

to facilitate international technological transfers, adopt rules that would mitigate, or at least reduce the amount of rent seeking in the economy, and move to improve minority education. Most thoughtful people would agree at some level with all four of these proposals, but there is still the question of "level." In the case of basic research, the economic argument depends upon an externally induced market failure. Some governmental support is almost certainly better than no support, but no one has the formula needed to determine the appropriate amount. As to the Office of Technology Transfer, the reader is left with a question about the definition of its mission, since the authors argue that the free market will provide adequate funding for applied research. In the case of minority education, every citizen can certainly applaud attempts to provide a better trained work force; but no one should be dubbed a racist for questioning why the same extended opportunities should not also be made available to non-minority youth. They will, after all, constitute the bulk of that future work force.

Finally, we can all agree that there is little economic gain and probably substantial loss inherent in the nation's long-standing love affair with rent seeking. The problem, of course, lies in differentiating rent-seeking from productive activities and in designing policies that, while preventing, or at least mitigating, such behavior, will not burden the economy with even more costs than those imposed by the object of the affair. To some, for example, Michael Milken's invention of the junk bond represents the greatest single technological advance of the 20th century; to others, however, given that it opened undreamed new opportunities for rent seeking, it is viewed as the greatest license to steal ever issued in the history of mankind. Again, with respect to mechanism, the authors suggest that the Japanese have been relatively successful in changing the rules of the game in a way that has minimized rent seeking. It is, however, certainly not unambiguously clear, at least to me, that the Japanese solution is not more costly than the dead weight imposed by all the lawyers' fees, greenmail payments, golden parachutes, and bribes to politicians and bureaucrats that we have been forced to bear.

Despite these objections, if the authors' modest proposals can be translated into efficient policies, they would likely nudge the economy in the direction of greater productivity increase. The same cannot be said for the author's "heterodox" "Failsafe (Reverse) Measure for Stimulating Economic Growth." Their goal is laudable: to provide a free market mechanism "perfectly

capable of directing capital flows precisely in the manner required by productivity policy." Their solution—a government subsidy to business based on "the rate of growth in a firm's profits after correction for inflation"—is less so. If productivity could be mapped uniquely into profits, the proposal might well have merit; but even a casual glance at the history of American business performance indicates that, though productivity advance may be one cause of increased profits, it is certainly not the only one. Quite apart from the differential impact of the proposal on the few remaining competitive sectors of the economy, it is difficult to believe, given the suggested structure of rewards, that successful implementation would not trigger a surge of collusion, union busting, bribery, and rent seeking that would make the recent wave of mergers look like no more than ripples on a fish pond.

Give Baumol, Blackman, and Wolff top marks for refocusing a crucial debate in a productive manner, give them high marks for their analysis of the factors underlying productivity growth, raise your eyebrows at their policy suggestions, but flunk the other 20,644 members of the American Economic Association who have for too long ignored the problems of economic growth and development.

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Ventures before MITI

Managing Industrial Enterprise. Cases from Japan's Prewar Experience. WILLIAM D. WRAY, Ed. Harvard University Council on East Asian Studies, Cambridge, MA, 1989 (distributor, Harvard University Press, Cambridge, MA). xiv, 442 pp., illus. \$25. Harvard East Asian Monograph 142. Based on a workshop, Vancouver, BC, Feb. 1982.

The postwar Japanese economic miracle is one of the most dramatic and complex episodes of the 20th century. Some aspects of the miracle confound the received wisdom of neoclassical economic theory, which would predict chaotic failure from the use of those very devices that lie near the heart of Japan's growth. These measures include industrial targeting, capital controls, recession cartels, lifetime employment, tight restrictions on foreign direct investment, and deliberate failure to rationalize agriculture, wholesaling, and retailing. So the miracle constitutes an arresting puzzle whose pieces

are only now beginning to be fitted into place.

