processes and outcomes of future decisions.

LEARNING OBJECTIVE

- Recognize the appraisal stage and the development of future insights as the final stage in the decision-making process

KEY POINTS

- Appraisal is used as the final step of formal decision methods. Appraising may help the decision maker create a repertoire of past outcomes that can then be used to make wiser decisions in the future.
- Self-esteem is important when evaluating results because it may result in decision makers viewing the results of their decision with favorable bias. This can cause people to filter out or discount information that might show the decision in an unfavorable light.
- The results of a decision must be compared to the results that the decision maker was expecting in order to improve future decision making.

TERMS

- appraisal A judgment or assessment of the value of something, especially a formal one.
- insight An extended understanding of a subject resulting from identification of relationships and behaviors within a model, context, or scenario.

Evaluating Results

Once a problem is defined, the alternatives have been considered, and the decision has been made, it is important to evaluate the results of the decision. These results must be compared to the results that the decision maker was expecting.

The Appraisal Stage

Appraisal is used as the final step of formal decision methods. The objective/">objective of the appraisal stage is for the decision maker to develop insight into the decision. Appraising may help the decision maker create a repertoire of past outcomes that can then be used to make wiser decisions in the future.

Much of the insight developed in this stage results from exploring the implications of the decision.

Evaluating Decisions

Evaluating decisions can lead to insights into ways to improve future decisions. Insight can be obtained by referencing key business metrics, balanced score cards, or by looking back to decision trees and analyzing what could have happened had the decision maker chosen an alternative. Possible actions following the appraisal stage include evaluating the success of the decision, how it plays out, and accepting the results; revising the decision and reevaluating it; or abandoning the decision and doing something else if possible.

For most people, when appraising the results of a decision, maintaining self-esteem is an important goal. Self-esteem may make decision makers view the results of their decision with favorable bias. This can cause people to filter out or discount information that might show the decision in an unfavorable light. The tendency to attribute good outcomes to one's actions and bad outcomes to factors outside one's control may cause this bias to take place when evaluating decisions. While such defenses against loss of self-esteem can be helpful to the extent that they help the decision maker persist in the face of adversity, they can reduce learning and waste opportunities to take corrective action.

Section 5 – Considering Ethics in Decision Making

Decision trees are a diagrammatic way of representing all possible combinations of decisions and their resulting actions.

LEARNING OBJECTIVE

- Define the concept of a decision tree as it applies to ethical outcomes.

KEY POINTS

- Decision trees are often used in operations research, specifically in decision analysis, to help identify a strategy most likely to reach a goal.
- The function of developing and the implantation of an "ethics system" is difficult because the system must reflect each organization's culture.
- If posed with an ethical dilemma, creating a decision tree is a useful method for analyzing how to proceed and what the potential outcomes of each action would be.

TERMS

- ethics The study of principles relating to right and wrong conduct.
- decision tree A visualization of a complex decision-making situation in which the possible decisions and their likely outcomes are organized in the form of a graph that resembles a tree.

Ethics:

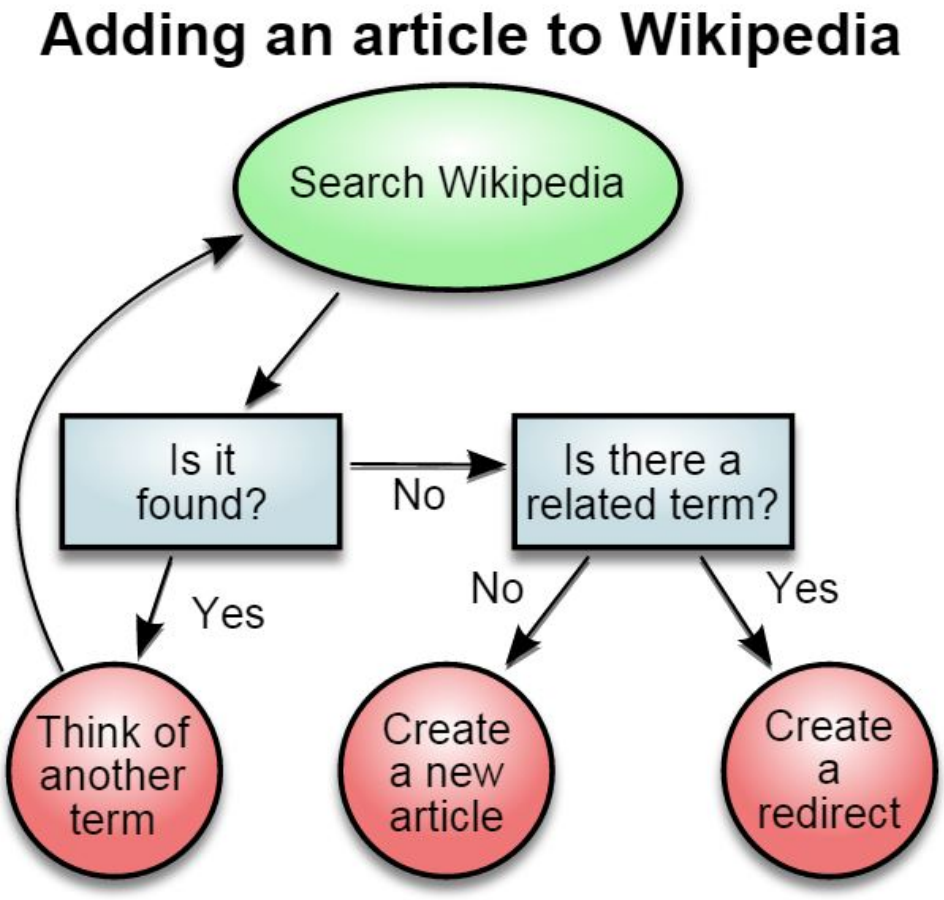
Ethics are moral principles that guide a person's behavior. These morals can be different based on social norms, cultural and religious influences.

