Review of M. Abramovitz,"Thinking about growth"

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anti-bads, between production that contributes to net welfare and activities required as a precondition of production, those needed to protect us from the threats to our welfare from our enemies (like army and police), and the bads caused by nature (like heating against the cold), or the productive system itself (like scrubbers against pollution). Seventh, weighting incomes by market prices reflects the existing income distribution. It is therefore impossible to distinguish between production and distribution. Eighth, there is no mention of other dimensions of inequality such as recognition, status, or power. Political power in Zimbabwe or Malaysia is not in the hands of those with economic wealth. Influence does not go with affluence. Ninth, and by no means least, although Sundrum has a lot to say on possible conflicts between equality and growth, he does not mention possible conflicts between equality and freedom. A perfectly equal income distribution and even a high rate of growth of living standards can be achieved in a well-run prison or in a zoo.

In sum, this is an admirable book for what it does, but one wishes Sundrum had done more and taken a wider view.

Note

1. Allan M. Feldman, "Equity," in *The New Palgrave Dictionary of Economics*, ed. John Eatwell, Murray Milgate, and Peter Newman (London: Macmillan, 1987).

Moses Abramovitz. **Thinking about Growth and Other Essays on Economic Growth and Welfare.** Cambridge: Cambridge University Press, 1989. Pp. xviii + 377.

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Moses Abramovitz has been thinking and publishing about growth for more than 4 decades. This volume brings together 13 of his principal essays on the causes and consequences of productivity growth in advanced nations. All but one were previously published between 1952 and 1986. The papers are grouped into four parts dealing with long-term growth, long swings (Kuznets cycles), welfare, and an introductory part with the 1952 survey of the economics of growth and a new essay on the "erratic involvement of economists with economic growth." In all sections, except the idiosyncratic one on swings, the papers span the period from the early 1950s to the 1980s.

This is a valuable collection of essays full of original ideas expressed with great clarity. They reveal Abramovitz's awareness of the broader picture within which economic processes unfold and his appreciation of theoretical concepts to guide empirical analysis for which, however, they cannot substitute. The emphasis on measurement, even when its limitations are repeatedly pointed out, is a useful reminder particularly now when a resurgence of growth theory—mostly nonempirical—appears to be underway. A brief review must be selective. Accordingly, I emphasize what in my view are the main and more significant common themes that run through the collection of essays.

Part 2 on long-term growth starts with what is probably Abramovitz's best-known study, namely, the 1956 essay on "Resource and Output Trends" that, together with Solow's 1957 study, contributed more than any other single paper to popularize growth accounting and the residual.[1] Credit is given here and in other parts of the book to those who pioneered this method of analysis (J. Schmookler, S. Fabricant, G. S. Stigler, and others). The main result of this study was the relatively very large share of growth accounted for by factor productivity—a result regarded as "sobering, if not discouraging," in its being a "measure of our ignorance about the causes of economic growth" (p. 133). To put the importance of factor input in a better perspective two qualifications are added to the results, both of which appear prominently in the new vintage of growth theories. The first claimed that with increasing returns to scale "the great expansion of total resources must have contributed substantially to the increase in productivity" (p. 133). The second argued that incorporating changes in the composition of labor would show a significant increase in its contribution to growth and that for capital its definition has to be broadened to include "any use of resources which helps increase our output in future periods" (p. 134). Among the categories specifically mentioned for inclusion are health, education and training, and research, as well as part of the expenditures for food, clothing, and recreation.

Incorporating these factors into a growth-accounting exercise is not an easy task. The conceptual and empirical problems are highlighted in the review of Denison's detailed investigation of sources of growth in the United States. Abramovitz praises highly this study, regarding it as "a beautifully ordered program of research" (p. 149), but on close inspection finds the calculations to be mostly guesswork and to "fall apart at almost every important point" (p. 170)—an unfortunate fact seen as the inevitable consequence of the present state of the art. This combination of highly demanding standards coupled with an optimistic outlook for the necessity and promise of empirical research is evident throughout the book.

A recurrent theme in this volume is the distinction between the potential for raising efficiency and its realization, namely, the pace at which we take advantage of those opportunities. The attempt to identify the causes that explain both the potential for growth and its realization appeared to Abramowitz already in 1956 as "the chief excuse" for decomposing growth into the effects of resource expansion and increases in factor productivity.