Attempts by Western scholars to engage the puzzle include the Brookings Institution's pioneering study of 1976, *Asia's New Giant*, edited by Hugh Patrick and Henry Rosovsky; Ezra Vogel's panegyric of 1979, *Japan as Number One: Lessons for America*; Chalmers Johnson's influential *MITI and the Japanese Miracle* (1982); my own *America Versus Japan* (1986), a comparative analysis by scholars in economics, history, political science, and business administration; and Karel van Wolferen's harshly critical best-seller of 1989, *The Enigma of Japanese Power*. All of these works, together with about a dozen other major efforts by writers from several disciplines, have concentrated on the postwar period. Yet each has noted that the roots of the economic miracle lie deep in Japan's past. The miracle itself might even be said to have begun in 1868, when the Meiji Restoration ended more than two centuries of hermetic isolation imposed by the Tokugawa shogunate.

Historians in both Japan and the West have long studied the political, economic, cultural, social, and intellectual contours of Japan between the early Tokugawa period and the Pacific War. A rich literature in both Japanese and English has resulted. Only recently, however, have books in English such as those mentioned above begun to appear, and most of them have taken a broad, top-down perspective. Largely missing have been bottom-up studies of particular Japanese companies, which were the shock troops of the economic miracle. The nine essays in the book under review here, written by seven specialists in Japanese business history and based on detailed archival research, represent the best of this new approach.

Editor William D. Wray, author of three of the essays, gives us an uncommonly valuable introduction and afterword. These two fragments, which total 81 pages, provide a sweeping overview of the theory and practice of Japanese business and economic history. Nowhere else in print is one likely to find such a serviceable introduction to the subject.

Among other curiosities, Wray notes the dominant but not altogether dysfunctional role of Marxism among Japanese economists. (Marxism's one salient advantage over neoclassical theory is its emphasis on evolutionary institutional process as opposed to static equilibrium analysis.) Wray goes on to describe the newly flourishing practice of business history by a group of Japanese scholars who are neither Marxists nor neoclassicists but straightforward empiricists. He describes both the virtues of this genre



The model filature at Tomioka. [From *Tomioka seishijōshi* (Tomioka-shi Kyōiku Iinkai, Tomioka, 1977); courtesy of Stephen W. McCallion]

(extremely detailed chronicles) and its shortcomings (absence of generalization). He notes that the difficulties of synthesis derive mostly from the youth of the discipline: few reliable generalizations can be made until additional monographic work is done.

In this volume, and in a book he brought out in 1984, Wray himself provides an exemplar of the new business history in his study of the N.Y.K. (Japanese Mail Steamship Company). This firm, affiliated with the Mitsubishi zaibatsu but mostly autonomous in its operational decisions, was Japan's leading shipping company from the late 19th century until the postwar period. Wray uses N.Y.K.'s history to illustrate the variety of decision-making patterns possible within the Japanese system of vertical and horizontal business relationships. In particular, his analysis of an abortive merger in the 1930s of N.Y.K. with O.S.K., Japan's second largest shipping company, provides a useful window through which to examine the anatomy of Japanese business.

The volume offers an abundance of other riches. Hidemasa Morikawa provides a concise and persuasive discussion of the rise of Japanese salarymen to top management positions, beginning in the mid-Meiji period. Thus, it was not the Occupation-led purge of zaibatsu families after 1945 that empowered salarymen as top management, but rather an evolution that began much earlier. Morikawa shows that salaried managers constituted 10% of all board members of major firms by 1905, 16% by 1913, and 37% by 1930. Today, that percentage would be in the 80s or even 90s, just as in American companies. The big difference, historically and today, is that Japanese firms are much more dominated by insiders who have spent their careers with the same company, whereas the American firms have a balanced mixture of inside and outside directors. In addition, the general Japanese

model of leadership by salaried managers with technical training, as compared with American financial and legal types, also appears to be a pattern of long standing.

In another essay, on business lobbying from 1911 to 1941, Andrew Gordon provides a careful analysis of labor relations in Japan. His focus is on business associations and their interaction with evolving government bureaucracies. While emphasizing the significance of labor problems in the pre-World War II era, Gordon shows how Japanese executives, after some initial bickering, closed ranks in the early 1930s and defeated all serious organizing efforts from the Left. (At no point during the 20th century, except for a brief period after World War II, have Japanese unions gained anything like the rights their American counterparts won under the Wagner Act of 1935.) Meanwhile, when full war mobilization came in the early 1940s, the government pushed through the distinctive seniority wage system that characterizes Japanese practice to this day. So again we see the roots of an important policy in place long before the period of miracle growth.

