The Forces of Economic Growth and Decline

Paolo Sylos-Labini

The Forces of Economic Growth and Decline

Paolo Sylos-Labini

The MIT Press
Cambridge, Massachusetts
London, England

This book was set in Apollo by Asco Trade Typesetting Ltd., Hong Kong and printed and bound by Halliday Lithograph in the United States of America.

Library of Congress Cataloging in Publication Data

Sylos Labini, Paolo.
The forces of economic growth and decline.

Includes bibliographical references and index.
1. Economic development—Addresses, essays, lectures. 2. Technological innovations—Addresses, essays, lectures. 3. Industrial organization (Economic theory)—Addresses, essays, lectures. 4. Income distribution—Addresses, essays, lectures. I. Title.
HD75.S95 1984 338.9 84-9699
ISBN 0-262-19224-1

Introduction: Innovations, Market Structures, Income Distribution, and the Process of Economic Growth

Innovations, changes in market forms, and changes in income distribution are the three specific processes that constitute the general process of economic growth. This is the unifying conception behind the essays collected here, which are grouped into different parts depending on the emphasis given to one of the three said processes. They are treated sequentially, however, only after an introductory part that discusses the problem of economic growth as posed by the classical economists. In one way or another the tripartition of economic growth that I have just mentioned goes back to the classical theory. To clarify my approach, I must start with a short autobiographical note.

When I was a young student at the University of Rome in 1940, I chose to prepare a dissertation on the economic consequences of inventions. My knowledge of economic theory was extremely limited. I was fascinated by the great technical inventions of our time, and this was the reason for my choice. In starting my work, I believed that I was going to find a huge bibliography, and I was a little scared by the prospect of studying a large number of books and articles. To my surprise both the bibliography that was suggested to me and the one that I was able to find myself were incredibly scanty: I discovered that Joseph Schumpeter's *Theory of Economic Development* was the only important book analyzing that problem systematically (his treatise on business cycles was not yet available in Italy). Important chapters could be found in John Bates Clark's *Essentials of Economic Theory* and in Dennis Robertson's *A Study of Industrial Fluctuations*. Chapters and sections could be found in the books of other economists, together with a number of articles, treating that problem directly or indirectly, but the treatment was never systematic. My surprise in finding this state of research, I must confess, was great. The importance of innovations for all aspects of society, both in peace and in war, should have been obvious to anyone. Why was it, then, that economic theory had largely neglected this category of problems?

It is true that after the second world war the situation to some extent improved.[1] However, it is still very surprising to realize that the main body of economic theory is static in nature. It is surprising, nay unbelievable, to realize that the central economic problem, both in theory and in practice, is considered the problem of the optimal allocation of given resources, whereas it is evident that the central problem, both in advanced and even more in backward countries, is the problem of how to develop available resources. It is surprising to observe that many economists of our time, who are trying to leave the static ground, conceive the movements of the economy as the result of a sort of comedy of errors, in which people are systematically fooled or else are capable of neutralizing even important economic changes if only they succeed in predicting them. At the same time such economists simply ignore those powerful agents of economic and social change, technological innovations.

The explanation is, I think, a very complex one, implying logical, ideological, and social aspects. As for the purely logical aspects, I only recall that in the development of economic theory two ideas, which are to be related to the aspiration of many economists to acquire a status similar to that of natural scientists by applying certain techniques of mathematics and of theoretical physics that were developed in the late nineteenth century, have had a particularly important role: the idea of applying differential calculus to economics, where it is natural to analyze problems of maximum and minimum in instantaneous terms, and the idea of using certain analogies—especially the analogy between the economic system and a static mechanical system—borrowed from a concept of physics. The result has been paradoxical, however: the static approach has come to dominate economic theory precisely in the historical period when technological change and economic growth have become the characteristic features of an increasing number of societies.

Yet directly or indirectly the problem of economic growth has been the main concern of the classical economists, including Marx, and their analysis was by no means "static."

