

THE ORGANIZATION OF INDUSTRY

William F. Shughart II



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THE ORGANIZATION OF INDUSTRY

*To my parents,
who got me started, and
To Hilary, Willie, and Frank
who keep me going.*

Preface

The market for industrial organization textbooks has become increasingly competitive in recent years. Despite this development, however, much of the field remains stuck in 1970. The market leader was first published in that year, and although a revised edition was introduced in 1980, both it and the new entrants failed to incorporate most of the important theoretical and empirical results that have appeared in the scholarly literature over the past two decades.

The current situation in the industrial organization textbook market is not unlike the state of affairs that prevailed in the area of macroeconomic theory until quite recently. For many of the same pedagogical reasons that the Keynesian model dominated the textbooks long after its loss of credibility among macro specialists—its ease of exposition, its unifying theme, its justification for and ready application to public policy—industrial organization textbooks have found it difficult to break free of the confines of the structure-conduct-performance model, the basic paradigm of the traditional approach to the study of industrial organization.

This predicament is perhaps understandable for two reasons. First, a new paradigm has not yet arisen to fill the vacuum created by the retreat of the traditional approach. Indeed, one interpretation of the “new learning” in industrial organization is that the firm, the industry, and the market are economic institutions that are far too complex to be understandable in terms of a single, simple model.

Second, the literature in industrial organization has developed in several different directions since the mid-1970s. Among the new developments are the “modern” theory of the firm, which highlights the importance of property rights, institutional structure, and transaction costs in delineating the boundaries of economic organization; the use of game-theoretic models to analyze the strategic interactions of oligopolistic firms under various assumptions concerning the information available to the individual sellers; and applications of the insights of the economic theory of regulation and public choice to the study of the purposes and effects of public policies toward business. Virtually every issue of the *Journal of Law and Economics*, the *RAND Journal of Economics*, and a number of other leading scholarly publications now contains new contributions to one or more of these topics. New journals specializing in industrial organization, neoinstitutional studies, law and economics, and related areas have appeared in recent years to keep pace with the new findings. Integrating these diverse approaches into a unified whole is a difficult task. Nevertheless, the time when textbooks could safely suppress the new developments in footnotes, or simply ignore them, is long past.

This book clearly presents the modern developments in the field of industrial organization and fully integrates them with more traditional approaches. Since I have sought to report much of the exciting work that has been done in the past two decades, novel topics appear throughout. One distinguishing feature of the book is the expanded treatment it accords to the modern theory of the firm. This body of literature stresses that the forces leading to the emergence of business organizations are not purely (or even mainly) technological in nature. Instead, the firm is a specialized institutional structure that comes into being to economize on the costs of governing certain types of business transactions. The firm is not a technological “black box,” but rather a complex set of contractual interrelationships among resource owners. As a result of the addition of this material, which is first introduced in Chapter 3, the purposes and effects of many business practices traditionally explained by ad hoc appeals to monopoly power are cast in an entirely new light.

A second distinguishing feature of the book is the emphasis it places on the public policy *process*. Existing texts are content to assume that the formulation and execution of public policies toward business involve issues lying outside the range of questions that the positive economist can address. Thus, whenever the actual effects of public policy diverge from the intended effects (and they do quite often by most accounts), the failures are attributed to error or to policymakers’ ignorance of economic principles. By contrast, modern scholarship in public finance and regulation has moved the discussion of policy away from normative assertions about “good” and “bad” law and “good” and “bad” enforcement and toward a positive analysis of how the institutions of public policy actually function. A whole set of novel topics heretofore suppressed or overlooked in the textbooks is opened up by recognizing that the rational, self-interest-seeking behavior ordinarily attributed to participants in ordinary markets also characterizes to decision making in the public sector. Among the unique issues covered in

the text are the interest-group theory of regulation (Chapter 8), the origins of the antitrust laws and the private incentives of antitrust policymakers and enforcement personnel (Chapter 9), and the use of governmental processes to subvert competition (Chapter 17).

The links among theory, empirical evidence, and public policy are emphasized throughout the book. There is a clear focus on antitrust policy as opposed to regulation and other forms of government intervention into the economy, though such policy initiatives are certainly not ignored. This focus partly reflects my own belief that antitrust represents the most pervasive, if subtle, of government's tools for regulating business enterprise. At the same time, antitrust is the least understood of public policies toward business in the sense that blind faith in the intentions of policymakers often substitutes for serious analysis of its purposes and effects. Public-interest explanations have increasingly yielded to private-interest explanations in the areas of traditional economic regulation of price and entry and newer forms of social regulation. It therefore seemed important to stress the emerging view that antitrust can be analyzed fruitfully from the same perspective.

