



YOU SAVED
MONEY ON THIS
USED BOOK

ECONOMICS

Duncan McDougall
James Quirk

ECONOMICS

Duncan McDougall

Queen's University
Kingston, Ontario

James Quirk

California Institute of Technology
Pasadena, California



SCIENCE RESEARCH ASSOCIATES, INC.
Chicago, Palo Alto, Toronto
Henley-on-Thames, Sydney, Paris

A Subsidiary of IBM

To Gail, Jim, Janice, Jill, Coleen, and Tom

Compositor	Tyothetae
Illustrator	House of Graphics
Designer	Carol Harris
Acquisition Editor	David B. Caldwell
Project Editor	Kay Nelson
Cover photograph	E. Streichan/Shostal Associates

Photo on p. 117 © Paolo Koch / Rapho / Photo Researchers, Inc.

Photo on p. 397 © George W. Gardner / Stock, Boston

Library of Congress Cataloging in Publication Data

McDougall, Duncan M
Economics.

Includes Macroeconomics, by D. M. McDougall, and Microeconomics, by J. P. Quirk, which are also published separately.

Includes index.

1. Economics. I. Quirk, James P., joint author. II. Title.

HB171.5.M1395 330 80-25434
ISBN 0-574-19405-3

© 1981 Science Research Associates, Inc. All rights reserved.
Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

Preface

To the reader

Economics is an ever-changing field of study with a sense of relevance and controversy that comes from a concern with real-world problems. As economic problems change, so does the emphasis of economics—this textbook is quite different from those written twenty or even ten years ago. Nevertheless, this book is similar to those books because economics is a science with a core of theoretical principles that endures while continually being tested against the data of experience.

The newspapers and TV news give daily updates on economic data with respect to such diverse measures as the prices of gasoline and food, interest rates, foreign trade, unemployment, housing starts, and the level of industrial production. This book is designed to help you understand why these data are important. But the fact that economics is a part of daily life does not make it easy. Most students find the economist's way of thinking a little strange and unusual, and you will probably have to adjust your thinking habits and struggle a bit to get the most out of the material presented here.

We have tried as much as possible to make this book easy to study. There are photographs, questions, and key terms for each chapter as well as boxed material to illustrate principles. There are appendices to some of the chapters to give extended discussion of some material. However, the text is still the heart of the material, so when you

begin a chapter we suggest you read right through and at the end go over the list of key terms to check your understanding of what you have read. If you run across a concept you have met before but you are now unfamiliar with, consult the glossary at the back of the book. If you need further help, go to the index and use the page references to see how the term is defined and applied elsewhere in the book. Finally, it will be helpful to go back and read the chapter again, spending time with the illustrations, the highlighted material, and the examples in the boxes.

We strongly recommend that you use the study guide that accompanies this text. It has been designed specifically to help you with the material, using exercises and problems to test your understanding of the text. You will get maximum advantage from the study guide if you use it continuously as the course goes along. It will be of more help to you used that way than if you save it until just before test time, expecting to use it as a means of review.

When it does come time for review you will find the end-of-chapter material helpful. Review the key terms and go over the questions to make sure you understand what they are asking. Have your study guide with you and review it along with the text, chapter by chapter.

The basic point is to keep at it. Economics is a classic example of the truth of the statement that you only get out of a course what you put into it. We have tried to design this book to give you as

much help as we could, but you still have to supply the effort of reading, studying, some memorizing, and a lot of critical thinking.

When you master the material in this book you will have taken an important first step toward unraveling the mysteries of economics and the way economists think, and your understanding of the world around you will be increased dramatically. Use your new knowledge to keep yourself informed about public policy matters so you can contribute to public discussion. We hope that you will decide to go on to study more economics, encouraged by the vistas that have been opened to you here.

To the instructor

This book is designed as an introduction to the macro and micro theory that we take to be the core of modern economics. But the point of learning the theory is to be able to apply it to real-world situations. Thus we include numerous practical or policy problems set in boxes to illustrate the use of theory.

We also recognize that relatively few students will go on to major in economics, and we have had to make hard decisions about theoretical areas to omit. One traditional theory problem is indifference curve analysis. We have placed it in an appendix because we do not think it is necessary to the demonstration that demand curves are generally negatively sloped. But it is an elegant and powerful analytical tool that can excite students to the potentials of economic theory.

