



Microeconomics **Theory and** **Applications**

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**MICROECONOMICS:
THEORY AND APPLICATIONS**

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To My Parents

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Preface

Microeconomic theory studies the economic behavior of individual consumers, resource owners, and business firms, and the operation of markets in a free-enterprise economy. While macroeconomic issues, such as the rate of national unemployment and inflation, usually receive more attention in the media, it is the sum total of all the individual decisions by consumers, resource owners, and firms that actually determines the overall performance of the economy. Because it presents many of the basic tools of economic analysis, microeconomic theory is one of the most important courses in all economics and business programs.

This is a text for the standard undergraduate course in intermediate microeconomics in economics and business programs. Only a prior course in principles of economics is required and only simple geometry is used. The presentation is clear and concise, and it is reinforced throughout with numerous pertinent real-world examples and extensive applications from economics and business. There are no mathematical footnotes, but there is an optional mathematical appendix at the end of the text for students who have had calculus.

Useful and Unique Features of the Text

Although the structure of this text is traditional, there are a number of very useful features which, together, makes it unique.

Each chapter includes several extensive and current *real-world applications*. These applications serve to highlight the relevance of microtheory in analyzing (and offering possible solutions to) important present-day economic problems. The recurrent theme throughout the text is that only by “putting theory to work” does theory truly come alive. Applications deepen understanding of the theory and motivate the student by demonstrating the great usefulness of the theory.

Each chapter progresses smoothly *from theory to applications*. Many texts present applications in separate chapters, with the result that applications seem to be mere appendages and are seldom covered. Other texts present applications throughout the chapter, interrupting the continuity in the presentation of the theory.

This text also introduces *greater realism* than most others by presenting numerous real-world examples of the theories examined. The oligopoly

chapter (Chapter 13) includes an extensive discussion of *managerial theories of the firm* and *game theory*. These important topics are often omitted from other texts.

A very important feature of the text is the presentation of *important recent developments in consumer demand theory* (Chapter 6) and important extensions of production theory (Chapter 9). These examine revealed preference, index numbers, choices subject to risk, the demand for characteristics, and empirical demand curves (in Chapter 6); and the Cobb-Douglas production function, empirical production and cost curves, technological progress, and linear programming (in Chapter 9). While these chapters are optional, many professors may want to expose their students to at least some of these current developments and extensions in demand and production theory. In other texts, either these important topics are not covered at all (a serious omission) or they are presented at too high a level to be accessible to most undergraduates.

There is also a chapter (16) on interest and capital theory and one (Chapter 19) on public goods, externalities, and the role of the government.

Graphs are drawn on a light background grid with real numbers to add realism to the analysis and to facilitate reading off answers. For example, instead of saying that a reduction in the price of X from P_1 to P_2 results in an increase in the quantity demanded from Q_1 to Q_2 per unit of time, we examine how a reduction from \$2 to \$1 in the price of hamburgers leads an individual to increase the quantity demanded from 2 to 6 per week. This also allows us to separate numerically the substitution from the income effect of the price reduction, thus making the analysis more realistic and much more easily and thoroughly comprehensible to students.

Organization of the Book

The text is organized into six parts. Part I (Chapters 1–2) presents an introduction to microeconomic theory and a review of some principles of economics. Chapter 1 deals with scarcity as the fundamental economic fact facing every society, examines the function or purpose of microeconomic theory and its methodology, and discusses the overall organization of the text and of each of its chapters. Chapter 2 is a brief review of the concepts of demand, supply, equilibrium, and elasticity.

Part II (Chapters 3–6) presents the theory of consumer behavior and demand. Chapter 3 examines the tastes of the consumer and how the consumer maximizes utility or satisfaction in spending his or her income. These concepts are then utilized and extended in Chapter 4 to derive the consumer's demand curve for a commodity. Chapter 5 shows how, by aggregating or summing up individual consumer's demand curves, we get

the market demand curve for the commodity. Chapter 5 also examines in detail the usefulness and measurement of the various demand elasticities. Finally, Chapter 6 presents more advanced topics and more recent important developments in consumer demand theory. The presentation of the theory is reinforced throughout with many real-world examples and important applications.

