

CONTENTS

Introduction	ix
------------------------	----

Part One: DECISION ANALYSIS—METHODOLOGY

Introduction	3
Better Decisions with Preference Theory	5
<i>John S. Hammond III</i>	
Reprinted with permission from <i>Harvard Business Review</i> , November-December 1967, pp. 123-41. Copyright 1967 by the President and Fellows of Harvard College. All rights reserved.	
Tutorial Introduction to Decision Theory	24
<i>D. Warner North</i>	
Reprinted with permission from the <i>IEEE Transactions on Systems Science and Cybernetics</i> , September 1968, pp. TI-1–TI-11. Copyright 1968 by the Institute of Electrical and Electronics Engineers, Inc.	
The Foundations of Decision under Uncertainty: An Elementary Exposition	35
<i>John W. Pratt, Howard Raiffa, Robert Schlaifer</i>	
Reprinted with permission from the <i>Journal of the American Statistical Association</i> , June 1964, pp. 354-75.	
Bibliography	58

Part Two: DECISION ANALYSIS—SUBJECTIVE PROBABILITY

Introduction	63
Subjective Probability and Its Measurement	65
<i>J. M. Hampton, P. G. Moore, H. Thomas</i>	
Reprinted with permission from The Royal Statistical Society, London, England. Published in the <i>Journal of the Royal Statistical Society</i> , Series A, Vol. 136, Part 1, 1973, pp. 21-42.	
Prior Probabilities	87
<i>Edwin T. Jaynes</i>	
Reprinted with permission from the <i>IEEE Transactions on Systems Science and Cybernetics</i> , September 1968, pp. 227-41. Copyright 1968 by the Institute of Electrical and Electronics Engineers, Inc.	
How to Choose the Initial Probabilities	102
<i>L. J. Savage, B. de Finetti</i>	
Reprinted with permission from John Wiley and Sons, Inc. <i>Probability, Induction and Statistics</i> by B. de Finetti, Chapter 8, pp. 143-46. Copyright 1972 by John Wiley and Sons, Ltd.	
Bibliography	106

Part Three: DECISION ANALYSIS—UTILITY OR PREFERENCE THEORY

Introduction	111
Utility Theory—Insights into Risk Taking	113
<i>Ralph O. Swalm</i>	
Reprinted with permission from the author and <i>Harvard Business Review</i> , November-December 1966, pp. 123-36. Copyright 1966 by the President and Fellows of Harvard College. All rights reserved.	
The Development of a Corporate Risk Policy for Capital Investment Decisions	127
<i>Carl S. Spetzler</i>	
Reprinted with permission from the author and <i>IEEE Transactions on Systems Science and Cybernetics</i> , September 1968, pp. 279-300. Copyright 1968 by the Institute of Electrical and Electronic Engineers, Inc.	
Risk Aversion In the Small and In the Large	149
<i>John W. Pratt</i>	
Reprinted with permission from <i>Econometrica</i> , January-April 1964, pp. 122-36.	
Bibliography	165

Part Four: DECISION ANALYSIS—ACCOUNTING

Introduction	169
Assessing Prior Distributions for Applying Bayesian Statistics in Auditing	170
<i>John C. Corless</i>	
Reprinted with permission from <i>The Accounting Review</i> , July 1972, pp. 556-66.	
Multiproduct C-V-P Analysis under Uncertainty	181
<i>Glen L. Johnson, S. Stephen Simik II</i>	
Reprinted with permission from <i>Journal of Accounting Research</i> , Autumn 1971, pp. 278-86.	
Some New Approaches to Risk	190
<i>R. Byrne, A. Charnes, W. W. Cooper, K. Kortanek</i>	
Reprinted with permission from <i>The Accounting Review</i> , January 1968, pp. 18-37.	
Bibliography	210

Part Five: DECISION ANALYSIS—FINANCE

Introduction	213
Merger Negotiations: A Decision Model	214
<i>James B. Boulden</i>	
Reprinted with permission from <i>Business Horizons</i> , February 1969, pp. 21-28.	
The Credit Granting Decision	222
<i>Harold Bierman, Jr., Warren H. Hausman</i>	
Reprinted with permission from <i>Management Science</i> , April 1970, pp. B519-B532.	
A Decision Theory Approach to Portfolio Selection	236
<i>James C. T. Mao, Carl Erik Sarndal</i>	
Reprinted with permission from <i>Management Science</i> , April 1966, pp. B323-B333.	
Bibliography	246

