

CHAPTER TWO

THE TECHNIQUES OF ECONOMIC ANALYSIS

After reading this chapter, you should be able to:

- a. Narrate the economic history.
- b. Explain the concepts of statistics and theory

Introduction

THE LAST sub-section of the preceding chapter points toward momentous problems, which will, under the interrelationship between economic ideas, be touched upon in this Chapter 2. Now we break off our argument and turn aside in order to hunt two hares whose paths diverge sometimes in a disconcerting manner: on the one hand, it is necessary to define the relations of economics to some of the fields of tooled knowledge that have or have had influence upon it or have border zones in common with it; on the other hand, it is convenient to use this opportunity to explain right now some of the concepts and principles that will govern our exposition of the history of economic analysis. This will be done in the current chapter.

Let us begin in a thoroughly common-sense manner. What distinguishes the ‘scientific’ economist from all the other people who think, talk, and write about economic topics is a command of techniques that we class under three heads: economic history, statistics, and ‘theory.’ The three together make up what we shall call Economic Analysis.

Economic history

Of these fundamental fields, economic history—which issues into and includes present day facts—is by far the most important. To start right in your career in economics afresh, there is the need to study the economic history. You have to on three grounds which are:

1. The subject matter of economics is essentially a unique process in historic time. Nobody can hope to understand the economic phenomena of any, including the present, era which has not an adequate command of historical *facts* and an adequate amount of historical *sense* or of what may be described as *historical experience*.
2. The historical report cannot be purely economic but must inevitably reflect also ‘institutional’ facts that are not purely economic: therefore it affords the best method for understanding how economic and non-economic facts *are* related to one another and how the various social sciences *should* be related to one another.
3. It is the fact that most of the fundamental errors currently committed in economic analysis are due to lack of historical experience more often than to any other shortcoming of the economist’s equipment. History must of course be understood to include fields that have acquired different names as a consequence of specialization, such as prehistoric reports and ethnology (anthropology).

Two worrying consequences of the argument above should be noticed at once.

- a. Since history is an important source of the economist’s material and since, moreover, the economist himself is a product of his own *and all preceding* time, economic analysis and its results are certainly affected by historical relativity and the only question is how much. No worth-while answer to this question can be got by philosophizing about it, but it will be one of our major concerns to work one out by detailed investigation. This is why sketches of ‘the spirit of the times’ and, in particular, of the politics of each period will preface our exposition of the economic analysis.
- b. We have to face the fact that the historian’s techniques are passengers in the big bus that we call economic analysis. Derivative knowledge is always unsatisfactory. Hence, even economists who are not economic historians themselves and who merely read the historical reports written by others must understand how these reports came into being or else they will not be able to appraise the real meaning.

Statistics

It stands to reason that for economics, statistics, that is, the statistical figure or series of figures must be of vital importance. In practice this has been recognized *at least* since the sixteenth and seventeenth centuries when a large part of the work of the Spanish *políticos*, for example, consisted in the collection and interpretation of statistical figures—not to mention the English econometricians, who were called political arithmeticians, and their fellow workers in France, Germany, and Italy. We need statistics not only for explaining things but also in order to know precisely what there is to explain. It is impossible to understand statistical figures without understanding how they have been compiled. It is equally impossible to extract information from them or to understand the information that specialists extract for the rest of us without understanding the methods by which this is done—and the epistemological backgrounds of these methods. Thus, an adequate command of modern statistical methods is a necessary (but not a sufficient) condition for preventing the modern economist from producing nonsense, though very much more so in some fields than in others: our stake in these methods is too great for us to leave judgment on the virtues or shortcomings, say, of the variate-difference method to specialists, even if they were undisputed about it. But again, we shall recognize, in principle at least: statistical methods are part of the tools of economic analysis even when not specially devised to meet its particular needs.

Theory

The third fundamental field is ‘theory.’ This term carries many meanings but only two of them are relevant so far as this book is concerned. The first and less important one makes theories identical with Explanatory Hypotheses. Such hypotheses are of course essential ingredients of historiography and statistics also. For instance, even the most fiercely factual historian, economic or other, can hardly avoid forming an explanatory hypothesis or theory, or several explanatory hypotheses or theories, on the origins of towns. The statistician must form a hypothesis or theory, say, on the joint distribution of the stochastic variables that enter into his problem. All that needs to be said about this is that it is an error to believe that the main business of the economic theorist consists in formulating such hypotheses (some may wish to add: out of the blue sky).

