



# Brief Contents

Chapter 1	Introduction	1
Chapter 2	The Firm and Its Goals	22
Appendix 2A:	Review of Mathematical Concepts Used in Managerial Economics	42
Chapter 3	Supply and Demand	68
Appendix 3A:	The Mathematics of Supply and Demand	99
Chapter 4	Demand Elasticity	103
Appendix 4A:	Applications of Supply and Demand	133
Chapter 5	Demand Estimation	151
Chapter 6	Forecasting	201
Appendix 6A:	Forecasting and the Computer	240
Chapter 7	The Theory and Estimation of Production	242
Appendix 7A:	The Multiple-Input Case	283
Appendix 7B:	Expressing the Production Function with the Use of Calculus	296
Chapter 8	The Theory and Estimation of Cost	301
Appendix 8A:	A Mathematical Restatement of the Short-Run Cost Function	339
Appendix 8B:	The Estimation of Cost	340
Chapter 9	Pricing and Output Decisions: Perfect Competition and Monopoly	355
Appendix 9A:	The Use of Calculus in Pricing and Output Decisions	387
Chapter 10	Pricing and Output Decisions: Monopolistic Competition and Oligopoly	390
Chapter 11	Break-Even Analysis (Volume-Cost-Profit)	417
Chapter 12	Special Pricing Practices	435
Chapter 13	Capital Budgeting	473
Appendix 13A:	Calculations for Time Value of Money	507
Chapter 14	Risk and Uncertainty	515
Chapter 15	Government and Industry: Challenges and Opportunities for Today's Manager	550
Chapter 16	Managerial Economics in Action: The Case of the Semiconductor Industry	570
Appendix A:	Linear Programming	592
Appendix B:	Statistical and Financial Tables	605
Appendix C:	Solutions to Odd-Numbered Problems	620
Index		627



# Contents

**Preface**      xiv

**CHAPTER 1 Introduction**      1

Introduction: Economics and Managerial Decision Making	2
The Economics of a Business	5
A Brief Review of Important Economic Terms and Concepts	7
The Case of Global Foods, Inc.: Situations and Solutions	13
Summary of the Situations and Solutions	15
Summary	19
Important Concepts	20
Questions	20

**CHAPTER 2 The Firm and Its Goals**      22

Introduction	23
The Firm	23
The Economic Goal of the Firm and Optimal Decision Making	26
Goals Other Than Profit	27
Once Again—Do Companies Maximize Profits?	29
Maximizing the Wealth of Stockholders	32
Economic Profits	36
International Application	38
Summary	39
Important Concepts	40
Questions	40

**Appendix 2A: Review of Mathematical Concepts**

**Used in Managerial Economics**      42

Variables, Functions, and Slopes: The Heart of Economic Analysis	42
The Importance of Marginal Analysis in Economic Analysis	44
Functional Forms: A Variation on a Theme	46

Using Calculus	51
Five Key Values Used in This Text	63
Summary	65
Questions	66
Problems	67
<b>CHAPTER 3 Supply and Demand</b>	<b>68</b>
Introduction	69
Market Demand	69
Market Supply	73
Market Equilibrium	75
Comparative Statics Analysis	77
Supply, Demand, and Managerial Decision Making	86
International Application: The World Sugar Market	89
Summary	93
Important Concepts	93
Questions	94
Problems	95
<b>Appendix 3A: The Mathematics of Supply and Demand</b>	<b>99</b>
<b>CHAPTER 4 Demand Elasticity</b>	<b>103</b>
The Economic Concepts of Elasticity	104
The Price Elasticity of Demand	104
The Cross-Elasticity of Demand	120
Income Elasticity	122
Other Elasticity Measures	124
Elasticity of Supply	125
Summary	127
Important Concepts	128
Questions	129
Problems	130
<b>Appendix 4A: Applications of Supply and Demand</b>	<b>133</b>
Interference with the Price Mechanism	133
The Incidence of Taxes	136
Interference with the Price Mechanism II: Agriculture	140
Actual Situations	143
Summary	150

