



CONTENTS

Part One Introduction

Chapter 1 The Nature of Microeconomics

1

- Introduction 1
- Optimal Production Decisions 2
- Pricing Policy 3
- Efficient Allocation of a Society's Resources 3
- Public Policy Concerning Market Structure 4
- Microeconomics: Problem-Solving and Science 5
- Human Wants and Resources 6
- Technology 7
- The Tasks Performed by an Economic System 8
- Our Mixed Capitalistic System 9
- The Price System and Microeconomics 11
- Model-Building and the Role of Models 12
- The Evaluation of a Model 12
- SUMMARY 14 QUESTIONS/PROBLEMS 15

Chapter 2 Demand and Supply

17

- Introduction 17
- Markets 17
- The Demand Side of the Market 18

The Supply Side of the Market 25

Determinants of Price 29

Analyzing the Effects of an Excise Tax 33

Example 2.1 Is the War on Drugs Being Won? 35

Price Floors and Ceilings 38

Example 2.2 Should Bovine Growth Hormone Be Banned? 40

Example 2.3 Rent Control California-Style: Mobile Home Owners vs. Park Owners 42

Imperfect Information, Auctions, and the Winner's Curse 43

Asymmetric Information and the Market for Used Cars 44

SUMMARY 45 QUESTIONS/PROBLEMS 46

Part Two Consumer Behavior and Market Demand

Chapter 3 The Tastes and Preferences of the Consumer

49

Introduction 49

The Nature of the Consumer's Preferences 50

Indifference Curves 50

The Concept of Utility 56

Example 3.1 The Experimental Determination of Indifference Curves 58

The Budget Line 59

The Equilibrium of the Consumer 61

Example 3.2 Sickness and Health Insurance 64

Corner Solutions 65

Determinants of Consumer Tastes and Preferences 66

Example 3.3 The Food-Stamp Program 67

Budget Allocation by a Government Agency: An Application 69

SUMMARY 71 QUESTIONS/PROBLEMS 72 APPENDIX Ordinal and Cardinal Utility 74

Chapter 4 Consumer Behavior and Individual Demand

78

The Equilibrium of the Consumer: Review and Another Viewpoint 78

Effects of Changes in Consumer Money Income 79

Effects of Changes in Commodity Price 83

Example 4.1 Medical Insurance and the Demand for Medical Care 86

Substitution and Income Effects 87

Consumer's Surplus 90

Indexes of the Cost of Living 95

The Consumer Price Index 96

Example 4.2 New York City's Water Crisis 97

Problems with the Price Index 100

Example 4.3 Calculating a Cost-of-Living Index 102

Chapter 5 Market Demand

108

- Introduction 108
- Derivation of the Market Demand Curve 109
- The Price Elasticity of Demand 110
 - Example 5.1* Residential Demand for Water 112
- The Income Elasticity of Demand 113
 - Example 5.2* Government Policy-Making in the 1973 Fuel Crisis 115
- Cross Elasticities of Demand 116
- The Sellers' Side of the Market and Marginal Revenue 118
- Industry and Firm Demand Curves 121
 - Example 5.3* Animal Experiments and the Theory of Demand 123
- Measurement of Demand Curves 124
- Applications 127
- SUMMARY 130 QUESTIONS/PROBLEMS 130

CROSS-CHAPTER CASE/PART TWO The Demand for Airline Travel: The North Atlantic Market 133

Part Three
The Firm: Its Technology and Costs

Chapter 6 The Firm and Its Technology

137

- The Assumption of Profit Maximization 137
 - Example 6.1* Profits Versus Leisure 139
- Firm Owners and Managers: A Principal-Agent Problem 140
- Technology and Inputs 142
- The Short Run and the Long Run 142
- The Production Function 143
- The Law of Diminishing Marginal Returns and the Geometry of Average and Marginal Product Curves 147
- The Production Function: Two Variable Inputs 150
- Isoquants 152
 - Example 6.2* Milk Production 157
- The Long Run and Returns to Scale 158
- Measurement of Production Functions 160
 - Example 6.3* Should Two New York Dairy Farms Merge? 161
- SUMMARY 164 QUESTIONS/PROBLEMS 165

Chapter 7 Optimal Input Combinations and Cost Functions

167

- Decisions Regarding Input Combinations 167
- The Optimal Combination of Inputs 168
- The Production of Corn: An Application 172

The Nature of Costs 173

Example 7.1 Rice Milling in Indonesia 174

Social Versus Private Costs and Explicit Versus Implicit Costs 178

The Proper Comparison of Alternatives 178

Cost Functions in the Short Run 179

Example 7.2 Short-Run Costs of a Boeing 747 189

Example 7.3 The Effects of Biotechnology on an Antibiotic's Production Costs 192

Cost Functions in the Long Run 193

Example 7.4 Long-Run Costs at IBM 200

Economies of Scope 201

Measurement of Cost Functions 202

SUMMARY 208 QUESTIONS/PROBLEMS 209

CROSS-CHAPTER CASE/PART THREE Optimal Lot Size and Japanese Manufacturing Methods 212