Decision Trees:

Decision trees are graphical representations of possible combinations of decisions and possible results. The decisions are represented by branches of a tree. Decision

trees are based on the concept that every action will have an outcome that is positive or negative. Businesses and individuals often use decision trees as part of their decision making process. Decision trees are commonly used in operations research, specifically in decision analysis, to help identify a strategy most likely to reach a goal.

Decision trees can be applied to ethical considerations as well. If posed with an ethical dilemma, creating a decision tree is a useful method for analyzing how to proceed and what the potential outcomes of each action would be.



Decision Tree

Example of a decision tree.

Ethical System Implementation and Consideration:

Creating an ethical system within an organization is often difficult. Ethics can be sometimes subjective. They have no clear standards and can vary based on different cultural and societal influences. In addition, for an international organization, ethics will have many different influences and the input of the ethical system of one society may violate the ethical code of another society. Therefore, although, it may require a great deal of time, stakeholder management should consider the Rational Decision-Making Model for implementation of various aspects of an ethical system to the stakeholders. If done successfully, then each stakeholder feels empowered for the moment to moment daily decisions that are ethically positive for the organization.

Applying the Decision Tree

A decision tree is a tool that uses a tree-like graph to quantify and visually display decisions and their possible consequences.

LEARNING OBJECTIVES

- Express decision criteria in an organized and structured view, allowing for systematic and logical decision-making.
- Understand the three different types of nodes found in a decision tree.
- Recognize the application of a decision tree as it pertains to business ethics.

KEY POINTS

- A decision tree consists of three types of nodes: decision nodes, chance nodes, and end nodes.
- Decision trees can be applied to ethical considerations. Laying out each consideration, potential actions, and potential outcomes can be useful in deciding how to proceed in the best ethical manner.
- In decision analysis, a decision tree is used as a visual and analytical decision support tool.

TERMS

- decision tree A visualization of a complex decision-making situation in which the possible decisions and their likely outcomes are organized in the form of a graph that resembles a tree.
- utility In economics, utility is a representation of preferences over some set of goods and services. Preferences have a utility representation so long as they are transitive, complete, and continuous.

Defining the Decision Tree

A decision tree is a decision support tool that uses a tree-like graph that models decisions and their possible consequences, including utility, chance event outcomes, and resource costs.

Applying the Decision Tree

In decision analysis, a decision tree is used as a visual and analytical decision support tool to help individuals quantify and weigh options against one another. On a decision tree, the expected value/">values of competing alternatives are calculated. This tells the decision maker which decision has the highest utility, or is the most preferred, to the decision maker.

Creating a Decision Tree

A decision tree consists of 3 types of nodes:

1. Decision nodes - These are commonly represented by squares. Decision nodes are used when a decision needs to be made between at least two alternatives.

2. Chance nodes - These are represented by circles. Chance nodes represent a point on the decision tree in which there is a degree of uncertainty about the outcomes of a decision, so there must be at least two possible outcomes represented.
3. End nodes - These are represented by triangles. An end node is where a decision is made and its value or utility is identified.

Decision trees can be applied to ethical considerations. Consider a dilemma involving a colleague. You are considering three options: report your colleague to a superior, confront the colleague yourself, or ignore the situation completely. The top box of the decision tree would state "Colleague Dilemma."