In view of the cultural interests I have just mentioned, it was natural for me to study Schumpeter and, through him, to go back to the classical economists, especially to Adam Smith, David Ricardo, and Karl Marx. I had just started on this itinerary when I had the good fortune of meeting Alberto Breglia, who was my guide in my formative years. He encouraged me to go to Harvard and to complete my studies under Joseph Schumpeter, whose work I had become familiar with in preparing my doctoral dissertation. I was awarded a scholarship in 1948 to be spent in the United States. After three months in Chicago, where I came to know Franco Modigliani, I went on to spend about nine months at Harvard, where I was able to obtain Schumpeter as my supervisor.

Then in 1950 I won another scholarship, this time for an academic year at Cambridge University. There I was lucky enough to have Dennis Robertson as my supervisor. The new and the old Cambridges were two great experiences for me: in both academic communities I had the privilege of meeting and associating with some of the most illustrious economists of our time.

Although written fairly recently (in 1976), the essay on Adam Smith presented in chapter 1 logically precedes that on Marx and Schumpeter (chapter 2), originally written in 1954. Smith emphasizes the importance of technological change in the process of economic growth: expansion of the market provides new possibilities for the division of labor and therefore for technological change, which can promote an expansion of production by reducing its costs and in this way lead to a further expansion of the market itself; a sort of chain reaction is thus put into motion. At the same time Smith emphasizes that the only market structure consistent with economic growth is competition, which he conceives of not as a fixed state—a market with a great number of producers—but as a process—a market where free entry and free exit tend to create a continuous expansion of production and trade. For Smith monopoly is a serious obstacle to growth; it is well to remember that for him monopoly is essentially the result of legal and institutional barriers that were typical of the stage of commercial capitalism in his time. Smith does not attach great importance to the changes in the distribution of income. Although he is sometimes described as the ideologist of the emerging bourgeoisie, Smith is very critical of high profits which, among other things, he associates with high prices and with low, or even zero, growth. As I will argue in chapter 8 ("On the Concept of the Optimum Rate of Profit"), this is not so strange or contradictory as it may appear. In any case Smith does not see the danger that declining profits could put an end to the accumulation process; rather, the end of this process would occur when the society under consideration would have "acquired that full complement to riches which the nature of its laws and institutions permits to acquire." For Smith, then, the end of accumulation and the ensuing stationary state would be a consequence of institutional rather than purely economic causes.

Contrary to Smith, Ricardo is preoccupied not with profits being too high but too low; for him the end of accumulation would precisely be the consequence of profits being too low. Ricardo derives such a notion from his conviction that the diminishing returns from land would push up the share of rents and pull down the share and the rate of profits.

Ricardo agrees with Smith on the issue of competition and in his *Principles* discusses technological changes partly with regard to the problem of relative prices and partly in the chapter on machinery added to the third edition.

On the whole he concentrates his attention on the changes in the distribution of income, not because he does not attach importance to the process of accumulation but because he takes it for granted that, if the tendency of the rate of profit to fall were offset, accumulation would meet with no other obstacles (see the appendix to chapter 1).

Marx too attaches great importance to the changes in the distribution of income and believes that in the long run the rate of profit tends to fall, thus creating increasing obstacles to the process of accumulation; for him, however, this tendency was not due to diminishing returns from land but to the rise in the "organic composition of capital" (a very controversial thesis that seems to have no supporters nowadays).

Marx is the first economist to place great emphasis on technological innovations, without which the process of enlarged reproduction (i.e., of accumulation) would be impossible. He is also the first economist, before Schumpeter, to conceive of the process of capitalist development as a cyclical process, development and growth being viewed as two aspects of the same process which is carried out by innovations and conditioned by changes in income distribution. For Marx, as for Smith, competition is an essential part of this process. Marx, however, differently from his predecessors, is able to see as another aspect of the same process the tendency of firms in many important branches to increase in size and decrease in number, which implies an increasing concentration of productive units.