During the nearly two years it has taken to see this project through to completion, I have continually benefited from the expertise of the editorial staff at Richard D. Irwin. I wish to single out for thanks Mike Junior, who first suggested the idea of writing a textbook to me; Elizabeth Murry, the developmental editor who assembled the team of outside reviewers and helped guide me throughout the writing (and rewriting) stage; and Ethel Shiell, the project editor who magically turned over 1,300 pages of typescript into a final product.

Like all textbook authors, I have benefited greatly from the comments and suggestions of a number of colleagues and critics. Four prepublication reviewers provided invaluable assistance in preparing the text. I incorporated many of their insights into the final draft and the book is more complete and, I think, more coherent as a result of their efforts. While absolving them of any responsibility due to my failure to take all of their suggestions to heart, I wish to extend my gratitude to Mark Bagnoli (University of Michigan), James Hagerman (Reed College), Philip G. King (San Francisco State University), and Richard N. Langlois (University of Connecticut—Storrs). I am especially grateful to Don Boudreaux (George Mason University), who read the entire manuscript in draft form and helped clarify the exposition at several critical points. My greatest debt, however, is owed to my former colleague, Bob Tollison, who started asking the questions that generated my interest in applying the economic model to the antitrust policy process. Finally, I extend my thanks to Elizabeth Masaitis and Rosanne Schwalenberg for typing the manuscript.

William F. Shughart II

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Introduction

THE SCOPE OF INDUSTRIAL ORGANIZATION

As George Stigler has so aptly observed, there is no such subject as industrial organization.¹ The basic economic content of the field is the same as that covered in any ordinary course in price theory that includes such topics as the theories of production and cost, the pricing and employment of resources, and the determination of output and price under alternative market structures. Candor has its limits, however. Industrial organization is well established as a distinct area of study in the standard economics curriculum.

Policy applications are what justify this distinction. Industrial organization attempts to link

the behavior observed in actual markets with the conceptual boxes provided by the theory of price. Industrial organization is richer in empirical content insofar as it deals with complications typically assumed away or glossed over in studying the pure theory of the firm. Among these complications are imperfect knowledge; product differentiation; transaction costs; ownership integration; research, development, and innovation; and a host of “nonstandard” contractual relations such as tying arrangements, resale price maintenance, franchising, exclusive dealing, and joint ventures.

The complications presented by the real world lead to two important questions, one of which is theoretical and the other practical. The first concerns the effects of the structure of industry and the business practices adopted by firms on the welfare of consumers. This question is nor-

¹ George J. Stigler, *The Organization of Industry* (Homewood, Ill.: Richard D. Irwin, 1968), p. 1.

mally addressed by comparing economic performance in actual markets—in terms of the pricing and output decisions of firms—with the benchmark provided by the model of perfect competition. A finding of noncompetitive performance then raises secondary questions concerning whether government action, in any of its various forms running from antitrust policy to regulation to public ownership, might be employed to secure an outcome closer to the competitive ideal.

Thus, “the principal concerns of industrial organization relate to the application of microeconomics to the problem of monopoly, restraints of trade, and the public regulation and ownership of enterprise.”² The origins of industrial organization as a distinct subspecialty within the field of economics can be traced to an interest in the workings of specific industries, which began to develop just before the turn of the century.³ The term *industrial organization* was apparently not coined until the 1930s, however, when a group of Harvard economists led by Edward Chamberlin and Edward Mason turned their attention to the study of the pricing policies of large-scale enterprises. Indeed, Chamberlin and Mason offered the first graduate course in industrial organization at Harvard in 1936.⁴

While industry studies remain the bread and butter of industrial organization,⁵ the field has been intimately involved with public policy issues since its inception. Attempts to understand how industries work or, more specifically, how the organization of industries affects how they work lead naturally to questions about the role government might play in influencing the organization of industry. The earliest of the indus-

try studies mentioned above were undertaken to evaluate the economic effects of the great trusts that arose in the late 19th century. This work was given impetus by the debate surrounding the passage of the first major piece of U.S. antitrust legislation, the Sherman Act of 1890.⁶ The Harvard economists of the 1930s were undoubtedly influenced by the Great Depression and by the federal government’s attempts to deal with the massive economic dislocations of that era. Today, the public policy issues raised by large-scale business enterprises remain a central focus of industrial organization.

