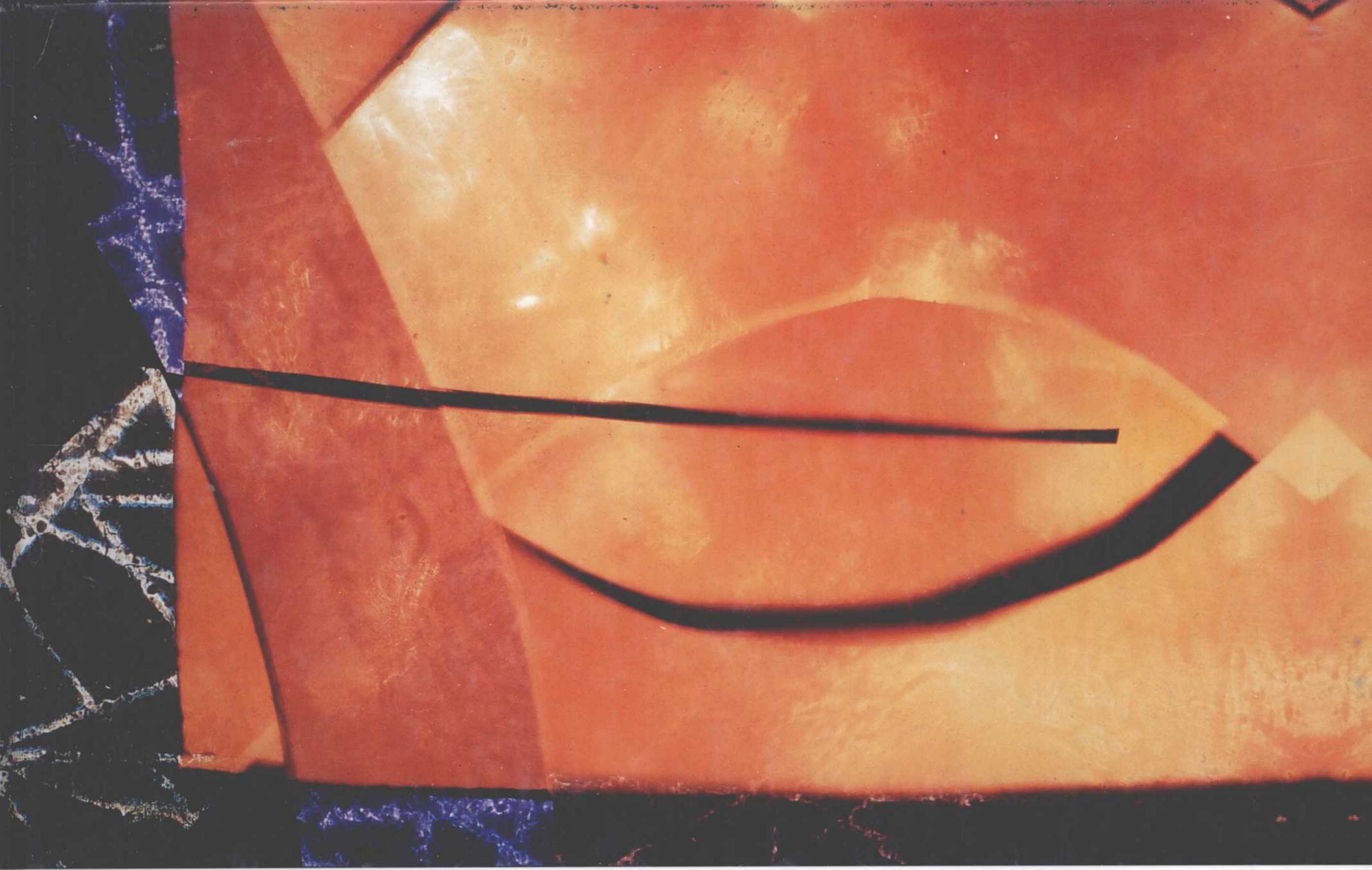

PRICE THEORY AND APPLICATIONS

Second Edition

B. Peter Pashigian

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Irwin
McGraw-Hill

Boston, Massachusetts   Burr Ridge, Illinois   Dubuque, Iowa
Madison, Wisconsin   New York, New York   San Francisco, California   St. Louis, Missouri

Irwin/McGraw-Hill

A Division of The ***McGraw-Hill*** *Companies*

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This book is printed on acid-free paper.

