

# Understanding Economic Growth: Review Article of *Why Economies Grow*

Andrew Sharpe  
*Centre for the Study of Living Standards*

THE CENTRAL QUESTION OF ECONOMICS going back to Adam Smith is why economies grow. In his new book *Why Economies Grow: The Forces That Shape Prosperity and How To Get Them Working Again*,<sup>1</sup> Jeff Madrick revisits this important issue, focusing on the size of the market as a key determinant of the growth process. The contribution of the book lies in its emphasis on demand-side forces as driving the growth process, in contrast to the more conventional view that supply-side forces such as technological change are responsible.

Jeff Madrick is one of the best known economic journalists in the United States. He currently is Editor of *Challenge: The Magazine of Economic Affairs*, an economics columnist for the *New York Times*, and a frequent essayist for the *New York Review of Books*. He has served as a financial editor for *Business Week* and a commentator for NBC News. This is his third book on economic issues, including the well-known *The End of Affluence*.

The book is organized into 11 chapters. The first part of the book provides a general discussion of different approaches to economic growth, the definition and meaning of the new economy, and the importance of economic growth. The Industrial Revolution, the rise of the U.S. economy, the late 20<sup>th</sup> century productivity slowdown, and the post-1995 productivity

acceleration are then examined. The final chapters of the book look at the challenges and principles for making the United States grow again, put forward an agenda for growth, and conclude with a pessimistic chapter on why strong growth will not happen.

## Technological Change versus Growth of Markets

Madrick begins by observing that technological advance is generally regarded as the origin of economic growth during the Industrial Revolution, just as technological advance is seen as responsible for the boom in the United States in the late 1990s. But he believes that such a view is wrong. In his words (page 2):

“The central argument is that inventions in and of themselves are not the sole or even leading source of prosperity. Technological innovation is necessary to growth, but it is as much a consequence of economic opportunity as it is a cause, and perhaps even more a follower of economic growth than a leader... This book argues that the growth of markets through trade, colonization, and domestic expansion was the predominate factor in Western economic development.”

Madrick of course recognizes that the conditions of growth include technological advance, literacy, health of the population, distribution of

---

1 Published in 2002 by Basic Books, New York. The book was sponsored by the Century Foundation. The price is \$26.00 U.S. or \$39.50 Canadian.

wealth and income-making assets, availability of financial capital, development of legal institutions, abundance of natural resources, vitality of entrepreneurship, and peace and political stability. But he sees certain factors, in particular market size and dissemination of and access to information, as the first movers or true leaders.

### **Sources of 19<sup>th</sup> Century Productivity Growth**

Madrack documents some fascinating examples of the technological innovations that contributed to the 19<sup>th</sup> century U.S. productivity advance. For example, a key advance was the development of the interchangeability of parts in metalworking pioneered by a Springfield, Massachusetts armory in the 1850s. Standardized gun parts resulted in increased specialization of workers, in contrast to each worker assembling a complete firearm. According to Madrack, mid-19<sup>th</sup> century British visitors to the United States were stunned by the productivity of the “American system of manufacture” based on specialization. It was the existence of the large U.S. market that made possible large production runs and fostered specialization.

Another example of productivity advance occurred in the tobacco industry. In the 1880s, the Bonsack cigarette machine was invented. It could produce 120,000 cigarettes per day. This “continuous process” machine rolled the tobacco onto a moving tape, compressed it, wrapped it in paper, pasted it, and cut it. Labour hours were reduced by 95 per cent! The resulting decline in the price of cigarettes and innovative marketing turned the United States from a country of tobacco chewers into one of cigarette smokers.

The innovation of parts changeability was developed further by Henry Ford in the early 20<sup>th</sup> century through the introduction of the assembly line, ushering in the age of mass production for the large U.S. market. The productivity effects were stupendous. Labour time expended in mak-

ing a Model T fell from 12 hours and 8 minutes to 2 hours and 35 minutes, with the price of a Model T falling from \$950 in 1909 to \$360 in 1916.

### **The Post-1973 Productivity Slowdown and Post-1995 Acceleration**

Madrack correctly identifies the slowdown in productivity growth after 1973 as the key economic development in the second half of the 20<sup>th</sup> century in the United States. He offers five explanations for this development:

- inflation and the deflationary macroeconomic policies it engendered;
- lost market share to international competition;
- growing demand for labour-intensive services;
- lack of investment in public goods; and
- the fragmenting of markets, as the standardized products of the past which had created enormous economies of scale were replaced by a wide range of more narrowly targeted products.

Madrack believes that the last factor outlined above probably made the most durable and important contribution to slower productivity growth. He downplays the technological explanation for the productivity slowdown associated with the diminishing returns to the technologies of the 1945-74 golden age of productivity growth. He argues that technologies have in the past always been invented and replaced yet this situation had never had an effect on productivity growth comparable to that experienced after 1973. Unfortunately, Madrack provides little quantitative evidence to support his five explanations of the productivity slowdown.

