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For Chau, our kids and our grandkids
Roger D. Blair

For Sue's memory and our kids
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PART 1  ECONOMIC FOUNDATIONS

1  Managerial Economics and Decision Making  1
2  Demand and Supply  33
3  Measuring and Using Demand  86

PART 2  MARKET STRUCTURE AND MANAGERIAL DECISIONS

4  Production and Costs  138
5  Perfect Competition  186
6  Monopoly and Monopolistic Competition  227
7  Cartels and Oligopoly  274
8  Game Theory and Oligopoly  318
9  A Manager’s Guide to Antitrust Policy  371

PART 3  MANAGERIAL DECISIONS

10 Advanced Pricing Decisions  414
11 Decisions About Vertical Integration and Distribution  465
12 Decisions About Production, Products, and Location  499
13 Marketing Decisions: Advertising and Promotion  541
14 Business Decisions Under Uncertainty  587
15 Managerial Decisions About Information  635
16 Using Present Value to Make Multiperiod Managerial Decisions  677

Content on the Web:
Appendix: The Business Plan
Chapter: Franchising Decisions
## CONTENTS

### PART 1

#### ECONOMIC FOUNDATIONS

##### 1

Managerial Economics and Decision Making 1

*Managers at Sears Holdings Use Opportunity Cost to Make Tough Decisions* 1

Introduction 1

1.1 Managerial Economics and Your Career 2

1.2 Firms and Their Organizational Structure 3
   - Definition of a Firm 3
   - The Legal Organization of Firms 3

1.3 Profit, Accounting Cost, and Opportunity Cost 6
   - Goal: Profit Maximization 6
   - Total Revenue 7
   - Accounting Cost and Opportunity Cost 8

**DECISION SNAPSHOT** Sunk Costs in the Stock Market 11

**DECISION SNAPSHOT** Opportunity Cost at Singing the Blues

Blueberry Farm 13

- Comparing Accounting Cost and Opportunity Cost 15
- Using Opportunity Cost to Make Decisions 17

**SOLVED PROBLEM** Resting Energy's Opportunity Cost 17

1.4 Marginal Analysis 18
   - The Marginal Analysis Rule 18
   - Using Marginal Analysis 19

**SOLVED PROBLEM** How to Respond Profitably to Changes in Marginal Cost 20

Revisiting How Managers at Sears Holdings Used Opportunity Cost to Make Tough Decisions 21

Summary: The Bottom Line 22

Key Terms and Concepts 23

Questions and Problems 23

MyLab Economics Auto-Graded Excel Projects 25

APPENDIX The Calculus of Marginal Analysis 28

A. Review of Mathematical Results 28
B. Marginal Benefit and Marginal Cost 29
C. Maximizing Total Surplus 29
D. Maximizing Total Surplus: Example 30

Calculus Questions and Problems 31
2 Demand and Supply 33

Managers at Red Lobster Cope with Early Mortality Syndrome 33

Introduction 33

2.1 Demand 34
Law of Demand 34
Demand Curve 35
Factors That Change Demand 37
DECISION SNAPSHOT Demand for the Cadillac Escalade 41
Changes in Demand: Demand Function 41
SOLVED PROBLEM Demand for Lobster Dinners 43

2.2 Supply 44
Law of Supply 44
Supply Curve 44
Factors That Change Supply 46
Changes in Supply: Supply Function 49
SOLVED PROBLEM The Supply of Gasoline-Powered Cars and the Price of Hybrid Cars 50

2.3 Market Equilibrium 51
Equilibrium Price and Equilibrium Quantity 51
Demand and Supply Functions: Equilibrium 53
SOLVED PROBLEM Equilibrium Price and Quantity of Plush Toys 54

2.4 Competition and Society 54
Total Surplus 54
Consumer Surplus 58
Producer Surplus 59
SOLVED PROBLEM Total Surplus, Consumer Surplus, and Producer Surplus in the Webcam Market 60

2.5 Changes in Market Equilibrium 61
Use of the Demand and Supply Model When One Curve Shifts: Demand 61
Use of the Demand and Supply Model When One Curve Shifts: Supply 63
Use of the Demand and Supply Model When Both Curves Shift 64
Demand and Supply Functions: Changes in Market Equilibrium 68
SOLVED PROBLEM Demand and Supply for Tablets Both Change 70

2.6 Price Controls 70
Price Ceiling 70
Price Floor 72
SOLVED PROBLEM The Effectiveness of a Minimum Wage 74

2.7 Using the Demand and Supply Model 75
Predicting Your Costs 75
Predicting Your Price 76

MANAGERIAL APPLICATION

Revisiting How Managers at Red Lobster Coped with Early Mortality Syndrome 78
Summary: The Bottom Line 78
Key Terms and Concepts 79
Questions and Problems 80

MyLab Economics Auto-Graded Excel Projects 83
3

Measuring and Using Demand 86

Managers at the Gates Foundation Decide to Subsidize Antimalarial Drugs 86

Introduction 87

3.1 Regression: Estimating Demand 87
The Basics of Regression Analysis 88
Regression Analysis 89
Regression Results: Estimated Coefficients and Estimated Demand Curve 92
SOLVED PROBLEM Regression Analysis at Your Steak Chain 94

3.2 Interpreting the Results of Regression Analysis 94
Estimated Coefficients 94
Fit of the Regression 99
SOLVED PROBLEM Confidence Intervals and Predictions for the Demand for Doors 100

