REVIEW ESSAY

The Industrial Policy Dilemma

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Max Holland, *When the Machine Stopped: A Cautionary Tale from Industrial America* (Boston, MA: Harvard Business School Press, 1989), 335 pp., $24.95 cloth.

George C. Lodge, *Perestroika for America: Restructuring Business-Government Relations for World Competitiveness* (Boston, MA: Harvard Business School Press, 1990), 235 pp., $22.95 cloth.

Although the Reagan and Bush administrations have pronounced no interest in any form of industrial policy—defined in this essay as an explicit policy to affect the fortunes of specific industries—the discussion of the issue continues. Both administrations in fact have undertaken actions that in a presidency with another ideology would be labeled industrial policy, industrial strategy, or competitiveness policy. The Defense Advanced Research Projects Agency (DARPA) operated as a venture-capital fund to promote the development of advanced technology, especially in high-tech industries, throughout the Reagan years and well into the Bush era.[1]

Other branches of government have also initiated at least portions of an industrial policy. In 1987 Congress established Sematech, a government-sponsored consortium of semiconductor manufacturers, aimed at enhancing technological innovation in the industry. Many states have put ideas about industrial policy into practice, particularly in technology diffusion programs to help small manufacturers evaluate and adopt new practices. Although the programs have avoided explicit targeting, they in practice specialize in aid to sectors that have been important in the states' economies. Michigan's program focuses on auto-related manufacturing, for instance.[2]

The list of economic conditions that have driven federal and state administrations to these measures has become familiar.[3] Since 1978, when the steel and auto industries first felt losses due to major structural problems, the number of people employed in manufacturing has remained about the same, but the percentage of employment in manufacturing fell from about 24% in 1978 to 18% in 1989.[4] Sectors that as recently as the 1970s and early 1980s were world leaders in innovation and controlled sizable shares of American and world markets have lost much of their technological edge and have been hit hard by competition from foreign companies, especially those in Japan. This change has been striking in machine tools and semiconductors, industries that have a major influence on technological advance in other industries' processes and products. In the machine tool industry imports accounted for less than 4% of domestic consumption in 1964, rose to 24% by 1980, and stood at about 35% in 1990.[5] American companies' share of the world market in semiconductors fell from over 60% in 1980 to less than 40% in 1988, although the total market has grown enormously since 1980 and employment in the American semiconductor industry rose 17% between 1980 and 1988.[6] Overall, the national trade deficit reached its highest level in 1987 even as the value of the dollar declined.[7] The rate of growth of productivity (defined as output per hour)—a key indicator of the direction of future change in the standard of living—was about the same from 1980 to 1990 as from 1970 to 1980 but a fraction of the rate of increase in productivity the nation had experienced in the 1950s and the 1960s.[8]

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Other related economic conditions were also profoundly disturbing, although federal and state administrations' industrial policy was not responding to these. The percentage of persons living in poverty rose during the 1980s, and the distribution of income became more unequal with the loss of good-paying manufacturing jobs that had placed households in the middle of the income distribution. Old industrial communities experienced loss of population, skyrocketing poverty and unemployment rates, and fiscal insolvency.[9]

The discussion of the nation's industrial problems and loss of international economic stature and of directions for national policy began at least 12 years ago. As of the early 1980s, attention from policymakers focused more on the pleas of older manufacturing that had been the core of the American economy for decades and less on ways to enhance the prospects of healthy sectors. Many looked at Japan's economic success and its vigorous industrial policy and believed the correlation was a causal relationship—Japan's industrial policy was responsible for its economic success. While Congress debated industrial policy, the Reagan administration's explicit position was that the economy would work best and industry would be healthiest if government did not interfere. To free the private sector to prosper, the government should cut taxes and ease regulations. The uneven effects of such measures among industries and between workers and owners of capital—what some termed the administration's implicit industrial policy—was not officially an issue for debate in the administration.[10]

