

PRINCIPLES
OF
ECONOMICS

An introductory volume

BY
ALFRED MARSHALL

EIGHTH EDITION

Natura non facit saltum

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PREFACE TO THE FIRST EDITION.

ECONOMIC conditions are constantly changing, and each generation looks at its own problems in its own way. In England, as well as on the Continent and in America, Economic studies are being more vigorously pursued now than ever before; but all this activity has only shown the more clearly that Economic science is, and must be, one of slow and continuous growth. Some of the best work of the present generation has indeed appeared at first sight to be antagonistic to that of earlier writers; but when it has had time to settle down into its proper place, and its rough edges have been worn away, it has been found to involve no real breach of continuity in the development of the science. The new doctrines have supplemented the older, have extended, developed, and sometimes corrected them, and often have given them a different tone by a new distribution of emphasis; but very seldom have subverted them.

The present treatise is an attempt to present a modern version of old doctrines with the aid of the new work, and with reference to the new problems, of our own age. Its general scope and purpose are indicated in Book I.; at the end of which a short account is given of what are taken to be the chief subjects of economic inquiry, and the chief practical issues on which that inquiry has a bearing. In accordance with English traditions, it is held that the function of the science is to collect, arrange and analyse economic facts, and to apply the knowledge, gained by observation and experience, in determining what are likely to be the immediate and ultimate effects of various groups of causes; and it is held that the Laws of

Economics are statements of tendencies expressed in the indicative mood, and not ethical precepts in the imperative. Economic laws and reasonings in fact are merely a part of the material which Conscience and Common-sense have to turn to account in solving practical problems, and in laying down rules which may be a guide in life.

But ethical forces are among those of which the economist has to take account. Attempts have indeed been made to construct an abstract science with regard to the actions of an "economic man," who is under no ethical influences and who pursues pecuniary gain warily and energetically, but mechanically and selfishly. But they have not been successful, nor even thoroughly carried out. For they have never really treated the economic man as perfectly selfish: no one could be relied on better to endure toil and sacrifice with the unselfish desire to make provision for his family; and his normal motives have always been tacitly assumed to include the family affections. But if they include these, why should they not include all other altruistic motives the action of which is so far uniform in any class at any time and place, that it can be reduced to general rule? There seems to be no reason; and in the present book normal action is taken to be that which may be expected, under certain conditions, from the members of an industrial group; and no attempt is made to exclude the influence of any motives, the action of which is regular, merely because they are altruistic. If the book has any special character of its own, that may perhaps be said to lie in the prominence which it gives to this and other applications of the Principle of Continuity.

This principle is applied not only to the ethical quality of the motives by which a man may be influenced in choosing his ends, but also to the sagacity, the energy and the enterprise with which he pursues those ends. Thus stress is laid on the fact that there is a continuous gradation from the actions of "city men," which are based on deliberate and far-reaching

calculations, and are executed with vigour and ability, to those of ordinary people who have neither the power nor the will to conduct their affairs in a business-like way. The normal willingness to save, the normal willingness to undergo a certain exertion for a certain pecuniary reward, or the normal alertness to seek the best markets in which to buy and sell, or to search out the most advantageous occupation for oneself or for one's children—all these and similar phrases must be relative to the members of a particular class at a given place and time: but, when that is once understood, the theory of normal value is applicable to the actions of the unbusiness-like classes in the same way, though not with the same precision of detail, as to those of the merchant or banker.

And as there is no sharp line of division between conduct which is normal, and that which has to be provisionally neglected as abnormal, so there is none between normal values and "current" or "market" or "occasional" values. The latter are those values in which the accidents of the moment exert a preponderating influence; while normal values are those which would be ultimately attained, if the economic conditions under view had time to work out undisturbed their full effect. But there is no impassable gulf between these two; they shade into one another by continuous gradations. The values which we may regard as normal if we are thinking of the changes from hour to hour on a Produce Exchange, do but indicate current variations with regard to the year's history: and the normal values with reference to the year's history are but current values with reference to the history of the century. For the element of Time, which is the centre of the chief difficulty of almost every economic problem, is itself absolutely continuous: Nature knows no absolute partition of time into long periods and short; but the two shade into one another by imperceptible gradations, and what is a short period for one problem, is a long period for another.

