Book Reviews

Postwar Productivity Trends in the United States, 1948-1969

By John W. Kendrick. National Bureau of Economic Research, Inc., 261 Madison Avenue, New York, N.Y. 10016. 369 pages. 1974. $15.

Productivity as a subject for research and policy attention has not been given its due in agriculture. There have been a few notably good studies and some good dissertations written on factor productivity in farming and in the food industry, but productivity is not one of the more common topics for research or teaching. This is true for the agricultural economics profession at large and, the work of a few stalwarts aside, for the Economic Research Service in particular, where in recent years there has been a paucity of resources assigned to this topic.

The meager resources assigned to productivity research in agriculture are in contrast to the rising concern for agricultural productivity. The National Academy of Sciences has expressed concern over purported evidence that productivity in some parts of agriculture is already in decline. A committee in the Academy has been studying this subject. The White House Commission on Productivity recently had a special task force review productivity problems in all sectors of the food industry, including farming. In the setting of inflation and scarcities, many observers are expressing concern that we have about exhausted our sources of easy gain in agricultural productivity and that we are not making the necessary new investments in research to assure new sources of productivity gains in the future. In response to these recent concerns, one may perceive faint signs of some resurgence of interest among economists in agricultural productivity research issues.

Economists interested in productivity will find John Kendrick's update of his earlier *Productivity Trends in the United States* a valuable addition to their reference shelves. The data assembled in the nearly 150 pages of "basic tables" (part III of the appendix) are alone enough to assure that the book will be well thumbed. But the book will also be valuable for its readability and because of the interesting results of Kendrick's years of research on productivity trends.

Kendrick's earlier book, published in 1961, traced the productivity story for the U.S. economy and its major industry divisions from 1889 to 1957. The current study focuses on postwar productivity trends, by industry groupings, for 1948-66 with preliminary estimates through 1969.

Kendrick devotes a chapter to a review of concepts of productivity and its component variables, plus a summary of methods and sources of estimation. His index numbers of "total factor productivity" are based on ratios of net output (real product) to weighted averages of the human (labor) and nonhuman (capital) tangible factor inputs. The weights represent the shares of factor income accruing to each of the two major factor classes in successive base periods. Labor input is measured in terms of man-hours worked. Capital is assumed to move proportionately to the real stocks of tangible capital assets. In addition to total factor productivity, Kendrick includes the more conventional measures relating output to man-hours and to capital individually.

Few economists agree on how to measure productivity. Kendrick acknowledges the disagreement over his measures. He is especially sensitive to the charge that his use of tangible factor inputs does not reflect changes in quality of inputs so that changes in the ratios of output to input may be interpreted as reflecting all the diverse forces that affect the quality or "productive efficiency" of the factors. A number of other economists have undertaken studies designed to narrow the residual attributable to productivity increases by expanding the inputs to include various qualitative elements, such as rising educational levels of the work force, and the assumed increase in man-hour output occasioned by declines in the average number of hours worked per week. However, Kendrick defends his measures of tangible factor inputs, unadjusted for quality changes, as a useful point of departure for analysis of growth and change in economic aggregates and structure.

The results of Kendrick's exhaustive investigations of productivity movements are summarized in four chapters. The first deals with national productivity trends during the postwar period. A major conclusion is that there has been no significant acceleration in the trend rate of growth in total factor productivity since World War II, at 2.3 percent per year, compared with the earlier period beginning around the time of World War I. Output per unit of labor, however, has shown further acceleration because of a faster rate of increase in capital per unit of labor input than prevailed during the interwar period.

Kendrick also notes that in the postwar period there is less year-to-year variation in productivity, and interprets this lesser variability as reflecting a broader and more persistent rate of technological advance.