As of the early 1980s those writing about the nation's economic problems suggested a range of approaches. At one end of the debate stood scholars who shared the ideological position articulated by the Reagan administration; they argued that any explicit intervention would hurt efficiency.[11] At the other end were those alarmed at the hardships of displaced workers and of communities that no longer had an economic base as major, high-paying industrial sectors declined. The goal of policy at any government level, they argued, should be economic growth with "economic democracy," which they defined as popular participation in the running of economic and social institutions.[12] In between were commentators who believed government could and should step in to influence the fortunes of specific sectors. However, the justifications they offered for doing so differed. Some, for example, argued that the federal government should intervene to revitalize troubled manufacturing industries that were important in defense but were not the major beneficiaries of the Reagan administration's massive defense buildup; the federal government was capable of "turning losers into winners."[13] Others held that the federal government should and could identify future winning industries and direct investment in their direction. Japan's industrial success, they argued, had been due to this kind of government planning and intervention. Markets would work too slowly and respond to the wrong signals in channeling resources to future growth sectors and away from dying industries.[14] Robert Reich pointed out that the United States had an industrial policy, albeit implicit, unplanned, and unexamined. He argued that the policy should be analyzed explicitly and allocation of burdens and benefits of major adjustment strategies should occur in a national bargaining arena.[15]

Now, in the early 1990s, the debate has evolved somewhat as the gap between rich and poor has widened and as previously healthy industries have fallen on hard times. The Harvard Business School Press has contributed two books, very different from each other, that add to the debate over American industrial decline and competitiveness policy and serve to enlighten the terms of the ongoing discussion. *When the Machine Stopped*, by Max Holland, is an account of the fortunes of a single firm, Burgmaster Tool, set in a context that offers insight into a range of business management and public policy issues. This book will be fascinating to anyone interested in what has happened to the American manufacturing base. *Perestroika for America*, by George C. Lodge, is an argument for a new relationship between government and large corporations and their lobbies with the aim of enhancing the international competitiveness of these corporations and their industries.

The books address several major issues that are central to any discussion of national industrial policy, although these are not the core concern of Holland's book. First, what is the capacity of American government to design and implement a successful industrial policy? Second, how should the direction for government action be decided? Finally, what is the role of industrial policy in

American governmental action to strengthen the nation's industrial base, and what is the major purpose of such intervention? The sections that follow note the contribution of the two books to answering these questions and place the issues in a broader context.

What Is the Capacity of American Government to Design and Implement a Successful Industrial Policy?

Holland demonstrates how federal government action to stimulate business activity damaged the machine tool industry and added to its problems at a time when such firms also lost the lead in innovation, endured inept management practices, and met increasing competition from Japanese companies. Defense contracts, even in peacetime, absorbed 20% to 30% of domestic output; the result was that many companies worked on expensive, complex technology rather than cost-effective technology. The Pentagon was committed to maintaining a strong machine tool industry that could be mobilized in emergencies; but uncertain national economic conditions from the 1970s through the 1980s meant that "the Pentagon helped skew the machine tool industry toward a commercially disastrous strategy."[16] Companies put their best efforts into custom machines for defense purposes where they faced few constraints on costs; they neglected the large domestic and international market for standardized, lower-cost, numerically controlled machines, thereby offering the opportunity to foreign producers to meet that demand. Depreciation allowances and laws that permit the deduction of unlimited amounts of interest from corporate income taxes subsidized leveraged buyouts and made many of these arrangements highly profitable by the late 1970s. When investors bought a company's stock and took private ownership of the company, the company acquired a large amount of debt that had to be serviced through reliable cash flow until the company's stock could be sold publicly again at a profit. Subsidies from the federal government in the form of depreciation allowances and interest deductions played a central role in making such buyouts work. In the case of Houdaille Industries (the conglomerate that took over Burgmaster in 1965), cash flow fell short of expectations and therefore the leveraged buyout did not go well. Management priorities shifted to dealing with the short-term exigencies of large amounts of debt, a disastrous approach for any machine tool company because success depends on continual innovation that requires a long-range view.[17]

