

JOHN M. BLATT

# *Dynamic Economic Systems*

A Post-Keynesian Approach

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## Preface

The aim of this book is explained and a brief description of its organization appears in the introductory chapter. The purpose of this preface is to express my thanks and appreciation to the people and the organizations who have been so helpful to me in writing this work.

My first thanks go to those who have been kind enough to read all, or nearly all, of the manuscript in various draft stages and who have contributed extremely valuable comments and criticisms: Professor Alfred Eichner of Rutgers University, Professor Peter Groenewegen of Sydney University, Professor Geoffrey Harcourt of Adelaide University, Professor Murray Kemp of the University of New South Wales, Dr. Ulrich Kohli of Sydney University, Dr. Helen Lapsley of the University of New South Wales, and Mr. Brian Martin of the Australian National University. It is impossible to exaggerate the importance of their contribution, or my debt to them singly and collectively.

I am also greatly indebted to many others who have given me valuable advice on particular areas, including Professor Malcolm Fisher, Dr. Flora Gill, Professor Jules Ginswick, Dr. Josef Halevy, Dr. Peter Jonson, and Dr. Robin Pope.

It should not be thought that all, or even most, of them are in agreement with the views put forward here. These views have developed and their literary expression has been improved through continued interaction with kind people willing to give of their time and expertise in order to aid a man come to the field but recently. This has been equally helpful, and equally appreciated by me, whether it has come from a person generally in agreement, or strongly in disagreement, with my own views. Naturally, I take full responsibility for the contents of this book, including all its short-

comings. These reflect on me only, not in any way on the many kind people to whom I owe so much gratitude.

The writing was greatly helped by a study leave of five months as a guest of the School of Economics at Sydney University. I thank the University of New South Wales for granting me this leave, and Sydney University for making my stay there such a thoroughly enjoyable, exciting, and stimulating experience.

Another area of indebtedness of any author is to the literature in his field. I am not, alas, an avid reader. As a result, I must now apologize to those scholars whose books and articles should have been, but have not been, cited. In all these cases, it may be taken for granted that the omission is due to my not having read the work in question, not to any deliberate decision on my part to omit citation of the work. Other omissions are associated with the very considerable delays before overseas books get into Australian university libraries. Partial amends are made, I hope, by citing review articles and books which contain fuller lists of scholarly references.

Mrs. Jill Pollock has been enormously helpful, particularly in connection with the list of references.

Last but not least, I owe profound gratitude to my wife, Ruth, for her love, good nature, and continued forbearance during an extended, and no doubt difficult, period with an author in the throes of writing.

John Blatt  
Sydney

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# *Dynamic Economic Systems*



# BOOK I

## *Preliminaries*

Chapter 1 is an overall introduction to the book, explaining its purpose, its limitations, its structure, its organization, and its relationship to other work in theoretical economics.

Chapter 2 is a preparatory study of pure steady-state input-output systems, both for the case of bare subsistence and for the case of a social surplus. To get a steady state in the latter case, one must assume that the surplus is not invested for growth, but rather that all of it is consumed. The purpose of this chapter is twofold: (1) to show, following Sraffa (1960), that the neoclassical mechanism of supply and demand for determining prices can be bypassed in favor of a much simpler procedure, and (2) to show why Sraffa's procedure must be modified when we turn to dynamic economics, i.e., when steady-state conditions are no longer true for the system under study.

# Introduction

## A. Purpose and limitations

The bicentenary of *The Wealth of Nations* has passed, and so has the centenary of the neoclassical revolution in economics. Yet the present state of *dynamic* economic theory leaves very much to be desired and appears to show little sign of significant improvement in the near future.

From the time of Adam Smith, economic theory has developed in terms of an almost universal concentration of thought and effort on the study of equilibrium states. These may be either states of static equilibrium, or states of proportional and balanced growth. Truly dynamic phenomena, of which the most striking example is the trade cycle, have been pushed to the sidelines of research.

In defense of this concentration on equilibrium and the neglect of true dynamics, there are two arguments:

1. Statics or (what comes to much the same thing) balanced proportional growth is much easier to handle theoretically than true dynamic phenomena. A good understanding of statics is a necessary prerequisite for the study of dynamics. We must learn to walk before we can attempt to run.