Part Four Market Structure, Price and Output

Chapter 8 Price and Output under Perfect Competition

219

Market Structure: An Introduction 219

Perfect Competition 220

Price Determination in the Short Run 221

Example 8.1 Auctions and Experimental Economics 229

Price Determination in the Long Run 230

Example 8.2 What Would Be the Effects of National Dental Insurance? 236

The Allocation Process: Short and Long Run 239

Estimates of Price Elasticity of Supply 240

Example 8.3 Speculation and the Coffee Market 241

Agricultural Prices and Output: An Application 242

SUMMARY 248 QUESTIONS/PROBLEMS 249 APPENDIX The Multiproduct Firm: The Choice of Output Combinations 252

Chapter 9 Price and Output under Monopoly

258

Monopoly 258

Short-Run Equilibrium Price and Output 262

Long-Run Equilibrium Price and Output 266

Example 9.1 Predatory Pricing and the Areeda-Turner Rule 268

Multiplant Monopoly 269

Comparison of Monopoly with Perfect Competition 270

Price Discrimination 274

Example 9.2 Why Should the Price of Bananas Be So Much Higher in Denmark Than in Ireland? 276

Two-Part Tariffs and Tying 280

Example 9.3 A Two-Part Tariff at Disneyland 281

Bundling: Another Pricing Technique 282

Public Regulation of Monopoly 284

Example 9.4 The Rejection of the Santa Fe/Southern Pacific Merger 286

Case Studies 287

SUMMARY 290 QUESTIONS/PROBLEMS 291

Chapter 10 Monopolistic Competition and Oligopoly

294

Introduction 294

Monopolistic Competition 294

Equilibrium Price and Output in the Short and Long Runs 295

Excess Capacity and Product Diversity 298

Markup Pricing 298

Comparisons with Perfect Competition and Monopoly 299

Advertising Expenditures: A Simple Model 300

Optimal Advertising Expenditures: A Graphical Analysis 303

The Social Value of Advertising 304

Example 10.1 Advertising, Spectacles, and the FTC 305

Oligopoly 306

Collusion and Cartels 307

The Instability of Cartels 309

The OPEC Oil Cartel: An Application 310

Example 10.2 A Cartel in the Orange Groves 311

Price Leadership 312

The Long Run and Barriers to Entry 314

Contestable Markets 316

SUMMARY 317 QUESTIONS/PROBLEMS 318 APPENDIX The Kinked Demand Curve 321

Chapter 11 Game Theory and Strategic Behavior

323

Introduction 323

The Theory of Games 324

Nash Equilibrium 325

An Example of Nash Equilibrium: The Cournot Model 326

Example 11.1 Should Amherst Buy All Its Steel from Duquesne? 330

The Prisoners' Dilemma 331

Cheating on a Cartel Agreement 332

Repeated Prisoners' Dilemma and "Tit for Tat" 333

Strategic Moves 335

Threats: Empty and Credible 336

The Deterrence of Entry 337

Limit Pricing 339

First-Mover Advantages 339

Example 11.2 How Government Can Tilt the Outcome of Oligopoly 341

Capacity Expansion and Preemption 342

Nonprice Competition 343
Effects of Oligopoly 344
SUMMARY 346 QUESTIONS/PROBLEMS 346

CROSS-CHAPTER CASE/PART FOUR The Economics of 1992 349

Part Five Markets for Inputs

Chapter 12 Price and Employment of Inputs

355

Incomes: Distribution and Inequality 355
Determinants of Input Prices 356
Profit Maximization and Input Employment 357
The Firm's Demand Curve: The Case of One Variable Input 359
The Firm's Demand Curve: The Case of Several Variable Inputs 360
Example 12.1 The Value of the Marginal Product of Irrigation Water 362
The Market Demand Curve 363
Determinants of the Price Elasticity of Demand for an Input 365
The Market Supply Curve 366
Equilibrium Price and Employment of an Input 368
Example 12.2 How Much Effect Would a Wage Increase Have on the Nursing Shortage? 371
The Concept of Rent 372
Example 12.3 Does Immigration Benefit the United States? 374
Example 12.4 The Effects of Minimum-Wage Laws 377
Market Signaling and Education 378
Employers and Workers: A Principal-Agent Problem 380
Efficiency Wage Theory 381
SUMMARY 384 QUESTIONS/PROBLEMS 384

Chapter 13 Price and Employment of Inputs under Imperfect Competition

387

Introduction 387
Profit Maximization and Input Employment: Imperfect Competition in the Product Market 387
Monopsony 392
Example 13.1 Effects of Minimum-Wage Laws Under Monopsony 397
Labor Unions 401
Example 13.2 Economic Effects of Unions 405
SUMMARY 406 QUESTIONS/PROBLEMS 406