3.3 Limitations of Regression Analysis 101
Specification of the Regression Equation 101
Functional Form of the Regression Equation 102
SOLVED PROBLEM Which Regression to Use? 104

3.4 Elasticity 105
The Price Elasticity of Demand 105
DECISION SNAPSHOT Advertising and the Price Elasticity of Demand 117
Income Elasticity and Cross-Price Elasticity of Demand 117
SOLVED PROBLEM The Price Elasticity of Demand for a Touch-Screen Smartphone 119

3.5 Regression Analysis and Elasticity 120
Using Regression Analysis 120
Using the Price Elasticity of Demand 122
Using the Income Elasticity of Demand Through the Business Cycle 122
Revisiting How Managers at the Gates Foundation Decided to Subsidize Antimalarial Drugs 123

Summary: The Bottom Line 123
Key Terms and Concepts 124
Questions and Problems 124

MyLab Economics Auto-Graded Excel Projects 128
CASE STUDY Decision Making Using Regression 130
APPENDIX The Calculus of Elasticity 133
A. Price Elasticity of Demand for a Linear and a Log-Linear Demand Function 133
B. Total Revenue Test 134
C. Income Elasticity of Demand and Cross-Price Elasticity of Demand 135

Calculus Questions and Problems 136
PART 2
MARKET STRUCTURE AND MANAGERIAL DECISIONS

4 Production and Costs 138

Pizza Hut Managers Learn That Size Matters 138

Introduction 138

4.1 Production 139
Production Function 139
Short-Run Production Function 141
Long-Run Production Function 145
SOLVED PROBLEM Marginal Product of Labor at a Bicycle Courier Service 147

4.2 Cost Minimization 147
Cost-Minimization Rule 148
Generalizing the Cost-Minimization Rule 149
SOLVED PROBLEM Cost Minimization at a Construction Firm 150

4.3 Short-Run Cost 150
Fixed Cost, Variable Cost, and Total Cost 151
Average Fixed Cost, Average Variable Cost, and Average Total Cost 152
Marginal Cost 153
DECISION SNAPSHOT Input Price Changes and Changes in the Marginal Cost of an Eiffel Tower Tour 154
Competitive Return 156
Shifts in Cost Curves 157
DECISION SNAPSHOT Changes in Input Prices and Cost Changes at Shagang Group 159
SOLVED PROBLEM Calculating Different Costs at a Caribbean Restaurant 161

4.4 Long-Run Cost 162
Long-Run Average Cost 162
Economies of Scale, Constant Returns to Scale, and Diseconomies of Scale 166
SOLVED PROBLEM Long-Run Average Cost 169

4.5 Using Production and Cost Theory 170
Effects of a Change in the Price of an Input 170
Economies and Diseconomies of Scale 171

Revisiting How Pizza Hut Managers Learned That Size Matters 173

Summary: The Bottom Line 174
Key Terms and Concepts 174
Questions and Problems 175

MyLab Economics Auto-Graded Excel Projects 178
APPENDIX The Calculus of Cost 179
A. Marginal Product 179
B. Cost Minimization 180
C. Marginal Cost and the Marginal/Average Relationship 183
Calculus Questions and Problems 184
Burger King Managers Decide to Let Chickens Have It Their Way  186

Introduction  186

5.1 Characteristics of Competitive Markets  187
Defining Characteristics of Perfect Competition  188
Perfectly Competitive Markets  189
SOLVED PROBLEM The Markets for Fencing and Cell Phones  190

5.2 Short-Run Profit Maximization in Competitive Markets  191
Marginal Analysis  191
Using Marginal Analysis to Maximize Profit  194
DECISION SNAPSHOT Marginal Analysis at the American Cancer Society  196
Changes in Costs  196
Amount of Profit  197
Shutting Down  201
DECISION SNAPSHOT Lundberg Family Farms Responds to a Fall in the Price of Rice  203
The Firm’s Short-Run Supply Curve  204
DECISION SNAPSHOT A Particleboard Firm Responds to a Fall in the Price of an Input  205
The Short-Run Market Supply Curve  206
SOLVED PROBLEM Amount of Profit and Shutting Down at a Plywood Producer  207

5.3 Long-Run Profit Maximization in Competitive Markets  208
Long-Run Effects of an Increase in Market Demand  208
Change in Technology  212
SOLVED PROBLEM The Long Run at a Plywood Producer  214

5.4 Perfect Competition  215
Applying Marginal Analysis  215
Optimal Long-Run Adjustments  215
Revisiting How Burger King Managers Decided to Let Chickens Have It Their Way  217
Summary: The Bottom Line  218
Key Terms and Concepts  218
Questions and Problems  219

MyLab Economics Auto-Graded Excel Projects  222
APPENDIX The Calculus of Profit Maximization for Perfectly Competitive Firms  224
A. Marginal Revenue  224
B. Maximizing Profit  224
C. Maximizing Profit: Example  224
Calculus Questions and Problems  226
Monopoly and Monopolistic Competition  227

Premature Rejoicing by the Managers at KV Pharmaceutical  227

Introduction  228

6.1 A Monopoly Market  228
Defining Characteristics of a Monopoly Market  228
Demand and Marginal Revenue for a Monopoly  229
DECISION SNAPSHOT Is Delta Airlines a Monopoly?  229
SOLVED PROBLEM The Relationship Among the Price Elasticity of Demand, Marginal Revenue, and Price  233