The next three nodes would then read: "Report colleague to superiors", "Confront colleague", and "Ignore situation." Each of these nodes would then have a "yes" arrow and a "no" arrow. For each "yes" and "no," you would list what the outcome would be, realizing that in some cases the nodes may need to continue to account for potential outcomes, some of which may link back to previous options. For example, a "yes" decision arrow for "Report colleague to superiors" may result in the situation being taken care of. Alternatively, this decision could result in an investigation that would impact your standing within the company and with your peers. Or if you chose to ignore the colleague and his unethical behavior gets discovered in the future, you could end up in trouble for choosing not to act on your prior knowledge. A decision tree for a tough dilemma allows the decision maker to visually lay out each scenario and make a detailed consideration. Additionally, for each potential

decision, the decision maker can calculate the expected utility (or preference) for that decision. Decision trees thus create a quantitative way of measuring which decision may be the best.

Moral Principles in Management

Business ethics examines ethical principles and moral or ethical problems that arise in a business environment.

LEARNING OBJECTIVES

- Identify the four elements necessary to effectively quantify an organization's ethical stance.
- Recognize the importance of ethics in the business environment, particularly how individual managers should employ these principles.

KEY POINTS

- Good leaders strive to create a better and more ethical organization.
- The corporate world has begun promoting ethics in the work place after major corporate scandals like WorldCom, Tyco, and Enron.
- To combat the recent corporate scandals and protect their reputation, companies have begun to form more comprehensive corporate policies concerning ethics.

TERMS

- moral Of or relating to principles of right and wrong in behavior, especially for teaching right behavior.
- ethics The study of principles relating to right and wrong conduct.

Morality and Ethics

Morality (from the Latin moralitas "manner, character, proper behavior") is the differentiation of intentions, decisions, and actions between those that are good (or right) and those that are bad (or wrong). Ethics, also known as moral philosophy, is a

branch of philosophy that involves systematizing, defending, and recommending concepts of right and wrong conduct.

Business Ethics

Business ethics (also corporate ethics) is a form of applied ethics or professional ethics that examines ethical principles and moral or ethical problems that arise in a business environment. It applies to all aspects of business conduct and is relevant to the conduct of individuals and entire organizations. Ethics is the concept of having moral value/">values and behaviors. Ethical behavior is conducting oneself in a way that is common with a certain set of values, whether personal or institutional. Businesses are dependent on their reputations, so when a company holds strong ethical values it brings positive results. One effect of ethical behavior is the retention and attraction of employees. Employee turnover tends to be lower, and an increase in applicants results in better qualified employees. Unethical behavior can hurt a company.

The corporate world has begun promoting ethics in the workplace after major corporate scandals like WorldCom, Tyco, and Enron. To be viewed credible by the public, many companies have created a position called the Corporate Ethics Officer or the Corporate Compliance Officer. This person ensures ethical procedures are created and adhered to by everyone in the organization. This decision may help the company gain goodwill and favorable publicity, protect the organization from legal

action, and foster ethical practices within the organization. Alternatively, these positions may only be a public relations scheme to delude the public and avoid legislative interference that would make the organization comply with specific regulations.

To combat the recent corporate scandals and protect company reputations, companies have begun to form more comprehensive corporate policies concerning ethics. These policies generally offer guidance to employees as well as state the expectations of the company. For these polices to work, companies may require that employees sign a contract stating that they will follow the procedures within the handbook.

Promoting an Ethical Business Climate

There are at least four elements that exist in organizations that make ethical behavior conducive within an organization. The four elements necessary to quantify an organization's ethics are:

1. Written code of ethics and standards ;
2. Ethics training to executives, managers, and employees;
3. Availability for advice on ethical situations (i.e. advice lines or offices);
4. Systems for confidential reporting.

Good leaders strive to create a better and more ethical organization. Promoting an ethical climate in an organization is critical, as it is a key component in solving many other organizational development and ethical behavior issues facing the organization.

Section 6 – Barriers to Decision Making

Individual Natures

Individual cognitive biases will influence decision making.

LEARNING OBJECTIVE

- Examine the complex individual influences central to the way in which decision-making is pursued, most notably the cognitive, normative and psychological perspectives

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KEY POINTS

- The psychological (needs) perspective, the cognitive (continuous interaction with the external environment) perspective and the normative (logical) perspective all influence individual performance in decision making. An individual need not necessarily fall into a single perspective.
- Abraham Maslow's work on needs based motivational theory forms the basis for much of the managerial literature surrounding the motivation of employees.
- Behavioral economist Herbert Simon famously declared that individuals express a "bounded rationality" when it comes to decision making, dismissing neoclassic maxims of the economic agent as a wealth maximizer in favor of an administrative self-sacrificing one.
- Simon also portrayed organizational decision makers as either "maximizers" or "satisficers" whereby maximizers sought to make optimal decisions, satisficers sought to make decisions that were adequate or "good enough".

TERMS

- tacit Not derived from formal principles of reasoning; based on induction rather than deduction.
- dichotomies Two elements, often mutually exclusive that stand in juxtaposition to one another.