CROSS-CHAPTER CASE/PART FIVE Sex Discrimination and Comparable Worth 409

Part Six
General Equilibrium, Economic Efficiency, Externalities, and Public Goods

Chapter 14 General Equilibrium Analysis and Resource Allocation

413

- Introduction 413
- Partial Equilibrium Analysis Versus General Equilibrium Analysis 414
- The Nature and Existence of General Equilibrium 415
- A Simple Model of General Equilibrium 416
 - Example 14.1* The Deregulation of Railroads and Trucks 418
- Resource Allocation and the Edgeworth Box Diagram 422
- Exchange 424
- Production 425
- The Product Transformation Curve 427
- Production and Exchange 428
 - Example 14.2* The Allocation of Fissionable Material 430
- SUMMARY 433 QUESTIONS/PROBLEMS 433

Chapter 15 The Promotion of Economic Efficiency

435

- Introduction 435
- The Definition of Economic Efficiency 436
- Marginal Conditions for Economic Efficiency 437
- The Utility-Possibility Curve 441
- Equity Considerations 443
 - Example 15.1* John Rawls on Social Justice 444
- Perfect Competition and Economic Efficiency 445
- Economic Planning and Marginal Cost Pricing 447
- External Economies and Diseconomies 449
 - Example 15.2* Time-of-Day Electricity Rates 450
- Increasing Returns, Public Goods, and Imperfect Information 454
 - Example 15.3* External Diseconomies on the Highways 456
- SUMMARY 457 QUESTIONS/PROBLEMS 458

Chapter 16 Public Goods, Externalities, and the Role of Government

460

- Introduction 460
- Characteristics of a Public Good 461
- The Efficient Output of a Public Good 461
- The Provision of Public Goods 463
- Externalities: The Case of Environmental Pollution 464
 - Example 16.1* Economics of a Lighthouse 465
- Property Rights and Coase's Theorem 471
- Government Intervention and Benefit-Cost Analysis 472
 - Example 16.2* The Effect of Voting Rules 475

Anemia Reduction in Indonesia, Kenya, and Mexico: An Application 476

Limitations of Government Effectiveness 478

Example 16.3 Should Refuse Collection Be Privatized? 479

SUMMARY 481 QUESTIONS/PROBLEMS 482

CROSS-CHAPTER CASE/PART SIX Effects of Quotas on Steel Imports into the United States 485

Part Seven

Intertemporal Choice and Decision-Making Involving Risk

Chapter 17 Intertemporal Choice and Technological Change

489

Introduction 489

Intertemporal Choice: Consumption 490

Intertemporal Choice: Production 492

The Interest Rate: Effects and Determinants 495

The Present-Value Rule for Investment Decisions 499

The Present-Value Rule: The Multiperiod Case 500

The Investment Decision: An Example 502

Internal Rates of Return and Bond Yields 503

Example 17.1 Should the Carborundum Corporation Expand Its Capacity? 504

Example 17.2 Did Proposition 13 Result in Lower Housing Prices? 506

Technological Change 507

Productivity Growth and the Measurement of Technological Change 508

The Learning Curve 509

Example 17.3 The Growth of Labor Productivity at General Motors and Toyota 510

Static Efficiency and Economic Progress 512

Example 17.4 Robots and Their Economic Effects 514

SUMMARY 516 QUESTIONS/PROBLEMS 518

Chapter 18 Decision-Making and Choice Involving Risk

521

Introduction 521

Definitions of Probability 521

Expected Monetary Value 523

Decision Trees 524

Drilling for Oil: A Case Study 526

The Expected Value of Perfect Information 528

Is it Rational to Maximize the Expected Monetary Value? 530

Constructing a Neumann-Morgenstern Utility Function 531

Example 18.1 Who Buys State Lottery Tickets? 537

The Optimal Amount of Insurance 538

Example 18.2 The Utility Function for Income 541

Moral Hazard 544

Diversification and Risk Reduction 545

Diversifiable and Nondiversifiable Risk 546

The Capital Asset Pricing Model 547

SUMMARY 550 QUESTIONS/PROBLEMS 551

CROSS-CHAPTER CASE/PART SEVEN Aircraft Development and the SST 554

Appendix Linear Programming

A1

The Firm's Production Decisions as a Linear Programming Problem A2

The Finishing of Cotton Cloth: An Illustration A3

Isoprofit Curves and a Graphical Solution A7

Minimization of Costs A9

Example A.1 The Choice of Production Processes A11

The Production of Automobiles and Trucks: Another Illustration A13

Computational Efficiency and the Comparison of Solutions at Extreme Points A16

The Dual Problem and Shadow Prices A17

Application of Linear Programming in the Petroleum Industry A18

SUMMARY A20 QUESTIONS/PROBLEMS A21

Glossary of Terms

A23

Brief Answers to Odd-Numbered Questions and Problems

A35

Brief Answers to Analytical Questions in Cross-Chapter Cases

A52

Photograph Credits

A54

Index

A55