Regarding the potential for growth of productivity, Abramovitz probes into various more and less conventional sources of growth. The discussion appears mostly in relation to the analysis of catching up based on the experience of the United States, Western Europe, and Japan. In this context, technological gaps and other elements of relative backwardness appear as key elements in the potential for productivity growth. The presentation is uniformly interesting and illuminating; for developing countries, however, the main lessons are found in the complementary sections on the realization of that potential. Potential is repeatedly portrayed as a permissive but not sufficient condition for rapid growth. What then determines the extent and pace of realizing the potential for productivity advances? First, the pace itself is governed by investment and growth of capital. No potential free lunches here but rather a generalized embodiment approach. In addition, the realization of the productivity potential depends on a host of societal characteristics that, following K. Ohkawa and H. Rosovsky, are called "social capability." This involves "technical competence, [and] . . . political, commercial, industrial, and financial institutions, [essential for] . . . the organization and management of large-scale enterprise and . . . mobilizing capital for individual firms on a similar large scale" (pp. 222–23). It is also the "ability to make and absorb the social adjustments required to exploit new products and processes" (p. 354). Technological backwardness is therefore not only not enough to assure a fast catch-up but also it is itself the result of the same "tenacious social characteristics." "One should say, therefore that a country's potential for rapid growth is strong not when it is backward without qualification, but rather when it is technologically backward but socially advanced" (p. 222).

Although he writes at length and persuasively about "social capability" and finds earlier devotees to the subject in S. Kuznets, T. Veblen, and A. Gerschenkron, still Abramovitz recognizes that "no one knows just what it means or how to measure it" (p. 222). It is no wonder then that the elucidation of "why growth rates differ" has proven so elusive. In the new introductory chapter, it is suggested that "elements of social capability adapt to economic opportunity over long periods of time" (p. 47). Social constraints may limit or retard potential advances in productivity, "but technological opportunity also presses for relief from the social constraints" (p. 46). In a footnote Abramovitz regards as invalid the contention that institutional change consistently favors efficiency and that institutional adaptation occurs speedily, but still he concludes that "countries that succeed in industrializing, however, do respond positively to the demands of modern technology, and there may be a general tendency toward such response, if only in the very long run'' (p. 74). This is an intriguing subject well suited for some SSRC-type comparative research.

A related recurrent theme, deeply rooted in the NBER-Kuznets tradition, is the view that productivity growth is intimately tied with structural changes, and the speed with which those changes can be carried through determines in part the pace at which technological potential can be exploited. The required changes in structure derive from the interaction of consumption trends and technology and involve ''radical changes in the sectoral structure of production, in its geographical distribution, in the occupational composition of the work force, and the organization of industry and commerce'' (p. 51).

One way in which the changing composition of output manifests itself is the tendency, established by Arthur Burns and Simon Kuznets, for retardation in the growth of individual sectors but not in the growth of aggregate output. The implied change in the composition of output can be attributed to variations in the composition of consumer demand as income grows and to the introduction of new products which tend to displace the old. Characteristically, Abramovitz does not stop at this but probes beyond to the bearing that the changing patterns may have on incentives to effort and investment, for without those changes ''the desire for additional consumption and income and, therefore, the stimulus to economic activity would be weaker'' (p. 90). The basic NBER finding of retardation at the micro level with aggregate stable growth reappears some 30 years later in various essays concerned with the retardation in productivity growth in advanced countries since the mid 1970s.

Over the 30 years spanned by the essays in this volume, Abramovitz witnessed and analyzed fast productivity growth, a catch-up process among industrial nations, and retardation in the growth of productivity. Chapter 6 elaborates the thesis that the fast growth of productivity in the postwar period was the result of ''a special, but transitory, set of circumstances'' that made for a strong potential for growth and also favored its realization by developed countries ''in concert and over a long period'' (pp. 188–89).

