

Decision Making Under Uncertain and Risky Situations

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Abstract

Decision making is certainly the most important task of a manager and it is often a very difficult one. The domain of decision analysis models falls between two extreme cases. This depends upon the degree of knowledge we have about the outcome of our actions. One "pole" on this scale is deterministic. The opposite "pole" is pure uncertainty. Between these two extremes are problems under risk. The main idea here is that for any given problem, the degree of certainty varies among managers depending upon how much knowledge each one has about the same problem. This reflects the recommendation of a different solution by each person. Probability is an instrument used to measure the likelihood of occurrence for an event. When probability is used to express uncertainty, the deterministic side has a probability of one (or zero), while the other end has a flat (all equally probable) probability. This paper offers a decision making procedure for solving complex problems step by step. It presents the decision analysis process for both public and private decision making, using different decision criteria, different types of information and information of varying quality. It describes the elements in the analysis of decision alternatives and choices, as well as the goals and objectives that guide decision making. The key issues related to a decision-maker's preferences regarding alternatives, criteria for choice and choice modes, together with the risk assessment tools, are also presented.

Keywords:

Decision Making under Risk, Risk Management, Decision Making Technique, Bayesian Approach, Risk Measuring Tool