Decision making is inherently a cognitive activity, the result of which may be rational or irrational based on the series of tacit, or underlying, assumptions that inform the decision's basis. The nature of the individual tasked with making a given decision heavily influences the cognitive architecture brought to bear on the decision itself. As such, an individual's predisposition can either be an obstacle or an enabler to the decision-making process.

The literature points to three chief perspectives that influence individual performance in making decisions. From the psychological perspective, decisions are often weighed against a set of needs and augmented by individual preferences or values. Abraham Maslow's work on needs-based motivational theory forms the basis for much of the managerial literature surrounding the motivation of employees.

From the cognitive perspective, individuals view decision making as an ongoing process heavily influenced by external environmental factors.

The normative perspective dictates a purely logical approach to decision making, relying primarily on individual rationality. Behavioral economist Herbert Simon famously declared that individuals express a "bounded rationality" when it comes to decision making, dismissing neoclassic maxims of the economic agent as a wealth maximizer in favor of an administrative self-sacrificing one.

It is important to point out that no person is necessarily typecasted into a certain perspective, although individuals may habitually display traits attributed to one decision-making perspective over another. Generally, individuals are bound to a certain extent to rely on all three.

The Myers-Briggs Type Indicator (MBTI) has become a popular tool within management circles to identify individual characteristics. Upon answering a series of behavioral preference questions, subjects are then assigned to a value for each category, which are thinking, introversion, judgment, and intuition. Based on these preferences, inferences can be made about one's style with respect to decision making. By categorizing individuals in terms of dichotomies such as thinking and feeling; extroversion and introversion; judgment and perception; and sensing and intuition, managers may obtain a map of the individual's preferences for decision making.

Personal Biases

Personal biases can be divisive forces within a decision processes as they often lead to less than ideal outcomes for decision makers.

LEARNING OBJECTIVE

- Recognize the most common biases that may act as a barrier to effective decision making, particularly from the perspective of how best to avoid pitfalls

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KEY POINTS

- The nature of personal biases can vary considerably and can often be imbedded within a person and manifest itself unknowingly.
- Biases seek to disrupt lucid contemplation of an issue by introducing externalities that are generally not relevant to the decision at hand.
- Important known biases within a management context include: the halo effect, confirmation bias, overconfidence bias, anchoring, and groupthink.

TERM

- externalities Something that indirectly affects something else. In economics, a cost or benefit that is not captured in the price mechanism.

Personal biases can be major obstacles in any decision-making process and are as complex as they are numerous. Biases seek to disrupt lucid contemplation of an issue by introducing externalities that are generally not relevant to the decision at hand.

An individual may be biased by a variety of factors, but there are a number of common and very detrimental biases that should be highlighted.

1. Confirmation bias: This is probably the most common and the most subliminal, as many people naturally exhibit this bias without even knowing it. Often times called selective search for evidence, confirmation bias occurs when decision makers seek out evidence that confirms their previously held beliefs, while discounting or diminishing the impact of evidence in support of differing conclusions.
2. Anchoring: This is the over-reliance on a single piece of *a priori* information or experience that affects one's ability to adjust to new potentially relevant information.

3. Halo effect: This is the distortion of a person's overt positive or negative characteristics that are amplified and applied to other situations or scenarios. Basically, it is the perception that if someone demonstrates well in a certain area, then they will automatically perform well at something else regardless of how interconnected the tasks are.
4. Overconfidence bias: This is another potentially disruptive personal bias and occurs when a person subjectively overestimates the reliability of their judgments versus an objectively accurate outcome.
5. Groupthink: This is a bias within group/">group decision making that leads the group toward harmony rather than a realistic evaluation of alternatives.

Other personal biases can take on a variety of forms and may extend to either the holder of the bias or to external parties. Personal biases toward information, intelligence, gender, ability, handicap, race, or other closely held beliefs are detrimental to decision-making processes and are often hard to counteract.

Building on a Bias

Personal biases (or architectural ones) can negatively influence the stability of decision making.

Time Pressure

Time pressure forces decision makers to shift from logical processes (ideal) to intuitive processes (sub-ideal).

LEARNING OBJECTIVE

- Understand the way in which time pressure creates intuitive decisions (heuristics), as opposed to a longer and more rational process

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KEY POINTS

- Heuristics or mental shortcuts can deliver workable decisions in the presence of time pressure and the absence of logical decision-making processes.
- Decision makers who feel as though they have ample time tend to arrive at more logically crafted, higher quality decisions than those who felt as though they had insufficient amounts of time, even if confronted by similar time pressure in real terms.
- While generally considered a barrier/">barrier to decision making, time pressures may also have the opposite effect in terms of creating organizational motivation to render decisions and move on. In this way time pressure, real or perceived, may act as a deadline and encourage organizational dexterity.

