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Intermediate Microeconomics

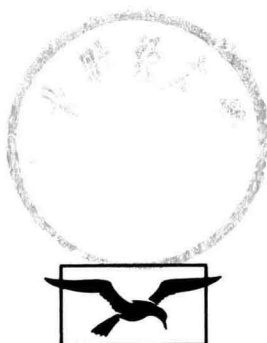
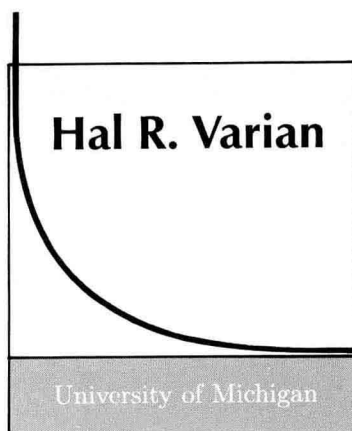
A Modern Approach

SECOND EDITION

Intermediate Microeconomics

A Modern Approach

Second Edition



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To Carol

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PREFACE

The success of the first edition of *Intermediate Microeconomics* has pleased me very much. It confirmed my belief that the market would welcome an analytic approach to microeconomics at the undergraduate level.

My aim in writing the first edition was to present a treatment of the methods of microeconomics that would allow students to apply these tools on their own, and not just passively absorb the pre-digested cases described in the text. I have found that the best way to do this is to emphasize the fundamental conceptual foundations of microeconomics and provide concrete examples of their application, rather than to attempt to provide an encyclopedia of terminology and anecdote.

A challenge in pursuing this approach arises from the lack of mathematical prerequisites for economics courses at many colleges and universities. The lack of calculus and problem-solving experience in general makes it difficult to present some of the analytical methods of economics. However, it is not impossible. One can go a long way with just a few simple facts about linear demand functions and supply functions, and some elementary algebra. It is perfectly possible to be analytical without being excessively mathematical.

The distinction is worth emphasizing. An analytical approach to economics is one that uses rigorous, logical reasoning. This does not necessarily imply the use of advanced mathematical methods. The language of mathematics certainly aids in helping to ensure a rigorous analysis, and is undoubtedly the best way to proceed when possible, but it may not be appropriate for all students.

Many undergraduate majors in economics are students who *should* know calculus, but don't—at least, not very well. For this reason I have kept calculus out of the main body of the text. However, I have provided complete calculus appendices to many of the chapters. This means that the calculus methods are there for the students who can handle them, but they do not pose a barrier to understanding for the others.

I think that this approach manages to convey the idea that calculus is not just a footnote to the argument of the text, but is instead a deeper way to examine the same issues that one can also examine verbally and graphically. Many arguments are much simpler with a little mathematics, and all economics students should learn that. In many cases I've found that with a little motivation, and a few nice economic examples, students become quite enthusiastic about looking at things from an analytic perspective.

There are several other innovations in this text. First, the chapters are generally very short. I've tried to make most of them roughly "lecture size" so that they can be read at one sitting. I have followed the standard order of discussing first consumer theory and then producer theory, but I've spent a bit more time on consumer theory than is normally the case. This is not because I think that consumer theory is necessarily the most important part of microeconomics; rather, I have found that this is the material that students find the most mysterious, so I wanted to provide more detailed treatment of it.

Second, I've tried to put in a lot of examples of how to use the theory described here. In most books, students look at a lot of diagrams of shifting curves, but they don't see much algebra, or much calculation of any sort for that matter. But it is the algebra that is used to solve problems in practice. Graphs can provide insight, but the real power of economic analysis comes in calculating quantitative answers to economic problems. Every economics student should be able to translate an economic story into an equation or a numerical example, but all too often the development of this skill is neglected. For this reason I have also provided a workbook that I feel is an integral accompaniment to this book. The workbook was written with my colleague Theodore Bergstrom, and we have put a lot of effort into generating interesting and instructive problems. We think that the workbook provides an important aid to the student for the study of microeconomics.