6.2 Monopoly Profit Maximization  234
Profit Maximization for a Monopoly  234
DECISION SNAPSHOT Profit-Maximizing Range of Prices for Tires  237
Comparing Perfect Competition and Monopoly  239
Barriers to Entry  241
SOLVED PROBLEM Merck’s Profit-Maximizing Price, Quantity, and Economic Profit  247

6.3 Dominant Firm  247
Dominant Firm’s Profit Maximization  248
DECISION SNAPSHOT How a Technology Firm Responds to Changes in the Competitive Fringe  251
SOLVED PROBLEM The Demand for Shoes at a Dominant Firm  252

6.4 Monopolistic Competition  252
Defining Characteristics of Monopolistic Competition  253
Short-Run Profit Maximization for a Monopolistically Competitive Firm  253
Long-Run Equilibrium for a Monopolistically Competitive Firm  255
SOLVED PROBLEM J-Phone’s Camera Phone  256

6.5 The Monopoly, Dominant Firm, and Monopolistic Competition Models  257
Using the Models in Managerial Decision Making  257
Applying the Monopolistic Competition Model  259

Revisiting Premature Rejoicing by the Managers at KV Pharmaceutical  261
Summary: The Bottom Line  261
Key Terms and Concepts  262
Questions and Problems  262

MyLab Economics Auto-Graded Excel Projects  268
APPENDIX The Calculus of Profit Maximization for Firms with Market Power  269
A. Marginal Revenue Curve  269
B. Elasticity, Price, and Marginal Revenue  269
C. Maximizing Profit  270
D. Maximizing Profit: Example  271
Calculus Questions and Problems  272
7 Cartels and Oligopoly  274

Managers at Major Publishers Read the e-Writing on the e-Wall  274

Introduction  274

7.1 Cartels  275
Cartel Profit Maximization  276
Instability of a Cartel  277

SOLVED PROBLEM Potential Profit from a Cellular Telephone Cartel  280

7.2 Tacit Collusion  280
Price Visibility  281

DECISION SNAPSHOT A Contract in the Market for Propane  282
Preannouncements  283
Precommitments  283
Price Leadership  284

SOLVED PROBLEM Price Leadership in the Market for Insulin  284

7.3 Four Types of Oligopolies  285
Cournot Oligopoly  285

DECISION SNAPSHOT South Africa’s Impala Platinum as a Cournot Oligopolist  293
Chamberlin Oligopoly  294
Stackelberg Oligopoly  296
Bertrand Oligopoly  297
Comparing Oligopoly Models  298

SOLVED PROBLEM Coca-Cola Reacts to PepsiCo  299

7.4 Cartels and Oligopoly  300
Using Cartel Theory and Tacit Collusion for Managerial Decision Making  301
Using Types of Oligopolies for Managerial Decision Making  301

Revisiting How Managers at Major Publishers Read the e-Writing on the e-Wall  302

Summary: The Bottom Line  303
Key Terms and Concepts  303
Questions and Problems  304

MyLab Economics Auto-Graded Excel Projects  307

APPENDIX The Calculus of Oligopoly  309
A. Cournot Oligopoly  309
B. Stackelberg Oligopoly  315
Calculus Questions and Problems  316
9 A Manager’s Guide to Antitrust Policy 371

The Managers of Sea Star Line Walk the Plank 371

Introduction 372

9.1 Overview of U.S. Antitrust Policy 372

The Monopoly Problem 372
The Sherman Act, 1890 374
The Clayton Act, 1914 374
The Federal Trade Commission Act, 1914 375
Sanctions for Antitrust Violations 375
Recent Antitrust Cases 377

SOLVED PROBLEM A Perfectly Competitive Market Versus a Monopoly Market 378

9.2 The Sherman Act 379

Sherman Act Section 1: Restraint of Trade 379
Sherman Act Section 2: Monopolization and Attempt to Monopolize 383

SOLVED PROBLEM Going, Going, Gone: Price Fixing in the Market for Fine Art 387

9.3 The Clayton Act 388

Clayton Act Section 1: Price Discrimination 388
Clayton Act Section 3: Conditional Sales 388
Clayton Act Section 7: Mergers 391

SOLVED PROBLEM The Business Practices Covered in the Clayton Act 392

9.4 U.S. Merger Policy 392

Economic Effects of Horizontal Mergers 393
Antitrust Merger Policy 394

DECISION SNAPSHOT The XM/Sirius Satellite Radio Merger 396

SOLVED PROBLEM Mergers in the Office-Supply Market 397

9.5 International Competition Laws 398

European Union Laws 398
Chinese Laws 400
Worldwide Competition Laws 401

SOLVED PROBLEM Gazprom Gas Prices Create Indigestion in the European Union 402

9.6 Antitrust Policy 402

Using the Sherman Act and the Clayton Act 402
Using International Competition Laws 403
Antitrust Advice for Managers 403

Revisiting How the Managers of Sea Star Line Walked the Plank 404

Summary: The Bottom Line 405
Key Terms and Concepts 405
Questions and Problems 406

MyLab Economics Auto-Graded Excel Projects 410

CASE STUDY Student Athletes and the NCAA 412
PART 3
MANAGERIAL DECISIONS

10 Advanced Pricing Decisions 414

Managers at the Turtle Bay Resort Think Kama’aina Pricing Is Par for the Course 414

Introduction 414

10.1 Price Discrimination 416
First-Degree Price Discrimination 416
Second-Degree Price Discrimination 418
Third-Degree Price Discrimination 419