A similar problem arises in the area of policy applications in macro. We have not tried to “sugar-coat” the theoretical basis of recent policy moves, but purists might insist that we have simplified matters too much in presenting applications of controversial theoretical concepts. Our defense is that we have tried to be honest with the student but have avoided murky theoretical considerations

where the pay-off was small and confusion would likely result.

There are several features of this text that distinguish it from other introductory books. First is the emphasis on the basic theory underlying both macroeconomics and microeconomics. We have allocated more space to developing the theory than most other books because we feel that the most important function of a principles text is to teach how economists think about problems. Second, we have included a large number of real-world examples and applications that are tied as directly as possible to the discussion of the theoretical concepts in the text. Finally, we have included (mainly as appendix materials) some nonstandard topics such as recent work in experimental economics, the fundamentals of revealed preference, and important policy issues that have arisen in the past few years.

The majority of courses are taught with macro first, and we have followed that outline. But either order can be followed using the present text, and indeed separate macro and micro editions are available for those who are interested in only micro or only macro. The introductory material has been designed to precede either part of the course.

The first six chapters have been written to provide the essential concepts and ideas underlying the analysis of the later chapters. We have tried to include problems, illustrations, examples, and applications to make the introduction of necessary tools as palatable as possible. This introductory section is written to stimulate discussion, because when students begin by asking questions the theoretical structure necessary for the answer follows much more naturally.

This text has been written to be used sequentially within each section. The initial chapters develop the theory and the later chapters deal with applications of the theory to policy questions. We have intentionally omitted some material that appears in other books on the grounds that stu-

dents should not be made apprehensive by sheer bulk. You are of course free to pick and choose among the material, but we suggest that you follow the chapter sequence at the beginning of each of the macro and micro sections. It is our belief that the student must learn the model first.

Acknowledgments

Our intellectual debts are enormous. To our teachers, students, and colleagues, all of whom have contributed to this book, we give our sincere thanks. There is not room here to name them all and we hope they will not feel slighted by this blanket expression of thanks.

We owe a large debt too to our publisher, Science Research Associates. David B. Caldwell originally suggested the writing of this book and

has been most instrumental in seeing it to completion through its various drafts. We especially want to thank him for his help and encouragement. Kay Nelson has done an outstanding job as project editor. Special thanks also to Jill Mellick, who copyedited the text and wrote the test items. Others at SRA provided encouragement, expertise, and insistence on nothing short of excellence at all stages of the publication process and have contributed enormously to the finished product.

We would also like to acknowledge the important contributions of Professor Donald Chaffee, who supplied interesting and provocative end-of-chapter questions, and, with Professor Daniel Williamson, wrote the study guide to this text.