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The unexpected and unintended effects of defense spending and of laws regarding depreciation and interest deductions were harmful. But even as Holland argues that such accidental effects should be controlled and planned, his tale of explicit industrial policy-making in the Reagan administration demonstrates that the pitfalls of direct policy are considerable. The process of Cabinet-level decision making on the appeal from Houdaille Industries for import restrictions in the mid-1980s was inept. The positions of the Secretary of Commerce and the Trade Representative depended primarily on the inaccurate, politically skillful story presented by the attorney for Houdaille. The positions of the Secretary of State and the members of the Council of Economic Advisers were those they usually took against trade restrictions, without accurate knowledge of the specifics of the Houdaille case, because that information was not available. When the President ultimately made the decision not to grant import restrictions, it had little to do with the merits of Houdaille's claims and principally depended on concern about relations with the Japanese. The decision was accidentally the best one in consideration of the facts of Houdaille's situation as well, although no one involved in making policy had learned those details.[18]

Lodge's examples frequently show the failures of the American federal government's industrial policy in the past. For instance, he describes how voluntary export restraint agreements, intended to help American industries in competition with foreign producers, have stimulated foreign competition and allowed domestic producers temporary protection.[19] Lodge's fascinating case study of Sematech reveals the dilemmas in government sponsorship of industry research and development consortia but leaves unresolved questions about whether Sematech is more effective than no action and whether it can serve as a model for more extensive industrial policy efforts. Another case study, of the relationship between the Reagan administration and EOSAT, a private company created to exploit the potential of the Landsat satellites and ground stations network, demonstrates how poorly the Reagan administration managed such efforts. As Lodge notes, the EOSAT difficulties had their roots in basic American institutions (a culture of "ambivalence about the propriety of government's responsibility for commercial competitiveness," the division of interests and difference in constituencies among executive branch agencies, the conflict in priorities in Congress and administrative agencies[20]); these cannot be resolved or reformed away.

At the same time that Lodge points to American government failures, he cites the success of Japanese intervention. Although Holland argues persuasively that Japanese industrial policy had almost no effect on the competitiveness of the Japanese machine tool industry, Lodge cites the Japanese government's measures and the industry's success and asserts cause and effect. At least in part because he believes that Japanese and European governments have been successful in industrial policy, Lodge believes that American government does have the capacity to intervene effectively as well. Successful industrial policy is a matter of will.

Whether the American government can design and implement an industrial policy that targets certain types of industries and that adds to rather than detracts from the nation's economic prosperity is in fact a major unanswered question. At least two key issues remain unresolved. The first is whether knowledge exists on which to base a policy either to revitalize industries or to facilitate the growth of others in ways that will result in net growth in the economy. The second is whether policies that target industries can be implemented successfully to enhance national economic growth.

As Krugman points out, choosing industrial sectors for targeting is problematic. The criteria for selection normally advanced in policy discussions – high value-added per worker, "linkages" to the rest of the economy, future international competitiveness, and aid by other governments to competing foreign industries – are flawed. However, more sophisticated criteria, based on ways in which the assumptions of idealized economic models are violated, cannot be translated into operational criteria for choosing industries. For instance, Krugman argues, an industrial policy should probably target high-technology industries that have "important dynamic scale economies and important externalities." However, he writes, "There are arguments, and not outlandish ones, suggesting that targeting of these industries might well lower national income."[21] Krugman demonstrates conditions under which such industries would benefit from restrictions on trade or subsidies for research and development, but he emphasizes that theorizing the results in simplified models is quite different from knowing what the results would be – "Will a dollar of R&D in the semiconductor industry convey ten cents worth of external benefits, or ten dollars? Nobody really knows."[22]

As Charles Schultze writes, "what substantive criteria would be for deciding which older industries to protect or restructure" is no more clear than criteria for selecting newer industries.[23] The problem in strengthening declining manufacturing industries can be defined as creating a comparative advantage in international trade for a specific industry. However, economists' theories do not suggest how policy intervention can change comparative advantage, especially for older industries feeling acute pressures from international competitors.