Third, I believe that the treatment of the topics in this book is more accurate than is usually the case in intermediate micro texts. It is true that I've sometimes chosen special cases to analyze when the general case is too difficult, but I've tried to be honest about that when I did it. In general, I've tried to spell out every step of each argument in detail. I believe that the discussion I've provided is not only more complete and more accurate than usual, but this attention to detail also makes the arguments easier to understand than the loose discussion presented in many other books.

Using the Book

There is probably more material in this book than can comfortably be taught in one semester, so it is worthwhile picking and choosing carefully the material that you want to examine in depth. I suspect that only a minority of users of this book will study the sections on uncertainty, for example. But I wanted an accurate treatment of the topic, precisely for that minority. There are some people who want to discuss this material in undergraduate courses, and it is helpful to them to have a textbook discussion available. It is my feeling that a textbook should provide a solid reference for the course—a place that students can go to see material spelled out in detail. But a textbook is no substitute for well-designed lectures and a carefully chosen syllabus.

Changes for the Second Edition

In preparing the second edition I have added two new chapters, rewritten two chapters, and made many smaller modifications throughout the entire book.

The new chapters are on factor supply and information economics. The factor supply chapter treats monopsony and factor demand by a monopolist in more depth than did the previous edition. The chapter on information economics examines adverse selection, moral hazard, and incentive schemes.

The rewritten chapters are those on consumer's surplus and oligopoly. These chapters were probably the most technically demanding chapters in the previous edition, but I think that the new chapters will be much more accessible. The consumer's surplus chapter uses an approach to the material that is more intuitive than in the first edition, but does not sacrifice rigor. The oligopoly chapter is now organized more systematically and provides a better understanding of how the various models of oligopoly fit together.

The Production of the Book

The entire book was typeset by the author on a personal computer using \TeX , the wonderful typesetting system designed by Donald Knuth. \TeX gives the author complete control over the structure and appearance of a document, and is especially convenient for text involving mathematics.

In preparing the second edition of the text I used Borland's Sprint on a Zenith Z241 and an ALR386 to enter the text and then used PCTeX from Personal \TeX , Inc. to typeset the material. I found the Polytron Version Control System to be very useful for keeping track of the modifications and changes.

The rough diagrams for the preliminary editions were prepared using Micrographix Designer. These were then redrawn and improved by a professional artist for the final version.

I used DVIPS and DVIHP from Arbortext to prepare the \TeX output for printing on laser printers. This provided an exact proof copy which could be class tested and edited. After several months of polishing, the final version of the manuscript was run through a phototypesetter to typeset the \TeX output.

The book design was by Nancy Dale Muldoon, with some modifications by Roy Tedoff and the author. Carolyn Viola John was the manuscript editor, and Drake McFeely coordinated the whole effort in his capacity as editor.

Acknowledgments

Several people contributed to this project. First, I must thank my editorial assistants for the first edition, John Miller and Debra Holt. John provided many comments, suggestions, and exercises based on early drafts of this text, and made a significant contribution to the coherence of the final product. Debra did a careful proofreading and consistency check during the final stages, and helped in preparing the index.

The following individuals provided me with many useful suggestions and comments during the preparation of the first edition: Ken Binmore (University of Michigan), Mark Bagnoli (University of Michigan), Larry Chenault (Miami University), Jonathan Hoag (Bowling Green State University), Allen Jacobs (M.I.T.), John McMillan (University of California at San Diego), Hal White (University of California at San Diego), and Gary Yohe (Wesleyan University).

My editorial assistants for the second edition were Sharon Parrott and Angela Bills. They provided much useful assistance with the writing and editing. Robert M. Costrell (University of Massachusetts at Amherst), Ashley Lyman (University of Idaho), Daniel Schwallie (Case-Western Reserve), A. D. Slivinskie (Western Ontario), and Charles Plourde (York University) provided me with detailed comments and suggestions about how to improve the second edition.

