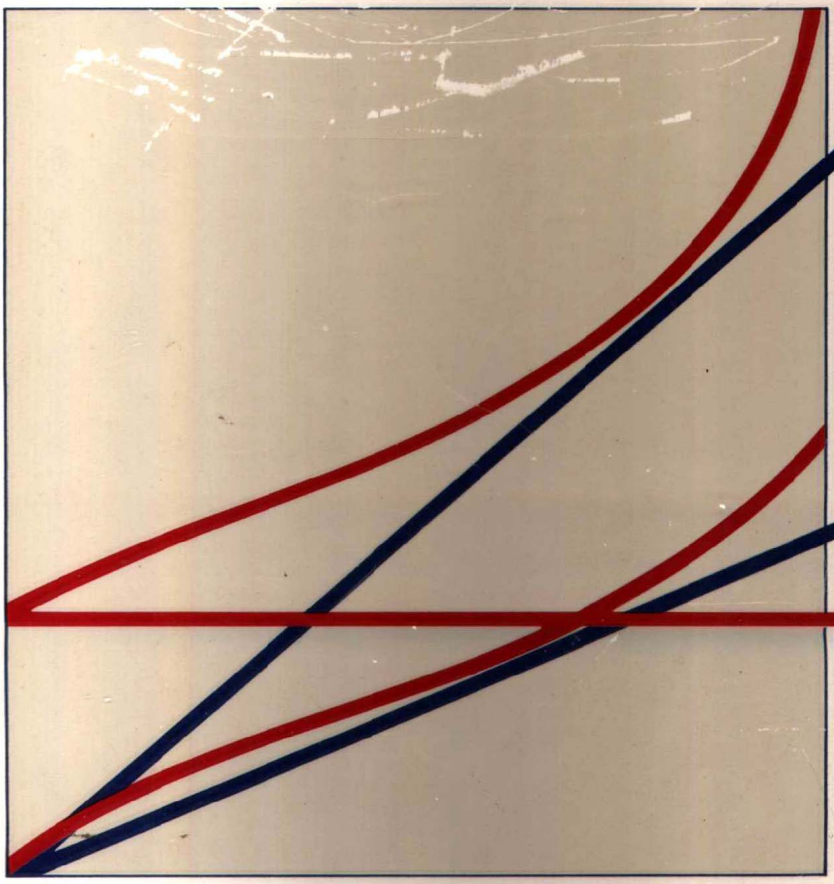
READINGS IN MICROECONOMICS



Breit Hochman Saueracker

Readings in Microeconomics

WILLIAM BREIT, Ph.D.

Trinity University,
San Antonio, Texas

HAROLD M. HOCHMAN, Ph.D.

Baruch College and the Graduate School and
University Center, City University of New York,
New York, New York

EDWARD SAUERACKER, Ph.D.

Bernard Baruch College,
City University of New York,
New York, New York

with 100 *illustrations*

TIMES MIRROR/MOSBY
COLLEGE PUBLISHING

St. Louis Toronto Santa Clara 1986

Manuscript Editor: Connie Leinicke (Top Graphics)
Book Designer: Joanne Kluba (Top Graphics)
Cover Designer: Christine Leonard Raquepaw
Production: Billie Forshee (Top Graphics)

A division of The C.V. Mosby Company
11830 Westline Industrial Drive
St. Louis, Missouri 63146

Previous editions of this book were published by Dryden Press, C.B.S., Inc.

Printed in the United States of America

Library of Congress Cataloging in Publication Data

Main entry under title:

Readings in microeconomics.

1. Microeconomics—Addresses, essays, lectures.
I. Breit, William. II. Hochman, Harold M.
III. Saueracker, Edward.
HB172.R33 1986 338.5 85-21398
ISBN 0-8016-0795-7

GW/VH/VH 9 8 7 6 5 4 3 2 1 02/C/251

Readings in Microeconomics

Foreword

It is important that students be exposed to the writings of leading economists at the earliest possible stage in their specialization. There is a knowledge and wisdom in scholarly publications not reproducible in a textbook, no matter how high its quality. The text, indispensable as it is in basic courses, must by its nature be thorough in its coverage and cannot have the liveliness obtained by concentrating on a limited area. The value of a volume of readings is indeed confirmed by the fact that this book is currently undergoing this revision.