Schumpeter distinguishes economic growth, which tends to take place gradually and, in principle, continuously, from economic development, a process by its nature discontinuous, originated as it is by innovations. (In this book I use the term "growth" in a broad sense, covering the two Schumpeterian meanings, and the term "development" when I wish to emphasize Schumpeter's second meaning). In fact Schumpeter gives the greatest importance to the economic consequences of innovations. He was one of the first economists to point out that the large enterprises, which are obviously in a position to influence prices and therefore do not fit in the classical or neoclassical model of competition, are not necessarily an impediment to the process of development but under certain conditions, as I have argued in several works of mine and as I show in chapter 5, can even speed up this process. (In different terms Maffeo Pantaleoni maintained a similar thesis in an essay published in 1909.) In a certain sense Schumpeter agrees with Marx on the particular view that modern large enterprises fall in between the capitalist and the socialist economic order, but on grounds that are very different from those of Marx: Schumpeter emphasizes the bureaucratization of innovations; Marx, the increasing separation between ownership and administration. Moreover Marx points out that the spread of large enterprises makes government control inevitable. These two concepts—the separation between ownership and administration and the question of government control proposed by Marx more than a century ago—are the same concepts to be found in the famous 1926 pamphlet of Keynes, *The End of Laissez-Faire*.

The appearance of large enterprises greatly modifies the structure of modern industrial economies. However, this is but one of many structural changes of our time. Another one consists of the increasing differentiation of products, a phenomenon related to the development of the mass media, transportation, and advertising, which can assert itself only when per capita income rises well above the subsistence level. Both the concentration process and the increasing differentiation of products have determined the spread of noncompetitive market structures in industrial and tertiary activities, though not in agriculture and mining. (Oligopoly in its three varieties—concentrated, differentiated, and mixed—emerges as the most frequent market structure in industry and services.)

These structural changes require new theoretical models that analyze the process of economic growth. Several stages in the evolution of modern capitalism have to be distinguished, and correspondingly, several theoretical models have to be worked out. As frames of reference we can consider the Smithian model for the premodern stage, and the Marxian and the Schumpeterian models for the competitive stage. As for the third stage—the "trustified," as Schumpeter terms it, or, as I prefer to say, "oligopolistic" capitalism—Schumpeter does not really supply a new model, but in *Business Cycles*, and to a greater extent in *Capitalism, Socialism, and Democracy*, he presents many elements that can be used to work out such a model. It could be argued that after World War II we entered into a stage that suggests still another model to be worked out, one that should give due emphasis to technological and organizational changes in the service sector and to the direct and indirect role of government in promoting applied scientific research. At present little is available in the literature concerning this development.

Some aspects of the problems just mentioned are discussed in chapter 3, and the factors affecting changes in productivity are analyzed in chapter 4. Productivity increases constitute the main effect of technological progress, although such increases can be determined also by organizational innovations. Technological progress, however, does not only determine an increase in productivity, it also gives rise to new products which can be seen as a source of an increase in productivity when we consider the economy as a whole. Among the factors affecting productivity changes, I consider investment, changes in output, and changes in the relative cost of labor, that is, the ratio between wages and the price of machines. This ratio has important theoretical implications that are discussed in the first part of chapter 4; in the final part of that chapter a few estimates of the productivity equation are presented for Italy and the United States.

One might ask, How have the changes in the structure of modern industrial economies affected the productivity trend? The answer, though somewhat paradoxical, is: Such changes do not seem to have had any discernible effect at all on that trend, which is almost always upward. Although in certain periods we have noticed an acceleration or, as in the last ten years, a deceleration of productivity increases, the fundamental trend does not show significant modifications. To understand this fact, one has to reflect on the views of Schumpeter on large enterprises. Stated generally, in the period of oligopolistic capitalism the conditions of economic progress vary with respect to those of competitive capitalism. The overall performance in terms of production and productivity does not need to change, however. Under certain circumstances this performance can even be, and often has been, superior. Moreover there is no reason to think that the factors directly affecting productivity have changed, rather the determinants of such factors, particularly output, investment, and what I call the relative cost of labor, have changed. The said determinants as well as the relationships of large firms' price policies, financial requirements, and investment policies in the times of oligopolistic capitalism are discussed in chapter 5. In chapter 6 the analysis is focused on the problem of price variation both in oligopolistic markets and in markets where a situation close to competition still prevails—the former situation being frequent in industry and services, the latter in agriculture and mining. Certain relationships then are discussed between world inflation and the slowdown of growth in industrial economies.