2. In any case, while no economic system is ever in strict equilibrium, the deviations from such a state are small and can be treated as comparatively minor perturbations. The equilibrium state is, so to speak, the reference state about which everything turns and toward which the system gravitates. Market prices fluctuate up and down, but there exist "natural prices" about which this fluctuation occurs, and these natural prices can be determined directly, by ignoring the fluctuations altogether and working as if strict equilibrium obtained throughout.

Such arguments did carry a great deal of conviction two hundred years ago, when the basic ideas of the science of economics were being formulated for the first time.

However, it is impossible to ignore the passage of two hundred years. A baby is expected to first crawl, then walk, before running. But what if a grown-up man is still crawling? At present, the state of our dynamic economics is more akin to a crawl than to a walk, to say nothing of a run. Indeed, some may think that capitalism as a social system may disappear before its dynamics are understood by economists.

It is possible, of course, that this deplorable lack of progress is due entirely to the technical difficulty of investigating dynamic systems and that economists, by following up the present lines of research, will eventually, in the long long long run, develop a useful dynamic theory of their subject.

However, another possibility must not be ignored. It is by no means true that *all* dynamic behavior can be understood best, or even understood at all, by starting from a study of the system in its equilibrium state. Consider the waves and tides of the sea. The equilibrium state is a tideless, waveless, perfectly flat ocean surface. This is no help at all in studying waves and tides. We lose the essence of the phenomenon we are trying to study when we concentrate on the equilibrium state. Exactly the same is true of meteorology, the study of the weather. Everything that matters and is of interest to us happens *because* the system is not in equilibrium.

In the first example, the equilibrium state is at least stable, in the sense that the system tends to approach equilibrium in the absence of disturbances. But there is no such stability in meteorology. The input of energy from the sun, the rotation of the earth, and various other effects keep the system from getting at all close to equilibrium. Nor, for that matter, would we wish it to approach equilibrium. The true equilibrium state, in the absence of heat input from the sun, is at a temperature where all life comes to a stop! The heat input from the sun is the basic power source for winds, clouds, etc., for everything that makes our weather. The heat input is very steady, but the resulting weather is not steady at all. *None* of this can be understood by concentrating on a study of equilibrium.

There exist known systems, therefore, in which the important and interesting features of the system are "essentially dynamic," in the sense that they are not just small perturbations around some equilibrium state, perturbations which can be understood by starting from a study of the equilibrium state and tacking on the dynamics as an afterthought.

If it should be true that a competitive market system is of that kind, then the lack of progress in dynamic economics is no longer surprising. No progress can then be made by continuing along the road that economists have been following for two hundred years. The study of economic equilibrium is then little more than a waste of time and effort.

This is the basic contention of *Dynamic Economic Systems*. Its main purpose is to present arguments for this contention and to start developing the tools which are needed to make progress in understanding truly dynamic economic systems.

A subsidiary purpose, related to the main one but not identical with it, is to present a critical survey of the more important existing dynamic economic theories—in particular, the theories of balanced proportional growth and the theories of the trade cycle. This survey serves three purposes:

1. It is useful in its own right, as a summary of present views, and it can be used as such by students of economics.

2. It establishes contact between the new approach and the literature.

3. It is necessary to clear the path to further advance, which is currently blocked by beliefs which are very commonly held, but which are not in accordance with the facts.

The third point needs some elaboration. The main enemy of scientific progress is *not* the things we do not know. Rather, it is the things which we think we know well, but which are actually not so! Progress can be retarded by a lack of facts. But when it comes to bringing progress to an absolute halt, there is nothing as effective as incorrect ideas and misleading concepts. "Everyone knows" that economic models must be stable about equilibrium, or else one gets nonsense.<sup>1</sup> So, models with unstable equilibria are never investigated! Yet, in this as in so much else, what "everyone knows" happens to be simply wrong. Such incorrect ideas must be overturned to clear the path to real progress in dynamic economics.

