

# Research Review

## U.S. Competitiveness in the World Economy

Bruce R. Scott and George C. Lodge (eds.). Cambridge, MA: Harvard University Press, 1985, 543 pp., \$16.95.

Reviewed by Stephen W. Hiemstra

The decline of key U S manufacturing industries has focused public attention on the competitiveness of U S exports. The mid-1986 advent of a trade deficit in agricultural products turned heads throughout the Nation. These events provide ample motivation to review a book on U S competitiveness.

*U S Competitiveness in the World Economy* is a book of readings that evolved out of a colloquium series sponsored by the Harvard Business School (HBS) during 1983-84.<sup>1</sup> These readings represent the best papers presented in this series and include papers on competitiveness issues and industry studies. Most are authored by HBS faculty. The readings were reviewed by a cross-section of academic, industry, labor, and government leaders and are edited so that they contribute to a common understanding of competitiveness. Consequently, it is more useful to grapple with the issues raised by the readings taken together than to evaluate them individually.

A key theme running through these readings is that "competitiveness is more and more a matter of strategies, and less and less a product of national endowments" (p. 5). This emphasis on strategies<sup>2</sup> suggests that the effect of natural resource endowments on a country's export product mix is influenced by the choice of technology, prices, market institutions, and public policies. From this perspective, competitiveness is not window-dressing on the concept of comparative advantage. Economies of scale are considered more important than resource endowments in determining a nation's export product mix. Strategic innovators obtain a lower cost of production by targeting growing markets before their

competitors and by moving more rapidly down the learning curve. For the authors, "national competitiveness refers to a country's ability to create, produce, distribute, and/or service products in international trade while earning rising returns on its resources" (p. 3).

The papers include (1) "U S Competitiveness: Concepts, Performance, and Implications" by Bruce R. Scott, (2) "National Strategies Key to International Competition" by Bruce R. Scott, (3) "Sustaining U.S. Competitiveness in Microelectronics: The Challenge of U.S. Policy" by William F. Finan and Annette M. LaMond; (4) "The Very High Speed Integrated Circuit Program: Lessons for Industrial Policy" by Michael Y. Yoshino and Glenn R. Fong, (5) "U.S. Competitiveness in Global Industries: Lessons from the Auto Industry" by Malcolm S. Salter, Alan M. Webber, and Davis Dyer, (6) "Textiles and Apparel: A Negotiated Approach to International Competition" by Stanley Nehmer and Mark W. Love, (7) "Restructuring Petrochemicals: A Comparative Study of Business and Government Strategy to Deal with a Declining Sector of the Economy" by Joseph L. Bower, (8) "International Competitiveness of American Industry: The Role of U.S. Trade Policy" by Alan W. Wolff, (9) "Technology as a Factor in U.S. Competitiveness" by Harvey Brooks, (10) "Competitiveness in the World Economy: The Role of the U.S. Financial System" by Philip A. Wellons, (11) "Savings, Investment, and Government Deficits in the 1980s" by Benjamin M. Friedman, (12) "Competitiveness: The Labor Dimension" by D. Quinn Mills and Malcolm R. Lovell, Jr., (13) "Enhancing Competitiveness: The Contribution of Employee Relations" by D. Quinn Mills and Malcolm R. Lovell, Jr., and (14) "The Pursuit of Remedies" by George C. Lodge and William C. Crum.

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<sup>1</sup>A colloquium held in 1985 focused on agriculture. See Federal Reserve Bank of Kansas City, *Competing in the World Marketplace: The Challenge for American Agriculture* (Kansas City, MO, 1985).

<sup>2</sup>The focus on strategies stems from the HBS approach to corporate management generally, as exemplified in Michael Porter's *Competitive Strategies* (New York: McGraw Hill Company, 1980).

The Japanese example figures prominently throughout the book. Two key features of the Japanese national strategy are highlighted. First, the Japanese strategy is "growth/productivity/opportunity oriented" rather than "distribution/security/resource oriented" (p. 72). In other words, Japanese institutions encourage hard work and savings rather than equal opportunity and consumption. Second, the Japanese Ministry of International Trade and Industry uses two criteria for selecting industries for support: (1) the industry should have a high income elasticity, and (2) the industry should exhibit a potentially high rate of return to technological sophistication (p. 98). The first criterion suggests that the industry possesses a growing market, and the second that it makes use of Japan's most abundant resource: skilled labor. The structure of Japanese financial markets, labor institutions, and social policy all reinforce the Japanese strategy. In contrast to the Japanese model, U.S. export strategy is a byproduct of a laissez-faire trade policy hampered by incompatible domestic policies designed to promote goals other than competitiveness.