TERM

- heuristic Experience-based techniques for problem solving, learning, and discovery. Where an exhaustive search is impractical, heuristic methods are used to speed up the process of finding a satisfactory solution. Examples of this method include using a rule of thumb, an educated guess, an intuitive judgment, or common sense.

Similar to conditions of risk and uncertainty, decision making under time pressure often alters the neurological chemistry and migrates the decision process from a logical perspective to a more intuitive perspective. In many instances, the use of mental maps or heuristics can be applied to complex decisions under time pressure to arrive at a workable decision.

Time Pressure

Time pressure often forces decision makers to look for intuitive shortcuts rather than logically process all of the required data.

There does not appear to be overwhelming evidence suggesting that time pressure has major impact on decision quality. On the contrary, it simply shifts the way in which the decision maker goes about arriving at a decision, generally from a rational process to an intuitive one. There is evidence that suggests that the perception of time pressure may impact decision quality. That is to say those decision makers who feel as though they have ample time tend to arrive at more logically crafted, higher quality decisions than those who felt as though they had an insufficient amount of time. Behavioral experiments have compared and analyzed the two group/">groups, both of which are given the same amount of time to complete a complex task. Yet one group is told that they have sufficient time while the other is told the opposite. In this sense, it is the perception of time pressure that tends to affect decision quality rather than a time constraint.

While time pressure is generally perceived as being a barrier to decision making, it may also have the exact opposite effect. If managers are presented with a looming

decision, certain factors might entice them to delay rendering a decision, potentially at the expense of the organization. Time pressure thus serves as a deadline, forcing managers to bring the appropriate resources to bear on a given decision.

Group Dynamics

Group dynamics, which involves the influence of social behavior, is the primary determining factor in the success of group outcomes.

LEARNING OBJECTIVE

- Recognize the value and potential drawbacks of group dynamics in making decisions, particularly in light of Richard Hackman's proposed conditions for success of groups

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KEY POINTS

- Decisions made in groups differ substantially from those made by individuals, and this is why organizations put groups to use. What is less clear, and heavily debated amongst researchers, is how decision quality differs between groups and individuals.
- The presence of a well-developed group synergy, often achieved through healthy levels of dissent, typically results in preferable outcomes, while groupthink can lead to harmonizing and premature consensus.
- Harvard professor and researcher Richard Hackman proposed five conditions that increase the probability of success for groups involved in decision making. Hackman mentions effective leadership, amongst other items, within the group context that contribute materially to successful group outcomes.

TERMS

- Transformational Leadership a type of leadership that often transcends group dynamics, increasing believability and buy-in for group outcomes, and maximizes group potential.
- group a number of things or persons being in some relation to one another
- Synergy benefits resulting from combining two different groups, people, objects, or processes.

Delegating key decision making to groups, teams, or committees occurs often within organizations. Decisions made in groups will differ substantively, often dramatically,

then decisions rendered by individuals. But this is about the extent to which researchers agree on comparative decision outcomes between individuals and groups.

Group dynamics play a large role in determining the overall effectiveness of group decision making. However there are opportunities for group dynamics to both positively and/or negatively influence group decision outcomes. The social nature of groups and the process of sharing information lead to synergies, such that group performance exceeds the potential performance of its most able member. Synergy prompts groups to quickly identify areas of disagreement among group members and encourages dissent. Encouraging dissent might seem like a negative consequence of the group process, however it is can be constructive and tends to create conditions where more robust and complex decisions are made.

Group Dynamics: The All Blacks

Rugby, a game with fifteen players per team, is the ultimate team game. Group dynamics require all fifteen players work together, often demanding tremendous synergy to outlast an opponent. The historic success of New Zealand's The All Blacks has been attributed not only to skill, but how the team achieves ideal group dynamics.

Dissent is also a major preventative measure in combating groupthink, certainly one of the largest threats posed by group dynamics. Unlike dissent, groupthink is borne out of group's desire to harmonize. Harmony leads to premature consensus within the group and normally forces decision making without a thorough and logical

examination of alternatives that might otherwise be raised in an environment of controlled dissent.

Considerable research has been done regarding the influence of group dynamic. Harvard professor and researcher Richard Hackman proposed five conditions that increase the probability of success for groups involved in decision making:

1. Being a real team: embracing a shared task, identifying clear boundaries as to group membership, and the believability or acceptance as to individual membership.
2. Compelling direction: identifying a clear and worthwhile goal.
3. Enabling structure: maintaining a diversity of interesting and challenging tasks, suitable group size (the larger the group, the harder it usually is to manage group dynamics), the presence of sufficient talent amongst group members, and authentic norms governing group behavior.
4. Supportive context: occurs when groups are "nested" within larger groups, such as corporations. Within these organizations supportive contexts involve reward systems that reward performance and cooperation (e.g. group-based rewards linked to group performance), a development framework that enhances group member skills, and adequate resources in terms of data and information.
5. Expert coaching: presence of transformational leadership within the group that neither dominates group processes nor remains silent on key issues.