Part III (Chapters 7–9) presents the theory of production and cost. Chapter 7 examines production theory or how firms combine resources or inputs to produce final commodities. These concepts are then utilized and extended in Chapter 8 to examine costs of production and to derive the short-run and the long-run cost curves of the firm. Finally, Chapter 9 presents more advanced topics in the theory of production and costs. As in the previous parts, the presentation of the theory is reinforced throughout with many real-world examples and important applications.

Part IV (Chapters 10–13) presents the theory of the firm and market structure. It brings together the theory of consumer behavior and demand (from Part II) and the theory of production and costs (from Part III) to analyze how price and output are determined under various types of market organization. Chapter 10 shows how price and output are determined under perfect competition. Chapter 11 shows price and output determination under pure monopoly. Chapter 12 does the same for monopolistic competition, and Chapter 13 does so for oligopoly.

Part V (Chapters 14–16) presents the theory of input pricing and employment. Until this point, input prices were assumed to be given. In this part we examine how input prices and the level of their employment are determined in the market. Chapter 14 examines input pricing and employment under perfect competition in the output and input markets. Chapter 15 deals with input pricing and employment under imperfect competition in the output and/or input markets. Chapter 16 presents interest and capital theory; that is, it deals with choices in the allocation of inputs over time. Many real-world examples and applications add an important dose of realism to the theoretical analysis.

Part VI (Chapters 17–19) presents the theory of general equilibrium and welfare economics, and examines the role of government. Chapter 17 presents general equilibrium theory. This examines the interdependence or relationship among all products and input markets, and shows how the various individual markets (studied in Parts II–V) fit together to form an integrated economic system. Chapter 18 studies welfare economics within a general equilibrium framework. It examines questions of economic efficiency in the production of output and equity in the distribution of income. Finally, Chapter 19 examines externalities, public goods, and the role of government. It studies why externalities (such as pollution) and the existence of public goods (such as national defense) lead to economic inefficiencies. It also presents policies that can be used to overcome these inefficiencies.

The eight core chapters are: 3–5, 7–8, 10–11, 14.

Audience and Level

There are several choices in the use of the text.

(1) For a solid, popular, “no-frills” undergraduate course in microeconomics, I would include Chapters 1 and 2 and the eight core chapters (3–5, 7–8, 10–11, 14) with their applications.

(2) With a stronger background (such as a two-semester course in principles of economics), I would skip Chapter 2 and cover parts of one or two other chapters, as follows:

(2a) If the aim is to give a stronger theoretical background, I would choose topics from Chapter 6 (Extensions of Consumer Demand Analysis) and Chapter 9 (Extensions of Production Theory), or Chapters 17 (General Equilibrium Analysis) and 18 (Welfare Economics).

(2b) For a more “applied” course, I would choose topics from Chapter 15 (Input Price and Employment under Imperfect Competition) and Chapter 19 dealing with public goods, externalities, and the role of government.

(2c) For business majors, I would cover the following topics (time permitting) in addition to the eight core chapters: choices subject to risk, index numbers, and empirical demand curves (from Chapter 6); empirical production and cost curves, and linear programming (from Chapter 9); managerial theories of the firm and game theory (from Chapter 13); and Chapter 16 on interest rates and capital theory.

Thus, the book is designed for flexibility, depending on the background of the student and the aims of the course—keeping in mind that in most cases no more than 11 or 12 chapters can be covered in one semester.

Teaching Aids

Each chapter contains a number of teaching aids to make the text easier to use in the classroom. The sections of each chapter are numbered for easy reference. Longer sections are broken into two or more subsections. All of the graphs and diagrams are carefully explained in the text and then summarized briefly in the captions. Most diagrams are drawn on a light background grid to facilitate reading off answers.

Each chapter ends with the following teaching aids:

Summary—Reviews the main points covered in the text.

Chapter Glossary—Gives the definition of important terms introduced in bold-face in the chapter. A separate index of glossary terms in alphabetical order is provided at the end of the book for easy cross-reference.

Questions for Review—At least one question for each section in the chapter.