The remedy for the U.S. competitiveness problem is a radical restructuring of American society. "To regain our national competitiveness, government, business, and labor leaders must inspect a number of cherished but partially antiquated assumptions about international trade, domestic government, management-labor relations, and the rights and duties that accompany membership in American Society" (p. 480). In reviewing congressional proposals, the authors see some merit in each, although all fail to address "the fundamental

assumptions and priorities that have caused America's competitive failure" (p. 490).

In evaluating this line of reasoning, one sees clearly that technological change plays a leading role in determining the market where strategic planning will pay off. The Japanese have specialized in producing for selected high-technology markets.<sup>3</sup> Since this is the basis for the Japanese strategy, the authors never confront the issue as to whether a larger nation, such as the United States, could be expected to support its growth based on extraordinary growth in a limited number of markets. If the growing markets are small or the improvements in technology/efficiency are relatively minor relative to the size of a nation's economy, then specialization cannot be expected to yield improved growth and a diversification strategy may be more appropriate. In view of the radical prescription the authors propose, it is appropriate for analysts to evaluate the Japanese strategy more closely.

*U.S. Competitiveness in the World Economy* is a high-quality reader, likely to interest a wide audience from university students to specialists in international trade. The papers are readable, pragmatic, and scholarly. Although not the last word on the subject, this book is likely to remain the focus for discussions of competitiveness for many years.

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<sup>3</sup>The Japanese competitive strategy is a logical extension of the product cycle hypothesis. See Edwin Mansfield, *Technological Change* (New York: W. W. Norton & Company, Inc., 1971).

# The Cult of Information

Theodore Roszak. New York: Pantheon Books, 1986, 238 pp., \$17.95

Reviewed by L. Joe Moffitt

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Dictionaries 25 years ago defined information as "knowledge communicated or received." More recent dictionaries offer an alternate meaning, for example, "data that can be coded for processing by a computer." Roszak's book traces the evolution of the concept of information and the forces that have contributed to the development of the Information Economy, an economy in which the production and exchange of information is a major activity.

Roszak links the origin of the current prominence of information in economic affairs to Norbert Wiener's post World War II founding of the field of cybernetics, Claude Shannon's quantitative definition of information, the early successes of computing machines such as UNIVAC, and the ensuing work in biology and artificial intelligence (AI). These developments are portrayed by Roszak as having triggered a sense of discovery and an enormous optimism among decision theorists and other scientists, as exemplified in a statement attributed to Herbert Simon identifying information with the basis of life itself: "the programmed computer and human problem solver are both species belonging to the genus 'Information Processing System'."

According to Roszak, the mystique that has developed around the concept of information as the result of enthusiasm generated by research in communications, biology, and AI, by sparkling electronic devices that process information, and by the hyperbole of advertisers and merchandisers has promoted a cult-like atmosphere that pervades the production and marketing of information. The membership of the cult includes major corporate interests, government agencies, the scientific establishment, and, increasingly, the educational system. Roszak maintains that, in the present climate, membership in the cult can grow simply because of the vogue that has been lent to the word information.

Roszak cautions that his ideas are not intended as a focal point for "computerphobes." In fact, he expresses respect for information processing. However, his main contention is that the AI view of knowledge as the result of information processing is incorrect. He regards ideas as the result of a human process apart from mechanical permutations of information. Acquiescence to the AI model presupposes a society that produces and processes increasing amounts of information, defined as computer-codable messages, in a futile pursuit of knowledge. Roszak's premise also leads him to reject more clever software as a solution to the data glut because he sees the glut itself as unnecessary, that is, it results from social forces distinct from considerations of economic efficiency. He recommends demystification of the concept of information and careful scrutiny of the legitimacy of information-processing functions by public and academic administrators.

Elements of this book remind me of an undergraduate colloquium in which a past president of the American Economic Association lamented that the overuse of mathematics in economics was "largely an excuse for thinking." Although such abuses doubtless occur, most professional economists clearly use mathematical models as appropriate adjuncts to creative problem-solving. If Roszak is correct, the aura surrounding information has permitted profit-seeking hucksters to identify information processing not as an adjunct to thinking but as a substitute for thinking so far as public perception is concerned. He identifies the public policy impacts of this perception in education, national defense, and other areas. Finally, he warns that the educational and scientific communities are, however unwittingly, becoming members of the information cult.