Section 7 – Managing Group Decision Making

Advantages and Disadvantages of Group Decision Making

Group decision making can lead to improved outcomes, but only if a variety of conditions pertaining to group chemistry are satisfied.

LEARNING OBJECTIVE

- Assess the advantages and disadvantages that should be considered in leveraging collaborative decision-making

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KEY POINTS

- For obvious reasons, decisions made in group/">groups can vary considerable from those undertaken by individuals. It is this potential divergence in outcomes that makes group decision making attractive. However, the use of groups is not necessarily an indicator of decision quality.
- There are a number of potential advantages gained in relying on group decision making, chief among them are more favorable outcomes gained through synergy and shared information. Both of these advantages rely on the power of many minds undertaking a single decision.
- Disadvantages arise in attempting to mitigate certain aspects of group chemistry, leading to information biases, and possibly groupthink, which might steer groups toward premature consensus in favor of workable and ultimately beneficial decisions.

TERMS

- Homogeneity In the context of group decision making, homogeneity refers to a set of consistent and uniform ideas, prejudices, and beliefs held by all members within a group.
- groupthink Groupthink is a psychological phenomenon that occurs within groups of people, in which the desire for harmony in a decision-making group overrides a realistic appraisal of alternatives.

For a variety of reasons, outcomes related to individual decision making versus group decision making vary considerably. These differences primarily stem from the social influences brought to bear on any group decision making, largely absent in individual decision making. Collaborative synergies often make group decisions more complete and robust, factoring influences that would otherwise have been excluded under individual considerations. Yet the collective psychology of the group can also produce less than desirable results, creating the need for considerable structure and guidelines that frame group decision-making outcomes. Without the proper chemistry and social influences, group decisions can often lead to potentially destructive outcomes. Overall decision quality often cannot be linked to the social nature of decision makers.

Group Decisions

Decision making in groups can produce a higher quality decision, if managed properly.

Advantages of Group Decision Making:

Group decision making often benefits from two major natural advantages: synergy and sharing of information. Synergy relates to the idea that certain outcomes can only be achieved by many minds brought to bear on a certain decision-making

process. One can liken synergy in group processes to achieving social economies of scope, whereby decision quality is improved as more minds are included.

The sharing of information among group members is another advantage of the group process, and if executed properly, it can lead to better informed decisions. The idea here is that group members all possess unique information beyond that which is known by everyone. By capturing unique information, group decision quality will reflect a more complete informational landscape. The natural tendency of groups is to overemphasize information which is shared. If unshared information can be unlocked then decision quality will improve.

Disadvantages of Group Decision Making:

There are a number of conditions that can destroy group decision quality. Achieving a workable balance of these conditions can be very difficult and is arguably the most disruptive force for group decision makers, and a precise recipe of conditions must be in place in order for group decision-making to be truly effective. These conditions extend to the variety of group members (homogeneity) as well as the formal systems in place that determine consensus and eventually the decision itself. If improperly considered, then the phenomenon known as groupthink can negatively influence overall decision quality.

Manager's Role in Group Decisions

The manager's role in group decision making is to ensure the team's outcomes are optimized in the eyes of the organization.

LEARNING OBJECTIVE

- Describe the roles managers must play in the decision-making process to maximize group performance and efficacy

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KEY POINTS

- The manager's role is best achieved through neither over-management nor under-management of group decision making.
- A manager will be considerably less likely to accept a decision if it fails to conform to the organization's philosophy, ethics, or performance.
- To create a motivated team/">team, a manager must define a goal, creating positive working conditions, establish expectations, provide adequate resources, and give group members ample space and latitude.

TERM

- Autocratic Conducted alone and with sole responsibility.

When groups charged with the task of making certain decisions are convened, the role of the manager takes on added significance. If the decisions in question are made with an autocratic process, then the team does not serve any substantive purpose; rather, the team's activity would simply be a wasteful exercise. Therefore, the manager must shape the group experience so the decision makers will act in a manner consistent with internal managerial beliefs and systems. A manager will be considerably less likely to accept a decision if it fails to conform to the basics of the organization's philosophy, ethics, or performance. In short, the

manager's role in group decision making is to get the most out of his or her team so the team's outcomes are optimized in the eyes of the team, the manager, and the organization.