The readings to supplement a basic course in microeconomics should not, of course, deal with the finer points of theory or subtle empirical analyses appropriate to more advanced work. The aim is to show leading minds grappling with the fundamentals of the subject. What is economics all about? How does it assess evidence and come to conclusions? What do the basic concepts of the subject—demand, supply, and utility—mean? How does one identify them with empirically observed magnitudes? How can the applicability of these concepts be tested, and what uses can be made of them in interpreting economic phenomena? Not only must the general concepts be scrutinized, but also the ways in which they can be used for analyzing particular economic problems, especially the structure of markets.

The editors of this book have chosen a varied menu, which yet makes up a well-composed feast. Relatively old papers, going back even to the 1930s, mingle with papers of the last few years. Most of the essays are in the mainstream neoclassical tradition, but some, such as those of Leibenstein and Williamson, represent sharply varying views. Not all the economists listed are equally well known, but all the papers are of high quality. The student will learn that in a field with high standards, the reputation of the author is not necessary for the interest and intellectual power of the paper.

The student will indeed see a variety of insights into fundamentals, demand, supply, the meaning of economic welfare, and its institutional realization. Although these topics are at the foundations, our understanding is still evolving. But even at this stage in the student's career, he or she will learn about relatively new developments, about the economic problems of the allocation of time, and about rational economic responses to the problem of acquiring information and the presence of actors with differing degrees of knowledge. The field, as presented in this book, is seen as developing, not as a static body of received doctrine.

KENNETH J. ARROW

Acknowledgments

This revision of our previous edition, which was published in 1971, would never have reached the drawing board were it not for the encouragement of several colleagues and the effort put into the process of constructive suggestion by many of our friends. In the first category, special mention is due David Colander, Arnold Harberger, and the late Abba Lerner. In the latter we note, with but alphabetical distinction, Thomas Barthold, Thomas Borcherding, Edgar Browning, William Dougan, Kenneth Elzinga, and Ronald Warren. In addition, we wish to recognize our special debt to Kenneth Arrow, both for his suggestions, which were (as one would expect) first class and for agreeing, as the editorial advisor to The C.V. Mosby Company, to write the Foreword.

Needless to say, with a project of this kind, staff help with seemingly endless detail is critical. For such assistance we thank the support staff of the Center for the Study of Business and Government at Baruch College and, in particular, Jean Cracchiolo, Donna Lambert, Susan Massaro, and Eva Mattina. We hope that the current generation of economics students finds this edition of *Readings in Microeconomics* as useful as the earlier editions seem to have been to prior cohorts. Their comments, frequently registered in a passing comment at a professional meeting, have been a continuing source of gratification, and did much to rekindle our interest in this project.

WILLIAM BREIT
HAROLD M. HOCHMAN
EDWARD SAUERACKER

Introduction

Price theory, unlike Picassos, chamber music, or giraffes, is not to be admired for its own sake. Rather, it is something utilitarian, like hammers, screwdrivers, and wrenches, that makes up, in Mrs. Joan Robinson's apposite phrase, "a box of tools." The purpose of this book is to familiarize the student with these tools as they are used by the professional economist. This has long held true for traditional policy issues, such as poverty and income distribution, or the explanation of such otherwise mysterious values as the price of caviar. In recent years, however, the instrumental power of microeconomics has been demonstrated through applications to such social problems as crime and environmental pollution, and to the provision of public goods and human resource development.

The excellent response to the first two editions, including their translation into Italian and Spanish, confirms our conviction that conventional textbooks, however clearly written and thorough, can satisfy but part of the needs of economic education. Seasoned students of economics must be thoroughly familiar with original articles in the professional literature, material which is all too often very limited in its availability. This book, therefore, tries to alleviate the need to oblige our students to spend countless hours in a reserve book room and restless nights under the threat of fine for failure to return reserve books by 9 AM—for most of us a depressing reminiscence. Moreover, to follow through on one of the major recent applications of pure theory, developed in one of the articles it reprints, the availability of this collection reduces, for students, the deadweight costs of travel time to and from libraries and time spent laboring over a photocopier, rather than reading in a comfortable easychair.

The papers reprinted in this book, as in the first two editions, focus on logic, methodology, and applications of microeconomics. We have, for the most part, selected articles that emphasize conceptual rather than empirical material, and articles that can be readily understood without significant formal training in any mathematics more advanced than geometry and, in a few cases, elementary calculus.

Microeconomics is that branch of economic theory concerned with the behavior of individual households and firms in the process of constrained choice. In working out the implications of this process, the theory explains how scarce resources are allocated among competing uses. There are two major subdivisions of microeconomics: one which explains the pricing of final products and another which explains the pricing of factors of production. The first deals with the division of output among consumers and the division of its production between firms and industries, while the second is concerned with the distribution of income. Taken together, they constitute the subject matter of microeconomics.