Roszak also provides some good entertainment. I enjoyed reading his account of the role of the counter culture in the development of California's Silicon Valley. His description of Japanese attempts to link extrasensory perception to AI, which he dubs "artificial clairvoyance," is particularly humorous.

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# Breadlines Knee-Deep in Wheat: Food Assistance in the Great Depression

By Janet Poppendieck. New Brunswick, NJ: Rutgers University Press, 1986, 306 pp., \$30.00.

Reviewed by Tom Fulton

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Newspaper articles recount how nonprofit groups can glean fantastic amounts of edible foodstuffs from fields previously harvested. Anger is similarly aroused when edible fruits or vegetables are destroyed because of slight blemishes or because they are too small. Yet, other articles in the same newspapers tell of farmers' leaving farms, unable to make a living from agriculture despite record harvests. At no time in U.S. history was this paradox more acute than during the Great Depression. This paradox of want amid plenty is the essential theme of *Breadlines Knee-Deep in Wheat*.

The book, a product of Poppendieck's doctoral dissertation, places the paradox of want amid plenty within the context of America in the twenties and thirties. After enjoying unprecedented prosperity during World War I as food suppliers to the world, farmers found themselves after the war with a rapidly declining export market as Europe's farmers-turned-warriors returned to farming. The Great Depression, for America's farmers at least, began a decade before it began for the rest of society.

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When agriculture is seen as an essential underpinning to the rest of America's economic structure, what was happening should have been viewed with more alarm than it was. Americans in the twenties were lulled by a stock market that showed unprecedented gains day after day, while requiring those who participated to put up as little as 10 percent in cash. That millions were unable to look beyond the smoke and mirrors of Wall Street and see the declining conditions of essential industries, like agriculture, which underpin the economic structure, demonstrates a shortsightedness that pervaded the optimism of the decade. For the same reason, Poppendieck's book fails the reader.

The book turns too soon from an examination of the intertwining of economics and politics of surplus production and welfare relief, both of which would have been of great interest to many, to a recitation of the mechanics of the Federal relief effort. Such stories have been told before (the Praeger series comes to mind) and serve a much smaller audience than would a study with a wider scope.

In fairness, however, *Breadlines* accurately portrays the Federal response both to conditions of surplus agricultural production and to the hunger that the Government was so ill-equipped to deal with.

# Food Policy: Frameworks for Analysis and Action

C.K. Mann and B. Huddleston (eds.). Bloomington: Indiana University Press, 1986, 243 pp., \$22.50.

Reviewed by Robert E. Christiansen

This collection of essays is brought together, in the words of one of its editors (C K Mann), "as part of an effort to encourage interaction and dialogue among food policy analysts and practitioners. The book seeks to link disciplines within the context of food policy analysis." The volume contains 27 papers and is divided into two parts: "Frameworks for Food Policy Analysis" and "Approaches to Developing National Food Policy Capabilities." The first part contains a number of perspectives on food policy, while the latter concentrates on three case studies of food policy projects in Thailand, Kenya, and Tunisia. The number of articles limits this review to highlighting especially interesting essays and describing the book's strengths and weaknesses.

The book itself is of limited value. The editors have tried to bring together a wide range of interests, from livestock potential to issues of political economy. As a result, the individual articles tend to be too short. The range of topics requires better integration than the editors have provided. For example, articles on microcomputers in Tunisia and on the livestock option for developing countries cannot be expected to stand on their own. They need to be put into a context, so the reader will understand their relevance to the broader subject of food policy.

Four "frameworks" for food policy analysis are covered in the first part of the book: production, nutrition, politics, and trade. Peter Timmer sets the stage for each of these perspectives. He argues that a successful food system/policy is difficult to achieve, because of the problems of integrating the necessary components of any food policy: household behavior by both producers and consumers, a macroeconomic policy environment, and an international trade policy. Timmer stresses the critical dependence of a successful food policy on an appropriate macroeconomic environment, which becomes a necessary, but not sufficient, condition for success. One of the frustrations is the conflict between specific policies designed to help the household and

macroeconomic policy. Adequate food supplies for low-income families frequently require price subsidies or other policies that macroeconomic planners view as "distortions." Timmer points out that most macroeconomic reform packages call for eliminating such policies, leaving food policy in a quandary.

The three articles under the heading, "Production Aspects of Food Policy," concern the role of crops (Gomez), livestock in agricultural systems (Pino), and women in production (Mencher). Gomez attempts to "provide an analytical framework for evaluating the existing and potential capacity of crops to supply the nutritional requirements of an increasing world population." Instead, the article briefly discusses the technologies currently available for meeting increased food needs, for example, improved varieties and intensive cropping. Pino focuses on the role of livestock in production systems, claiming that it can play an important role in meeting food needs. However, the article serves mostly to remind the reader that livestock production is an option, but offers no solutions to problems such as the peasants' view that "animals in the system are secondary" to plant crops.