The potential for rapid postwar productivity growth arose from advances in knowledge and from initial wide gaps between actual and potential levels of productivity, particularly in Europe and Japan. A combination of favorable conditions for the diffusion of knowledge, for the accumulation of capital, for structural changes, and for the expansion of demand led to fast growth and to a process of catch-up among industrial nations. Abramovitz presents various simple tests indicating a convergence of income levels among advanced nations, and while the convergence hypothesis has recently been called into question, the value of the essays dealing with this topic is not diminished by that. Of particular interest are the sections in the 1986 essay, reprinted as chapter 7, on "forging ahead and falling behind" and on the "interaction between followers and leaders." In this context we find an interesting qualification on the simple view, underlying the catch-up hypothesis, that different countries with similar social capabilities are equally competent to exploit the leader's path of technological progress. If that path is biased in a direction favoring the leader, the technological gap may end up being very resilient and persist for long periods of time. The technological path after 1870, according to Abramovitz, appears to have been biased in a resource-using direction and to have been heavily scale-dependent. On both counts the United States was particularly well placed relative to the follower advanced countries.

By the early 1970s there is already clear evidence of a retardation in measured productivity growth in the United States and other advanced countries. Among the factors discussed in this context is the role of the government. The government was earlier seen as having "played a crucial role in providing the early impetus [for growth], which was carried forward later by the rising confidence of private business" (p. 207). In various essays we encounter the thought that "the enlargement of the government's economic role . . . was, and is—up to a point—a part of the productivity growth process itself" (p. 355). But this is followed by the recognition that this enlarged role "as referee and as mitigator of the costs of growth" comes with a price tag. In 1958 Abramovitz mentions that the increase in governmental activity "constitutes some threat to the system of incentives on which the growth of productive capacity rests" (p. 306). In 1980 he presents in some detail the arguments of "many [who] believe that the welfare and regulatory programs are heavily implicated" (p. 360) in the severe retardation of productivity. Yet, he remains cautious and regards these arguments as no more than "a *prima facie* indication that something very substantial may be involved in the choices we make between productivity growth and alternative welfare goals. Yet, at the present time the argument is only speculative, and the estimated loss still more so" (p. 362).

The third part of the volume contains only two papers, both on long swings in economic growth, one from 1961 arguing their existence and importance and a second one seven years later announcing their demise. The brief detour from long-term growth to "long-swings" came, as Abramovitz tells us in the preface, as a reaction to the suggestion of Arthur Burns (NBER's director in the 1950s) to work on "more immediately practical subjects, preferably on business cycles" (p. xiii). The value of these essays lies in the way they straddle growth and fluctuations. They bring together the growth of input and productivity with changes in the intensity of use of employed resources by regarding variations on the supply side (inputs and productivity) as functions of change in intensity of use (demand induced).

Abramovitz remains a believer in the necessity and potentials of growth, even as he recognizes some of its more unpalatable concomitants. The heightened interest in economic growth during the postwar decades was matched by its achievement; nevertheless, "as the experience with rapid growth proceeded, doubts emerged . . . [and] a mood of disappointment in the achievement spread" (p. 329). The rationale for this curious recoil from growth is discussed and criticized in chapter 12. Many of his more valid arguments pertain to "unmeasured and badly measured costs—and benefits" (p. 330) rather than to economic growth itself: "What are no more than criticisms of the conventional GNP figures as *measures* of growth serve as arguments to discredit economic growth itself" (p. 326).

Finally, some minor quibbles. The papers are reprinted as they first appeared and, except for some brief remarks in the preface, there is no attempt to pull them together, place them in perspective, reiterate some inferences or perhaps qualify others. There is only one correction in the book. It comes at the end of chapter 9, but, though it is nowhere mentioned, it dates back to 1969. The omission of an index is hard to justify in a work of this type.

The essays refer to the United States and Europe and, over time, also to Japan. Unfortunately, there is barely a mention of LDCs, regarding both their experiences and the lessons that one could learn for their prospects from the experience of the industrial countries. In the introductory essay, the importance of the social climate is heavily emphasized, and given that it is implausible to assume it constant "in comparisons between industrialized and underdeveloped countries, studies keep the two sets of countries in different boxes" (p. 62). That this separation is not strictly necessary was clearly shown by Simon Kuznets, who probably had as much influence on Abramovitz's work as any other economist. In sum, this is a collection of essays on growth by a pioneer in its measurement and interpretation, highly recommended to economists of all persuasions. Some of the essays should become required reading for students of economic growth in these days of theory without measurement.

Note

1. R. Solow, "Technical Progress and the Aggregate Production Function," *Review of Economics and Statistics* 39 (1957): 312–20.