Problems—These ask the student to calculate a specific measure or explain a particular theory or issue. Brief answers to selected problems are provided at the end of the book for feedback. These problems are indicated by a star (★).

Supplementary Readings—The most important references are included along with specific notes indicating the topic they cover. A separate author index is included at the end of the book.

For those interested, a short mathematical appendix is available at the end of the text.

A substantial *Instructor's Manual* prepared by the author is available which includes chapter objectives, lecture suggestions, detailed answers to the end-of-chapter problems, a set of 25 multiple-choice questions with answers for each chapter, and additional problems with answers for each chapter for examinations and/or class discussions. The *Manual* was prepared with as much care as the text itself.

A *Study Guide*, prepared by Dr. Mary Acker of Iona College, is available which includes chapter summaries, an annotated bibliography for each chapter, multiple choice questions, review questions, and problems.

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This text grew out of the undergraduate and graduate courses in microeconomics that I have been teaching at Fordham University during the past 15 years. I was very fortunate to have had many excellent students who with their questions and comments have contributed much to the clarity of exposition of this text.

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Brief Contents

ONE INTRODUCTION	1
Chapter 1 Introduction	2
Chapter 2 Demand and Supply: A Review	25
TWO THEORY OF CONSUMER BEHAVIOR AND DEMAND	57
★Chapter 3 Consumer Preferences and Choice	58
★Chapter 4 Consumer Behavior and Individual Demand	94
★Chapter 5 Market Demand and Elasticities	127
Chapter 6 Extensions of Consumer Demand Theory	159
THREE THEORY OF PRODUCTION AND COST	193
★Chapter 7 Production Theory	194
★Chapter 8 Costs of Production	228
Chapter 9 Extensions of Production and Cost Theory	262
FOUR THEORY OF THE FIRM AND MARKET STRUCTURE	297
★Chapter 10 Price and Output Under Perfect Competition	298
★Chapter 11 Price and Output Under Pure Monopoly	334
Chapter 12 Price and Output Under Monopolistic Competition	374
Chapter 13 Price and Output Under Oligopoly	401
FIVE PRICING AND EMPLOYMENT OF INPUTS	445
★Chapter 14 Input Price and Employment Under Perfect Competition	446

★ Core Chapter.

Brief Contents

Chapter 15	Input Price and Employment Under Imperfect Competition	483
Chapter 16	Intertemporal Choice: Interest and Capital	512
	SIX GENERAL EQUILIBRIUM, WELFARE ECONOMICS, AND THE ROLE OF GOVERNMENT	551
Chapter 17	General Equilibrium Analysis	552
Chapter 18	Welfare Economics	581
Chapter 19	Externalities, Public Goods, and the Role of Government	611
	APPENDICES	634
A	Mathematical Appendix	A1
B	Answers to Selected Problems	B1
	Glossary Index	I1
	Name Index	I5
	Subject Index	I7

Detailed Contents

ONE INTRODUCTION

1

Chapter 1 Introduction 2

- 1.1 The Fundamental Economic Fact 4
 - 1.1a Human Wants and Resources 4
 - 1.1b Scarcity 5
- 1.2 The Functions of an Economic System 7
- 1.3 Microeconomic Theory and the Price System 10
 - 1.3a The Circular Flow of Economic Activity 10
 - 1.3b Determination and Function of Prices 12
 - 1.3c Effect of Government 13
- 1.4 Models and Methodology 15
- 1.5 Positive and Normative Economics 16
- 1.6 Organization of the Book 19
 - 1.6a Organization of the Text 19
 - 1.6b Chapter Organization 20
- Summary 21
- Glossary 21
- Questions for Review 22
- Problems 23
- Supplementary Readings 24

Chapter 2 Demand and Supply: A Review 25

- 2.1 Market Analysis 26
- 2.2 Market Demand 27
 - 2.2a Demand Schedule and Demand Curve 27
 - 2.2b Changes in Demand 29
 - 2.2c Price Elasticity of Demand 31
- 2.3 Market Supply 34
 - 2.3a Supply Schedule and Supply Curve 34
 - 2.3b Changes in Supply 36
 - 2.3c Price Elasticity of Supply 37
- 2.4 Equilibrium 39
- 2.5 Adjustment to Changes in Demand and Supply 41
 - 2.5a Adjustment to Changes in Demand 41
 - 2.5b Adjustment to Changes in Supply 43
- 2.6 Applications 44
 - Summary 51
 - Glossary 52
 - Questions for Review 53