Economic theory does something entirely different. It cannot indeed, any more than can theoretical physics do without simplifying schemata or models that are intended to portray certain aspects of reality and take some things for granted in order to establish others according to certain rules of procedure. So far as our present argument is concerned, the things (propositions) that we take for granted may be called indiscriminately either hypotheses or axioms or postulates or assumptions or even principles, and the things (propositions) that we think we have established by admissible procedure are called theorems. Of course a proposition may figure in one argument as a postulate and in another as a theorem. Now, hypotheses of this kind are also *suggested* by facts but in strict logic they are arbitrary creations of the analyst. They differ from the hypotheses of the first kind in that they do not *embody* final results of research that are supposed to be interesting for their own sake, but are mere instruments or tools framed for the purpose of *establishing* interesting results. Moreover, framing them is no more all the economic theorist does than framing statistical hypotheses is all that the statistical theorist or in fact any theorist does. Just as important is the devising of the other gadgets by which results may be extracted from the hypotheses—all the concepts (such as ‘marginal rate of substitution,’ ‘marginal productivity,’ ‘multiplier,’ ‘accelerator’), relations between concepts, and methods of handling these relations, all of which have nothing hypothetical about them. And it is the sum total of such

gadgets which constitutes economic theory. In Mrs. Robinson's unsurpassable felicitous phrase, economic theory is a box of tools.

Although it is neither possible nor desirable for us to embark upon an epistemology of economics and although some of the topics pertaining to that field will receive attention both in the subsequent chapters. However, it will be helpful to insert here a few additional remarks in the hope that they will do something to scale down possible barriers between readers.

If economic theory is such a simple and harmless sort of thing as it has been represented, the reader might wonder where the hostility comes from that has followed it ever since it attracted any attention at all to this day. The main headings for an answer which our story will amply verify:

1. At all times, including the present, in judging from the standpoint of the requirements of each period (not judging the state of the theory as it was at any time by standards of a later time) the performance of economic theory has been below reasonable expectation and open to valid criticism.
2. Unsatisfactory performance has always been and still is accompanied by unjustified claims, and especially by irresponsible applications to practical problems that were and are beyond the powers of the contemporaneous analytic apparatus.
3. But while the performance of economic theory was never up to the mark, that is, never what it might have been, it was at the same time beyond the grasp of the majority of interested people who failed to understand it and resented any attempt at analytic refinement. Let us distinguish carefully the two different elements that enter into this resentment. On the one hand, there were always many economists who deplored the loss of all those masses of facts that actually are lost in any process that involves abstraction. So far as application is concerned, resentment of this type is very frequently quite justified. On the other hand, however, there are untheoretical minds who are unable to see any use in anything that does not directly bear upon practical problems. Or, to put it less inoffensively, who lack the scientific culture which is required in order to appreciate analytic refinement. It is very important for the reader to bear in mind this curious combination of justified and unjustified criticism of economic theory, which will be emphasized all along in this book. It accounts for the fact that criticism of economic theory practically always proceeded from both people who were above and people who were below the level of the economic theory of their time.
4. The hostility that proceeded from these sources was frequently strengthened by the hostility to the political alliances which the majority of theorists persisted in forming. The classical example for this is the alliance of economic theory with the political liberalism of the nineteenth century. As we shall see, this alliance had the effect of turning for a time the defeat of political liberalism into a defeat of economic theory. And at that time many people positively hated economic theory because they thought it was just a device for bolstering up a political program of which they disapproved. This view came all the easier to them because economic theorists themselves shared their error and did all they could to harness their analytic apparatus into the service of their liberal political creed. In this and many analogous cases, of which modern economic theory is another deplorable example, economists indulged their strong propensity to dabble in politics, to peddle political recipes, to offer themselves as philosophers of economic life, and in doing so neglected the duty of stating explicitly the value judgments that they introduced into their reasoning.
5. Although really implied under one or more of the preceding headings, we may just as well list as a separate one the view that economic theory consists in framing unfounded, speculative hypotheses in the first of the two meanings that were

distinguished above. Hence, the tendency quite frequent among economists or other social scientists to rule out economic theory from the realm of serious science. It is interesting to note that a propensity of this kind is by no means confined to our field. Isaac Newton was a theorist if he was anything. Nevertheless, he displayed a marked hostility toward theory and especially toward framing of causal hypotheses. What he really meant was not theory or hypothesis of our second kind but just inadequately substantiated speculation. Perhaps there was also something else in this hostility, namely the aversion of the truly scientific mind to the use of the word 'cause' that carries a metaphysical flavor. Newton's example may also be appealed to in order to illustrate the truth that dislike of the use of metaphysical concepts in the realm of empirical science does not at all imply any dislike of metaphysics itself.