Microeconomics is sometimes called "price theory" because of its emphasis on how relative prices are determined and the crucial role such prices play in solving the problems of production and distribution. So important, in fact, are relative prices in organizing production and distribution that an economy primarily reliant on them to solve these problems is appropriately called a "price system."

The theory of price is one of the most challenging and rewarding subjects offered in a university curriculum. The student, in mastering its fundamentals, is enabled to sort out the considerations relevant to evaluation of the vast mass of policies that affect the allocation of resources. The papers collected in this volume were chosen on the basis of their ability to enable the student to learn and to apply the basic logic of this approach.

Part 1, "The Nature and Method of Economics," contains a classic paper by Frank Knight, in which the author defines the scope of economics and sets forth the five main functions of an economic system. He also provides an overview of the types of economic organizations that have attempted to perform these essential functions.

The second paper is an excursion into the domain of philosophy of social science. Milton Friedman's

essay on methodology explains the important distinction between positive and normative economics. The author argues that undue emphasis on the descriptive "realism" of assumptions has caused economists to neglect the really crucial factor in the construction of good economic theory, namely, whether the theory enables us to accurately predict how consumers and producers will behave? To what extent are the implications of the theory borne out in practice? This, of course, implies that any adequate scientific theory must be put into the form of testable (conceivably refutable) hypotheses.

Part 2, "Demand and Supply," covers two major areas in the subject matter of price theory: (1) demand and utility theory and (2) supply and the theory of the firm.

The second paper by Friedman suggests that the usual conception of the demand curve does not meet the positivist test of conceivable refutability, inasmuch as the existence of the income effect allows the demand curve to have either a positive or a negative slope. Friedman, in seeking an operational tool, derives a hypothetical constant real income demand curve in which he eliminates the income effect of a change in price. Thus, with Friedman's characteristic skill and ingenuity, the law of demand becomes an operational proposition. Martin Bailey, however, points out that Friedman's construction does not take into account the overall fixity of resource supply. The various points along the constant real income demand curve may not represent available alternatives. Bailey, therefore, fixes the production possibilities of the community and derives a demand curve reflecting genuinely available alternatives.

Robert Strotz's essay analyzes the question of whether utility is subject to measure (the notion of "cardinal" utility) or simple ranking ("ordinal" utility). The publication of John von Neumann and Oskar Morgenstern's work on game theory in 1944 resurrected measurable utility in a way that bears little resemblance to the earlier notion of cardinal utility. But, as Strotz argues, the new notion of measurable utility rests on a superior understanding of the meaning of measurement in which the latter is not a property of things, but a predictive procedure. In so doing, Strotz clears up some of the confusion surrounding the debates of the cardinalists and ordinalists.

Yoram Barzel, in his contribution to the theory of demand, explains why the existence of an income effect on consumption impedes the empirical testing of the law of demand (the proposition that "demand curves are negatively sloped"). Barzel shows how one can identify a class of observations free of the income effect that enables the law of demand to be directly tested.

The testing of the law of demand is carried out under laboratory conditions in ingenious experiments constructed by John Kagel, Raymond Battalio, Howard Rachlin, and Leonard Green. They were able to demonstrate, using male albino rats as their laboratory animals, that demand curves are negatively sloped for nonhuman consumers, suggesting that for humans, along with other animals, evolutionary pressures have induced behavioral responses to stimuli that can be characterized as solutions to a constrained maximizing model. This essay is representative of the growing literature in the field of "experimental economics."

One of the central questions of demand theory is whether tastes are capricious and differ importantly between people or, on the contrary, are stable over time and similar among people. George Stigler and Gary Becker confront this question and argue that much of the behavior used to illustrate the instability of tastes (addiction, habitual behavior, advertising, and fashions) can be explained by a generalized calculus of utility-maximizing behavior consistent with the assumption of stable tastes. Thus the hypothesis of stable tastes yields more useful predictions about observable behavior than the alternative, which assumes that tastes are capricious. This permits Stigler and Becker to claim that differences in prices or incomes can explain any differences or changes in behavior. Richard Thaler, on the other hand, in developing a positive theory of consumer choice, argues that traditional consumer demand theory, in certain well-defined situations, predicts behavior that is inconsistent with actual behavior. Thaler shows that consumers often underweigh opportunity costs, fail to ignore sunk costs, choose not to choose, and engage in search behavior that is inconsistent with the predictions of orthodox theory. This does not mean that the rationality assumption must be jettisoned, but only that the orthodox economic model does a poor job of predicting the behavior of average, but rational, individual consumers. Kelvin Lancaster, in developing a new theory of consumer choice, breaks away from the traditional approach in which goods are the direct objects of utility, and assumes instead

that the objects of utility are the characteristics of the goods from which utility is derived. The goods are inputs, and the output is a collection of characteristics. The Lancaster approach to consumer behavior is rich in heuristic and predictive power.