**Part Six: DECISION ANALYSIS—CAPITAL
INVESTMENT (BUDGETING)**

Introduction	251
Abandonment Value and Capital Budgeting	252
<i>Alexander A. Robichek, James C. Van Horne</i>	
Reprinted with permission from the <i>Journal of Finance</i> , December 1967, pp. 577-89.	
The Analysis of Uncertainty Resolution in Capital Budgeting for New Products	265
<i>James C. Van Horne</i>	
Reprinted with permission from <i>Management Science</i> , April 1969, pp. B376-B386.	
The Derivation of Probabilistic Information for the Evaluation of Risky Investments	276
<i>Frederick S. Hillier</i>	
Reprinted with permission from <i>Management Science</i> , April 1963, pp. 443-57.	
Supplement to “The Derivation of Probabilistic Information for the Evaluation of Risky Investments”	291
Reprinted with permission from <i>Management Science</i> , Communications to the Editor, January 1965, pp. 485-86.	
Bibliography	294

Part Seven: DECISION ANALYSIS—MARKETING

Introduction	297
Bayesian Statistics in Marketing	298
<i>Harry V. Roberts</i>	
Reprinted with permission from <i>Journal of Marketing</i> published by the American Marketing Association. January 1963, pp. 1-4.	
Bayesian Decision Theory in Pricing Strategy	302
<i>Paul E. Green</i>	
Reprinted with permission from <i>Journal of Marketing</i> published by the American Marketing Association. January 1963, pp. 5-14.	
Marketing Research Expenditures: A Decision Model	312
<i>Frank M. Bass</i>	
Reprinted with permission from <i>The Journal of Business of the University of Chicago</i> , Vol. XXXCI, No. 1, January 1963, pp. 77-90. Copyright 1963 by the University of Chicago.	
Bibliography	326

Part Eight: DECISION ANALYSIS—ECONOMICS

Introduction	329
Econometrics and Decision Theory	331
<i>Jacques H. Dreze</i>	
Reprinted with permission from <i>Econometrica</i> , January 1972, pp. 1-17.	

Analysis of Distributed Lag Models with Applications to Consumption Function Estimation	348
<i>Arnold Zellner, Martin S. Geisel</i>	
Reprinted with permission from the <i>Econometrica</i> , November 1970, pp. 865-87.	
The Likelihood Approach to Pooling Cross-Section and Time-Series Data	373
<i>G. S. Maddala</i>	
Reprinted with permission from <i>Econometrica</i> , November 1971, pp. 939-53.	
Bibliography	388

Part Nine: DECISION ANALYSIS—OPERATIONS MANAGEMENT

Introduction	393
Decision Trees for Decision Making	394
<i>John F. Magee</i>	
Reprinted with permission from <i>Harvard Business Review</i> , July-August 1964, pp. 126-38. Copyright 1964 by the President and Fellows of Harvard College. All rights reserved.	
A Bayesian Analysis of the Style Goods Inventory Problem	407
<i>George R. Murray, Jr., Edward A. Silver</i>	
Reprinted with permission from <i>Management Science</i> , July 1966, pp. 785-97.	
A Bayesian Approach to the Scheduling of Preventive Maintenance	420
<i>Prakash T. Sathe, Walton M. Hancock</i>	
Reprinted with permission from June 1973 <i>AIIE Transactions</i> , pp. 172-79. Copyright American Institute of Industrial Engineers, Inc., 25 Technology Park, Atlanta, Norcross, Georgia 30071.	
Bibliography	428

Part Ten: DECISION ANALYSIS—PUBLIC SECTOR

Introduction	431
A Decision Analysis with Multiple Objectives: The Mexico City Airport	432
<i>Ralph L. Keeney</i>	
Reprinted with permission from <i>The Bell Journal of Economics and Management Science</i> , Spring 1973, pp. 101-17. Copyright 1973, American Telephone and Telegraph Company, 195 Broadway, New York, New York 10007.	
Utility Measurement in Public Health Decision Making	449
<i>David H. Stimson</i>	
Reprinted with permission from <i>Management Science</i> , October 1969, pp. B17-B30.	
The Decision to Seed Hurricanes	463
<i>R. A. Howard, J. E. Matheson, D. W. North</i>	
Reprinted with permission from <i>Science</i> , June 1972, pp. 1191-1202. Copyright 1972 by the American Association for the Advancement of Science.	
Bibliography	475