DECISION SNAPSHOT American Airlines Identifies a Customer Type 425

SOLVED PROBLEM Price Discrimination at Warner Brothers: That’s All, Folks! 426

10.2 Peak-Load Pricing 427
Long-Run Capacity Decision 428
Short-Run Pricing and Quantity Decisions 429

DECISION SNAPSHOT Peak-Load Pricing by the Minneapolis–St. Paul Metropolitan Airport 432

SOLVED PROBLEM Peak-Load Pricing 433

10.3 Nonlinear Pricing 434
Two-Part Pricing 434
All-or-Nothing Offers 440

DECISION SNAPSHOT Nonlinear Pricing at the 55 Bar 443

Commodity Bundling 443

SOLVED PROBLEM Movie Magic 446

10.4 Using Advanced Pricing Decisions 447
Managerial Use of Price Discrimination 447
Managerial Use of Peak-Load Pricing 448
Managerial Use of Nonlinear Pricing 449

Revisiting How the Managers at Turtle Bay Resort Came to Think Kama’aina Pricing Is Par for the Course 450

Summary: The Bottom Line 451
Key Terms and Concepts 451
Questions and Problems 451

MyLab Economics Auto-Graded Excel Projects 456
APPENDIX The Calculus of Advanced Pricing Decisions 458
A. Third-Degree Price Discrimination 458
B. Two-Part Pricing 459
Calculus Questions and Problems 463
11 Decisions About Vertical Integration and Distribution 465

Why Would Walgreens Boots Alliance Purchase Wholesaler AmerisourceBergen? 465

Introduction 465

11.1 The Basics of Vertical Integration 467
Markets Versus Vertical Integration 467
Types of Vertical Integration 468
Transfer Prices and Taxes 469
SOLVED PROBLEM Vertical Integration 470

11.2 The Economics of Vertical Integration 471
Synergies 471
Costs of Using a Market: Transaction Costs, the Holdup Problem, and Technological Interdependencies 471
DECISION SNAPSHOT PepsiCo Reduces Transaction Costs 473
Costs of Using Vertical Integration 476
DECISION SNAPSHOT Pilgrim’s Pride and the Limits of Vertical Integration 477
SOLVED PROBLEM IBM Avoids a Holdup Problem 478

11.3 Vertical Integration and Market Structure 478
Vertical Integration with Competitive Distributors 479
Vertical Integration with a Monopoly Distributor 483
SOLVED PROBLEM Price and Quantity with Competitive Distributors and a Monopoly Distributor 488

MANAGERIAL APPLICATION

11.4 Vertical Integration and Distribution 489
Using the Economics of Vertical Integration for Managerial Decision Making 489
Using Vertical Integration and Market Structure for Managerial Decision Making Within a Firm 490
Revisiting Why Walgreens Boots Alliance Would Purchase Wholesaler AmerisourceBergen 490
Summary: The Bottom Line 491
Key Terms and Concepts 492
Questions and Problems 492
MyLab Economics Auto-Graded Excel Projects 496

12 Decisions About Production, Products, and Location 499

Managers at Freeport-McMoRan Dig Deep to Make a Decision 499

Introduction 500

12.1 Joint Production 500
Fixed Proportions 501
Variable Proportions 502
SOLVED PROBLEM A Refinery Responds to an Increase in the Profit from Gasoline 506
13 Marketing Decisions: Advertising and Promotion 541

Heads Up for Advertising Decisions at Riddell 541

Introduction 541

13.1 Profit-Maximizing Advertising by a Firm 542
   Advertising and Profit Maximization 543
   Choosing Advertising Media 547
13.2 Optimal Advertising by an Industry 550
   Industry-Wide Advertising as a Public Good 550
   Challenges of Industry-Wide Advertising 551
   SOLVED PROBLEM The National Football League’s Advertising Problem 554

13.3 False Advertising 554
   When Can False Advertising Be Successful? 555
   What Are the Penalties for False Advertising? 557
   SOLVED PROBLEM Advertising for Skechers Shape-Ups Gets the Boot 558

13.4 Resale Price Maintenance and Product Promotion 558
   The Effect of Resale Price Maintenance 559
   Profit Maximization with Resale Price Maintenance 560
   Resale Price Maintenance and Antitrust Policy 561
   DECISION SNAPSHOT Amazon.com Markets Its Kindle 562
   SOLVED PROBLEM Profit-Maximizing Resale Price Maintenance for Designer Shoes 563

13.5 International Marketing: Entry and Corruption Laws 564
   Entering a Foreign Market 564
   DECISION SNAPSHOT JPMorgan “Sons and Daughters” Program 569
   U.K. Bribery Act 569
   SOLVED PROBLEM Legal or Illegal? 570

13.6 Marketing and Promotional Decisions 571
   Industry-Wide Advertising 571
   Resale Price Maintenance 571
   Foreign Marketing Issues 573

   Revisiting Heads Up for Advertising Decisions at Riddell 573

   Summary: The Bottom Line 575
   Key Terms and Concepts 576
   Questions and Problems 576

   MyLab Economics Auto-Graded Excel Projects 580

APPENDIX The Calculus of Advertising 582
   A. Profit-Maximizing Amount of Advertising with a Single Advertising Medium 582
   B. Profit-Maximizing Amount of Advertising with Two or More Advertising Media 584
   Calculus Questions and Problems 585
14 Business Decisions Under Uncertainty 587