Other essays trace the evolution of Japanese business practice in a variety of industries. Stephen W. McCallion writes of a large, mechanized silk-spinning factory sponsored by the Meiji government in the 1870s and intended as a prototype for Japanese industrialization. McCallion details the often hilarious mixture of motives involved in this experiment, together with repeated operational snafus. Though the factory failed as a model for similar plants, it did contribute to Japan's international prestige. It also furnished convenient temporary employment for the daughters of idled samurai, and it somehow managed to turn a profit. McCallion's larger lesson is that we should temper the prevailing image of successful promotion of Japanese industrialization

through model enterprises set up at government expense.

In a valuable if prolix account of the crisis faced by privately owned Japanese railways after the financial panic of 1890, Steven J. Ericson argues that the role of banks in Japan's early industrialization was a good deal more important than earlier accounts would have us believe. Overall patterns of Japanese finance during the Meiji period, he writes, are best understood as standing midway between the British model of investor-financed joint-stock companies and the banker-dominated capitalism characteristic of Germany during the same era. Ericson explains that government influence could be either strong (as in the case of two railroads whose profits were guaranteed) or weak (when public support was tied to specific construction projects).

Barbara Molony, in a detailed look at the Nitchitsu chemical company from 1908 until the 1920s, shows how the firm's founder, Jun Noguchi, represents the archetypical Japanese entrepreneur. After training as an engineer, Noguchi built Nitchitsu from scratch into a large and successful fertilizer company. He then moved offshore to Japan's new colony, Korea, where he exploited cheap hydropower, close relations with the colonial government, and emerging protectionist sentiment. He used these advantages to help Nitchitsu compete successfully in the Japanese market against lower-cost European and American suppliers.

Molony's most useful argument, one echoed by other authors in this collection, is that high-tech entrepreneurial firms such as Nitchitsu, which became big businesses through internal expansion and diversification, were as instrumental in building industrial Japan as were the traditional zaibatsu (Mitsui, Mitsubishi, Sumitomo). In the new science-based industries such as chemicals, electrical machinery, and automobiles, they were a good deal more important. Molony sees parallels between Nitchitsu and other companies such as Toyota, Honda, Ricoh, Matsushita, Canon, Sony, Seiko, and Sharp. In each case, prominent founder-entrepreneurs with high aptitudes in technology built large, innovative firms that achieved international success and renown. Thus, the overall Western view of the Japanese miracle as somehow led by old-style zaibatsu needs modification.

In still another essay, Michael A. Cusumano examines one of the new science-based 20th-century zaibatsu, the Riken group, of which Ricoh is the best-known survivor. Riken began not as a manufacturing enterprise but as a think tank. Inaugurated in 1917 as the Institute of Physical and Chemical Research (a group of scientific

laboratories designed to develop new products for commercialization), Riken grew by the early 1940s into an unwieldy melange of small and medium-sized companies employing some 40,000 workers in a wide variety of industries.

Riken's founding genius, Masatoshi Okochi (1878–1952), was trained as an engineer at Tokyo Imperial University. He then became not only a scientific entrepreneur but also a prolific and remarkably prophetic writer. Noting Japan's lack of natural resources, Okochi stressed the need for an indigenous, science-based, perpetually innovative industrial system organized so as to take advantage of the nation's highly educated and energetic work force. During and after the Pacific War, Okochi was denounced in some quarters as a fascist, partly because his companies had helped produce munitions. Cusumano here sees him as a visionary, an important writer comparable to such Americans as Frederick W. Taylor and Thorstein Veblen. Certainly some of Okochi's writings have an uncannily modern ring. More than two generations ago, contemplating the rise and decline of nations, he wrote that although Great Britain was continuing to produce an ample number of first-rate basic scientists, British engineers were falling behind. Worse still, British business firms were typically taking a short-term view. They were emphasizing finance and profit-taking more than market share and process technology and were lagging in the design and engineering of new, science-based products. Okochi argued that this was the fundamental reason why Germany surpassed Britain in modern industrial enterprise.

Does this indictment sound familiar?