Thus for instance the greater part, though not the whole, of the distinction between Rent and Interest on capital turns on the length of the period which we have in view. That which is rightly regarded as interest on "free" or "floating" capital, or on new investments of capital, is more properly treated as a sort of rent—a *Quasi-rent* it is called below—on old investments of capital. And there is no sharp line of division between floating capital and that which has been "sunk" for a special branch of production, nor between new and old investments of capital; each group shades into the other gradually. And thus even the rent of land is seen, not as a thing by itself, but as the leading species of a large genus; though indeed it has peculiarities of its own which are of vital importance from the point of view of theory as well as of practice.

Again, though there is a sharp line of division between man himself and the appliances which he uses; and though the supply of, and the demand for, human efforts and sacrifices have peculiarities of their own, which do not attach to the supply of, and the demand for, material goods; yet, after all, these material goods are themselves generally the result of human efforts and sacrifices. The theories of the values of labour, and of the things made by it, cannot be separated: they are parts of one great whole; and what differences there are between them even in matters of detail, turn out on inquiry to be, for the most part, differences of degree rather than of kind. As, in spite of the great differences in form between birds and quadrupeds, there is one Fundamental Idea running through all their frames, so the general theory of the equilibrium of demand and supply is a Fundamental Idea running through the frames of all the various parts of the central problem of Distribution and Exchange¹.

¹ In the *Economics of Industry* published by my wife and myself in 1879 an endeavour was made to show the nature of this fundamental unity. A short provisional account of the relations of demand and supply was given before the theory of Distribution; and then this one scheme of general reasoning was applied in

Another application of the Principle of Continuity is to the use of terms. There has always been a temptation to classify economic goods in clearly defined groups, about which a number of short and sharp propositions could be made, to gratify at once the student's desire for logical precision, and the popular liking for dogmas that have the air of being profound and are yet easily handled. But great mischief seems to have been done by yielding to this temptation, and drawing broad artificial lines of division where Nature has made none. The more simple and absolute an economic doctrine is, the greater will be the confusion which it brings into attempts to apply economic doctrines to practice, if the dividing lines to which it refers cannot be found in real life. There is not in real life a clear line of division between things that are and are not Capital, or that are and are not Necessaries, or again between labour that is and is not Productive.

The notion of continuity with regard to development is common to all modern schools of economic thought, whether the chief influences acting on them are those of biology, as represented by the writings of Herbert Spencer; or of history and philosophy, as represented by Hegel's *Philosophy of History*, and by more recent ethico-historical studies on the Continent and elsewhere. These two kinds of influences have affected, more than any other, the substance of the views expressed in the present book; but their form has been most affected by mathematical conceptions of continuity, as represented in Cournot's *Principes Mathématiques de la Théorie des Richesses*. He taught that it is necessary to face the difficulty of regarding the various elements of an economic problem,—not as determining one another in a chain of causation, *A* determining *B*, *B* determining *C*, and so on—but as all mutually

succession to the earnings of labour, the interest on capital and the Earnings of Management. But the drift of this arrangement was not made sufficiently clear; and on Professor Nicholson's suggestion, more prominence has been given to it in the present volume.

determining one another. Nature's action is complex: and nothing is gained in the long run by pretending that it is simple, and trying to describe it in a series of elementary propositions.

Under the guidance of Cournot, and in a less degree of von Thünen, I was led to attach great importance to the fact that our observations of nature, in the moral as in the physical world, relate not so much to aggregate quantities, as to increments of quantities, and that in particular the demand for a thing is a continuous function, of which the "marginal"¹ increment is, in stable equilibrium, balanced against the corresponding increment of its cost of production. It is not easy to get a clear full view of continuity in this aspect without the aid either of mathematical symbols or of diagrams. The use of the latter requires no special knowledge, and they often express the conditions of economic life more accurately, as well as more easily, than do mathematical symbols; and therefore they have been applied as supplementary illustrations in the footnotes of the present volume. The argument in the text is never dependent on them; and they may be omitted; but experience seems to show that they give a firmer grasp of many important principles than can be got without their aid; and that there are many problems of pure theory, which no one who has once learnt to use diagrams will willingly handle in any other way.