Duncan McDougall
James Quirk

PREFACE xvii

I INTRODUCTION

1 ECONOMICS: AN OVERVIEW 3

INTRODUCTION: THE DISMAL
SCIENCE 3

WHAT ECONOMICS IS ALL ABOUT 4

Positive Economics and Normative
Economics 4

Microeconomics and Macroeconomics 6

SOME EXAMPLES OF ECONOMIC PROBLEMS
AND PRINCIPLES 6

The Cake-Cutting Problem 7

Buying and Selling—Who Gains and
Who Loses? 7

Conspiracies and Incentives 8

The Paradox of Thrift and the Fallacy of
Composition 9

Nuclear Safety and the Market for
Insurance 10

Heroes and Villains in Economics 11

SUMMARY 12

2 TABLES AND GRAPHS: THEIR USE IN ECONOMICS 15

INTRODUCTION 15

RELATIONS BETWEEN VARIABLES 15

Dependent and Independent Variables 16

Functions and Relations 16

Linear Functions 18

Curvilinear Functions: The Law of
Gravity 18

OBSERVED RELATIONS 20

Predicting with Observed Data 21

A Practical Example 23

SUMMARY 26

3 THE ALLOCATION OF RESOURCES AND THE PRICE SYSTEM 29

INTRODUCTION 29

THE BASIC QUESTIONS A SOCIETY MUST

ANSWER 30

Outputs 30

Inputs 30

Distribution of Income 31

SOCIETY'S RESOURCES: THE FACTORS OF
PRODUCTION 31

Land 32

Labor 32

Management 32

Capital 32

STOCKS AND FLOWS 33

The Difference between Stocks and
Flows 33

Resource Stocks 34

THE PRODUCTION POSSIBILITY CURVE 35

Points along the Curve 35

Points inside the Curve 36

THE LAW OF INCREASING COST 36

Interpreting the Curve 37

Soviet Industrialization and the Law of
Increasing Cost 38

Why Does the Law of Increasing Cost
Hold? 41

THE PRICE SYSTEM AND THE CIRCULAR
FLOW OF ECONOMIC ACTIVITY 41

What Is a Price System? 41

The Circular Flow 43

Contents

THE PRICE SYSTEM AS AN ALLOCATION MECHANISM	44	BASIC FEATURES OF MARKETS	79
The Input Market	44	Similarities among Markets	79
The Output Market	45	Simple Markets	80
THE FUNCTION OF PRICES	45	Highly Organized Markets	80
Prices as Signals	45	DEMAND SCHEDULES AND SUPPLY SCHEDULES	81
Prices as Rationing Devices	45	Interpreting the Demand Schedule	82
Prices as Determinants of Income	46	Interpreting the Supply Schedule	82
EFFICIENCY AND THE PRICE SYSTEM	47	DEMAND AND SUPPLY CURVES	83
SUMMARY	47	Demand Curve for a Potential Buyer	83
		Supply Curve for a Potential Seller	83
4 GROWTH OF THE U.S. ECONOMY	51	MARKET DEMAND AND SUPPLY	84
INTRODUCTION	51	Adding up Individual Schedules	84
GROWTH IN OUTPUT	52	Market Demand and Supply Curves	84
Real Output, 1890–1978	52	Market Equilibrium	85
Output per Capita	53	Adjustment to Equilibrium	85
SOURCES OF GROWTH IN OUTPUT	55	The Constancy of Other Variables	87
Population	55	Change in Demand and Change in the Quantity Demanded	88
The Labor Force: Urban and Rural Trends	58	SUMMARY	93
Labor Productivity	62		
Other Factors of Economic Growth	65	6 THE PRICE SYSTEM AND CENTRALLY PLANNED ECONOMIC SYSTEMS	97
THE DISTRIBUTION OF INCOME	71	INTRODUCTION	97
Family Personal Income and Family Money Income	71	SOME DISTINGUISHING PROPERTIES OF ECONOMIC SYSTEMS	98
The Lorenz Diagram	73	Capitalism and Socialism	98
SUMMARY	74	Basic Questions about Economic Systems	98
		POLAR EXTREMES: THE PRICE SYSTEM AND THE CENTRALLY PLANNED ECONOMY	98
5 SUPPLY AND DEMAND AND THE OPERATION OF MARKETS	79	The Price System	98
INTRODUCTION	79	The Centrally Planned Economy	99
		Idealized Systems vs. the Real World	100

THE PRICE SYSTEM: A CLOSER LOOK	100	CURRENT MACROECONOMIC ISSUES	121
Economic Efficiency	100	Inflation	121
Economic Freedoms	101	Unemployment	124
CRITICISMS OF THE PRICE SYSTEM	101	The Productivity of U.S. Workers	129
Inefficiencies and Monopoly		International Transactions	131
Capitalism	102	CONCLUDING COMMENTS	134
Inefficiencies and Externalities	102	SUMMARY	134
Inequitable Distribution of Income	102		
THE MIXED PRICE SYSTEM	104	8 THE GROSS NATIONAL	
Government Redistribution of Income	105	PRODUCT 137	
Antitrust Laws and Natural Monopoly		INTRODUCTION	137
Regulation	105	Output and Input of a Firm	137
Control of Externalities	105	Measurement of GNP	138
Maintaining Employment Levels	105	Intermediate and Final Goods	138
An Overview of the U.S. System	106	THE NATIONAL INCOME AND PRODUCT	
THE CENTRALLY PLANNED		ACCOUNT	139
ECONOMY	107	The Flow of Output	139
Equitable Distribution of Income	107	The Flow of Factor Payments and Other	
Answers to Unemployment and Monopoly		Costs	141
Power	107	GENERAL FEATURES OF GNP	143
Abolition of Consumer Sovereignty	107	PRICE CHANGES AND REAL OUTPUT	144
CRITICISMS OF THE CENTRALLY PLANNED		The Effects of Market Prices	144
ECONOMY	108	Overcoming the Effects of Changing	
Inconsistency of Planning	108	Prices	144
Problems of Quality Control	108	The Implicit GNP Price Deflator	146
Absence of Market Signals	109	Real GNP	146
Lack of Innovation Incentives	109	GNP as a Measure of Well-Being	148
Market-Oriented Modifications	110	ALTERNATIVE MEASURES OF	
MARKET SOCIALISM	110	INCOME	149
Social Ownership of Means of		Household Income	149
Production	110	Disposable Personal Income	149
Free Market Operation	110	SUMMARY	150
Changes in the Distribution of Income	110	APPENDIX: Value Added	153
SOME COMPARISONS OF ECONOMIC			
SYSTEMS	111	9 A MODEL OF THE	
SUMMARY	112	MACROECONOMY 157	
		INTRODUCTION	157
II MACROECONOMICS		A SIMPLE MACROECONOMIC MODEL	157
7 MACROECONOMICS AND THE		The Introduction of Saving and	
ECONOMY 119		Investment	158
INTRODUCTION	119	Changes in the Level of National	
The Importance of Macroeconomics	119	Income	161
Applications of Macroeconomics	120	THE CONSUMPTION AND SAVING	
		FUNCTIONS	161