In order to maximize group performance, the manager should take the following important steps:

1. Establish the Team Vision/Goal: By articulating a vision or goal for the team, greater cohesion is made possible through commonality. As the process unfolds, managers can refer back to the vision or goal to refocus and energize team discourse.
2. Facilitate a Working Environment: After the goal is established, the working environment must allow for meaningful, honest, and open communication among group members. This communication will help prevent constructive discourse.
3. Set Clear Expectations and Responsibilities: By setting expectations, managers and team members understand the specific deliverables or outcomes for which they are responsible. These expectations include deadlines, timelines, or a certain scope of work required. In the event of ambiguity, group outcomes could become unpredictable or unworkable. Managers must also delegate appropriate responsibilities, in part to motivate the team with ample working latitude, but also to avoid redundancies or duplication of efforts.

4. Provide Resources: Managers must make sure that teams are adequately equipped to perform to a level consistent with expectations and the team's vision or goals.

5. Get Out of the Way: After the manager has furnished the team members with everything they need to succeed, the manager must step back and let the team perform. Micro-managing a team tasked with a specific goal inhibits progress and destroys team confidence.

Manager and employee

Manager and employee communicating

Manager

Once a manager has created an appropriate forum for group decisions, he or she must avoid meddling with group processes in order to produce the desired outcome.

Employee Involvement

Involving employees in key decisions not only accesses unique skills, but also motivates and signals that their contributions are important.

LEARNING OBJECTIVE

- Distinguish the importance and inherent value of ensuring employee involvement as much as possible in the decision-making process

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KEY POINTS

- From a managerial standpoint, employee involvement is an effective way to leverage human resources and ultimately influence outcomes by drawing on the diverse technical capabilities of employees across departments.
- Any organizational emphasis placed on employee involvement in key business decision making, is likely the result of a desire to find ways to motivate employees beyond simple financial compensation.
- The Job Characteristic Model (JCM), designed by Hackman and Oldham, attempts to address employee motivation by highlighting five unique job characteristics that can effectively enhance the motivational properties of any job.

TERM

- employee voice refers to the participation of employees in influencing corporate decision making. Employees are given a voice through informal and formal means to minimize conflict, improve communication and encourage staff retention through motivation and fair treatment

One of the chief benefits of organizational group/">group decision making is the involvement of multiple stakeholders within the organization rather than one person or a select few. In this way, employee involvement becomes a critical factor in the group decision making process. From a managerial standpoint, employee involvement is an effective way of leveraging human capital resources and ultimately influencing outcomes by drawing on the diverse technical capabilities of employees

across departments. Employee involvement in corporate decision making is also known as employee.

Any organizational emphasis on employee involvement in key business decision making, is likely the result of a desire to motivate employees beyond simple financial compensation. Organizational motivation theory supports this notion by emphasizing job design, amongst other things, as a primary driver behind employees' involvement, engagement and motivation. The Job Characteristic Model (JCM), designed by Hackman and Oldham, attempts to address employee motivation by highlighting five unique job characteristics that can effectively enhance the motivational properties of any job. They are:

1. Skill Variety - the degree to which a job requires different skills and talents to complete a number of different activities
2. Task Identity - this dimension refers to the completion of a whole and identifiable piece of work versus a partial task as part of a larger piece of work
3. Task Significance - is the impact of the task upon the lives or work of others
4. Autonomy - is the degree of independence or freedom allowed to complete a job
5. Task Feedback - individually obtaining direct and clear feedback about the effectiveness of the individual carrying out the work activities

   Employee involvement in key business decisions reinforces a number of these properties, ultimately leading to enhanced levels of employee motivation.

Employee Involvement

Managers use employee involvement in key decision making not only to leverage employees' unique skills, but also to motivate them, signaling that their impact to the company is meaningful.

Techniques for Reaching Consensus

Reaching consensus typically requires identifying and addressing the underlying concerns of group members.

LEARNING OBJECTIVES

- Define consensus and the varying ways in which it can be achieved in a group dynamic
- Recognize the critical importance of the majority and minority opinion-holders to find common ground, often assisted by a facilitator

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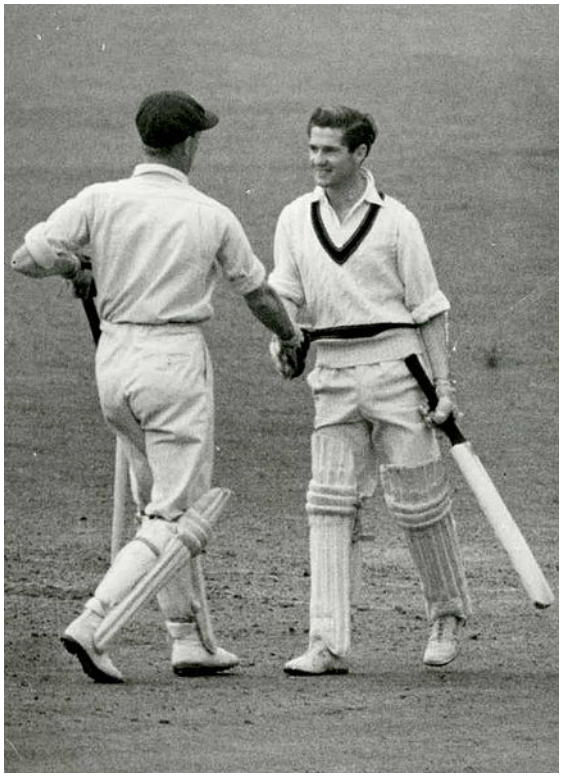
KEY POINTS