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Organizations and Careers

The Bureaucratic Labor Market. The Case of the Federal Civil Service. THOMAS A. DIPRETE. Plenum, New York, 1989. xvi, 341 pp. \$39.50. Plenum Studies in Work and Industry.

This is a book about how an organization's decisions affect the careers of its employees. Since the organization at issue is the Federal Civil Service (which has about the same share of the nation's workforce—3%—as New York City has of the nation's population), the findings are of more than academic interest. What makes this book appealing is that its conclusions have both

academic and practical importance—or, more accurately, that its theoretical analysis contributes to our understanding of the real-world predicaments of federal civil servants.

The basic conceptual apparatus DiPrete employs is derived from the theory of internal labor markets. This perspective stipulates that career mobility within organizations is more strongly influenced by rules, that is, the rules that identify promotion sequences or job ladders, than by the more chaotic and free-wheeling forces of supply and demand. DiPrete breaks new ground, however, because he does not take the shape, length, and strength of job ladders as given but as factors to be explained and examined empirically. Of central importance to employees' careers are the barriers that separate various jobs in white-collar hierarchies, as well as the ladders that link them.

Thus in the late 20th century large organizations of all kinds recognize separate tiers of clerical and administrative work. This is a distinction of considerable stability, held in place by the framework of social status and moral sentiment. It is also, as DiPrete exhaustively demonstrates here, a relatively recent construction. As late as 1927, he tells us, "the State Department had only an undersecretary and three assistant secretaries above the chief clerk" (p. 65, my emphasis). How the line between managers and clerks was drawn in the federal service and what it has done to the careers of civil servants become the central themes of this monograph—themes that are developed with demographic and with historical data.

The historical narrative has the flavor of a detective story. Blame (or credit) for the segregation of clerical and administrative careers could be plausibly allocated to any number of social forces. The British civil service, which reserved superior positions for the university-educated, was a ready model throughout the late 19th and early 20th centuries. The Progressive movement often pushed in the same direction—better government meant more efficient government staffed by the college-trained and the technically competent. Taylorism (scientific management) contributed through its development of systematic job description, job classification, and organizational centralization. There were also diverse forces of resistance. A persistent American ideology of egalitarian democracy, federal employee unions that wanted to protect promotion rights of existing members, and political efforts of veterans each slowed down the imposition of a clerical-administrative barrier.

This stalemate was not broken decisively, DiPrete informs us, until after the end of World War II. What finally turned the tide

in favor of separate administrative and clerical job ladders appears to have been developments outside more than inside the federal government. At this point, the story gets rather murky, but the key factors can be positively identified. One was the changing job market for college graduates in the 1940s and '50s—a market in which the federal civil service was competing poorly. To enhance its market position, the Civil Service Commission implemented a hiring strategy that linked formal testing (the Federal Service Entrance Exam) and college recruiting. A second contingency was the increasing identification of lower level white-collar work with women. Although this was certainly occurring outside of the federal government, DiPrete tends to focus on feminization of clerical work within the civil service.

The historical evidence provided here reveals some interesting truths and raises some interesting questions. For example, the emergence of separate governmental career paths for the college-educated was not a simple result of the inexorable march of "credentialism." But it is not completely clear how the other relevant social forces actually brought about the change that occurred. How did the establishment of a career track for baccalaureate managers enhance the government's market standing? Did candidates for administrative jobs demand protection against competition from lower-level employees? Were they assured of this protection in private sector markets? Which mattered more, the external market or the government's response?

Having described and accounted for this "structure," DiPrete then proceeds to assess its vitality. Through a painstaking, and occasionally pains-giving, statistical analysis of mobility records, he demonstrates that job ladders constrain but do not fully determine individuals' paths through the bureaucratic system. Considerable attention is also devoted to understanding how the differential opportunities embedded in job ladders explain the relative mobility chances of women and minorities in the federal government. A separate chapter examines the impact of affirmative action and Equal Employment Opportunity provisions on the mobility system (which was left largely intact) and the mobility chances of protected employees (which were, nevertheless, enhanced). Throughout these analyses, DiPrete sustains an interesting comparison between the clerical-administrative boundary and the technical-professional line. Although all the statistical findings are presented with technical rigor, some could have been communicated with greater substantive clarity.

In general, this is an ambitious and suc-