The Average Propensities to Consume and Save	164	Limits on Policy Choices	196
The Marginal Propensities to Consume and Save	164	The Inflationary Gap	196
THE EQUILIBRIUM LEVEL OF INCOME	165	AUTOMATIC STABILIZERS	196
The Decision to Invest	165	The Progressive Income Tax	197
Determining the Equilibrium Level	166	Transfer Payments	197
Equilibrium: The Meaning of Stability	167	Limitations on Automatic Stabilizers	198
SUMMARY	170	Automatic Stabilizers and Policy	199
10 AN EXPANSION OF THE CIRCULAR FLOW MODEL	173	FISCAL POLICY AND THE GOVERNMENT	
INTRODUCTION	173	DEBT	199
Adding a Financial Sector	173	The Cash Budget	199
Flows in the Financial Sector	174	Financing the Deficit	200
EXPANDING THE CIRCULAR FLOW	174	The Federal Government Debt	200
The Government Sector	174	Public vs. Private Debt	204
The Foreign Sector	176	SUMMARY	204
AN EXAMINATION OF THE EXPANDED MODEL	178	APPENDIX: Considerations on the Public Debt	207
The Reality of the Model	178	12 FISCAL POLICY AND ECONOMIC STABILIZATION	211
The Advantage of the Model	179	INTRODUCTION	211
CHANGES IN THE LEVEL OF NATIONAL INCOME	179	EARLY VIEWS OF THE ROLE OF GOVERNMENT	211
Injection into the Circular Flow	180	The Passive Role of Government	211
Increase in Leakages from the Circular Flow	181	The Active Role of Government	213
Adjustment to Changes in Injections:		THE KEYNESIAN REVOLUTION	214
The Multiplier	181	The New Deal	214
The Multiplier Process	183	The End of Depression	215
The Size of the Multiplier	185	The New Economics	217
Including the Government and Foreign Sectors	186	THE EMPLOYMENT ACT OF 1946	218
SUMMARY	188	CYCLICAL BUDGETING	220
11 THE GOVERNMENT SECTOR AND FISCAL POLICY	191	Fine-Tuning	221
INTRODUCTION	191	Recession Returns	221
THE MECHANICS OF FISCAL POLICY	192	The Reassessment	221
Government Expenditure	192	THE FULL-EMPLOYMENT BUDGET	224
Taxation	192	Illustrating the Full-Employment Budget	224
A Balanced Budget	193	The Lesson for Fiscal Policy	225
GOVERNMENT FISCAL POLICY	194	Tax Reform: 1964	225
The Deflationary Gap	194	The Post-Vietnam Period	226
Policy Choices	195	SUMMARY	231
		13 MONEY AND BANKING	235
		INTRODUCTION	235
		MONEY	235
		The Need for Money	235