<b>CHAPTER 5 Demand Estimation</b>	<b>151</b>
Introduction	152
A Summary of Regression Analysis	153
Regression Analysis	161
The Coefficient of Determination: A Measure of the Explanatory Power of the Estimated Regression Equation	165
Evaluating the Regression Coefficients	170
Multiple Regression Analysis	181
The Use of Regression Analysis to Forecast Demand	185
Additional Topics on the Specification of the Regression Model	186
Problems in the Use of Regression Analysis	188
Summary	195
Important Concepts	196
Questions	197
Problems	197
<b>CHAPTER 6 Forecasting</b>	<b>201</b>
Introduction	202
Subjects of Forecasts	203
Prerequisites of a Good Forecast	204
Forecasting Techniques	205
International Application: Forecasting Exchange Rates	230
Summary	233
Important Concepts	234
Questions	234
Problems	236
<b>Appendix 6A: Forecasting and the Computer</b>	<b>240</b>
<b>CHAPTER 7 The Theory and Estimation of Production</b>	<b>242</b>
The Production Function	243
A Short-Run Analysis of Total, Average, and Marginal Product	244
The Long-Run Production Function	256
The Estimation of Production Functions	259
The Importance of Production Functions in Managerial Decision Making	267
Call Centers: Applying the Production Function to a Service	269
International Application: International Call Centers	272
Summary	274
Important Concepts	274

Questions	276
Problems	277
<b>Appendix 7A: The Multiple-Input Case</b>	<b>283</b>
Substituting Input Factors	284
The Optimal Combination of Multiple Inputs	290
The Optimal Levels of Multiple Inputs	293
<b>Appendix 7B: Expressing the Production Function with the Use of Calculus</b>	<b>296</b>
A Brief Review of the Production Function	296
Marginal Product: The First Derivative of the Total Product Function	297
Converting the Cobb-Douglas Function into Linear Form	297
The Optimal Combination of Two Inputs	299
<b>CHAPTER 8 The Theory and Estimation of Cost</b>	<b>301</b>
The Importance of Cost in Managerial Decisions	301
The Definition and Use of Cost in Economic Analysis	302
The Relationship between Production and Cost	304
The Short-Run Cost Function	306
The Long-Run Cost Function	312
The Learning Curve	322
Economies of Scope	325
Examples of Ways Companies Have Cut Costs to Remain Competitive	326
International Application: Downsizing in Japan	329
Summary	331
Important Concepts	331
Questions	332
Problems	334
<b>Appendix 8A: A Mathematical Restatement of the Short-Run Cost Function</b>	<b>340</b>
<b>Appendix 8B: The Estimation of Cost</b>	<b>340</b>
The Estimation of Short-Run Cost Functions	340
The Estimation of Long-Run Cost Functions	346
Summary	354
<b>CHAPTER 9 Pricing and Output Decisions: Perfect Competition and Monopoly</b>	<b>355</b>
Introduction	356
Pricing and Output Decisions in Perfect Competition	359

Pricing and Output Decisions in Monopoly Markets	373
The Implications of Perfect Competition and Monopoly for Managerial Decision Making	377
International Application: Next Time You're in Tibet, Be Sure to Stop at the "Hard Yak Café"	379
Summary	381
Important Concepts	382
Questions	383
Problems	384
<b>Appendix 9A: The Use of Calculus in Pricing and Output Decisions</b>	<b>387</b>
Perfect Competition	387
Monopoly	388
<b>CHAPTER 10 Pricing and Output Decisions: Monopolistic Competition and Oligopoly</b>	<b>390</b>
Introduction	391
Monopolistic Competition	391
Oligopoly	394
Pricing in an Oligopolistic Market: Rivalry and Mutual Interdependence	396
Game Theory and the Pricing Behavior of Oligopolies	401
Industrial Organization and Strategy	405
International Application: Expanding Beyond One's Borders	410
Summary	411
Important Concepts	412
Questions	412
Problems	413
<b>CHAPTER 11 Break-Even Analysis (Volume-Cost-Profit)</b>	<b>417</b>
Introduction	418
The Break-Even Point	421
Break-Even Revenue	422
Required Profit	425
Degree of Operating Leverage	426
The Uses and Limitations of Volume-Cost-Profit Analysis	428
An Application: The Restaurant Industry	429
Summary	431
Important Concepts	432
Questions	432
Problems	432