Mencher's article addresses (1) ways in which women are involved in agriculture in different regions of the world, (2) ways in which women's participation in agriculture is affected by various institutional arrangements, and (3) the role of women in household maintenance and survival. Mencher's article is especially interesting, because it provides a valuable framework for viewing the problems of women in traditional agricultural systems. However, like others in this volume, Mencher's article suffers from a lack of development, presumably due to space restrictions. For example, Mencher's description of women's role in agriculture in various regions is limited to five pages, which does not begin to do justice to the topic, even in the context of providing a framework for the subject.

The Pinstrup-Anderson article identifies and discusses three factors influencing the effect of food and nutrition programs on levels of nutrition.

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(1) the ability of households with malnourished members to acquire food, (2) the food acquisition behavior of households, and (3) the intra-household distribution of food

The articles by Chen and by Gencaga present interesting econometric results. Chen was unable to discover a significant relationship between "child caloric intake" as the dependent variable and per-capita household consumption and wealth as independent variables. Gencaga was similarly unable to identify a significant relationship between income and the consumption of protein and calories, except for the top 10 percent of the population. A hypothesized explanation for these surprising results is that the household is not the appropriate unit to work with, but rather some larger community concept, such as the village, given the presence of intra-community transfers of food.

The section on "Political Aspects of Food Policy" contains three chapters concerned with political obstacles to reforming food policies in developing countries. Selowsky argues that development assistance packages should be designed to help bridge the financial gap between those who benefit from a policy reform and those who are hurt by it, thereby creating broader political support for reform.

The centerpiece of this section, and it could be argued of the book, is the article by Bates, which summarizes the impact of political interests on the formulation of economic policy. Bates defines agricultural policy as those decisions taken by "governments that influence the prices farmers confront in the markets which determine their incomes." The central issue is why government policy tends to discriminate against farmers in countries where agricultural interests predominate? Bates portrays governments as seeking to retain power and therefore, concerned with implementing policy that serves the best interests of influential constituents and that undermines the interests of opposition groups. For example, Bates argues that governments seeking to increase food production will favor project-based policies over price-based policies, even though improved price policies are usually a necessary condition for projects to succeed. Price policies encounter strong and cohesive opposition from urban interests, whereas project-oriented policies allow the political elite greater opportunities for job distribution. The Bates model is a useful framework in which to view the policy formulation process.

Delehanty provides a valuable perspective on food policy reform by arguing that it should be approached

through "negotiation of political contracts which redistribute the economic rents created by public policy." These rents are simply "opportunities to buy for less or sell for more than would be the case in the absence of government intervention." Delehanty's view, especially when combined with Bates' model, opens the door to some intriguing and innovative multilateral and bilateral aid policies. However, the editors do not explore these possibilities.

The final section in the first part of the book covers trade aspects of food policy. Donaldson reviews food security events since the 1972-74 crisis, pointing out that this crisis was a historical anomaly. World food supplies have "consistently outstripped population for a hundred years." Donaldson lists several factors that need to be considered when addressing food security issues, for example, distribution systems, price policy, protection of low-income households, and production technology. He argues that the key to improving food security "lies in increasing the incomes of low productivity groups and increasing the efficiency of the distribution systems which serve them."

Schuh clearly and succinctly analyzes how the roles of agriculture and trade have changed in the promotion of economic development. He argues that the international economic system has changed in many ways, including the emergence of a more fully integrated capital market, flexible exchange rates, and economic liberalization by the less developed countries. Furthermore, he argues that many international institutions designed to meet the needs of developed countries have become irrelevant as the developing countries have assumed a greater economic importance. Schuh sees two broad areas that need attention: (1) a new set of institutions to deal with world problems, especially in the areas of international monetary reserves and arrangements governing trade, and (2) more research on the ways the world economy has changed.

The last half of this volume deals with more specific issues concerning the development of national food policy capabilities and with case studies of food policy projects in Thailand, Kenya, and Tunisia. These last sections are interesting, but to a fairly limited audience. These sections tend to be brief and do not offer the level of detail in which a country expert would be interested.

Little in the book is new, most articles are condensed versions of previous research. Therefore, the book is most useful for readers interested in an overview of food policy topics. Those who are interested in more detail may feel dissatisfied with both the quantity and quality of the articles.