Several other users of the first edition provided me with useful suggestions. In particular, I would like to thank Dr. Reiner Buchegger, who prepared the German translation, for his close reading of the first edition, and for providing me with a detailed list of corrections. Other individuals to whom I owe thanks for suggestions are Theodore Bergstrom, Jan Gerson, Oliver Landmann, Alasdair Smith, Barry Smith, and David Winch.

Ann Arbor
October 1989

CONTENTS

1 The Market

Constructing a Model 1 Optimization and Equilibrium 3 The Demand Curve 3 The Supply Curve 5 Market Equilibrium 7 Comparative Statics 9 Other Ways to Allocate Apartments 11 *The Discriminating Monopolist* • *The Ordinary Monopolist* • *Rent Control Which Way Is Best?* 14 Pareto Efficiency 15 Comparing Ways to Allocate Apartments 16 Equilibrium in the Long Run 17 Summary 18 Review Questions 19

2 Budget Constraint

The Budget Constraint 20 Two Goods Are Often Enough 21 Properties of the Budget Set 21 How the Budget Line Changes 23 The Numeraire 26 Taxes, Subsidies, and Rationing 26 *Example: The Food Stamp Program* Budget Line Changes 31 Summary 31 Review Questions 32

3 Preferences

Consumer Preferences **34** Assumptions about Preferences **35** Indifference Curves **36** Examples of Preferences **37** *Perfect Substitutes* • *Perfect Complements* • *Bads* • *Neutrals* • *Satiation* • *Discrete Goods* Well-Behaved Preferences **44** The Marginal Rate of Substitution **48** Other Interpretations of the MRS **50** Behavior of the Marginal Rate of Substitution **51** Summary **52** Review Questions **53**

4 Utility

Cardinal Utility **57** Constructing a Utility Function **58** Some Examples of Utility Functions **59** *Example: Indifference Curves from Utility* *Perfect Substitutes* • *Perfect Complements* • *Quasilinear Preferences* • *Cobb-Douglas Preferences* Marginal Utility **65** Marginal Utility and MRS **66** Utility for Commuting **67** Summary **69** Review Questions **70** Appendix **70** *Example: Cobb-Douglas Preferences*

5 Choice

Optimal Choice **73** Consumer Demand **78** Some Examples **78** *Perfect Substitutes* • *Perfect Complements* • *Neutrals and Bads* • *Discrete Goods* • *Concave Preferences* • *Cobb-Douglas Preferences* Estimating Utility Functions **83** Implications of the MRS Condition **85** Choosing Taxes **86** Summary **89** Review Questions **90** Appendix **90** *Example: Cobb-Douglas Demand Functions*

6 Demand

Normal and Inferior Goods **96** Income Offer Curves and Engel Curves **96** Some Examples **99** *Perfect Substitutes* • *Perfect Complements* • *Cobb-Douglas Preferences* • *Homothetic Preferences* • *Quasilinear Preferences* Ordinary Goods and Giffen Goods **103** The Offer Curve and the Demand Curve **106** Some Examples **107** *Perfect Substitutes* • *Perfect Complements* • *A Discrete Good* Substitutes and Complements **111** The Inverse Demand Curve **112** Summary **114** Review Questions **115** Appendix **115**

7 Revealed Preference

The Idea of Revealed Preference 117 From Revealed Preference to Preference 119 Recovering Preferences 121 The Weak Axiom of Revealed Preference 123 Checking WARP 124 The Strong Axiom of Revealed Preference 127 How to Check SARP 128 Index Numbers 129 Price Indices 131 *Example: Indexing Social Security Payments* Summary 133 Review Questions 134

8 Slutsky Equation

The Substitution Effect 136 *Example: Calculating the Substitution Effect* The Income Effect 140 *Example: Calculating the Income Effect* Sign of the Substitution Effect 141 The Total Change in Demand 141 Rates of Change 143 The Law of Demand 145 Examples of Income and Substitution Effects 146 *Example: Rebating a Tax* Another Substitution Effect 150 Summary 152 Review Questions 153 Appendix 153 *Example: Rebating a Small Tax*