This is a book on basic economic theory, addressed to students of economics. It is *not* a book on "mathematical economics," and even less so a book on mathematical methods in economics. On the contrary, the mathematical level of this book has been kept deliberately to an irreducible, and extremely low, minimum. Chapters are literary, with mathematical appendices. The level of mathematics in the literary sections is the amount of elementary alge-

<sup>1</sup> E.g., Blaug (1968, p. 631) describes the result of Tooke (1838), that "the money market turns out always to be in unstable equilibrium," as an "absurdity." Tooke was, of course, completely right in this assertion.

bra reached rather early in high school; solving two linear equations in two unknowns is the most difficult mathematical operation used. In the mathematical appendices, the level is second year mathematics in universities; the meaning of a matrix, of eigenvalues, and of a matrix inverse are the main requirements. Whenever more advanced mathematics is required—and this is very rarely indeed—the relevant theorems are stated without proof, but with references to suitable textbooks. This very sparing use of mathematics should enable all economics students, and many laymen, to read and understand this book fully. Those who cannot follow the mathematical appendices must take the mathematics for granted, but if they are prepared to do that, they will lose nothing of the main message.

This does not mean that mathematics is unimportant or of little help, when used properly. This unfortunately all too common belief is incorrect. To make real progress in dynamic economics, researchers must know rather more, and somewhat different, mathematics from what is commonly taught to students of economics. But while mathematics is highly desirable, probably essential, to making further progress, the progress that has already been made can be phrased in terms understandable to people without mathematical background. This reliance on nonmathematical diction has not been easy for someone to whom mathematics is not some arcane foreign language, but rather his normal mode of thinking; only time can tell to what extent the effort has been successful.

Another limitation of this work is the restriction to classically competitive conditions in most cases. There is no discussion of monopoly, oligopoly, restrictions on entry, or related matters which are stressed, quite rightly, in the so-called post-Keynesian literature. This omission is *not* to be interpreted as disagreement with, or lack of sympathy for, the contentions of that school. Rather, the post-Keynesians have been entirely too kind and indulgent toward the neoclassical doctrine. The assumption of equilibrium has indeed been attacked (Robinson 1974, for example), but only in rather general terms. The more prominent part of the post-Keynesian critique has been that conventional economic theory bases itself on assumptions (e.g., perfect competition, perfect market clearing, certainty of the future) which are invalid in our time, though some of them (*not* perfect certainty of the future!) may have been appropriate a century ago. We agree with this criticism, but that is not the point we wish to make in this book.

Rather, *even under its own assumptions, conventional theory is incorrect*. A competitive economic system with market clearing and certainty of the future does *not* behave in the way that theory



claims it should behave. It is *not* true that, under these assumptions, the equilibrium state is stable and a natural center of attraction to which the system tends to return of its own accord. Obviously, in any such discussion, questions of oligopoly, imperfect market clearing, etc. are irrelevant. It is for that reason, and only for that reason, that such matters are ignored here.

In this view, the rise of oligopoly toward the end of the nineteenth century was not just an accident or an aberration of the system. Rather, it was a natural and necessary development, to be expected on basic economic grounds. John D. Rockefeller concealed his views on competition and paid lip service to prevailing ideas when it suited him. But he was a genius, who understood the system very well indeed and proved his understanding through phenomenal practical success. Alfred Marshall's *Principles of Economics* was written and refined at the same time that Rockefeller established the Standard Oil trust and piloted it to an absolute dominance of the oil industry. There can be little doubt who had the better understanding of the true dynamics of the system.<sup>2</sup>

It follows that the theory of this book should not be applied directly to conditions of monopoly or oligopoly, which are so prevalent in the twentieth century. However, the theory *is* directly relevant to something equally prevalent, namely the creation of economic myths and fairy tales, to the effect that all our present-day ills, such as unemployment and inflation, are due primarily to the mistaken intervention by the state in the working of what would otherwise be a perfect, self-adjusting system of competitive capitalism. This system was in power in the nineteenth century. It is well-known that it failed to ensure either common equity (read Charles Dickens on the conditions under which little children were worked to death!) or economic stability: There were "panics" every ten years or so. The theory of this book shows that the failure of stability was not an accident, but rather was, and is, an inherent and inescapable feature of a freely competitive system with perfect market clearing. The usual equilibrium analysis *assumes* stability from the start, whereas actually the equilibrium is highly unstable in the long run. The economic myths pushed by so many interested parties are not only in contradiction to known history, but also to sound theory.

## B. Structure and contents

The structure of this work is as follows: There are five "books."

<sup>2</sup> This is an appropriate place to call attention to an excellent, and unjustly neglected, book, *The Emergence of Oligopoly: Sugar Refining as a Case Study* (Eichner 1969).