Embezzlement Makes Managers at a Nonprofit See Red 587

Introduction 587

14.1 Basics of Probability 588
Relative Frequency 588

DECISION SNAPSHOT Probability of Success at a New Branch 589
Expected Value 590
Subjective Probability 591

SOLVED PROBLEM Expected Customers at a Car Dealership 592

14.2 Profit Maximization with Random Demand and Random Cost 593
Expected Profit Maximization with Random Demand 593
Expected Profit Maximization with Random Cost 596
Expected Profit Maximization with Random Demand and Random Cost 598

SOLVED PROBLEM Profit Maximization for a Vineyard 599

14.3 Optimal Inventories with Random Demand 600
The Inventory Problem 600
Profit-Maximizing Inventory 601

SOLVED PROBLEM Profit-Maximizing Inventory of Pastry Rings 603

14.4 Minimizing the Cost of Random Adverse Events 604
Minimizing the Cost of Undesirable Outcomes 604
Marginal Cost of Avoiding Undesirable Outcomes 606
Optimal Accident Avoidance 607

DECISION SNAPSHOT Patent Search at a Pharmaceutical Firm 608
The Role of Marginal Analysis in Minimizing the Cost of Accidents 611

SOLVED PROBLEM Safety at an Energy Firm 611

14.5 The Business Decision to Settle Litigation 612
Basic Economic Model of Settlements: Parties with Similar Assessments 612

DECISION SNAPSHOT Actavis Versus Solvay Pharmaceuticals 614
Parties with Different Assessments 615

SOLVED PROBLEM To Settle or Not To Settle, That Is the Question 616

14.6 Risk Aversion 616
Insurance 617
Risk Aversion and Diversification 617
Risk Aversion and Litigation 618

SOLVED PROBLEM Merck Takes Advantage of Risk Aversion 618
15 Managerial Decisions About Information 635

Auctions Float the Navy’s Boat 635

Introduction 635

15.1 Intellectual Property 636
Patents and Trade Secrets 637
Copyrights 639
Trademarks 640
SOLVED PROBLEM Patent Infringement 641

15.2 Value of Forecasts 642
Random Demand Model 642
Factors Affecting the Value of Forecasts 644
SOLVED PROBLEM Value of a Forecast 648

15.3 Auctions 650
Types of Auctions 650
Bidding Strategy 651
DECISION SNAPSHOT Strategy in an English Auction of a U.S. Silver Dollar 655
Expected Revenue 656
SOLVED PROBLEM The San Francisco Giants Strike Out 658

15.4 Asymmetric Information 658
Adverse Selection 659
Moral Hazard 663
SOLVED PROBLEM Adverse Selection and Insurance Companies 665

15.5 Decisions about Information 666
Value of Forecasts for Different Time Periods 666
Managing the Winner’s Curse When Selling a Product 667
Incentives and the Principal–Agent Problem 667
Revisiting How Auctions Float the Navy’s Boat 669

Summary: The Bottom Line 669
Key Terms and Concepts 670
Questions and Problems 671

MyLab Economics Auto-Graded Excel Projects 674
Using Present Value to Make Multiperiod Managerial Decisions 677

Why Did Ziosk's Managers Give Their Tablets to Chili's for Free? 677

Introduction 677

16.1 Fundamentals of Present Value 678
Calculating Future Values 679
Calculating Present Values 680
Valuing a Stream of Future Payments 683
Future and Present Value Formulas 688
SOLVED PROBLEM Choosing a Loan Repayment Schedule 688

16.2 Evaluating Investment Options 689
Net Present Value and the Net Present Value Rule 689
Extensions to the Net Present Value Rule 692
DECISION SNAPSHOT Salvage Value at a Car Rental Firm 693
DECISION SNAPSHOT Depreciation Allowance: Should a Tax Firm Take It Now or Later? 697
Selection of the Discount Rate 698
Risk and the Net Present Value Rule 698
SOLVED PROBLEM Investment Decision for an Electric Car Maker 700

16.3 Make-or-Buy Decisions 701
Make-or-Buy Basics 701
Make-or-Buy Net Present Value Calculations 703
SOLVED PROBLEM A Make-or-Buy Decision with Learning by Doing 704

16.4 Present Value and Net Present Value 704
Valuing Financial Assets 704
Using the Net Present Value Rule in the Real World 705
The Effect of Tax Shields on Net Present Value 706
Revisiting Why Ziosk's Managers Gave Their Tablets to Chili's for Free 707
Summary: The Bottom Line 708
Key Terms and Concepts 709
Questions and Problems 709

Managerial Application

MyLab Economics Auto-Graded Excel Projects 712
CASE STUDY Analyzing Predatory Pricing as an Investment 715

Answer Key to Chapters 717
Answer Key to Calculus Appendices 756
Index 765
Content on the Web

The following content is available on www.pearson.com/mylab/economics

Web Appendix: The Business Plan

A. Dehydrated Business Plan
B. Funding Business Plan
   Executive Summary
   Market and Customer Analysis
   Company Description, Product Description, and Competitor Analysis
   Marketing and Pricing Strategies
   DECISION SNAPSHOT Gilead Sciences Needs a Price
   Operations Plan
   Development Plan
   Team
   Critical Risks
   Offering
   Financial Plan
   Key Terms and Concepts
   Questions and Problems

Web Chapter: Franchising Decisions

Quiznos Sandwiches Finds Its Stores Under Water

Introduction

WC.1 Franchising
   Franchising Issues
   Monopoly Benchmark
   Input Purchase Requirements
   Sales Revenue Royalties
   Resale Price Controls and Sales Quotas
   WORKED PROBLEM Subway Uses an Input Purchase Requirement