The last three chapters are concerned mainly with the relationship between economic growth and changes in income distribution. In chapter 7 I show that the theoretical and empirical analyses of price changes can be expanded into an analysis of the changes in the distribution of income. The conclusions reached in this chapter have an important methodological implication: if changes in prices necessarily determine changes in income distribution, and if in turn the changes in income distribution affect the rate of growth of income as well as the level of employment, then it is radically wrong to treat real and nominal quantities as if they are fundamentally independent of each other. The analysis worked out in this chapter may help to explain the recurrent postwar stagnation or even recession accompanied by inflation, which is regarded by many economists as a paradox. In chapter 8 the relationships between investment and the rate of profit are discussed, and it is argued that from the point of view of economic growth this rate can be "too low" as well as "too high," hence the concept of the optimum rate of profit. What emerges is that, whereas in the last ten years or so in the manufacturing industry of certain advanced countries the average rate of profit appears to have been "too low," in the twenties in the United States it was "too high," and this was one of the causes of the Great Depression. This thesis is elaborated further in chapter 9, which consists of part of an essay written recently for a volume on the current state of Keynesian theory. I thought it fitting to include it for the reason that my discussion there of the diagnosis of the Great Depression is based on the conception of the three processes mentioned at the beginning of this introduction and appearing in all nine chapters, though in different ways and with different emphases. This is why chapter 9, which makes use of such a conception to try and clarify one of the most important historical events of our time, concludes this volume.

I have edited some of the essays to render the whole collection more homogeneous but have not introduced substantial changes. To this end a section on Ricardo and diminishing returns is appended to chapter 1 and the postscript to chapter 2 enlarged.

Chapter 1 reproduces a report presented at the conference organized in 1976 by the University of Glasgow for the bicentenary of *The Wealth of Nations*; the Proceedings were collected in the volume *The Market and the State: Essays in Honour of Adam Smith*, edited by Thomas Wilson and Andrew S. Skinner (Oxford University Press, Oxford, 1976).

Chapter 2 appeared originally in Italian in the volume *Teoria dello sviluppo economico*, edited by G. U. Papi (1954; reprinted in *Problemi dello sviluppo economico*, Laterza, Bari, 1970). It was translated into English by Joseph Halevi and revised by Peter Groenewegen for *Altro polo*, a book containing essays of Italian scholars published annually by the F. May Foundation of Italian studies in Sydney.

Chapter 3 gives the text of the Eleventh R. C. Mills Memorial Lecture at the University of Sydney on 21 October 1980; it was first published in the August 1981 issue of *Economic Papers*, which is the journal of the Economic Society of Australia and New Zealand–New South Wales and Victorian Branches, edited by Peter Groenewegen.

Chapter 4 is an essay published in the Winter 1983 issue of the *Journal of Post Keynesian Economics*.

Chapter 5 is an article originally published in French in the *Revue d'économie politique*, March 1971.

Chapter 6 combines two papers: one published in March 1982 in *Banca Nazionale del Lavoro Quarterly Review* and the other, the modified text of a report presented in February 1982 before the World Conference on Gold held in Rome, published in the volume *The Gold Problem: Economic Perspectives*, edited by Alberto Quadrio Curzio (Oxford University Press for the Banca Nazionale del Lavoro and Nomisma, 1982).

Chapter 7 was originally published in the Fall 1979 issue of the *Journal of Post Keynesian Economics*.

Chapter 8 is a short essay published in the volume *Studies in Economic Theory and Practice: Essays in Honour of Edward Lipinski*, edited by J. Łoś et al. (North-Holland, Amsterdam, 1981).