2 3 4 5 6 7 8 9 0 DOC/DOC 9 0 9 8 (U.S. edition)
1*2 3 4 5 6 7 8 9 0 DOC/DOC 9 0 9 8 7 (International edition)

ISBN 0-07-048778-2

Vice president and editorial director: *Michael W. Junior*
Sponsoring editor: *Lucille Sutton*
Senior project manager: *Beth Cigler*
Designer: *Michael Warrell*
Compositor: *Ruttle, Shaw & Wetherill*
Typeface: *10/12 Century Schoolbook*
Printer: *R. R. Donnelley & Sons Company*

Library of Congress Cataloging-in-Publication Data

Pashigian, B. Peter (Bedros Peter)
Price theory and applications / B. Peter Pashigian. —2nd ed.
p. cm.
Includes index.
ISBN 0-07-048778-2 (alk. paper)
1. Microeconomics. 2. Prices. I. Title.
HB172.P26 1997
338.5'2—dc21 97-1282

INTERNATIONAL EDITION

When ordering this title, use ISBN 0-07-115462-0.

http://www.mhcollege.com

PREFACE

The second edition of *Price Theory and Applications* continues the objectives and expectations of the first edition by clearly presenting the essentials of microeconomic theory and, equally important, applying the theory to consumer and firm behavior.

As the book's title suggests, my underlying conviction is that microeconomics can best be taught through an artful blend of theory and application. One without the other represents a failing. It is an unfortunate fact of life that many students who take intermediate microeconomics courses will never take another economics course. Only a minority of students take upper-level courses where they have an opportunity to apply the theory. In most business schools microeconomics is a required course but students seldom go on to apply the theory in advanced work. Given this fleeting rendezvous with microeconomics, I believe the study of microeconomics can be made worthwhile and even exciting by showing how the theory can be applied.

Each chapter in the second edition of *Price Theory and Applications* includes interesting and serious real-world applications, not only hypothetical examples. Former students have praised the applications and I believe readers of the second edition will too. Numerous reviewers of the second edition have been struck by the successful integration of the theory with unique and relevant applications. As one reviewer wrote, "Pashigian's greatest strengths are the breadth and relevance of his applications." This is a source of personal satisfaction since my objective was to write a rigorous book that showed how theory can be applied. I wrote this textbook because I thought the existing books could be improved upon. Some were books in logic that left students wondering why they had learned the theory. Others skimped on theory and presented applications that at times were either contrived or only distantly related to the theory. I have made a conscientious effort to motivate students' interest in theory by using incisive real-world applications in every chapter that lend an empirical dimension to the book.

The central premise of the book is that much behavior can be explained as a rational response to economic incentives. Because the theory has general applicability, the analyses in *Price Theory and Applications* deal with issues that are not specific to one economy but are universal to all modern economies. For instance, incentives matter even for a staple like water, which is essential for life. Even for water, when its price rises, consumers use less of it by modifying their behavior in numerous little ways, such as watering their lawns less frequently, taking shorter showers, and using mulch to preserve moisture for their plants. When the price of cotton rises because of a disease that has diminished the Asian cotton crop, producers throughout the world respond to the higher prices by shifting into cotton production and out of production of other crops. Obvious or subtle responses like these to changing economic incentives occur daily in local economies and throughout the world economy. Understanding the role of incentives is the most important lesson that students can gain from their study of microeconomics.

Distinctive Features of the Book

To find fresh and interesting applications, I look more to private sector behavior and less to government behavior, which is the more conventional practice in many microeconomics textbooks. I believe the favorable response to the book is due in part because I did not use the cut-and-dried applications involving the government. Other applications prepare students for the end-of-chapter Review Questions and Exercises, which are another especially valuable feature of the book that test the students' understanding of the theory by asking them to apply the theory in new and different situations. Applying microeconomic theory to new situations is exactly what many students will be doing the rest of their working lives.

Core Chapters 1, 2, part of 3, and 5 through 10 cover consumer behavior, the theory of the firm, and price formation under different structures. A differentiating feature of this book is its systematic examination of several topics that are either not treated or treated superficially elsewhere. Numerous reviewers have mentioned that a strength of the book is Part V, dealing with pricing practices and policies. Chapters 12 through 15 in Part V develop several models that help explain firms' price policies. Chapter 12, "Price Discrimination," presents an in-depth examination of the different forms of price discrimination. Unlike most books where the free rider problem is discussed but only in the context of the provision of public goods, Chapter 13, "The Free Rider Problem and Pricing," shows how frequently private markets face free rider problems and how firms use prices and other methods to circumvent these problems. Students find this topic fascinating and consistently rank the chapter among the most interesting, and I urge instructors to include part or all of the chapter in their course outlines. Chapter 14, "Market Behavior with Asymmetric Information," discusses how firms acquire a reputation for honesty and how private markets adapt to situations where asymmetric information exists. Chapter 15, "Pricing under Uncertainty," introduces the topic of uncertainty by showing how the theory of pricing under uncertainty explains seasonal variation in pricing and the growing frequency of sales.

