



## Keio Business School

# Rational Decision Making and Decision Trees

5

Decision making can be classified broadly into rational decision making and non-rational decision making. Rational decision making is the act of choosing a means that suits a purpose. More precisely, it is the act of choosing the optimal course of action from among all possible options for a well-defined purpose. However, to do so, we must be able to accurately evaluate the outcomes that each course of action will yield, as well as the extent to which these outcomes will contribute to accomplishment of the purpose.

10

Rational decision making is literally “the act of making decisions in a way that stands to reason.” We are, however, incapable of making decisions that are rational all the time. Often when making decisions, we fail to clarify the purpose, give consideration to all possible courses of action or confirm that our action will lead to the optimal outcome. In a sense, this is human behavior. It is almost certainly more relaxing to spend our private time this way. However, in business, clarifying the purpose, giving consideration to all possible courses of action and choosing the optimal option appear to be the recipe for success. Conversely, an ill-defined purpose without considering possible options will more often than not lead to regret.

15

20

In reality, there are limits to human rationality as discussed below. Nevertheless, training people to make rational decisions as best they can—even if not 100 percent every single time—is about instilling such qualities as the ability to prioritize objectives, a broad perspective and flexible thinking. This document introduces you to the creation and analysis of the decision tree model. Decision trees are a systematic, graphical representation of the elements of rational decision making, namely, alternative choices, uncertainty, and the prediction and valuation of outcomes.

25

30

.....  
These notes were prepared by Associate Professor Atsuomi Obayashi of the Keio Business School, and are published by the Keio Business School. Inquiries regarding the reproduction or use of these notes should be directed to the Keio Business School (Address: 4-1-1 Hiyoshi, Kohoku-ku, Yokohama, Kanagawa Prefecture, Japan 223-8526; Phone: +81-45-564-2444; Email: case@kbs.keio.ac.jp). Orders can also be placed via <http://www.kbs.keio.ac.jp/>. This publication may not be digitized, photocopied, or otherwise reproduced, posted or transmitted, in whole or in part, without the permission of the Keio Business School.

35

Copyright © Atsuomi Obayashi (created April 1999, revised February 2003)