Productivity growth in the United States picked up after 1995. Madrack explains this development by three factors. First, the death of inflation meant that the Federal Reserve Board could lower interest rates, stimulating the economy and

boosting productivity growth. Second, computer costs fell precipitously and this relative price movement resulted in much more intensive use of computers. Third, the mass production of IT products reversed the trend toward product fragmentation that had dampened productivity growth in the post-1973 period.

## Challenges to Prosperity

Probably the most interesting part of *Why Economies Grow* is the chapter on challenges to prosperity. Madrick appears an inveterate pessimist. The glass is always half empty, never half full. He admits that a number of factors bode well for the future. He notes that the most important requirement for technological advance is for the market for goods and services to expand rapidly. The defeat of inflation will continue to strengthen market demand. He also recognizes the great value the internet has contributed to the economy in creating price, quality, and distribution competition among potential suppliers. But Madrick is skeptical that the technological revolution is ongoing and potent and that computer prices will continue to fall rapidly. He also notes that the continued existence of a comparatively low-paid and flexible workforce, a source of growth in the past, is problematic.

Madrick identifies a number of trends which he argues represent challenges to prosperity. Perhaps surprisingly for an economist, he sees the trend toward increased choice, checked in the late 1990s but growing again, as a threat. He argues that the productivity-reducing effects of additional choice through shorter production runs more than offset any consumer utility gains. Second, he argues that the uniqueness of the U.S. domestic market is being newly challenged via the expansion of the European Community. However, it is unclear why this development should have any negative impact on U.S. productivity growth. Third, the strongly increasing demand

for labour-intensive services may dampen labour productivity growth. Finally, the neglect of public investment may have reduced the ability of the U.S. economy to adapt to change.

Madrick puts forward an agenda to grow the economy based on two vital principles. First, strong market demand for goods and services is a leading cause of economic growth and market growth is itself a major cause of both capital investment and technological advance. Second, economic growth is organic in nature and involves many interrelated factors. His agenda emphasizes the critical role of the growth of internal markets, policies to reduce inequalities which hamper the growth of mass markets, and public investments.

## A Critical Appraisal

Madrick's book was published in 2002. Unfortunately, developments since then have not supported his analysis. Productivity growth has exceeded the expectations of even the most optimistic forecasters. Output per hour in the U.S. business sector advanced at a 3.8 per cent average annual rate in the 2000-2003 period, up from 2.5 per cent in 1996-2000. Indeed, productivity advanced 4.8 per cent in 2002 and 4.5 per cent in 2003, the strongest two-year period in the history of the series. This productivity performance is particularly remarkable given the slump in investment after the 2000 peak. Increased capital accumulation has not been responsible for the productivity boom. The most useful and relevant definition of the existence of the new economy is a pick up in trend productivity growth. By this criterion, the new economy is not dead, but supercharged!

Madrick places special emphasis on the importance of mass production for productivity growth because of the economies of scale effects. He sees the fragmentation of mass markets into niche markets as contributing to slower productivity growth. The argument

would be more convincing if Madrick had provided empirical content to the concept of market fragmentation. What proportion of value added consists of standardized products produced for mass markets and how has this proportion changed over time? Defining and estimating what constitutes mass market production would be difficult and controversial. However, such data would at least have assured the reader that the trends in market fragmentation and the resulting effect on productivity growth, such a big part of Madrick's story, has a basis in fact as well as in anecdote.

One surprising omission from the book is the lack of discussion of the role of universities in U.S. economic development. The United States has the best research universities in the world, attracting top students and researchers from many countries. These universities undertake basic research that the private sector applies to develop new technologies. Indeed, the United States would not be the leading technological power it is today without its top universities, its most important competitive advantage.

The book has a number of inconsistencies. On page 77 it is noted that "labour time expended in making a Model T fell from 12 hours and 8 minutes to 2 hours and 35 minutes, with the price of a Model T falling from \$950 in 1909 to \$360 in 1916." Yet on page 102 it is stated that "...managerial methods and new information technologies reduced the average hours of work required to manufacture a vehicle at Toyota from 97 in 1974 to 66 just three years later." It seems unlikely that a worker at Ford in 1916 was 26

times more productive than a worker at Toyota in 1977!

On page 105 Madrick correctly states that keeping foreign competition out of the United States would not have helped prevent a productivity slowdown. Yet on page 92 he has listed lost market share to international competition as an explanation of slower productivity growth. These statements seem inconsistent.

Madrick (page 110) argues that the pick-up in manufacturing productivity growth after the mid-1980s was in part linked to the contracting out of increasing numbers of creative, labour intensive tasks to the service sector. But to the degree that productivity is measured by value added (and not gross output), use of more purchased services reduces both value added and labour input and only has an effect on productivity if the output per worker of workers whose tasks are contracted out differs from the overall average.

## Conclusion

Madrick has produced a very insightful and readable account of why economies grow. In reality, supply-side and demand-side determinants of economic growth are so intertwined they are difficult to separate. It is not a question of one or the other, but rather of their relative importance in driving the growth process. Madrick makes the case, and makes it effectively in my view, that demand-side conditions matter. He provides an effective antidote to the widely accepted perspective that sees long-run economic growth as a supply-side driven phenomenon.