Other chapters also treat significant subjects that are often ignored. The cost of time receives comprehensive treatment in Chapter 4, "The Cost of Time and the Theory of Consumer Behavior." With more women in the work force and with women's earnings rising faster than men's, time plays a more and more influential role in explaining consumer behavior and should receive greater recognition in microeconomics texts. Another important but ignored topic is the governance of the firm. After the decade of the 80s when many hostile takeovers and mergers occurred, can a modern textbook ignore the topic of firm governance and the role of product and capital markets in monitoring the policies of management? Much has been learned about the role of the capital market in monitoring management performance in the last 15 years and this topic receives full treatment in Chapter 11, "Monitoring the Corporation: Corporate Governance."

Changes for the Second Edition

Changes have been made to virtually all chapters. Care has been taken to rewrite theory sections and Applications when students' or reviewers' comments have asked for greater clarity. We have also clarified and simplified the Figures so they can be more easily understood. In many chapters fresh and up-to-date Applications replace older ones. New Review Questions and Exercises have been added in the second edition, and in response to suggestions by adopters, some easier exercises have been added. More difficult exercises are now marked with asterisks (*).

In response to suggestions by users, the second edition of *Price Theory and Applications* presents an intuitive explanation of consumer surplus in the body of Chapter 3 and presents the "correct" formal derivation of consumer surplus using indifference curves at the end of Chapter 3 in the Appendix. Chapter 8 includes an interesting new application of when a firm should introduce a new cost-reducing innovation and retire an older technology by looking at the retirement of the Boeing 707 after the price of jet fuel increased. In Chapter 8, for instructors who like to use consumer and producer surplus in a partial equilibrium welfare analysis, I have included a section on the effect of taxes, trade limitations, and market restrictions on total surplus. The gains from trade are also illustrated in Chapter 8 in a new Application entitled "Banana Wars: Total Surplus and the Gains from Trade," which examines the impact on consumer and producer surplus in the United States and in Europe after the European Union's imposed quotas on banana imports from Latin America. Partial equilibrium welfare analysis reappears in Chapter 9 in a new Application where readers consider the consequences of a merger between two hospitals that may reduce the cost of supplying health care but may also create a monopoly.

The concept of strategic interaction is introduced at the beginning of Chapter 10, "Oligopoly and Monopolistic Competition." In response to adopters' requests, the second edition gives a more extended analysis of repeated games, sequential games, and the theory of monopolistic competition. I have filled out the discussion of price discrimination in Chapter 12 by including a section on when bundling is profitable. Besides considering a specific version of the lemons problem, a more general model of the lemons problem is presented in Chapter 14, which now includes an extended discussion of the moral hazard problem and an analysis of when a monopolist will acquire a reputation for reliability and honesty. Among the new additions to Chapter 17, "Wage Determination in Labor Markets," is a section on the effects of the minimum wage and Applications that deal with substitution and scale effects in the airline industry and the topic of whether the wage premium for a college education has peaked.

These and other changes will make the second edition of *Price Theory and Applications* even more interesting and educational for instructors and students alike and will contribute to an increased understanding of how the price system functions.

Alternative Course Designs

Deciding which topics to include in a course is always a challenge, so some guidance may be helpful. The modular form of the book gives instructors considerable flexibility with regard to both content and level of difficulty. For a quarter course offered in an economics department an instructor may include Chapters 1–3, 5–10, and parts of Chapters 17–19. For a quarter course offered in a business school an instructor may include Chapters 1–2, the section of Chapter 3 on consumer surplus, and Chapters 4 and 6–10, and then select sections from Chapters 11–15. Instructors in business schools often do not include production theory and they can confidently skip to Chapter 6 where the development of the cost functions of the firm is independently derived. For a semester course offered by a department an instructor may include Chapters 1–10, all or part of 12, and 17–19, and then select among Chapters 4, 11, and 13–16. For a semester course a business school instructor may include Chapters 1–4, and 6–13 and supplement these chapters with parts of Chapters 14–15, 17, and 19.