In the second section of Part 2 the theory of supply is analyzed. Armen Alchian explores some recent contributions to the theory of firm behavior in imperfectly competitive markets and argues that the utility-maximizing approach has implications consistent with the available evidence regarding managerial behavior. Louis De Alessi's paper relies heavily on Alchian's approach to firm behavior in showing that the use of a wealth-maximizing approach gives pertinent predictions regarding the short-run behavior of the firm. It also contains an examination of the "uneconomic" regions of the production function. Jack Hirshleifer goes deeper into the analysis of firm behavior by examining the problem of pricing commodities exchanged by the various divisional organizations within a single firm and indicates the pricing policies that would maximize the aggregate profits of the corporation. In an extremely influential paper, Harvey Leibenstein argues that the traditional concern of microeconomics with allocative efficiency is misplaced and that types of efficiency other than allocative efficiency (what Leibenstein calls "X-efficiency") are much more significant. The gains from increasing X-efficiency might be very large compared to gains that would be achieved by increasing allocative efficiency. Oliver Williamson takes up the important question of optimum firm size by looking at a bureaucratic theory under the "control-loss" phenomenon. Communication across successive hierarchical levels leads to an irreducible loss of control over an enterprise. Since this loss of control can be extensive, it puts a limit on firm size.

The papers in Part 3 are concerned with new developments in the theory of resource allocation. Stigler's essay in the area that has come to be called "search theory" shows that the determination of market price involves an important problem of information because sellers must be identified and their prices discovered. Stigler shows that price dispersion is the measure of ignorance in a market. Important aspects of economic organization are illuminated when considered from the viewpoint of the search for information. In particular, the theory has been shown to have significant implications for our understanding of investment markets and labor economics. Just as Stigler introduced the costs of information into traditional economic analysis, Becker introduced the cost of time into the theoretical analysis of choice. In doing so, Becker assumes that households are producers as well as consumers, who produce goods by combining inputs of time and goods according to the cost-minimization rules of standard economic theory. Some of the intriguing implications of this way of looking at resource allocation are summarized in Becker's paper. Stigler's theory of information is utilized by Armen Alchian and Harold Demsetz to develop a new theory of the firm, in which it is a device for team use of input, to minimize the cost of collecting and collating information about heterogeneous resources. This paper enables us to interpret the firm as a special class of contracts among a group of joint inputs to a team production process. The contractual structure is a means of enhancing the efficient organization of team production, which economizes on costs of monitoring to reduce shirking. Barzel's second paper is related to Becker's treatment of the allocation of time. Waiting time is a cost of establishing property rights in a good, over and above the cost required to produce it. Barzel shows that waiting (such as queuing) provides an additional route whereby consumers can equate on the margin under disequilibrium conditions (when the price imposed is not at the intersection of demand and supply). In the next paper, Kenneth Arrow applies microeconomic theory to help us understand racial discrimination in labor markets. He shows how utility-maximizing theories provide a reasonable account of the effect of discriminatory tastes on wages and employment in the short run, but are unsatisfactory in the long run. Adjustments that would wipe out racial wage differentials in the long run do not occur when there are considerable costs of change. Arrow also suggests that discrimination in labor markets is not only a reflection of tastes but of employer perceptions of reality.

The next two papers in this book are concerned with the general topic of contractual arrangements and market outcomes. The first, by Steven Cheung, introduces the notion of transaction costs and risks to explain why different contractual arrangements are chosen under the same system of property rights. The second paper, by Donald Gordon, ventures into the area of macroeconomics. In so doing, however, it shows the microeconomic underpinnings of wage rigidity and involuntary unemployment. In Gordon's

view, the typical auction market model (identified with Friedman and with Robert Lucas and Leonard Rapping) and the search model (identified with Edmund Phelps) entail both logical and empirical difficulties. Gordon, on the other hand, is able to explain rigidities in terms of implicit hiring contracts, which incorporate provisions relating to employee security and wages. This approach is an extension of neoclassical price theory and its maximizing postulates to labor markets.