The Nature of Money	236		
The Question of Savings Accounts		237	
Financial Intermediaries and Near Money	237		
BANKS	237		
Development of Banks	237		
Creation of Credit	238		
Implications for Banking Operations		239	
What Should a Banking System Do?		239	
DEVELOPMENT OF THE U.S. BANKING SYSTEM	240		
The Dual Function of Banks	240		
Banking Legislation	241		
The Federal Reserve System	241		
BANKS AND THE MONEY SUPPLY	243		
The Balance Sheet	243		
The Bank T-Account	244		
Loan Operation of a Bank	244		
The Path of a Particular Loan	246		
Multiple Expansion of Demand Deposits	248		
SUMMARY	252		
14 THE INSTRUMENTS OF MONETARY POLICY	255		
INTRODUCTION	255		
OPEN-MARKET OPERATIONS	256		
Purchase of Government Bonds	256		
Sale of Government Bonds	256		
OTHER MONETARY CONTROLS	259		
Changing Reserve Requirements	259		
Changing the Discount Rate	259		
Selective Credit Controls	263		
Moral Suasion	263		
THE CREDIT CRUNCH, 1980	264		
Controls on Consumer and Corporate Credit	264		
Near-Money Assets	264		
Strengths and Weaknesses of the Fed	265		
OPEN-MARKET OPERATIONS AND THE INTEREST RATE	265		
Rates of Interest	265		
Features of Government Bonds	266		
Open-Market Operations	266		
Effects of Buying and Selling Government Bonds	266		
THE FEDERAL RESERVE BANKS	267		
The Consolidated Balance Sheet	267		
What Backs our Money?	270		
The Value of Money	270		
SUMMARY	271		
APPENDIX: Discounting and Present Value	273		
15 ECONOMIC FLUCTUATIONS AND THEIR CONTROL	277		
INTRODUCTION	277		
THE ACCELERATOR PRINCIPLE	277		
THE INVESTMENT DECISION	282		
The Marginal Efficiency of Capital Schedule	283		
Marginal Efficiency of Investment for the Economy	284		
THE INTEREST RATE AS A POLICY INVESTMENT	284		
The Monetarists	289		
Constant Velocity	289		
Crowding Out	292		
COOPERATIVE POLICY	293		
Policy Bias	294		
Subordination of Monetary Policy	295		
Rules vs. Authority	295		
SUMMARY	297		
16 AGGREGATE SUPPLY AND INFLATION	301		
INTRODUCTION	301		
CAUSES OF INFLATION	303		
Demand-Pull Inflation	303		
Cost-Push Inflation	306		
THE TRADE-OFF CURVE	308		
The Inflation-Employment Relationship	308		
Shifts in the Trade-Off Curve	309		
WAGE AND PRICE CONTROLS	312		
The Difficulty of Establishing Controls	312		
A Typical Control Program	312		
Partial Controls	315		
OTHER EFFECTS OF INFLATION	315		
Productivity Growth	315		
International Implications	316		

POLICY CHOICES	316	
Monetary or Fiscal Policy	316	
Manipulation or Self-Regulation	317	
SUMMARY	317	
17 INTERNATIONAL TRADE	321	
INTRODUCTION	321	
THE BALANCE OF PAYMENTS ACCOUNT	323	
The Current Account	323	
The Capital Account	324	
The Foreign Exchange Reserve Account	325	
The Significance of the Reserve Position	325	
FOREIGN TRADE EQUILIBRIUM	325	
Interdependence of Exports and Imports	326	
Balance of Payments Equilibrium	327	
THE ECONOMIC BENEFITS OF TRADE	328	
Absolute Advantage	328	
Comparative Advantage	331	
Gains from Trade	334	
SUMMARY	336	
18 FIXED OR FLEXIBLE EXCHANGE RATES	339	
INTRODUCTION	339	
THE FOREIGN EXCHANGE MARKET	339	
The Demand for Foreign Exchange	340	
The Supply of Foreign Exchange	340	
The Operation of the Market	341	
PEGGED EXCHANGE RATES	343	
Recent Experience with Flexible Rates	343	
The Effect of Pegging the Rate	344	
An Accumulation of Foreign Exchange Reserves	346	
RECENT HISTORY OF EXCHANGE RATES	347	
The Gold Standard	347	
The Post-1945 Experiment	349	
Reconstruction	350	
The Recent Experience	352	
SUMMARY	354	
19 CONTROLS ON INTERNATIONAL TRADE	357	
INTRODUCTION	357	
MEASURES TO MAINTAIN PEGGED EXCHANGE RATES	357	
Eliminating Excess Demand for Foreign Currency	358	
Retaliatory Moves in the Wake of Elimination	359	
Abandoning the Pegged Rate	359	
TARIFFS AND OTHER TRADE CONTROLS	360	
Tariffs	360	
Nontariff Barriers	362	
ARGUMENTS FOR TARIFF PROTECTION	362	
The Infant Industry	363	
Balanced Development	364	
Domestic Goals	364	
MULTINATIONAL CORPORATIONS	366	
Example of an MNC	367	
THE DEVELOPMENT OF TRADE POLICY	367	
European Economic Community (EEC)	369	
The Kennedy Round	369	
SUMMARY	371	
20 TECHNOLOGY AND ECONOMIC GROWTH	375	
INTRODUCTION	375	
IMPLICATIONS OF ECONOMIC GROWTH	375	
The Role of Technical Change	376	
The Production-Possibility Curve	376	
DISCOVERY, INVENTION, AND INNOVATION	377	
The Process of Technical Change	377	
The Sources of Productivity Change	381	
The Role of Government	381	
ECONOMIC GROWTH AND STANDARDS OF LIFE	381	
Choosing a Technology	383	
Assigning the Costs of Technology	383	
Prophets of Doom	384	