Alternative Levels of Rigor

Price Theory and Applications was written and organized to give the instructor considerable flexibility in deciding whether to include or exclude, as appropriate, the sections denoted by asterisks (*), which cover more difficult material. There is also flexibility in the use of mathematics with most of the calculus placed in footnotes or in appendixes. Special care was taken to keep the exposition clear without sacrificing rigor. The second edition of *Price Theory and Applications* is appropriate for students with diverse backgrounds and interests.

The Teaching and Learning Package

Study Guide Professor Thomas Carroll of the University of Nevada at Las Vegas has prepared a detailed and user-friendly Study Guide that summarizes the major points in each chapter and gives the student ample opportunity to work multiple-choice and short answer problems.

Test Bank I was especially pleased when Charles Upton, now at Kent State University, agreed to do the Test Bank, since we saw eye-to-eye as to how a microeconomics course should be taught when Charles was a colleague at the University of Chicago. The Test Bank includes a variety of new short answer and story problems that test a student's understanding of each chapter's fundamentals.

Instructor's Resource Manual The Instructor's Resource Manual is once again prepared by Richard Peck. It follows the lead of the textbook in the application of economic concepts to real-world problems. Shane Greenstein at the University of Illinois contributed questions, some of which are included in the text and others in the Instructor's Resource Manual.

The Test Bank is available in a computerized format and an electronic version of the Instructor's Resource Manual is available to adopters by special request to your local Irwin-McGraw-Hill sales representative.

Acknowledgments

The second edition has benefited from the contributions of many. First, many thanks to those adopters of the first edition who suggested changes for the second edition. I have used this book in two different courses that I teach in the Graduate School of Business at the University of Chicago and extend my thanks to my former students who completed questionnaires, offered their opinions, and identified sections requiring greater clarity. The second edition is better because of their efforts. I want to particularly praise Jeanne Mey Sun who diligently read each chapter, correcting errors and suggesting rephrasing. I want to single out Lucille Sutton, Economics Editor at McGraw-Hill, who supervised the second edition while managing it from one stage to another. Accolades go to Stephanie Cappiello, Assistant Editor, who performed admirably while finding reviewers and tending to seemingly endless details. A word of appreciation is extended to Beth Cigler, Senior Project Manager, who guided the book through the production process.

Many economists across the country offered suggestions for the second edition after reading chapters in the first edition. Others read revised chapters for the second edition and made further suggestions. I am indebted to them for sharing their suggestions, praise, and criticism. They include **Jack Adams,** University of Arkansas at Little Rock; **James D. Adams,** University of Florida; **Michael Balch,** The University of Iowa; **David S. Ball,** North Carolina State University; **Howard Beales,** George Washington University; **Gautam Bhattacharya,** University of Kansas; **Michael R. Butler,** Texas Christian University; **David A. Butz,** University of Michigan; **Richard R. Cornwall,** Middlebury College; **Carl E. Enomoto,** New Mexico State University; **Paul G. Farnham,** Georgia State University; **Raymond J. Farrow,** Seattle University; **Robert G. Hansen,** Dartmouth College; **Donald B. Hausch,** University of Wisconsin–Madison; **Joseph W. Hunt,** Shippensburg University; **Thomas R. Ireland,** University of Missouri–St. Louis; **David R. Kamerschen,** University of Georgia; **Daniel Leonard,** Flinders University of South Australia; **Karen Lombard,** University of Miami; **Richard Manning,** Brigham Young University; **Thomas E. Merz,** Michigan Technlogical University; **Paul F. Okello,** The University of Texas at Arlington; **Sol Shallt,** University of Wisconsin–Milwaukee; **Paula Tkac,** University of Notre Dame; **Charles W. Upton,** Kent State University; **Juuso Valimaki,** Northwestern University; and **Chiou-nan Yeh,** Alabama State University.

Finally, a special word of gratitude to my wife Rose, who exhibited such patience once again while sharing her husband with the second edition of *Price Theory and Applications.*

B. Peter Pashigian

ABOUT THE AUTHOR

B. Peter Pashigian is Professor of Economics in the Graduate School of Business at the University of Chicago. He received his Ph.D. from the Department of Economics at the Massachusetts Institute of Technology. He has published articles in the *American Economic Review*, the *Journal of Political Economy, The Journal of Law and Economics, The Quarterly Journal of Economics*, and other leading journals on diverse topics such as why firms have sales; farmer opposition to futures markets; political support and opposition to environmental regulation; the demand and supply of lawyers; and other topics. He has served as coeditor of the *Journal of Business* and is a member of the executive committee of the George J. Stigler Center for the Study of the State and the Economy.

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