

## BOOK REVIEWS

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***Made in America: Regaining the Productive Edge.* By Michael L. Dertouzos, Richard K. Lester, Robert M. Solow and The MIT Commission on Industrial Productivity.** Cambridge, Massachusetts: The MIT Press, 1989. Pp. 344.

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After leading the reindustrialization of the world's market economies during the post-World War II era, the United States experienced considerable weakness in its industrial performance during the 1980s, especially compared to Japan and West Germany. Productivity growth slowed measurably. Huge trade deficits arose. Some American industries that once dominated world trade, automobiles and steel being two prime examples, lost much of their market share in the United States and abroad. In a few industries, particularly consumer electronics, American products all but disappeared from even the domestic market.

Some analysts have argued that there is nothing fundamentally wrong with American industry. They look to several macroeconomic factors to explain what has been happening, namely: international differences in economic growth rates, exchange rate fluctuations, and the federal government deficit. *Made in America* challenges this view.

Late in 1986, MIT established a Commission on Industrial Productivity to study the problems of American industrial productivity. Two characteristics of the Commission's approach stand out: it took a bottom-up perspective and concentrated on the production side of industrial activity. In taking a bottom-up approach the Commission examined specific firms and industries and then formulated general conclusions and recommendations. In particular, eight sectors of the industrial economy were analysed: automobiles; chemicals; commercial

aircraft; the closely-related industries of computers, semiconductors, and copiers; consumer electronics; machine tools; steel; and textiles. Hence, all industries studied were in manufacturing; there were none in services, agriculture, mining, or construction. Emphasis on the production side meant that the Commission's focus was on the organizations, plant and equipment, and the people that combine to "conceive, design, develop, produce, market, and deliver goods and services to the customer". The Commission sought to discover the reasons for the waning of American industry on the shop floor rather than in macroeconomic variables.

The Commission's general conclusion is that American manufacturing industry shows considerable signs of weakness. In many important industries, U.S. firms are losing ground to foreign competitors. These setbacks are not just random events or part of the normal dynamic process by which some firms constantly evolve and decline; they are symptoms of more systematic and pervasive ills. In particular, the decline in American productive performance is due to the failure by American firms and industries to adapt to new conditions that arose in the 1970s and 1980s. These failures are deeply rooted in organizational structures and social attitudes.

The Commission first prepared team reports on each of the eight industries mentioned. The members of each team were primarily professors at MIT who had expertise in the industry or in the technology used in the industry. The next step was to sift through the evidence from the team reports. This sifting process yielded recurring patterns of weakness in productivity performance. The Commissioners isolated six inter-related patterns of behaviour that were at the root of the failures of American industry. These were: outdated strategies, short time horizons, technological

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weakness in development and production, neglect of human resources, failures of co-operation, and government and industry at cross-purposes.

The Commission emphasized two main, outdated strategies in American industry. The first one is the continued reliance on mass production of standard commodity goods at a time now when production must efficiently satisfy the demands of limited segments of the market. The other problem is parochialism: American industry continues to produce mainly for the American market and obtains technical expertise mainly from its own factories and universities. This failure has kept American firms from the growing strength of foreign markets and technologies.

The second pattern that has led to productivity failure is the U.S. preoccupation with short-term gains at the expense of long-run goals. For example, the Commission detected something approaching a systematic unwillingness to maintain technological leadership after the first big returns have been captured. Another example of this pattern is that U.S. equity markets cause firms to maximize short-term profit in the belief that the markets would severely penalize them for taking the long view.

The third pattern, technological weaknesses in development and production, causes U.S. firms to increasingly find themselves lagging behind their foreign rivals in the commercial exploitation of inventions and discoveries. Although the United States is still the world leader in basic research, American firms have not been successful in turning basic scientific discoveries into product and process development. The VCR is but one example of this pattern.

One of the most significant shortcomings of the American economy is the fourth pattern, the neglect of human resources. Here the problem lies in the institutions that educate Americans for work. The Commission concluded that without major changes in the ways schools and firms train workers, no amount of macroeconomic fine-tuning or technological innovation will be able to produce significantly improved production performance. The U.S. needs to develop a system, as there is in Japan and Germany, where there is on-the-job training to develop general, transferable skills as well as specialized capabilities.

The fifth pattern, failure of co-operation, comes about at several levels: between individuals and groups within firms, between firms and their suppliers or their customers, among firms in the same industry segment, and between firms and government. Part of this problem stems from the many layers of bureaucracy within the firms. Another part comes from government antitrust regulation.