Another chapter examines the relationship between national productivity and economic growth. Kendrick finds that since World War I gains in total factor productivity have accounted for more than half of aggregate economic growth. Since 1948 the trend rate for total factor productivity has been 2.3 percent a year and the trend rate for economic growth has been 4.1 percent a year. Even more interesting is the conclusion that from 1948 to 1966, gains in total factor productivity accounted for almost all the increase in "planes of living," as measured by real net national product per capita, which rose at an average rate of 2.4 percent a year. During the postwar period total input per capita rose only fractionally, as substantial increases in capital input relative to population did little more than offset a persistent decline in labor input per capita. Kendrick concludes this chapter by hypothesizing that the chief determinant of the rate of growth in total factor productivity is the rate of growth in the real stocks of intangible capital embodied in the tangible factors. These intangible investments enhanced the quality or productive efficiency of labor and capital.

Yet another chapter deals with patterns of productivity change by industry groups. Here one can examine and compare productivity trends in seven major industry segments and 34 industry groups. Farming appears as a major industry segment and foods, beverages, tobacco, textiles, and apparel appear as industry groups under manufacturing. Interestingly, no industry group for which estimates were constructed showed declines in total factor productivity. Farming had a better than average showing (3.3 percent for the postwar period) but the air transportation industry outstripped all others in productivity gains (8 percent per year).

In the final chapter Kendrick examines the interrelationships among rates of change in productivity, output, and a number of associated variables. For 1948-66 there is a significant positive correlation between rates of change in productivity and in output. Since there was no significant correlation of productivity changes with input price movement, productivity gains were negatively correlated with price changes in output. Thus, the productivity gains of the postwar period have been a significant factor in reducing potential rates of inflation.

More than half the book is devoted to an appendix on sources and methods which cover the national economy (part I), industry groups (part II) and basic tables (part III).

In part II, Kendrick makes an interesting observation on the measurement of productivity in farming. He shows that the ratio of intermediate costs to the total value of farm output in real terms rose from about 35 percent in 1948 to 44 percent in 1966. This trend reflects the transfers of various activities from the farm to nonfarm sectors and the increasing use of various nonfarm inputs required to farm. If we adjust the gross output of the farm sector for the increasing proportion of intermediate products used, the rate of increase in real farm product is significantly smaller than the rate of increase in gross output. Kendrick argues that gross output in farming should be related not only to factor inputs, but to total inputs inclusive of intermediate inputs as well. This would reduce the apparent rate of productivity advance in farming. In most industries gross output is used as a proxy for real product output and is related only to factor inputs to measure productivity. In farming, however, it is clear that gross output has a persistent upward bias as a proxy for real product and cannot be so interpreted.

Kendrick's book is not the place to go for an exhaustive review of alternative productivity concepts. That would be a rather large book in itself. Kendrick's measures of productivity are not perfect or complete, but they are very useful. Certainly, few people have studied productivity as exhaustively as Kendrick. The results of his efforts make interesting reading.

John E. Lee, Jr.

Land Policy in Buganda

By Henry W. West. African Studies Series No. 3. Cambridge University Press, New York, N.Y. 10022. 244 pages. 1973. $19.50.

In 1900, the commissioner of the British Protectorate of Uganda assigned 8,000 square miles of agricultural land to 1,000 Buganda chiefs and their more important followers. Buganda, a part of the protectorate, was a long established kingdom whose king, the Kabaka, was presumed to own all the land because of his paternal sovereignty over everything in the kingdom. The immediate objectives of the land partition were to consolidate British overrule and to settle the strife between feuding factions, but inadvertently, it also had long-lasting complex effects on the future social and economic life of Buganda. The land of the 1900 agreement was distributed in square mile units, and for this reason, was called "mailo" land, from the African pronunciation of the English word "mile." It included virtually all land in Buganda suitable for crops.

This book is a study of the developments in the ownership and tenancy of the mailo land. It investigates the character of the proprietary rights of both mailo owners and tenants. Five sample surveys taken in the midsixties provide information on the number, position, size, and orientation of the holdings, and on the nature of land use in five areas ranging from rural to semiurban and urban.