LESS DEVELOPED COUNTRIES	384	Changes in Costs of Production	412
Development Plans	385	Change in Future Price Expectations	413
The Program	386	NONTYPICAL DEMAND AND SUPPLY	
The Results	387	CURVES	414
THE POPULATION PROBLEM	387	Nontypical Demand Curves	414
The Population Bomb	388	Nontypical Supply Curves	415
Looking at the Future	388	SUMMARY	419
THE ROLE OF THE DEVELOPED		APPENDIX: Experimental Economics and	
ECONOMIES	390	Supply and Demand Analysis	422
Concentration on Agriculture	391		
Concentration on Manufacturing	391	22 ELASTICITY	427
The Choice	393	INTRODUCTION	427
CONCLUSIONS	393	PRICE ELASTICITY OF DEMAND	428
SUMMARY	394	Responsiveness of Demand	428
		The Price Elasticity of Demand	428
		Types of Demand	429
		EXPENDITURES AND ELASTICITY OF	
		DEMAND	430
		PERFECTLY ELASTIC AND PERFECTLY	
		INELASTIC DEMAND CURVES	431
		ELASTICITY AND SUBSTITUTION	432
		Substitution and Relative Importance of	
		a Good	434
		Substitution over Time	434
		ESTIMATES OF ELASTICITY OF	
		DEMAND	435
		Goods with Inelastic Demand	435
		Goods with Elastic Demand	436
		OTHER ELASTICITY MEASURES FOR	
		DEMAND CURVES	437
		Income Elasticity of Demand	437
		Cross-Elasticity of Demand	440
		ELASTICITY OF SUPPLY	440
		Coefficient of Price Elasticity of	
		Supply	440
		Interpreting the Coefficient	440
		PERFECTLY ELASTIC AND PERFECTLY	
		INELASTIC SUPPLY CURVES	441
		Perfectly Elastic Supply	441
		Perfectly Inelastic Supply	442
		ELASTICITY OF SUPPLY AND	
		SUBSTITUTION	442
		Fixed vs. Unlimited Amounts	442
		The Long Run and the Short Run	442
		UNTANGLING SUPPLY AND DEMAND	442

III MICROECONOMICS

21 SUPPLY AND DEMAND ANALYSIS 399

INTRODUCTION	399
A REVIEW OF THE FUNDAMENTALS OF	
SUPPLY AND DEMAND ANALYSIS	400
Demand and Supply Schedules	400
Market Demand and Supply	
Schedules	400
RESERVATION PRICES AND THE GAINS	
FROM TRADE	401
The Use of a Reservation Price	401
The Equilibrium Price	402
SHIFTS IN MARKET DEMAND CURVES	403
Change in Income	403
Change in the Prices of Other Goods	404
Change in Tastes	405
SHIFTS IN MARKET SUPPLY CURVES	406
Changes in Costs of Inputs	407
Improvement in Technology	409
Expectation that the Price of a Good	
Will Change	409
CHANGES IN EQUILIBRIUM PRICES AND	
QUANTITIES	410
Comparative Statics	410
Increase in Income	411
Increase in the Price of Substitutes or	
Complements	412