9 Buying and Selling

Net and Gross Demands 156 The Budget Constraint 157 Changing the Endowment 159 Price Changes 160 Offer Curves and Demand Curves 163 The Slutsky Equation Revisited 165 Use of the Slutsky Equation 167 *Example: Calculating the Endowment Income Effect* Labor Supply 169 *The Budget Constraint* Comparative Statics of Labor Supply 170 *Example: Overtime and the Supply of Labor* Summary 174 Review Questions 175 Appendix 175

10 Intertemporal Choice

The Budget Constraint **178** Preferences for Consumption **181** Comparative Statics **182** The Slutsky Equation and Intertemporal Choice **184** Inflation **185** Present Value: A Closer Look **187** Analyzing Present Value for Several Periods **188** Use of Present Value **189** *Example: Valuing a Stream of Payments* • *Example: How Much Is Winning the Lottery Really Worth?* Bonds **192** *Example: Installment Loans* Taxes **194** Choice of the Interest Rate **195** Summary **195** Review Questions **196**

11 Asset Markets

Rates of Return **197** Arbitrage and Present Value **199** Adjustments for Differences Among Assets **199** Assets with Consumption Returns **200** Taxation of Asset Returns **201** Applications **202** *Depletable Resources* • *When to Cut a Forest* Financial Institutions **205** Summary **206** Review Questions **207** Appendix **207**

12 Uncertainty

Contingent Consumption **209** Utility Functions and Probabilities **213** *Example: Some Examples of Utility Functions* Expected Utility **214** Why Expected Utility Is Reasonable **215** Risk Aversion **217** *Example: The Demand for Insurance* Diversification **220** Risk Spreading **221** Role of the Stock Market **222** Summary **223** Review Questions **224** Appendix **224** *Example: The Effect of Taxation on Investment in Risky Assets*

13 Risky Assets

Mean-Variance Utility **227** Measuring Risk **232** Equilibrium in a Market for Risky Assets **234** How Returns Adjust **235** *Example: Ranking Mutual Funds* Summary **239** Review Questions **239**

14 Consumer's Surplus

Demand for a Discrete Good **241** Constructing Utility from Demand **241** Other Interpretations of Consumer's Surplus **242** From Consumer's Surplus to Consumers' Surplus **244** Approximating a Continuous Demand **244** Quasilinear Utility **244** Interpreting the Change in Consumer's Surplus **245** *Example: The Change in Consumer's Surplus* Compensating and Equivalent Variation **247** *Example: Compensating and Equivalent Variations* • *Example: Compensating and Equivalent Variation for Quasilinear Preferences* Producer's Surplus **251** Calculating Gains and Losses **253** Summary **254** Review Questions **255** Appendix **255** *Example: A Few Demand Functions* • *Example: Equivalent Variation, Consumer's Surplus and Compensating Variation*

15 Market Demand

From Individual to Market Demand **258** The Inverse Demand Curve **260** *Example: Adding up "Linear" Demand Curves* Discrete Goods **261** The Extensive and the Intensive Margin **261** Elasticity **262** *Example: The Elasticity of a Linear Demand Curve* Elasticity and Demand **264** Elasticity and Revenue **265** Constant Elasticity Demands **267** Elasticity and Marginal Revenue **269** *Example: Setting a Price* Marginal Revenue Curves **270** Summary **272** Review Questions **273** Appendix **273** *Example: The Laffer Curve* • *Example: Another Expression for Elasticity*

16 Equilibrium

Supply **279** Market Equilibrium **279** Two Special Cases **280** Inverse Demand and Supply Curves **281** *Example: Equilibrium with Linear Curves* Comparative Statics **283** *Example: Shifting Both Curves* Taxes **283** *Example: Taxation with Linear Demand and Supply* Passing Along a Tax **288** The Deadweight Loss of a Tax **290** *Example: The Market for Loans* • *Example: Food Subsidies* Pareto Efficiency **295** Summary **297** Review Questions **298**