WC.2 Managerial Application: Franchising Theory
   Managerial Use of Lump-Sum Franchise Fees
   Managerial Use of Sales Revenue Royalties
   Managerial Use of Resale Price Controls and Sales Quotas
   Summary
   Revisiting How Quiznos Sandwiches Found Its Stores Under Water
   Summary: The Bottom Line
   Key Terms and Concepts
   Questions and Problems
Solving Teaching and Learning Challenges

Students who enroll in the managerial economics course are typically not economics majors. They take the course with the goal of building skills that will help them become better managers in a variety of business settings, including small and large firms, nonprofit organizations, and public service. In teaching our classes, we often skipped theoretical, abstract coverage in existing books—such as indifference curves, isoquants, the Cobb–Douglas production function, the Rothschild Index, and the Lerner Index—because these topics are not useful to students pursuing careers in management. Based on our teaching experiences and feedback from many reviewers and class testers, we have omitted this sort of theoretical, abstract coverage from our book.

Our decision to omit these topics does not mean that we shortchange economic theory. On the contrary, our book and a wide range of media assets show students how economic theory and concepts—including opportunity cost, marginal analysis, and profit maximization—can provide important insights into real-world managerial challenges such as how to price a product, how many workers to hire, whether to expand production, and how much to spend on advertising. Applications and extensions of the core theory abound. Some of the topics include bundled pricing, vertical integration, resale price maintenance, industry-wide advertising, settlement of legal disputes, present value and investment decisions, auctions and optimal bidding, and optimal patent search. We focus on how to think critically and make decisions in real-world business situations—in other words, how to apply economic theory.

MyLab Economics

MyLab Economics is an online homework, tutorial, and assessment program that delivers technology-enhanced learning in tandem with printed textbooks and etexts. It improves results by helping students quickly grasp concepts and by providing educators with a robust set of tools to easily gauge and address the performance of individuals and classrooms.

The Study Plan provides personalized recommendations for each student, based on his or her ability to master the learning objectives in your course. This allows students to focus their study time by pinpointing the precise areas they need to review, and allowing them to use customized practice and learning aids—such as videos, eText, tutorials, and more—to keep them on track.

First-in-class content is delivered digitally to help every student master critical course concepts. MyLab Economics includes Mini Sims, Auto-Graded Excel Projects, and Digital Interactives to not only help students understand important economic concepts, but also help them learn how to apply these concepts in a variety of ways so they can see how they can use economics long after the last day of class.

MyLab Economics allows for easy and flexible assignment creation, so instructors can assign a variety of assignments tailored to meet their specific course needs.

Chapter Features

The following key features and media assets demonstrate how The Economics of Managerial Decisions keeps the spotlight on the student as a future manager.

Real-world chapter openers and closers: Each chapter begins with a real-world example that piques student interest and poses a managerial decision-making question. We revisit this question and apply the chapter content to provide an answer at the end. Because students pursue careers in various fields, the chapter openers present challenges faced by a number of different types of organizations, including large and small profit-seeking firms, government organizations, nongovernmental organizations, and nonprofits.

Managers at the Gates Foundation Decide to Subsidize Antimalarial Drugs

The Bill and Melinda Gates Foundation (Gates Foundation) is the world’s largest philanthropic organization, with a trust endowment of nearly $40 billion. The foundation provides grants for education, medical research, and vaccinations around the world. As of 2015, the foundation had made total grants of $37 billion. The goal of the Gates Foundation is not maximizing profit. Instead, its goal is to save lives and improve health in developing countries. In 2010, the Global Fund to Fight AIDS, Tuberculosis and Malaria presented proposals to the Gates Foundation to subsidize antimalarial drugs in Kenya and other nations of sub-Saharan Africa. Although the Gates Foundation provides nearly $4 billion in grants per year, there are more than $4 billion worth of competing uses for its resources. Consequently, before the managers accepted these proposals, they needed to determine their expected impact: How many people would these projects save compared to alternative uses of the funds? The managers realized that lives hinged on their decision, so they wanted to be certain that they were getting the most value for their money.

The proposed subsidy programs would lower the price patients pay for the drugs. As you learned in Chapter 2, according to the law of demand, a decrease in the price of a product increases the quantity demanded. Antimalarial drugs are no exception; if their price falls, more patients will buy them. To make the proper decision about the proposals, however, the foundation’s managers needed a more quantitative estimate. Precisely how many additional patients would buy the drugs when their prices were lower?

This chapter explains how to answer this and other questions that require quantitative answers. At the end of the chapter, you will learn how the Gates Foundation’s managers could forecast the number of patients they would help by subsidizing the drugs.


Revisiting How Managers at the Gates Foundation Decided to Subsidize Antimalarial Drugs

As noted at the beginning of the chapter, the managers at the Bill and Melinda Gates Foundation want to use their funds in the best way possible. Because wanting their resources means that people could die unnecessarily, managers at the foundation want to fund the most cost-effective programs. To achieve that goal, they must determine the quantitative impact of the proposals presented to them.

In the case of the proposals to subsidize antimalarial drugs in Kenya and other nations, the managers were unlikely to have an estimated demand curve for the drugs in those countries because of data limitations. Instead, they probably relied on estimates of the price elasticity of demand to determine the increase in the quantity of drugs demanded.