- Consensus involves group/">group decisions that are not necessarily ideal, representing the least collective resistance or most collective acceptance, without establishing definitive ideological winners or losers.
- Consensus hinges on majority opinion overcoming objections held by the minority, typically involving proposal modifications so no one will block the execution of the idea.
- When group members are willing to go along by not trying to block a proposal that does not necessarily mean they agree with its substance because consensus focuses on people not having objections.

TERM

- Buy-in In management and decision making, the commitment of interested or affected parties (often called stakeholders) to agree to support a decision, often by having been involved in its formulation.

It is important to frame the concept of consensus within a greater group decision-making framework. Consensus is merely a single process for making decisions and is not necessarily the most ideal or desirable process. Developing a consensus among group members can generally be framed as choosing based on the least collective net resistance, or the most collective net acceptance, and arriving at a consensus does so at the expense of establishing definitive ideological winners or losers.



Consensus

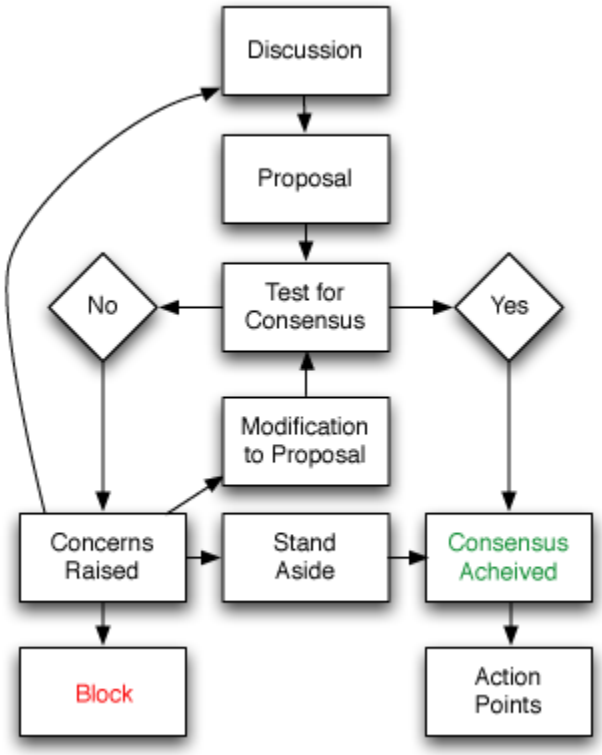
It's important to note that agreement and consensus within the group process are not the same thing.

In order to arrive at a group consensus, majority opinion holders must overcome objections held by those in the minority. This typically involves modifying the proposal in question so that all stakeholders become unwilling to block its execution. This presents a clear distinction with consensus building: while group members may be willing to go along with a proposal, and thereby consent, they do not actually need to agree with the substance of the proposal because consensus focuses on people not having objections. A simple version of identifying and building consensus looks like this:

- Arriving at a solution or proposal (a potential future decision)
- Identifying agreement or objections within the group
- Altering proposal to overcome objections sufficiently in order to support group ratification

If consensus is required, then group members who remain unpersuaded can block progress. Additional consensus building techniques are used in group decision-making. The Quaker model is a detailed, multi-step consensus building model that emphasizes listening among group members, dictating that only after all group members are heard may another member speak again, the effect of which is to neutralize dominating personality types. Another key feature of the Quaker model is that it relies on a single person to act as "facilitator," a moderator who makes sure the discussion flows according to an empathetic process. By articulating the

emerging consensus, members can be clear on the decision, and, as their views have been taken into account, will be likely to support it. This typically leads to greater group buy-in, and ultimately greater acceptance of the consensus.



Consensus Flow Diagram

This diagram shows a process of steps through which consensus can be reached.

Another technique for consensus building, although somewhat more generic and less detailed than the Quaker model, is the Consensus-Oriented Decision-Making, or CODM model. It has seven key steps.

1. Framing the topic
2. Open Discussion
3. Identifying Underlying Concerns

4. Collaborative Proposal Building
5. Choosing a Direction
6. Synthesizing a Final Proposal
7. Closure

The lack of a rigid structure makes CODM useful for a wide range of group decision-making scenarios.