Chapter 9 is part of a chapter appearing in *Attualità di Keynes*, a collection of essays edited by Fausto Vicarelli (Laterza, Bari, 1983; the English edition of this book will be published in 1984 by Macmillan, London).

All the papers in this volume are reprinted with the kind permission of the publishers concerned. I should like to express my gratitude to Mrs. Gisele Podbielski, who translated from the French the essay constituting chapter 5 and made emendations in the English of this introduction, the appendix to chapter 1, and chapter 9.

Notes

1. See F. H. Hahn and R. C. O. Matthews, "The Theory of Economic Growth: A Survey," *Economic Journal* 74 (1964): 826–832; reprinted in the volume *Survey of Economic Theory: Growth and Development* (prepared for the American Economic Association and the Royal Economic Society, New York: St. Martin Press, 1965). See also R. F. Harrod, *Towards a Dynamic Economics* (London: Macmillan, 1948); W. E. G. Salter, *Productivity and Technical Change* (Cambridge: Cambridge University Press, 1960). L. Robbins, *The Theory of Economic Development in the History of Economic Thought* (New York: Oxford University Press, 1968); N. Kaldor, *Essays on Economic Stability and Growth* (London: Duckworth, 1960); *Growth Economics: Selected Readings*, ed. by A. Sen (Baltimore: Penguin Books, 1970); M. Kalecki, *Selected Essays on the Dynamics of Capitalist Economy 1933–1970* (Cambridge: Cambridge University Press, 1971); C. Freeman, *The Economics of Industrial Innovation* (Baltimore: Penguin Books, 1974); R. Goodwin, *Essays in Economic Dynamics* (London: Macmillan, 1982). For a more general critical appraisal of contemporary developments in economic theory, see the essays included in *The Crisis in Economic Theory*, ed. by D. Bell and I. Kristol (New York: Basic Books, 1981), especially the essay by P. Davidson, "Post Keynesian Economics." See also the bibliography appended to chapter 4 and, in particular, the important book by L. L. Pasinetti, *Structural Change and Economic Growth* (Cambridge: Cambridge University Press, 1981).

A dynamic analysis of a peculiar type is the one concerning business cycles, an analysis that has got an old tradition, in which we find several great economists like Juglar, Spietoff, Robertson, Pigou, Mitchell, Fanno—Schumpeter has already been mentioned. However, this tradition developed laterally with respect to the main body of economic theory, from which it remained largely separated.

Contents

I

The Problem of Economic Growth in Classical Theory

1 Competition and Economic Growth in Adam Smith

In this chapter I contrast Smith's view of the competitive process with modern developments and compare his expectations with what happened in the next two centuries. To do this, I isolate the appropriate measure of value in which to make meaningful intertemporal comparisons of prices and incomes. Therefore the first part of the chapter is concerned with this fundamental problem, the understanding of which is necessary before an appraisal can be attempted of Smith's conception of competition and economic growth. The main analytical lines for such an appraisal are discussed in the second part.

1.1 Competition and Monopoly

The distance between the static conception of competition prevalent in our time and that of Smith is very great indeed: in *The Wealth of Nations* competition and economic growth are two aspects of one and the same process. More precisely, according to economists belonging to the marginalist tradition, the essential characteristic of competition is the large number of suppliers, each of whom is so small as not to be able to modify the conditions of the market, and in particular not the price. For Adam Smith, as well as for the other classical economists, competition is characterized by free entry; conversely, monopoly implies obstacles to entry. In Smith's time such obstacles were primarily institutional or legal, such as "the exclusive privileges of corporations, statutes of apprenticeship, and all those laws which restrain, in particular employments, the competition to a smaller number than might otherwise go into them" (*WN* I. vii. 28), or the privileges granted to certain companies in the colonial trade (*WN* IV., viii., III), or the high duties and prohibitions on foreign manufactures (*WN* IV., iii., II).[1] Such obstacles were to be attacked on the political and legislative plane. Smith, however, also considers other types of obstacles to entry: those determined by natural scarcities in agriculture and mining, those determined, in his time, temporarily by secrets in manufactures, and most important, those determined by high costs of transport. Still, other obstacles to entry can be found in certain activities carried on in the towns, where, for technical reasons or for reasons of geographic location, the number of manufacturers, workers, or tradesmen is small and cannot easily increase. In such a situation the people concerned, just because they are very few, are likely to enter into a combination in order to raise the price of their products or their labor. Here again the important element is not the smallness of the number but the obstacles to entry, that is, the impossibility or the great difficulty for "new rivals" to enter the market. The tendency toward equality of wages and profits in different employments (apart from the inequalities arising from the nature of the employments) presupposes free entry or, as Smith sometimes says with reference to both the product and labor markets, "perfect liberty" (*WN* I., x., a. 1).