The next three papers take up the problem of choice under uncertain information. George Akerlof's article deals with the problem consumers face when they are uncertain about product quality. Akerlof makes use of the market for used cars to illustrate the essence of his argument. Since sellers of used cars cannot capture the returns for good quality, which accrue to the entire group of sellers rather than to the individual seller, they have an incentive to market merchandise of poor quality. Because social and private returns differ in such markets, governmental interference may increase the welfare of all parties. The difficulty of distinguishing good from bad quality is inherent in many everyday business transactions, and Akerlof's analysis has extensions to those economic areas where trust is important.

The kind of market in which uncertainty is present is usually one in which insurance is common. But in the absence of private markets for insurance against uncertain events, should government provide insurance? Mark Pauly's paper argues in the negative. Pauly shows that insurance against some kinds of uncertain events may be suboptimal even if individuals are risk averse. Complete insurance may be inappropriate if its availability influences the demand for the services insurance policies provide.

In the third paper in this section, Michael Spence treats hiring in the job market as a type of investment under uncertainty, analogous to purchasing a ticket in a lottery. The wages the employer pays to enter the lottery depend on how he perceives it. The job applicant can affect that perception through observable characteristics, or signals, which the individual can manipulate. Education is one important form of signaling. Spence looks at the characteristics of a basic equilibrium signaling model. An equilibrium results when a set of expectations is confirmed by new data and tends to persist over time as new entrants come into the market. A considerable variety of market phenomena can be viewed through the conceptual lens of market signaling this essay provides.

The papers in Part 4 are concerned with the concepts and applications of the theory of market structures. Paul McNulty provides a thorough rehearsal of the meaning of competition at the hands of major figures in the history of economic thought and distinguishes between the idea of competition and that of market structure. To McNulty, competition should be viewed as a disequilibrium behavioral concept. Perfect competition, on the other hand, involves an equilibrium situation, a market structure in which price is given and no market activity is possible.

The paper on monopoly by Abba Lerner shows that market power can be measured by the excess of price over marginal cost. Lerner's article does much more than its title indicates. Included is a discussion of the meaning of an "optimum" position (clarified with the device of production and consumption indifference curves) that provides an introduction to the subject of "welfare economics." An analysis of the behavior of multiple-plant firms, as contrasted with the more conventional one firm–one plant model, is provided by Don Patinkin. He suggests that a cartel model is the best approach to understanding the forces at work in imperfectly competitive markets. In addition to its substantive content, Patinkin's article provides a brisk exercise in the use of the geometry of price theory.

Harold Demsetz's paper is an application of the theory of competitive price to the problem of regulating public utilities. In the case where production is characterized by large economies of scale, the commodity will essentially be produced by only one firm. This has led some scholars to assert that effective public utility regulation by the state is necessary and desirable. Demsetz shows that the theory of natural monopoly provides no logical basis for this outcome. Since there can be many bidders for a utility franchise, market rivalry will lead to prices well below that of unregulated monopoly. The discipline of the open market place, through competitive bidding for the utility contract, will be greater than that provided by regulation. The paper by William Breit and Kenneth Elzinga utilizes indifference curves to analyze the risk attitudes of corporate management. This enables them to suggest reforms in penalties that would most effectively deter violations of the antitrust laws.

William Baumol's paper generalizes the concept of the perfectly competitive market to a "perfectly contestable market." A contestable market is one in which entry is absolutely free and exit is costless. It is the potential entrants into markets who exercise discipline over the incumbents. Entry can be prevented under perfect market contestability only if the incumbent firms (be they monopolists, oligopolists, or whatever) offer consumers the benefits of perfect competition.

The final selections in Part 5 are concerned with general equilibrium, welfare maximization, and public goods. Arrow's paper provides a convenient overview of the issues surrounding the choice of market versus nonmarket allocation. He provides a crisp exposition of the meaning of "externality" and distinguishes sharply between the notions of "increasing returns" and "market failure." Arrow shows that market failure is a more general category than externality and differs from increasing returns, which is a technological phenomenon unrelated to the mode of economic organization. Francis Bator's paper performs a veritable tour de force, because in a relatively few pages it summarizes most of welfare economics within the framework of the static and stationary neoclassical model. Its treatment of such theory is, moreover, nonmathematical. The reader will find this a most helpful review of almost all aspects of microeconomics.