The number of land owners in Buganda increased from 4,000 in 1905 to 112,000 in 1967. Undoubtedly, landownership became possible for a large number of farmers, and some of these were able to break away from the traditional subsistence agriculture and farm commercially. Another volume in this series (*Subsistence to Commercial Farming in Present Day Uganda, An Economic and Anthropological Survey*, edited by Audrey I. Richards, Ford Sturrock, and Jean M. Fortt, Cambridge University Press, New York) tells the story of the successful commercial farmers on mailo land. The present study shows the pessimistic side of the picture. The original grants measured in square miles have been subdivided so drastically by inheritance that the average area inherited by beneficiaries in 1962-64 had shrunk to only about 24 acres. This is because families are large, and women can inherit land on equal terms with men. If this trend to smaller and smaller holdings continues, it will hamper the development of commercial agriculture.

Another factor that tended to perpetuate the number of subsistence holdings was a law promulgated in 1928 to improve the conditions of the tenant farmers on mailo land. This law abolished crop shares and pegged the money rent at a low level. At the same time, it made it difficult for the owner to evict the tenant. It provided the necessary security of tenure to encourage tenants to plant a long-surviving crop like coffee. The law also helped thousands of tenants to become owners, but in thousands of other cases, it discouraged the mailo owner from investing capital in the farm.

In the last chapter, the author discusses future policy. How can the market-oriented farmer, with a secure and negotiable title to an economically viable piece of land, replace the present subsistence cultivator? The companion volume suggests that the change to commercial farming occurs only when the peasant sees the possibility of a dramatic improvement in his position. Many peasants made this jump successfully. These included some who inherited the land and others who purchased it, but they are only a minority. For the majority to become commercial farmers, it is important that further subdivision by inheritance must stop. Yet the rural population keeps increasing at such a rapid rate that there is no way in the near future to find a place for them in other sectors. The solution seems to be some device which will prevent further division of properties, but which will provide a place in agriculture for the increasing population.

There is much more in this book, all well-documented with profuse footnotes. An extensive bibliography lists almost 100 government reports plus an equal number of special studies and general works. A large map shows land tenure in Buganda in 1966. Twelve smaller maps present details on such topics as land occupancy, land values, land use, ownership by clans, and more.

Herbert Steiner

You Can Profit from a Monetary Crisis

By Harry Browne. Macmillan Publishing Company, Inc., New York, N.Y. 10022. 397 pages. 1974. $8.95.

Many economists and financial writers predict difficult times for the economy, at least in the near future. None, however, has taken such an extreme position as Harry Browne, the author of this book. On the basis of his successful prophetic advice, published in his previous book in 1970, *How you Can Profit from the Coming Devaluation*, he evidently feels compelled to offer a broad strategy to the public for keeping on top of the eroding economies of the world.

The author concludes that because of the current state of the economy and the mistakes of Government financial policies, this Nation will experience the worst depression in its history. He predicts business conditions will get worse in the 1970's leading perhaps to financial collapse.

To offset the consequences, one must radically change his habits of investing; one must move away from traditional investments in securities, real estate, savings accounts, etc., and invest in the supreme commodity, gold, or things that are backed by gold, such as strong foreign currencies and stocks in gold companies. The author's reasoning is simply that paper money, not based on gold and subject to increasing inflationary pressures, will continue to lose its value as inflation proceeds—and there will be no letup of the inflationary push.

The author even suggests drastic measures as selling your home, car, and valuables, and storing up a retreat far away from any urban area to sit out the trouble. One would think that he is predicting an impending atomic bomb attack rather than a financial crisis. Our Nation has experienced economic reversals in the past—albeit not as severe as France in 1790 or Germany in 1923—and has managed to survive intact, indeed has gone on to greater economic heights.

Perhaps this is all right for the author, who is unattached, lives out of the country, relaxes on his couch, and listens to records (classical). But for the rest of us who have a vested interest in what material things we have acquired through work and who are conditioned to our routine of day-to-day enjoyment of life, it would be hard to give up so much on the basis of $8.95 worth of advice.

Despite everything, this book is worth reading if only because of the perspective and education one gets regarding this Nation's economy.

Jack Ben-Rubin

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