The obstacles to entry can keep the market price of particular commodities above the natural price and maintain not only profits but also wages above their natural rates for a long time.

> When the quantity brought to market is just sufficient to supply the effectual demand and no more, the market price naturally comes to be either exactly, or as nearly as can be judged of, the same with the natural price .... (*WN* I., vii., 11)

The effectual demand, according to Smith, is the quantity demanded by all "those who are willing to pay the natural price of the commodity, or the whole value of the rent, labor and profit" at their natural rates (*WN* I., vii., 8). The market price will rise above the natural price when the quantity of a given commodity which is brought to market falls short of the effectual demand, and it will fall below the natural price when the opposite is the case. Under competition the market price can be higher than the natural price only for a limited period.

The concepts of natural price and natural rate are inseparable from the concept of competition: in this respect "natural" and "competitive" can well be considered as synonymous.

1.2 The Natural Price and the Natural Rate of Wages, Profits, and Rent

To understand correctly Smith's conception of the natural price, it is necessary to realize that, unlike the point of view prevailing today among economists, Smith is considering not only the distinction between the short and long run but also what we today would call—for different analytical purposes—"stages of development" which are indistinguishable from long historical periods. (When speaking of the short run, Smith says "occasionally" or "temporarily"; when referring to the long run, he uses either this expression or other equivalent ones, like "considerable time"; when referring to the stages of development, Smith speaks of "states," "conditions," "general circumstances of the society," or "different periods of improvement.")

According to Smith, the basic stages are three: progessive, stationary, and declining. (It should be clear that these three stages refer to a society that has already developed an exchange economy.) The progressive stage, on which Smith concentrates his attention, is often divided further. In brief, in discussing the behavior of the natural and market prices, Smith is using three, and not two, terms of reference: short run, long run, and stage of development. In the short run, the market price depends on supply ("quantity brought to the market") and demand. In the long run, under conditions of monopoly, it depends on the same forces; under competition it tends to coincide with the natural price or, we may say, with the cost of production, with the proviso that, in a given historical period or subperiod the natural price varies only if technology varies, whereas the natural rates of wages, profits, and rent are to be considered as constant. In passing from one stage of development to another, or from one subperiod to another, the natural price will vary as a result not only of technological changes but also of variations in wages, profits, and rents:

> The natural price itself varies with the natural rate of ... its component parts, of wages, profit, and rent; and in every society this rate varies according to their circumstances, according to their riches or poverty, to their advancing, stationary, or declining condition. (*WN* I., vii., 33)

In chapter vii of the first book Smith discusses systematically the behavior of prices in the short and long run. In chapters viii, ix, and x of the same book he discusses the behavior of the "natural rate" of wages, profits, and rent in the different periods and subperiods of the "progress of improvement."

In analyzing the variations of the natural rate of the "three original sources of all revenue," Smith apparently uses the criterion of supply and demand, but it should be clear that his criterion has very little to do with the one followed by economists of the marginalist tradition, a criterion epitomized by two curves, one independent of the other. To clarify this point, let us consider very briefly some of the views set forth by Smith.

In the progressive stage of society, the demand for labor rises, while "the production of men" can only be increased under conditions of increasing cost, because each laborer has "to bring up a greater number of children." Therefore