17 Technology

Inputs and Outputs **299** Describing Technological Constraints **300**
 Examples of Technology **301** *Fixed Proportions* • *Perfect Substitutes*
 • *Cobb-Douglas* Properties of Technology **303** The Marginal Product
304 The Technical Rate of Substitution **305** Diminishing Marginal
 Product **305** Diminishing Technical Rate of Substitution **306** Long
 and Short Runs **307** Returns to Scale **307** Summary **309** Review
 Questions **310**

18 Profit Maximization

Profits **311** The Organization of Firms **313** Profits and Stock Market
 Value **313** Fixed and Variable Factors **315** Short-Run Profit Max-
 imization **315** Comparative Statics **317** Profit Maximization in the
 Long Run **318** Inverse Factor Demand Curves **319** Profit Maximiza-
 tion and Returns to Scale **319** Revealed Profitability **321** *Exam-
 ple: How Do Farmers React to Price Supports?* Cost Minimization **325**
 Summary **325** Review Questions **326** Appendix **327**

19 Cost Minimization

Cost Minimization **329** *Example: Minimizing Costs for Specific Tech-
 nologies* Revealed Cost Minimization **333** Returns to Scale and the
 Cost Function **334** Long-Run and Short-Run Costs **335** Fixed and
 Quasi-Fixed Costs **337** Summary **338** Review Questions **338** Ap-
 pendix **339**

20 Cost Curves

Average Costs **342** Marginal Costs **344** Marginal Costs and Variable
 Costs **345** *Example: Specific Cost Curves* • *Example: Marginal Cost
 Curves for Two Plants* Long-Run Costs **350** Discrete Levels of Plant
 Size **352** Long-Run Marginal Costs **354** Summary **354** Review
 Questions **356** Appendix **356**

21 Firm Supply

Market Environments **358** Pure Competition **359** The Supply Decision of a Competitive Firm **361** An Exception **362** Another Exception **364** The Inverse Supply Curve **364** Profits and Producer's Surplus **365** *Example: The Supply Curve for a Specific Cost Function* The Long-Run Supply Curve of a Firm **370** Long-Run Constant Average Costs **372** Summary **373** Review Questions **374** Appendix **374**

22 Industry Supply

Short-Run Industry Supply **375** Industry Equilibrium in the Short Run **375** Industry Equilibrium in the Long Run **377** The Long-Run Supply Curve **379** *Example: Taxation in the Long Run and the Short Run* The Meaning of Zero Profits **383** Fixed Factors and Economic Rent **384** Economic Rent **386** Rental Rates and Prices **387** The Politics of Rent **388** *Example: Taxation in an Industry with Fixed Factors* Energy Policy **390** *Two-tiered Oil Pricing • Price Controls • The Entitlement Program* Summary **394** Review Questions **395**

23 Monopoly

Maximizing Profits **397** Linear Demand Curve and Monopoly **398** Markup Pricing **400** *Example: The Impact of Taxes on a Monopolist* Inefficiency of Monopoly **402** Deadweight Loss of Monopoly **404** *Example: The Optimal Life of a Patent* Natural Monopoly **407** What Causes Monopolies? **409** Price Discrimination **411** Second-Degree Price Discrimination **411** First-Degree Price Discrimination **412** Third-Degree Price Discrimination **413** *Example: Linear Demand Curves • Example: Calculating Optimal Price Discrimination • Example: Price Discrimination in Academic Journals* Monopolistic Competition **417** *Example: A Location Model of Product Differentiation* Summary **422** Review Questions **424** Appendix **424** *Example: Value Taxes and Quantity Taxes*

24 Factor Markets

Monopoly in the Output Market **427** Monopsony **430** *Example: The Minimum Wage* Upstream and Downstream Monopolies **434** Summary **436** Review Questions **437** Appendix **437**