The next paper in the book takes up the question of the nature of costs and explores the famous Pigouvian distinction between private and social costs. In this classic work on the nature of social cost, Ronald Coase comes to the rather surprising conclusion that private and social costs are equal under perfect competition. Since the manner in which our legal system assigns liability for damages does not affect private marginal costs of production, it has no effect on the composition of output. Paul Samuelson's classic paper treats private consumption goods and public consumption goods as extreme polar cases to provide a neat geometrical treatment of the theory of public expenditure. In the next paper, James Buchanan constructs a model to explain the optimal size of membership organizations or "clubs" in which exclusion is possible. Since such organizations involve aspects of "privateness" and "publicness," Buchanan's technique helps to bridge the gap between Samuelson's polar cases of private and public goods.

The paper by Buchanan and Craig Stubblebine rigorously defines the various forms of observed externality: marginal and inframarginal externalities; potentially relevant and irrelevant externalities. They show that the mere existence of external effects cannot support a judgment about the desirability of social intervention, because the benefits from a particular activity, net of costs, may exceed the external costs it imposes on others. In the final paper, Harold Hochman and James Rodgers demonstrate conceptually that progressive income taxation may be fully consistent with the Pareto criterion, by postulating the existence of benevolent interdependence among utility functions with such interdependence. They then attempt to use this apparatus, which describes a rudimentary theory of charity, to explain the observed pattern of redistribution through the fiscal process. It is entirely conceivable that some redistribution will make all parties to income transfers, not just the recipients, better off.

Contents

Part 1 Nature and Method of Economics

Social Economic Organization*

FRANK H. KNIGHT

Frank H. Knight (B.A., Milligan College, 1911; B.A./M.A., University of Tennessee, 1913; Ph.D., Cornell University, 1916) was born in McLean County, Illinois, in 1885 and died in 1972. Most of his academic career was spent at the University of Chicago, where he was the Morton D. Hall Distinguished Service Professor of Social Science and Philosophy. Throughout his long career, Knight was one of the world's leading economists, making significant contributions to many issues of both economic theory, including the theory of profit, and social philosophy. He is best known for *Risk, Uncertainty and Profit*, a monumental study of the role of the entrepreneur in economic life. In 1950 Knight served as president of the American Economic Association, and in 1957 was the recipient of its coveted Francis A. Walker Award, given "not more frequently than once every five years to the living [American] economist who in the judgment of the awarding body has during his career made the greatest contribution to economics."

SOCIAL ECONOMIC ORGANIZATION AND ITS FIVE PRIMARY FUNCTIONS

It is somewhat unusual to begin the treatment of a subject with a warning against attaching too much importance to it; but in the case of economics, such an injunction is quite as much needed as explanation and emphasis of the importance it really has. It is characteristic of the age in which we live to think too much in terms of economics, to see things too predominantly in their economic aspect; and this is especially true of the American people. There is no more important prerequisite to clear thinking in regard to economics itself than is recognition of its limited place among human interests at large.

Common Definitions of Economics Much Too Broad, Though the Economic Conception of Life Is Too Narrow

In modern usage, the term economic has come to be used in a sense which is practically synonymous with intelligent or rational. This is the first and broadest conception of the term, within which we have to find by narrowing it down progressively, a definition which will describe the actual subject-matter of the science of political economy. It is in accord with good linguistic usage to think and speak

*Reprinted from *The Economic Organization* by Frank H. Knight by permission of Ethel Knight and George Stigler. Copyright 1933 by Harper and Row, Publishers. 1951 by Frank H. Knight, pp. 3–30.

of the whole problem of living as one of economy, the economical use of time, energy, etc.—*resource* of every sort. Many definitions of economics found in text books fall into this error of including virtually all intelligent behavior. One writer has actually given as his definition of economics the "science of rational activity." Others find its subject matter is "man's activity in making a living," or "the ordinary business of life." Such definitions come too near to saying that economics is the science of things generally, of everything that men are for practical reasons interested in. Such a definition is useless and misleading. It is necessary to devote a little time to making clear the restrictions which mark off the modestly limited domain of economic science within the inclusive sphere of knowledge as a whole.

In the first place, it should be understood that economizing, even in this broad sense of rational activity, or the intelligent use of given means in achieving given ends, does not include all human interests, and that the kind of knowledge on which such activity rests does not exhaust the field of human knowledge. It is, as we have said, one of the errors, not to say vices, of an age in which the progress of natural science and the triumphs of its application to life have engrossed men's attention, to look upon life too exclusively under this aspect of scientific rationality. It is requisite to a proper orientation to economic science itself as well as necessary to a sound philosophy of life, to see clearly that life must be more than economics, or rational conduct, or the intelligent accurate manipulation of materials and use of power in achieving results. Such a view is too narrow. It implies that the results to be achieved are to be taken for granted, whereas in fact the results themselves are often quite as much in question as the means and procedures for achieving results. Living intelligently includes more than the intelligent use of means in realizing ends; it is fully as important to select the ends intelligently, for intelligent action directed toward wrong ends only makes evil greater and more certain. One must have intelligent tastes, and intelligent opinions on many things which do not directly relate to conduct at all. Not only are the objectives of action in fact a practical problem, as well as the means of achievement, but intelligent discussion of the means cannot be separated from the discussion of the ends.