Problems	54
Supplementary Readings	55

TWO THEORY OF CONSUMER BEHAVIOR AND DEMAND

57

Chapter 3 Consumer Preferences and Choice 58

3.1	Utility Analysis	60
3.1a	Total and Marginal Utility	60
3.1b	Cardinal and Ordinal Utility	63
3.2	Indifference Curves	64
3.2a	Definition of Indifference Curves	64
3.2b	Characteristics of Indifference Curves	66
3.2c	The Marginal Rate of Substitution	68
3.2d	Some Special Types of Indifference Curves	69
3.3	Budget Line	72
3.3a	Definition of the Budget Line	72
3.3b	Changes in the Budget Line	74
3.4	Consumer's Choice	76
3.4a	Utility Maximization	76
3.4b	Corner Solutions	78
3.4c	Marginal Utility Approach to Utility Maximization	80
3.5	Applications	83
	Summary	89
	Glossary	89
	Questions for Review	90
	Problems	91
	Supplementary Readings	93

Chapter 4 Consumer Behavior and Individual Demand 94

4.1	Changes in Income	96
4.1a	Income-Consumption Curve and Engel Curve	96
4.1b	Normal and Inferior Goods	99
4.2	Changes in Price	101
4.2a	Price-Consumption Curve and Individual Demand Curve	102
4.2b	Price-Consumption Curve and Price Elasticity of Demand	105
4.3	Substitution and Income Effects	108
4.3a	Separation of the Substitution and Income Effects	108

Detailed Contents

4.3b	Substitution and Income Effects for Inferior Goods	111
4.4	Applications	114
	Summary	123
	Glossary	123
	Questions for Review	124
	Problems	125
	Supplementary Readings	126
Chapter 5 Market Demand and Elasticities		127
5.1	The Market Demand for a Commodity	129
5.2	Price Elasticity of Market Demand	132
	5.2a Price Elasticity Graphically	132
	5.2b Price Elasticity and Total Expenditures	134
	5.2c Factors Affecting Price Elasticity	135
5.3	Income Elasticity of Demand	138
5.4	Cross Elasticity of Demand	141
5.5	Marginal Revenue and Elasticity	144
	5.5a Demand, Total Revenue, and Marginal Revenue	144
	5.5b The Geometry of Marginal Revenue Determination	145
	5.5c Marginal Revenue, Price, and Elasticity	148
5.6	Applications	150
	Summary	154
	Glossary	155
	Questions for Review	156
	Problems	157
	Supplementary Readings	158
Chapter 6 Extensions of Consumer Demand Theory		159
6.1	The Substitution Effect According to Slutsky	161
6.2	The Theory of Revealed Preference	163
6.3	Index Numbers	165
	6.3a Expenditure, Laspeyres, and Paasche Indices	166
	6.3b Measures of Changes in Consumer Welfare	167
6.4	Utility Theory Under Uncertainty	170
6.5	The Characteristics Approach to Consumer Theory	174
6.6	Empirical Demand Curves	176
6.7	Applications	180
	Summary	187
	Glossary	188

Questions for Review	189
Problems	190
Supplementary Readings	191

THREE THEORY OF PRODUCTION AND COST **193**

Chapter 7 Production Theory **194**

7.1	Organization of Production and Classification of Inputs	196
7.1a	The Organization of Production	196
7.1b	Classification of Inputs	197
7.2	Production with One Variable Input	198
7.2a	Total, Average, and Marginal Product	199
7.2b	The Geometry of Average and Marginal Product Curves	200
7.2c	The Law of Diminishing Returns and Stages of Production	202
7.3	Production with Two Variable Inputs	205
7.3a	Definition of Isoquants	206
7.3b	Derivation of Total Product Curves from the Isoquant Map	207
7.4	The Shape of Isoquants	209
7.4a	Characteristics of Isoquants	209
7.4b	Economic Region of Production	212
7.4c	Fixed-Proportions Production Functions	214
7.5	Constant, Increasing, and Decreasing Returns to Scale	216
7.6	Applications	219
	Summary	223
	Glossary	224
	Questions for Review	225
	Problems	226
	Supplementary Readings	227