25 Oligopoly

Choosing a Strategy **440** Quantity Leadership **440** *The Follower's Problem* • *The Leader's Problem* Price Leadership **445** Comparing Price Leadership and Quantity Leadership **448** Simultaneous Quantity Setting **448** An Example of Cournot Equilibrium **450** Adjustment to Equilibrium **451** Many Firms in Cournot Equilibrium **452** Simultaneous Price Setting **453** Collusion **454** *Example: Agricultural Marketing Committees* Comparison of the Solutions **458** Summary **459** Review Questions **460**

26 Game Theory

The Payoff Matrix of a Game **461** Nash Equilibrium **463** Mixed Strategies **464** The Prisoner's Dilemma **465** Repeated Games **467** Enforcing a Cartel **468** Sequential Games **469** A Game of Entry Deterrence **471** Summary **472** Review Questions **474**

27 Exchange

The Edgeworth Box **476** Trade **478** Pareto Efficient Allocations **479** Market Trade **481** The Algebra of Equilibrium **483** Walras' Law **485** Relative Prices **486** *Example: An Algebraic Example of Equilibrium* The Existence of Equilibrium **488** Equilibrium and Efficiency **489** The Algebra of Efficiency **490** *Example: Monopoly in the Edgeworth Box* Efficiency and Equilibrium **493** Implications of the First Welfare Theorem **495** Implications of the Second Welfare Theorem **497** Summary **499** Review Questions **500** Appendix **500**

28 Production

The Robinson Crusoe Economy **502** Crusoe, Inc. **504** The Firm **505**
 Robinson's Problem **506** Putting Them Together **507** Different Technologies **508**
 Production and the First Welfare Theorem **510** Production and the Second Welfare Theorem **511**
 Production Possibilities **511** Comparative Advantage **513** Pareto Efficiency **515** Castaways, Inc. **517**
 Robinson and Friday as Consumers **519** Decentralized Resource Allocation **520**
 Summary **520** Review Questions **521** Appendix **522**

29 Welfare

Aggregation of Preferences **524** Social Welfare Functions **527** Welfare Maximization **529**
 Individualistic Social Welfare Functions **531** Fair Allocations **532** Envy and Equity **533**
 Summary **534** Review Questions **535** Appendix **536**

30 Externalities

Smokers and Nonsmokers **538** Quasilinear Preferences and the Coase Theorem **541**
 Production Externalities **543** *Example: A Numerical Example* • *Example: Positive Externalities* Interpretation of the Conditions **548**
 Market Signals **551** The Tragedy of the Commons **552** Automobile Pollution **555**
 Summary **556** Review Questions **557**

31 Public Goods

When to Provide a Public Good? **559** Private Provision of the Public Good **563**
 Free Riding **564** Different Levels of the Public Good **565** Quasilinear Preferences and Public Goods **567**
Example: Pollution Revisited The Free Rider Problem **569** Comparison to Private Goods **571**
 Voting **572** Demand Revelation **574** *Example: An Example of the Clarke Tax* Problems with the Clarke Tax **578** Summary **579**
 Review Questions **580** Appendix **580**

32 Information

The Market for Lemons **583** Quality Choice **584** *Choosing the quality* Adverse Selection **586** Moral Hazard **588** Moral Hazard and Adverse Selection **589** Signaling **590** Incentives **593** Asymmetric Information **596** Summary **597** Review Questions **599**

Mathematical Appendix

Functions **A1** Graphs **A2** Properties of Functions **A2** Inverse Functions **A3** Equations and Identities **A3** Linear Functions **A4** Changes and Rates of Change **A4** Slopes and Intercepts **A5** Absolute Values and Logarithms **A6** Derivatives **A6** Second Derivatives **A7** The Product Rule and the Chain Rule **A7** Partial Derivatives **A8** Optimization **A9** Constrained Optimization **A9**

Answers **A11**

Index **A27**