	Convergence to Equilibrium	442	
	Interpreting the Graph and Using the Information	443	
	SUMMARY	447	
23	THE ECONOMICS OF THE CONSUMER	451	
	INTRODUCTION	451	
	A PROFILE OF THE U.S. CONSUMER	452	
	Consumer Demographics	452	
	Income Distribution by Households	453	
	Household Budgets	456	
	The Life Cycle of Household Spending	458	
	Credit and the Consumer	459	
	THE THEORY OF CONSUMER BEHAVIOR	460	
	Rationality and Consumer Behavior	460	
	Rationality vs. Reason	461	
	Satisfactions and Utility	461	
	BUDGETING AND CONSUMER CHOICES	463	
	The Budget Line	463	
	The Consumer's Choice and the Marginal Utility Rule	465	
	Changes in Prices and Income	467	
	Proportionate Changes in Prices and Income	470	
	SUMMARY	472	
	APPENDIX: Indifference Curves and Revealed Preference	475	
24	THE BUSINESS OF BUSINESS	487	
	INTRODUCTION	487	
	PROPRIETORSHIPS, PARTNERSHIPS, AND CORPORATIONS	488	
	Defining the Business Forms	488	
	The Financial Position of the Investor	488	
	ADVANTAGES AND DISADVANTAGES OF VARIOUS BUSINESS FORMS	488	
	Ease of Organization	488	
	Ease of Raising Equity Capital	489	
	Ease of Raising Debt Capital	489	
	Tax Status	490	
	Life Span of the Business	491	
	INDUSTRIAL AND SIZE DISTRIBUTION OF PROPRIETORSHIPS, PARTNERSHIPS, AND CORPORATIONS	493	
	CORPORATION STOCKHOLDERS AND BONDHOLDERS	495	
	Common and Preferred Stockholders	495	
	Creditors	495	
	The Difference between Stocks and Bonds	496	
	Leverage and the Debt/Equity Ratio	496	
	Assets, Liabilities, and Debt/Equity Ratios	498	
	SOURCES AND USES OF FUNDS FOR CORPORATIONS	498	
	Internal and External Sources	498	
	The Stock Exchange and Corporate Financing	499	
	Operation of the Stock Exchange	500	
	Reading the Financial Page	501	
	Investment Bankers	503	
	SEPARATION OF OWNERSHIP FROM CONTROL IN LARGE CORPORATIONS	505	
	Corporate Organization	505	
	Use and Abuse of the Corporate Structure	505	
	MAKING MONEY IN THE STOCK MARKET	506	
	SUMMARY	509	
25	THE LAWS OF PRODUCTION	513	
	INTRODUCTION	513	
	EFFICIENCY IN PRODUCTION	514	
	The Laws of Production and Efficiency	514	
	The Assumption of Efficiency in Economics	515	
	TYPES OF INPUTS AND PRODUCTION SITUATIONS	518	
	Fixed and Variable Inputs	518	
	Short-Run and Long-Run Situations	518	
	RETURNS TO A VARIABLE INPUT	519	
	The Total Product Curve	519	

Average Product and Marginal Product	519		
Marginal Product, Average Product, and Total Product	520		
THE LAW OF DIMINISHING RETURNS		523	
RETURNS TO SCALE	525		
Constant, Increasing, and Decreasing Returns to Scale	525		
Explaining Returns to Scale	525		
SUMMARY	532		
26 THE COSTS OF THE FIRM		535	
INTRODUCTION	535		
THE MEANING OF COST	535		
Opportunity Costs	536		
Short-Run and Long-Run Costs; Fixed and Variable Costs	538		
THE SHORT RUN	539		
Total Cost, Fixed Cost, and Variable Cost	539		
Average and Marginal Costs	540		
The Properties of AVC, AFC, and ATC	540		
THE LONG RUN	546		
Costs of the Firm and Returns to Scale	546		
Cost Curves for the Firm	550		
SUMMARY	555		
APPENDIX: Long-Run Cost Curves as Envelope Curves	558		
27 PROFIT MAXIMIZATION, THE COMPETITIVE FIRM, AND THE COMPETITIVE INDUSTRY		565	
INTRODUCTION	565		
THE COMPETITIVE INDUSTRY	566		
Price in a Competitive Industry	566		
Revenue of the Competitive Firm	568		
SHORT-RUN PROFIT MAXIMIZATION		569	
Short-Run Profits for the Competitive Firm	569		
Marginal Revenue = Marginal Cost	570		
The Shut-Down Decision	572		
Rules for Short-Run Profit Maximization	573		
The Short-Run Supply Curve of the Competitive Firm	574		
The Short-Run Supply Curve of a Competitive Industry	575		
Short-Run Equilibrium for a Competitive Industry	576		
LONG-RUN PROFIT MAXIMIZATION		583	
Long-Run Profits and the Competitive Firm	583		
Normal Profits and the Long-Run Supply Curve for a Competitive Industry	586		
Long-Run Competitive Equilibrium	588		
THE DYNAMICS OF SHORT-RUN–LONG-RUN ADJUSTMENTS		589	
SUMMARY	595		
28 MONOPOLY		599	
INTRODUCTION	599		
THE MEANING OF MONOPOLY	600		
Identifying a Monopoly Firm	600		
Examples of Monopoly	601		
THE MONOPOLY AND THE MARKET		602	
Natural Monopoly and Returns to Scale	602		
Market Size and Monopoly	605		
Revenue of the Monopoly Firm	606		
MR and Elasticity of Demand	610		
THE MONOPOLY AND PRICE		611	
Profit Maximization and the Monopoly Firm	611		
Monopoly Price and Marginal Cost	613		
Effects of Monopoly Pricing and Output	613		
MONOPOLY REGULATION		615	
Federal Antitrust Laws	615		
Regulation and Marginal Cost Pricing	619		
SUMMARY	621		
29 OLIGOPOLY AND MONOPOLISTIC COMPETITION		625	
INTRODUCTION	625		
CONCENTRATION IN U.S. MANUFACTURING	626		
OLIGOPOLY AND LONG-RUN COSTS	628		