The subsidy programs lowered the price of these drugs between 25 percent and 75 percent (the fall in price differed from nation to nation and from drug to drug). Overall, the average decrease in price was roughly 50 percent. Because there are few substitutes, the demand for pharmaceutical drugs is price inelastic. The price elasticity of demand for pharmaceutical drugs for low-income Danish consumers is estimated to be 0.31. Denmark and Kenya differ in an important respect: Low-income consumers in Kenya have much lower incomes than their counterparts in Denmark. Consequently, the expenditure on drugs in Kenya is a much larger fraction of consumers’ income, which means that the price elasticity of demand for drugs in Kenya is larger than in Denmark. If the managers at the Bill and Melinda Gates Foundation estimated that the price elasticity of demand for drugs in Kenya was about twice that in Denmark—say, 0.60—they could then predict that lowering the price of the drugs by 50 percent would increase the quantity demanded by 16 percent. That is, 0.60 × 0.50 = 30 percent.

The Gates Foundation funded the proposals to subsidize antimalarial drugs. The actual outcome was that the quantity of the drugs demanded in the different nations increased by 20 to 40 percent. The quantitative estimate was right in line with what occurred. Using the price elasticity of demand to estimate the impact of the drug subsidy proposals allowed the managers at the foundation to compare them to competing proposals and to make decisions that saved the maximum number of lives.
Managerial Applications: Fifteen of the sixteen chapters include a major numbered section devoted to managerial applications of the chapter content.

**NEW! Mini Sims:** The Managerial Applications are accompanied by Mini Sims that are located in MyLab Economics. Written by David Switzer of St. Cloud State University and Casey DiRienzo of Elon University, these Mini Sims are designed to build students’ critical-thinking and decision-making skills through an engaging, active learning experience. Each Mini Sim requires students to make a series of decisions based on a business scenario, which helps them move from memorization to understanding and application. These also allow students to experience how different functional areas of a business interact and how each employee’s decisions affect the organization.

---

### Table 3.4 Estimated Demand Function for Steak Dinners

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>139.2</td>
<td>11.9</td>
<td>11.7</td>
<td>0.00</td>
<td>127.1</td>
</tr>
<tr>
<td>Price of dinner</td>
<td>−12.9</td>
<td>1.8</td>
<td>7.2</td>
<td>0.00</td>
<td>−16.4</td>
</tr>
<tr>
<td>Average income</td>
<td>0.0073</td>
<td>0.0012</td>
<td>6.1</td>
<td>0.00</td>
<td>4.9</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>−10.0</td>
<td>3.1</td>
<td>3.1</td>
<td>0.00</td>
<td>−16.5</td>
</tr>
<tr>
<td>Population</td>
<td>0.0005</td>
<td>0.0002</td>
<td>2.5</td>
<td>0.00</td>
<td>0.0003</td>
</tr>
</tbody>
</table>

(0.0073 \times 1,000), or 7.3 dinners per night. The coefficient for the unemployment rate, −10.0, shows that a one percentage point increase in the unemployment rate decreases the demand by −10.0 \times 1, or 10 dinners per night. And the coefficient for the population variable, 0.0005, shows that a 1,000-person increase in population increases the demand by 0.0005 \times 1,000, or 5 dinners per night.

### Short-Run Decisions Using Regression Analysis

Although a more detailed explanation of how managers determine price must wait until Chapter 9, intuitively it is clear that demand must play a role. The estimated demand function can help determine what price to charge in different cities because you can use it to estimate the nightly quantity of dinners your customers will demand in those cities. Suppose that one of the restaurants is located in a city of 900,000 people, in which average income is $60,000 and the unemployment rate is 5.9 percent. If you set a price of $60 per dinner, you can predict that the nightly demand for steak dinners equals:

\[
Q = 139.2 - (12.9 \times 60) + (0.0073 \times 56,300) - (10.0 \times 5.9) + (0.0005 \times 900,000) = 240 \text{ dinners per night.}
\]

You can now calculate consumer response to a change in the price.

### Demand and Supply

**Decision Point: Establishing Base Price Based on Demand:** Setting Price

Now that you’ve straightened out that administrative issue, you can focus on pricing the brighton.

While the brighten project was being developed, you hired a market research company to survey consumers to try to find out how much they would be willing to pay for a car with the brighten's features. The best estimate of the demand curve for the brighten is shown below.

Based on this projected demand curve, what price would you set the brighten if you were going to manufacture 80,000 cars and wanted to sell all of them?

Type values in the space provided below, and click Submit.
Preface

Integrated examples: We consistently present economic concepts in the context of business scenarios from a range of industries. For example:

- Chapter 4, “Production and Costs,” uses dinners at a restaurant to present the concepts of production and costs.
- Chapter 13, “Marketing Decisions: Advertising and Promotion,” includes examples of advertising by a private company as well as by an entire industry.

Solved Problems: This section-ending feature guides students step by step in solving a managerial problem, set in the context of a situation managers may encounter.