Finally, the pattern of government and industry at cross-purposes has hindered American productive performance. A variety of government policies concerning such matters as education and training, research and development, national security, economic and social regulation, and the nation's infrastructure shape the environment within which firms operate. An example discussed by the Commission is how the U.S. consumer-electronics industry was adversely affected by tariffs, quotas, and antidumping and antitrust laws.

The discussion of these six patterns forms the core of the book. The book consists of two parts: the first part discusses the six patterns and generalizes from the team reports, and the second part presents details on each of the eight industries. In the first part of the book, in addition to chapters devoted to the six patterns, there are chapters examining the macroeconomic aspects of U.S. productivity; emerging patterns of excellent industrial practices in some U.S. firms; recommendations addressed to industry and government for improving America's productive performance; and the reforms needed in American universities. The industry studies which make up the second half are summary reports of longer working papers, which have been published in *The Working Papers of the MIT Commission on Industrial Productivity*.

Although the main audience for this book are those concerned with the manufacturing competitiveness of the U.S. economy, businessmen and scholars in Asia will find the time reading *Made in America* well spent. It is precisely in those areas of American weakness that Asian economies have excelled, particularly in Japan, Taiwan, and South Korea. For the emerging manufacturing nations in ASEAN, there are many lessons to be learned from the mistakes recently made in American manufacturing. The primary lesson for rising ASEAN

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exporters is that firms have to continually adapt to new conditions. What worked well yesterday may not work well today. Today's production techniques and methods have to be scrutinized on a regular basis. Another lesson is that large-scale mass production is no longer needed to compete internationally. ASEAN exporters can successfully compete by focusing on the demands of limited segments in foreign markets. Furthermore, a related lesson for ASEAN is that, in the contemporary global environment, manufacturers have to produce the products that are demanded by foreign customers, and not just foist whatever is available locally upon export markets. These are valuable lessons, especially for new ASEAN players.

*Made in America* is simply the best book on the topic of the decline in American productive performance. In a crowded field, it stands above the crowd. The main reason is that it focuses on what really matters: how production takes place; and the book examines this from the ground level. The six chapters summarizing the patterns of behaviour are extremely well written. The authors were able to assemble a large amount of information about many industries and firms and present it in a concise, coherent manner. Their presentation is clear, well-organized, and convincing. The book's shortcoming is the second half. The industry studies add little to the material presented in the first half and thus these chapters could easily be skimmed over. For a deeper understanding of the various industries one should turn to the two volume set of working papers.

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***Economic Policy Management: A Japanese Approach.* By Naomi Maruo.** Tokyo: Chuo University Press, 1990. Pp. vi, 267.

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This book, a collection of articles by Naomi Maruo, is basically about the Japanese economy and economic policy in Japan.

In the introduction, Maruo summarizes each chapter and major findings of the study. Chapter 1

introduces for consideration a methodology for economic policy. The conclusion to this chapter indicates that the Japanese do a better job in the field of applied economics than in theoretical economics. Although Chapter 1 provides a constructive beginning to our understanding of the Japanese economy, there is much more that needs to be done to understand fully the Japanese approach to economic policy management.

Chapter 2 is an important first step in studying the dynamics of structural change in the Japanese economy. It should be of interest to ASEAN countries since Japan's experience with economic structural change in the 1960s is now largely being repeated in Asian NIEs. Japan itself is undergoing a mature state of economic and social development.

Chapter 3 discusses Japanese living standards and welfare, specially in comparison with the United States and European countries. Readers might have difficulty in understanding the empirical evidence provided by Maruo since a comparison of welfare indicators in each country cannot be accurately made. However, some economists believe that Japan is a "welfare superpower" equal to any in the West (Yatsuhiro 1979).

Chapter 4 can be regarded as a seminal piece of work with regard to our understanding of three important socio-economic factors: ageing population, social security and personal savings. Maruo concludes:

... The ageing of the population at a high pace has the following influences on social security as well as on the balance and growth of the economy. First of all, as the cost of social security increases remarkably at the earlier stage of ageing, the disposal (after tax) income and private consumption of the present labour force generation tend to increase at a lower growth rate than that of the GNP. Secondly, if pension systems are based on terminal funding schemes, the ageing of the population increase savings (net increase of the amount of the pension funds) at the earlier stage of the ageing of the population. Thirdly, there is a time lag between the increase of social security benefits and the decrease in the personal savings ratio. (pp. 126)

The fact that there are a number of empirical studies which show that the impact of social security on