OLIGOPOLY AND CARTELS	629	Long-Run Adjustment	665
Reasons for not Organizing as a		Human Capital	668
Cartel	629	SUMMARY	670
Conditions for a Successful Cartel	631		
OPEC-CARTEL THEORY IN ACTION	631	31 UNIONS AND THE LABOR	
PRICE LEADERSHIP IN OLIGOPOLY		MARKET 673	
INDUSTRIES	636	INTRODUCTION	673
The Stackelberg-Type Industry	636	MARKET POWER AND THE LABOR	
Competition for Leadership	640	MARKET	674
MONOPOLISTIC COMPETITION	641	Monopoly Power on the Output	
The Effect of the Number of Firms and		Market	674
Substitution among Products	462	Monopsony Power	675
Long-Run Equilibrium and Monopolistic		Unions and Monopoly Power on the	
Competition	644	Supply Side of Input Markets	675
Efficiency and Monopolistic		UNIONS AND THE LABOR MARKET	676
Competition	644	Unions and the Monopsony Firm	677
SUMMARY	646	Unions and Competitive Firms	678
		Bilateral Monopoly and Unions	681
30 MARGINAL PRODUCTIVITY AND THE		HISTORY OF THE U.S. LABOR	
MARKETS FOR INPUTS 649		MOVEMENT	682
INTRODUCTION	649	The Beginning of Unions	682
DEMAND FOR INPUTS IN THE SHORT		The First Effective National Labor	
RUN	650	Organization: The Knights of Labor	683
The Law of Diminishing Returns and		The Formation of the AFL and the	
Production	650	IWW	683
Marginal Revenue Product and Average		The Effect of the Depression	684
Revenue Product of an Input	650	The Formation of the CIO	685
Profit Maximization and the Hiring of		The Taft-Hartley Act	686
Inputs	653	Merger of the AFL and CIO	686
Input Hiring and the Shut-Down		SUMMARY	687
Decision	654	APPENDIX: How Monopoly, Monopsony, and	
Demand for Inputs Is a Derived		Union Control Affect Labor	
Demand	657	Equilibrium	689
Equalization of MRP throughout the			
Economy	657	32 REGULATION AND THE ECONOMIC	
SHORT-RUN EQUILIBRIUM IN THE INPUT		SYSTEM 697	
MARKET	659	INTRODUCTION	697
Capital and Land Services	659	FEDERAL REGULATORY ACTIVITY	698
Labor-Hours	660	METHODS OF REGULATION	703
Voluntary and Involuntary		Limiting Entry into an Industry	703
Unemployment	663	Control of Prices Charged by Firms in	
LONG-RUN EQUILIBRIUM IN THE INPUT		the Industry	703
MARKETS	664	Setting Quality Standards	704
Inputs with Long-Run Inelastic		SELF-REGULATION OF THE	
Supply	664	ECONOMY	704
Inputs with Long-Run Elastic Supply	665		

MARKET IMPERFECTIONS	705	REGULATION AND THE POLITICAL	
Market Power	705	PROCESS	710
Externalities	705	Initiating Regulation	710
Uncertainty	706	The "Capture" Theory of Regulation	711
MARKET IMPERFECTIONS AND		Congress and the Capture Theory	712
INTERVENTION BY THE		Limitations to the Capture Theory	713
GOVERNMENT	707	REGULATORY PROBLEMS	713
The Need for Government		Vested Interests	713
Intervention	707	Cost Overruns	717
Regulation of Externalities	707	Cross-Subsidization	718
Difficulty with Government		SUMMARY	719
Intervention	708		
DISTRIBUTION OF INCOME AND THE		GLOSSARY	721
MARKET ECONOMY	709	INDEX	737