The chief use of pure mathematics in economic questions seems to be in helping a person to write down quickly, shortly and exactly, some of his thoughts for his own use; and to make sure that he has enough, and only enough, premisses for his conclusions (i.e. that his equations are neither more nor less in number than his unknowns). But when a great many symbols have to be used, they become very laborious to any

¹ The term "marginal" increment I borrowed from von Thünen's *Der isolirte Staat*, 1826—63, and it is now commonly used by German economists. When Jevons' Theory appeared, I adopted his word "final"; but I have been gradually convinced that "marginal" is the better.

one but the writer himself. And though Cournot's genius must give a new mental activity to everyone who passes through his hands, and mathematicians of calibre similar to his may use their favourite weapons in clearing a way for themselves to the centre of some of those difficult problems of economic theory, of which only the outer fringe has yet been touched; yet it seems doubtful whether any one spends his time well in reading lengthy translations of economic doctrines into mathematics, that have not been made by himself. A few specimens of those applications of mathematical language which have proved most useful for my own purposes have, however, been added in an Appendix.

September, 1890.

PREFACE TO THE EIGHTH EDITION.

THIS edition is a reprint of the seventh, which was almost a reprint of the sixth, the only changes being in small matters of detail: the Preface is almost the same as in the seventh edition.

It is now thirty years since the first edition of this volume implied a promise that a second volume, completing the treatise, would appear within a reasonable time. But I had laid my plan on too large a scale; and its scope widened, especially on the realistic side, with every pulse of that Industrial Revolution of the present generation, which has far outdone the changes of a century ago, in both rapidity and breadth of movement. So ere long I was compelled to abandon my hope of completing the work in two volumes. My subsequent plans were changed more than once; partly by the course of events, partly by my other engagements, and the decline of my strength.

Industry and Trade, published in 1919, is in effect a continuation of the present volume. A third (on Trade, Finance and the Industrial Future) is far advanced. The three volumes are designed to deal with all the chief problems of economics, so far as the writer's power extends.

The present volume therefore remains as a general introduction to the study of economic science; similar in some respects, though not in all, to that of volumes on *Foundations* (*Grundlagen*), which Roscher and some other economists have put in the forefront of groups of semi-independent volumes on economics. It avoids such special topics as currency and the organization of markets: and, in regard to such matters as the

structure of industry, employment, and the problem of wages, it deals mainly with normal conditions.

Economic evolution is gradual. Its progress is sometimes arrested or reversed by political catastrophes: but its forward movements are never sudden; for even in the Western world and in Japan it is based on habit, partly conscious, partly unconscious. And though an inventor, or an organizer, or a financier of genius may seem to have modified the economic structure of a people almost at a stroke; yet that part of his influence, which has not been merely superficial and transitory, is found on inquiry to have done little more than bring to a head a broad constructive movement which had long been in preparation. Those manifestations of nature which occur most frequently, and are so orderly that they can be closely watched and narrowly studied, are the basis of economic as of most other scientific work; while those which are spasmodic, infrequent, and difficult of observation, are commonly reserved for special examination at a later stage: and the motto *Natura non facit saltum* is specially appropriate to a volume on Economic Foundations.

An illustration of this contrast may be taken from the distribution of the study of large businesses between the present volume and that on *Industry and Trade*. When any branch of industry offers an open field for new firms which rise to the first rank, and perhaps after a time decay, the normal cost of production in it can be estimated with reference to "a representative firm," which enjoys a fair share both of those internal economies which belong to a well-organized individual business, and of those general or external economies which arise out of the collective organization of the district as a whole. A study of such a firm belongs properly to a volume on Foundations. So also does a study of the principles on which a firmly established monopoly, in the hands of a Government department or a large railway, regulates its prices with main reference indeed

to its own revenue; but also with more or less consideration for the wellbeing of its customers.

But normal action falls into the background, when Trusts are striving for the mastery of a large market; when communities of interest are being made and unmade; and, above all, when the policy of any particular establishment is likely to be governed, not with a single eye to its own business success, but in subordination to some large stock-exchange manoeuvre, or some campaign for the control of markets. Such matters cannot be fitly discussed in a volume on Foundations: they belong to a volume dealing with some part of the Superstructure.

The Mecca of the economist lies in economic biology rather than in economic dynamics. But biological conceptions are more complex than those of mechanics; a volume on Foundations must therefore give a relatively large place to mechanical analogies; and frequent use is made of the term "equilibrium," which suggests something of statical analogy. This fact, combined with the predominant attention paid in the present volume to the normal conditions of life in the modern age, has suggested the notion that its central idea is "statical," rather than "dynamical." But in fact it is concerned throughout with the forces that cause movement: and its key-note is that of dynamics, rather than statics.