NORMATIVE VERSUS POSITIVE ECONOMICS

Industrial organization’s blend of theory and policy confronts the student immediately with the importance of the distinction between *positive* and *normative* economics. On the one hand, the positive aspects of industrial organization analysis provide the opportunity for applying one’s knowledge of theory to the real world of business behavior. Does a firm or industry respond to a change in its economic environment in ways that are consistent with the predictions of theoretical models? On the other hand, judging whether an industry’s performance is “good” or “bad” in some sense is a normative issue that lies outside the range of questions that the positive economist can answer.

Positive economics involves deriving and, perhaps, testing statements of the form “if x , then y .”⁷ For example, one of the many implications of the model of the profit-maximizing firm is that if an excise or sales tax is levied on output, then, other things being equal, the quantity produced of the taxed commodity will fall and its

² Almarin Phillips and Rodney E. Stevenson, “The Historical Development of Industrial Organization,” *History of Political Economy* 6 (Fall 1974), p. 324.

³ Ibid.

⁴ E. T. Grether, “Industrial Organization: Past History and Future Problems,” *American Economic Review Papers and Proceedings* 60 (May 1970), p. 83.

⁵ See any of the editions of Walter Adams, ed., *The Structure of American Industry* (New York: Macmillan, 1977).

⁶ Phillips and Stevenson, “Historical Development of Industrial Organization,” p. 325.

⁷ For a comprehensive statement of the foundations of the positive approach, see Milton Friedman, “The Methodology of Positive Economics,” in Milton Friedman, *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), pp. 3–43.

price will rise. This conclusion is derived logically from the behavioral assumptions built into the theoretical model of the firm. It says nothing whatsoever about the desirability of the outcome, y (smaller output and higher price), or, indeed, about whether x (the tax) is the “best” (least costly or most equitable) method of achieving that outcome. Such questions fall within the domain of normative economics insofar as they deal with value judgments about “what should be” rather than “what is.”

To illustrate the importance of this distinction, there is a long-standing controversy among students of industrial organization concerning the empirical observation that firms in highly concentrated industries (those with a small number of large enterprises) appear to be more profitable than their counterparts in industries that exhibit lower concentration levels. The debate centers on the source of this differential profitability. Are profits high in concentrated industries because with fewer firms there is less competition and higher prices, or do large-scale enterprises earn higher profits because they are more efficient (have lower costs)?

In principle, the main point of contention in this debate can be resolved on purely empirical grounds. Do firms in concentrated industries in fact have lower costs? Is there evidence that increases in industrial concentration lead to higher prices? In practice, however, the difficulties in measuring costs precisely may prevent one from distinguishing sharply between these two possibilities. The point deserving emphasis, though, is that the contributions of positive economics end when these questions are answered in a satisfactory manner. Any policy conclusions drawn from the empirical results move the analysis into the realm of normative economics.

For example, suppose the data indicate that the profitability of large-scale enterprises can be attributed to their pricing policies rather than to any cost advantages they may enjoy. Nothing contained in this finding dictates that corrective actions be undertaken or, if such actions are

recommended, what specific type of intervention might be appropriate. Any conclusions on this score are purely a function of the researcher's own value judgments. Differing opinions about the role of profits in a market economy, the political consequences of the concentration of economic power in a few hands, the relative weight to be attached to considerations of social equity versus considerations of economic efficiency, and so on would lead to differing policy recommendations. But because such opinions are by nature based on the researcher's ethical values or preferences and are not testable in any scientific sense, they fall into the category of normative rather than positive economics.

As the tax example given above illustrates, however, the tools of positive economics can be used to examine the effects of alternative policy instruments on the economy. Applied to industrial organization, much of the research falling into an area that might be referred to as modern “political economy” has been devoted to the analysis of antitrust and regulation in terms of their impact on various aspects of the behavior of firms and industries. More recently, positive economic analysis has been applied to the study of the public policy process itself.⁸ The ability to recognize the point at which the leap is made from analyzing alternatives to prescribing a course of action is especially important in these instances. Positive economics nevertheless can be quite powerful in illuminating the discussion of public policy. It is in this respect, perhaps, that the positive aspects of industrial organization analysis hold the most exciting promise.

THE SOCIAL WELFARE MODEL

In drawing conclusions about the performance of industry, a normative benchmark is required. A variety of welfare standards are possible, in-

⁸ See, for example, Robert J. Mackay, James C. Miller III, and Bruce Yandle, eds., *Public Choice and Regulation: A View from Inside the Federal Trade Commission* (Stanford, Calif.: Hoover Institution Press, 1987).