Decision Snapshots: This feature places readers in the role of managers facing a decision in a range of industries, including large and small for-profit firms, public service organizations, and nonprofits. An answer is included so students can confirm the decision they have made.
**Case studies:** Four chapters end with case studies that illustrate how managers used the topics in the chapter to approach or solve a business challenge. The case studies conclude with open-ended questions about a similar situation that instructors can use for class discussion or assign as homework. Here are the four cases:

- **Chapter 3 Case Study:** Decision Making Using Regression
- **Chapter 9 Case Study:** Student Athletics and the NCAA
- **Chapter 14 Case Study:** Decision Making with Final Offer Arbitration
- **Chapter 16 Case Study:** Analyzing Predatory Pricing as an Investment

**Assessment:** End-of-chapter Questions and Problems are grouped by the titles of the major numbered sections and the accompanying learning objectives so that instructors can easily assign problems based on those objectives, and students can efficiently review material that they find difficult. Students can complete these problems and questions on MyLab Economics, where they receive tutorial help, instant feedback, and assistance with incorrect responses.

**NEW! MyLab Economics Auto-Graded Excel Projects:** Excel is a software application that managers in all industries and all functional areas, such as marketing, sales, and finance, use to analyze data and make decisions such as what to produce, and how to price products. Mandie Weinandt of the University of South Dakota created Excel projects for each chapter based on the content of the chapter. Kathryn Nantz of Fairfield University accuracy checked the projects and solutions. The projects are accessible in MyLab Economics, where instructors can seamlessly integrate Excel content into their courses without having to manually copy data or Equations.
to manually grade spreadsheets. Students simply download a spreadsheet, work live on a problem in Excel, and then upload that file back into MyLab Economics, where they receive personalized, detailed feedback in the form of reports that pinpoint where they went wrong on any step of the problem.

**Optional calculus appendices:** The mathematics we use in the chapters is algebra and geometry because this level is appropriate for managers. For those who want to delve more deeply into the math, appendices showing calculus derivations of the important results accompany 9 of the 16 chapters (Chapters 1, 3, 4, 5, 6, 7, 10, 12, and 13). Each appendix includes five homework problems that use calculus.

### Developing Career Skills

Students who want to succeed in a rapidly changing job market should be aware of their career options and how to go about developing a variety of skills. As featured on the previous pages, the text focuses on developing these skills in various features:

- **Real-world chapter openers and closers** show how managers from a variety of business organizations apply economic concepts to make decisions.
- **Solved Problems** and **Decision Snapshots** help students build their analytical and critical-thinking skills.
- **Mini Sims** related to the Managerial Application at the end of each chapter, except Chapter 1, help build students’ critical-thinking and decision-making skills through an engaging, active learning experience. The screen on the left shows one decision-point step in the Mini Sim that accompanies Chapter 2, “Demand and Supply.”
- **Auto-Graded Excel Projects** at the end of each chapter help students build their skill using Excel, a software application that they will need to use as managers regardless of the industry or functional area in which they choose to work.

### Table of Contents Overview

Chapters 1 through 6 are core chapters. An instructor can cover these chapters in order and then proceed either to Chapters 7 and 8 or to Chapter 10. The chapters in Part 3 (Chapters 10–16) can be covered in any order. For those who want to delve more deeply into the mathematics, appendices showing calculus derivations of the important results accompany 9 of the 16 chapters (Chapters 1, 3, 4, 5, 6, 7, 10, 12, and 13). An appendix on how to write a business plan and an additional chapter on franchising decisions are located at www.pearson.com/mylab/economics.

**Part 1. ECONOMIC FOUNDATIONS**
- Chapter 1: Managerial Economics and Decision Making
- Chapter 2: Demand and Supply
- Chapter 3: Measuring and Using Demand

**Part 2. MARKET STRUCTURES AND MANAGERIAL DECISIONS**
- Chapter 4: Production and Costs
- Chapter 5: Perfect Competition
Preface

Chapter 6: Monopoly and Monopolistic Competition
Chapter 7: Cartels and Oligopoly
Chapter 8: Game Theory and Oligopoly
Chapter 9: A Manager’s Guide to Antitrust Policy

Part 3. MANAGERIAL DECISIONS
Chapter 10: Advanced Pricing Decisions
Chapter 11: Decisions About Vertical Integration and Distribution
Chapter 12: Decisions About Production, Products, and Location
Chapter 13: Marketing Decisions: Advertising and Promotion
Chapter 14: Business Decisions Under Uncertainty
Chapter 15: Managerial Decisions About Information
Chapter 16: Using Present Value to Make Multiperiod Managerial Decisions

The following content is posted on www.pearson.com/mylab/economics:
Web Appendix: The Business Plan
Web Chapter: Franchising Decisions

Instructor Teaching Resources

The following supplements are available to instructors for download at www.pearsonhighered.com.

The Instructor’s Manual was prepared by David Switzer of St. Cloud State University and includes the following features:

- Solutions to all end-of-chapter and appendix questions and problems, which the authors prepared and then revised based on an accuracy review by two other professors.
- Chapter summaries
- Lists of learning objectives
- Chapter outlines, section summaries, and key term definitions
- Extra examples
- Teaching tips

The Test Bank was prepared by Casey DiRienzo of Elon University and includes over 2,400 questions, with approximately 125 multiple-choice questions and 25 true/false questions per chapter. Between 5 and 10 questions per chapter include a graph and ask students to analyze that graph. The questions are organized by learning objective, and each question has the following annotations:

- Topic
- Skill
- AACSB learning standard (Written and Oral Communication; Ethical Understanding and Reasoning; Analytical Thinking; Information Technology; Interpersonal Relations and Teamwork; Diverse and Multicultural Work; Reflective Thinking; Application of Knowledge)

The PowerPoint Presentation was prepared by Julia Frankland of Malone University and includes the following features:

- All the graphs, tables, and equations in each chapter
- Section summaries for all chapters
- Lecture notes
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