Chapter 8 Costs of Production **225**

8.1	The Nature of Production Costs	229
8.2	Optimal Combination of Inputs	232
8.2a	Isocost Lines	232
8.2b	Least-Cost Input Combination	234
8.2c	Cost Minimization in the Long and Short Runs	235
8.3	Theory of Cost in the Short Run	236
8.3a	Total Costs	236

Detailed Contents

8.3b	Per-Unit Costs	238
8.3c	The Geometry of Per-Unit Cost Curves	241
8.4	Long-Run Theory of Costs	244
8.4a	Expansion Path and the Long-Run Total Cost Curve	244
8.4b	Derivation of the Long-Run Average Cost Curve	246
8.4c	Relationship Between Short- and Long-Run Cost Curves	247
8.5	The Shape of the Long-Run Average Cost Curve	250
8.6	Applications	251
	Summary	257
	Glossary	258
	Questions for Review	258
	Problems	259
	Supplementary Readings	261
Chapter 9 Extensions of Production and Cost Theory		262
9.1	The Cobb-Douglas Production Function	263
9.1a	The Formula	264
9.1b	Illustration	264
9.1c	Empirical Estimation	268
9.2	The Elasticity of Substitution	270
9.3	Technological Progress	272
9.4	Linear Programming: The Basic Concepts	274
9.4a	Introduction to Linear Programming	274
9.4b	Some Basic Linear Programming Concepts	275
9.5	Linear Programming: a More Complete Picture	278
9.5a	Solution of Linear Programming Problems	279
9.5b	Illustration of Profit Maximization	279
9.5c	Illustration of Cost Minimization	282
9.6	Applications	286
	Summary	292
	Glossary	293
	Questions for Review	293
	Problems	294
	Supplementary Readings	295

FOUR THEORY OF THE FIRM AND MARKET STRUCTURE

297

Chapter 10 Price and Output Under Perfect Competition 298

10.1	Market Structure: Perfect Competition	300
10.2	Price Determination in the Market Period	302

Detailed Contents

10.3	Short-Run Equilibrium of the Firm	304
10.3a	Total Approach	304
10.3b	Marginal Approach	306
10.3c	Profit Maximization or Loss Minimization	308
10.4	Short-Run Supply Curve and Equilibrium	310
10.4a	Short-Run Supply Curve of the Firm and Industry	310
10.4b	Short-Run Equilibrium of the Industry and Firm	313
10.5	Long-Run Equilibrium of the Firm and Industry	315
10.5a	Long-Run Equilibrium of the Firm	315
10.5b	Long-Run Equilibrium of the Industry and Firm	315
10.6	Constant, Increasing, and Decreasing Cost Industries	319
10.6a	Constant Cost Industries	319
10.6b	Increasing Cost Industries	320
10.6c	Decreasing Cost Industries	321
10.7	Applications	323
	Summary	329
	Glossary	330
	Questions for Review	331
	Problems	332
	Supplementary Readings	333

Chapter 11 Price and Output Under Pure Monopoly 334

11.1	Pure Monopoly	336
11.1a	Definition and Sources of Monopoly	336
11.1b	The Monopolist's Demand Curve	339
11.2	Short-Run Equilibrium Price and Output	341
11.2a	Total Approach	341
11.2b	Marginal Approach	342
11.2c	Profit Maximization or Loss Minimization	345
11.2d	Short-Run Marginal Cost and Supply	348
11.3	Long-Run Equilibrium Price and Output	349
11.3a	Profit Maximization in the Long Run	349
11.3b	Comparison with Perfect Competition: The Social Cost of Monopoly	351
11.4	Multipoint Monopolist	354
11.4a	Short-Run Equilibrium	354
11.4b	Long-Run Equilibrium	356
11.5	Price Discrimination	356
11.5a	Charging Different Prices for Different Quantities	356