Living is an art: and art is more than a matter of a scientific technique, and the richness and value of life are largely bound up in the "more." In its reaction from the futility of medievalism and mystical speculation, the modern Western world has gone far to the other extreme. It loses much of the value of life through neglect of the imponderables and incommensurables, and gets into a false conception of the character of social and individual problems. Our thinking about life-values runs too much in terms of material prerequisites and costs. It is an exaggeration which may be useful to say that economic goods as a class are predominantly "necessary" rather than truly valuable. The importance of economic provision is chiefly that of a prerequisite to the enjoyment of the free goods of the world, the beauty of the natural scene, the intercourse of friends in "aimless" camaraderie, the appreciation and creation of art, discovery of truth and communion with one's own inner being and the Nature of Things. Civilization should look forward to a day when the material product of industrial activity shall become rather its by-product, and its primary significance shall be that of a sphere for creative self-expression and the development of a higher type of individual and of human fellowship. It ought to be the first aim of economic policy to reduce the importance of economic policy in life as a whole. So it ought to be the highest objective in the study of economics to hasten the day when the study and the practice of economy will recede into the background of men's thoughts, when food and shelter, and all provision for physical needs, can be taken for granted without serious thought, when "production" and "consumption" and "distribution" shall cease from troubling and pass below the threshold of consciousness and the effort and planning of the mass of mankind may be mainly devoted to problems of beauty, truth, right human relations and cultural growth.

The Actual Subject Matter of Economics

What is discussed in the science of economics includes a relatively small fraction of the economic side of life taken in the broad sense. It has nothing to do with the concrete processes of producing or distributing goods, or using goods to satisfy wants. The study of these matters comes under the head of technology, including engineering, business management, and home economics. Economics deals with the *social organization* of economic activity. In prac-

tice its scope is much narrower still; there are many ways in which economic activity may be socially organized, but the predominant method in modern nations is the price system, or free enterprise. Consequently it is the structure and working of the system of free enterprise which constitutes the principal topic of discussion in a treatise on economics.

The Meaning of Organization

Everyone is familiar with the idea of division of labor—by which is really meant specialization of labor—and many economists have taken it as their point of departure in expounding the science of economics. This was the procedure of Adam Smith, for example, whose book, *The Wealth of Nations*, published in the year 1776, ranks as the first modern treatise on economics.

Modern economic society is often compared with a living body or "organism" and the comparison is certainly suggestive. The essential similarity and the fundamental idea for our purpose is precisely that of division of labor or specialization. But the expression "division" of labor, does not tell us enough. The idea is rather division into different *kinds* of labor. A number of men hoeing in a field or nailing shingles on a roof exemplify "division" of labor, but not organization. The problems of organization arise only when *different things are being done*, in the furtherance of a *common end*, and in definite relations to each other, i.e., in *coordination*. A single man in raising a crop or building a house shows division of labor in another sense, since he does many different things, but this is not yet organization in the sense with which we are concerned. The human body shows organization in the true sense, since the various "organs" not only perform different functions, but must all act in a substantially continuous manner and in proper adjustment to each other. Again, organization must be distinguished from cooperation; it involves cooperation, but more. If a group of men lift a stone which is too heavy for one to move alone, they cooperate, and increase their power by cooperation; their action is cooperative, but they are not organized, since they are all doing the same thing.

It is obvious enough that the economic or living-making activities of the modern world are very elaborately organized. We need not pause to comment on the number of persons who have contributed, and in what different ways, in supplying the wants of the humblest citizen today. The authorities of the federal census prepare a catalogue or classification of occupations which lists many thousands of these economic functions for the working population of the United States alone and which yet makes no pretense of distinguishing all specialized functions. For instance, farm laborers are classed together though different individuals work at the production of a wide variety of crops. It is evident also that the accomplishment of the ultimate purpose of it all, the provision for the needs and desires of the people, depends upon these various operations being carried on with a fair degree of continuity and tolerable coordination. The problem of organization, which sets the problem of economic science, deals with the concrete means or mechanism for dividing the general function of making a living for the people into parts and bringing about the performance of these parts in due proportion and harmony.