The forces to be dealt with are however so numerous, that it is best to take a few at a time; and to work out a number of partial solutions as auxiliaries to our main study. Thus we begin by isolating the primary relations of supply, demand and price in regard to a particular commodity. We reduce to inaction all other forces by the phrase "other things being equal": we do not suppose that they are inert, but for the time we ignore their activity. This scientific device is a great deal older than science: it is the method by which, consciously or unconsciously, sensible men have dealt from time immemorial with every difficult problem of ordinary life.

In the second stage more forces are released from the hypothetical slumber that had been imposed on them: changes in the conditions of demand for and supply of particular groups of commodities come into play; and their complex mutual interactions begin to be observed. Gradually the area of the dynamical problem becomes larger; the area covered by provisional statical assumptions becomes smaller; and at last is reached the great central problem of the Distribution of the National Dividend among a vast number of different agents of production. Meanwhile the dynamical principle of "Substitution" is seen ever at work, causing the demand for, and the supply of, any one set of agents of production to be influenced through indirect channels by the movements of demand and supply in relation to other agents, even though situated in far remote fields of industry.

The main concern of economics is thus with human beings who are impelled, for good and evil, to change and progress. Fragmentary statical hypotheses are used as temporary auxiliaries to dynamical—or rather biological—conceptions: but the central idea of economics, even when its Foundations alone are under discussion, must be that of living force and movement.

There have been stages in social history in which the special features of the income yielded by the ownership of land have dominated human relations: and perhaps they may again assert a pre-eminence. But in the present age, the opening out of new countries, aided by low transport charges on land and sea, has almost suspended the tendency to Diminishing Return, in that sense in which the term was used by Malthus and Ricardo, when the English labourers' weekly wages were often less than the price of half a bushel of good wheat. And yet, if the growth of population should continue for very long even at a quarter of its present rate, the aggregate rental values of land for all its uses (assumed to be as free as now from restraint

by public authority) may again exceed the aggregate of incomes derived from all other forms of material property; even though that may then embody twenty times as much labour as now.

Increasing stress has been laid in successive editions up to the present on these facts; and also on the correlated fact that in every branch of production and trade there is a margin, up to which an increased application of any agent will be profitable under given conditions; but beyond which its further application will yield a diminishing return unless there be some increase of demand accompanied by an appropriate increase of other agents of production needed to co-operate with it. And a similar increasing stress has been laid on the complementary fact that this notion of a margin is not uniform and absolute: it varies with the conditions of the problem in hand, and in particular with the period of time to which reference is being made. The rules are universal that, (1) marginal costs do not govern price; (2) it is only at the margin that the action of those forces which do govern price can be made to stand out in clear light; and (3) the margin, which must be studied in reference to long periods and enduring results, differs in character as well as in extent from that which must be studied in reference to short periods and to passing fluctuations.

Variations in the nature of marginal costs are indeed largely responsible for the well-known fact that those effects of an economic cause, which are not easily traced, are frequently more important than, and in the opposite direction to, those which lie on the surface and attract the eye of the casual observer. This is one of those fundamental difficulties which have underlain and troubled the economic analysis of past times; its full significance is perhaps not yet generally recognized, and much more work may need to be done before it is fully mastered.

The new analysis is endeavouring gradually and tentatively to bring over into economics, as far as the widely different

nature of the material will allow, those methods of the science of small increments (commonly called the differential calculus) to which man owes directly or indirectly the greater part of the control that he has obtained in recent times over physical nature. It is still in its infancy; it has no dogmas, and no standard of orthodoxy. It has not yet had time to obtain a perfectly settled terminology; and some differences as to the best use of terms and other subordinate matters are but a sign of healthy life. In fact however there is a remarkable harmony and agreement on essentials among those who are working constructively by the new method; and especially among such of them as have served an apprenticeship in the simpler and more definite, and therefore more advanced, problems of physics. Ere another generation has passed, its dominion over that limited but important field of economic inquiry to which it is appropriate will probably be no longer in dispute.

My wife has aided and advised me at every stage of successive editions of this volume. Each one of them owes a great deal to her suggestions, her care, and her judgment. Dr Keynes and Mr L. L. Price read through the proofs of the first edition and helped me greatly; and Mr A. W. Flux also has done much for me. Among the many who have helped me on special points, in some cases in regard to more than one edition, I would specially mention Professors Ashley, Cannan, Edgeworth, Haverfield, Pigou and Taussig; Dr Berry, Mr C. R. Fay, and the late Professor Sidgwick.

BALLIOL CROFT,
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