<b>CHAPTER 12</b>	<b>Special Pricing Practices</b>	<b>435</b>
Introduction	436	
Cartel Arrangements	436	
Price Leadership	439	
Revenue Maximization	441	
Price Discrimination	443	
Nonmarginal Pricing	454	
Multiproduct Pricing	458	
Transfer Pricing	463	
Other Pricing Practices	465	
International Application	466	
Summary	468	
Important Concepts	469	
Questions	469	
Problems	470	
<b>CHAPTER 13</b>	<b>Capital Budgeting</b>	<b>473</b>
Introduction	474	
The Capital Budgeting Decision	475	
Time Value of Money	476	
Methods of Capital Project Evaluation	477	
Cash Flows	486	
Cost of Capital	489	
The Capital Budgeting Model	492	
Capital Rationing	494	
The Value of a Corporation	495	
International Application: Capital Budgeting in a Multinational Corporation	497	
Summary	501	
Important Concepts	502	
Questions	502	
Problems	503	
<b>Appendix 13A:</b>	<b>Calculations for Time Value of Money</b>	<b>507</b>
The Future Value of a Single Sum	507	
The Future Value of an Annuity	508	
Present Value of a Single Sum	510	

Present Value of an Annuity	511
More Frequent Compounding	512
Bond Values and Perpetuities	513
<b>CHAPTER 14 Risk and Uncertainty</b>	<b>515</b>
Introduction	515
Risk versus Uncertainty	516
Sources of Business Risk	517
The Measures of Risk	518
Capital Budgeting under Conditions of Risk	524
Two Other Methods for Incorporating Risk	526
Sensitivity Analysis	528
Simulation	531
Decision Trees	533
Real Options in Capital Budgeting	536
International Application: Risk in Capital Budgeting	538
Summary	543
Important Concepts	543
Questions	544
Problems	545
<b>CHAPTER 15 Government and Industry: Challenges and Opportunities for Today's Manager</b>	<b>550</b>
Introduction	551
The Rationale for Government Involvement in a Market Economy	551
Doing Business with the U.S. Government	557
Government Deregulation, Mergers, and Acquisitions	563
International Application: Regulators around the World	
Try to Hold Back the "Red Team's" Global Expansion	566
Summary	567
Important Concepts	568
Questions	568
<b>CHAPTER 16 Managerial Economics in Action: The Case of the Semiconductor Industry</b>	<b>570</b>
Industry Analysis	570
Chip Market Meltdown	571
The Case of Standard Microsystems Corporation (SMSC)	582
Question for Further Study	591



<b>Appendix A</b>	<b>Linear Programming</b>	592
<b>Appendix B</b>	<b>Statistical and Financial Tables</b>	605
<b>Appendix B.1a</b>	<b>Future Value of \$1 at the End of <math>n</math> Periods</b>	606
<b>Appendix B.1b</b>	<b>Sum of an Annuity of \$1 per Period for <math>n</math> Periods</b>	608
<b>Appendix B.1c</b>	<b>Present Value of \$1 Received at the End of <math>n</math> Periods</b>	610
<b>Appendix B.1d</b>	<b>Present Value of an Annuity of \$1 per Period for <math>n</math> Periods</b>	612
<b>Appendix B.2</b>	<b>Areas Under the Normal Curve</b>	614
<b>Appendix B.3a</b>	<b>Critical Values for the <math>F</math>-Distribution (<math>\alpha = .05</math>)</b>	615
<b>Appendix B.3b</b>	<b>Critical Values for the <math>F</math>-Distribution (<math>\alpha = .01</math>)</b>	616
<b>Appendix B.4</b>	<b>Critical Values for the <math>t</math>-Distribution</b>	617
<b>Appendix B.5a</b>	<b>Durbin-Watson Statistic: Significance Points for <math>d_l</math> and <math>d_u</math> (One-Tail Test, <math>\alpha = .05</math>)</b>	618
<b>Appendix B.5b</b>	<b>Durbin-Watson Statistics: Significance Points for <math>d_l</math> and <math>d_u</math> (Two-Tail Test, <math>\alpha = .05</math>)</b>	619
<b>Appendix C</b>	<b>Solutions to Odd-Numbered Problems</b>	620
<b>INDEX</b>		627