More specifically, it is a problem of the social machinery for accomplishing *five fairly distinct functions*. Every system of organization must perform these tasks, and it is its success or failure in discharging these functions which determines its value as a system. Back of the study of economics is the practical need of making the organization better, and we can hope for success in this task only if we proceed to it intelligently, which is to say on the basis of an understanding of the nature of the work which a system of organization has to perform, and of the alternatives open in the way of possible types of organization machinery.

THE FIVE MAIN FUNCTIONS OF AN ECONOMIC SYSTEM

The general task of organizing the economic activity of society may be divided into a number of fundamental functions. These are in fact very much inter-connected and overlapping, but the distinction is useful as an aid to discussing the existing economic order both descriptively and critically, its structure as well as its workings. These functions fall into a more or less logical sequence. The first is to decide what is to be done, that is, what goods and services are to be produced, and in what proportions. It is the function of setting standards, of establishing a social scale of values, or the function of social choice; the second is the function of organizing production, in the narrow sense, of getting done the things settled

upon as most worth doing; third is distribution, the apportioning of the product among the members of society; the fourth is really a group of functions having to do with maintaining and improving the social structure, or promoting social progress.

1. The Function of Fixing Standards; The Notion of Efficiency

In a world where organizations were absent, where each individual carried on his life activities in isolation and independence of all others, the matter of standards would be simply a matter of individual choice. But when the production of wealth is socialized, there has to be a *social* decision as to the relative importance of different uses of productive power, as to which wants are to be satisfied and which left unsatisfied or to what extent any one is to be satisfied at the expense of any other. In the case of an individual, choice need be made only among his own wants; but in a social system, the wants of different individuals also come into conflict. As far as this is a quantitative question merely, of how far the wants of one are to be gratified at the expense of the wants of another, or left ungratified in favor of another, the problem is one of *distribution*, and will be noticed under another heading (the third function). But to a large and increasing extent, society finds it necessary or advisable further to regulate the individual's regulation of his own want-satisfaction, to enforce a community standard of living. As a matter of fact, these two problems are closely interlaced, the question of *whose* wants and that of *which* wants are to be given preference, and in what measure. It is important to observe that they are largely the same question. The difference in the "amount" consumed by different persons is not mainly a difference in the amounts of the same commodities; different persons consume different things, which are quantitatively compared only through the agency of the value scale itself. Nevertheless there seems to be ample justification for a logical separation of the questions of what is to be produced from that of who is to get the product, and for discussing separately the relations between the two phases of organization.

A point of fundamental importance in connection with the question of standards is that of the origin or ultimate source of wants. The system of social organization does more than reduce individual values to a common denominator or scale of equivalence. In large part the individual wants themselves are *created* by social intercourse, and their character is also largely dependent upon the form of organization of the economic system upon which they are dependent for their gratification. The workings of the economic organization in this connection form a problem too large and complex to be discussed at any length in a small book like this one. Indeed, the subject of wants is not only vast in scope but apparently cannot be reduced to scientific terms, except within rather narrow limits, falling rather in the field of art. The scientific discussion of economics has to be restricted in the main to the analysis of the organization of want-satisfaction. In the science of economics the wants are largely taken for granted as facts of the time and place, and the discussion of their origin and formation is left for the most part to the distinct studies of social psychology and cultural anthropology.[1]

The problem of standards or values occupies a key position in Economics. The practical objective of economics, it must be kept in mind, is that of improving the social organization and increasing its efficiency. There is a common misconception that it is possible to measure or discuss efficiency in purely physical terms. The first principles of physics or engineering science teach that this is not true, that the term efficiency involves the idea of value, and some measure of value as well. It is perhaps the most important principle of physical science that neither matter nor energy can be created or destroyed, that whatever goes into any process must come out in some form, and hence as a mere matter of physical quantity, the efficiency of all operations would equal one hundred per cent. The correct definition of efficiency is the ratio, not between "output" and "input" but between *useful* output and total output or input. Hence efficiency, even in the simplest energy transformation, is meaningless without a measure of usefulness or value. In any attempt to understand economic efficiency, the notion of value is more obviously crucial since most economic problems are concerned with a number of kinds both of outlay and of return, and there is no conceivable way of making comparisons without first reducing all the

[1] The deliberate creation or changing of wants for specific commodities as by advertising, is to some extent an exception, but in the main such activities must be regarded as creating a *knowledge of* certain *means* of satisfying wants rather than as changing ultimate *wants*.