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Potential implementation problems suggest that even if policymakers know exactly what to do to stimulate growth, the efforts will not be carried out in ways that can achieve that goal. Research on implementation of federal programs shows that many programs go astray no matter how good the intentions. Industrial policy would not be exempt from implementation problems, partly because of the lack of knowledge to guide policy but largely for other reasons. Schultze states that "the one thing that most democratic political systems – and especially the American one – cannot do well at all is to make critical choices among particular firms, municipalities, or regions, determining cold-bloodedly which shall prosper and which shall not."[24] Krugman would trust himself, but not federal government employees, to implement correctly a policy to encourage the growth of certain industries – "To ask the Commerce Department to ignore special-interest politics while formulating detailed policy for many industries is not realistic."[25] As Moe argues, "A bureaucracy that is structurally unsuited for effective action is precisely the kind of bureaucracy that interest groups and politicians routinely and deliberately create," although none of them want such ineffectiveness. No one has the power to dictate bureaucratic structures to achieve a specific group's aims.[26] Agreement does not exist about who should benefit from allocating resources to specific industries.

Nor has anyone yet demonstrated convincingly that the success of other nations' economies is due to their industrial policy rather than to macroeconomic conditions, organizational characteristics of businesses, or cultural differences, for instance. Therefore, they have not yet shown that those nations' success demonstrates at least that some governments can implement industrial policy effectively. Political scientists doing comparative work study microeconomic intervention by foreign governments and look for the reasons the American government has not taken similar approaches. This work has not dealt carefully enough with whether foreign economic intervention caused favorable economic effects or whether American government intervention would deal with economic problems effectively. Research on Japan's industrial policy has been challenged for its failure to consider what economic growth would have occurred without the policy and for its failure to demonstrate precisely the mechanisms that led from policy to economic outcome.[27]

How Should the Direction for Government Action Be Decided?

Lodge argues that the direction should come from government (not specifically defined) reorganized to assign priorities to the future of different industries. "Government" should define "community need" to "give high priority to industrial competitiveness." Interindustry associations and industry organizations should "help government define and implement the national interest; . . . serve as bridges between the public and private sectors; . . . make the most of their common interests; and . . . shape strategies for particular industries." He offers interesting examples of how the Health Industry Manufacturers' Association and the governmental affairs officer for IBM have accomplished this. Only twice, in the final pages of the book, does Lodge mention that workers and consumers should also be involved in deciding policy direction, and he has no suggestions about how their participation might occur. As he acknowledges, he describes relations between government and "large, publicly held firms in industries that are increasingly exposed to intensifying global competition." Although Lodge specifically denies this, the arrangements he discusses sound like a corporatist state, operated for and to a significant extent by the largest corporations.[28]

Holland details no specifics about how to decide a direction for government action to strengthen specific industries. However, his tale of Burgmaster Tool dramatically demonstrates that worker involvement in improving production processes and products was key to Burgmaster's success. Major reasons for the decline of the company were that conglomerate management disenfranchised workers and denigrated their views and paid insufficient attention to the needs of customers. After the Houdaille conglomerate acquired Burgmaster, managers who did not understand their subsidiary's industry undermined their business by making management control an end in itself.[29] Holland argues that the Burgmaster story aids in understanding what may have occurred in other firms and industries as well. If he is correct, then the process that Lodge advocates, where the managers of large corporations have a disproportionate role in the process that determines industrial policy, threatens to institutionalize in national policy-making some of the narrowness of vision that led to the problems in the first place.

How industrial policy should be determined is not an issue that meets with agreement, but what the process should be has not been widely debated. Harrison and Bluestone are an exception in discussing process when they refer to a "tripartite process" involving the representatives of business and labor working with government; Kuttner hopes for the mobilization of an "egalitarian constituency."[30] In large part, disagreement about how such policy should be determined—such as the difference between Lodge's proposal and that of Harrison and Bluestone—has its roots in questions about whose interests should be served and what constitutes the problem that industrial policy should solve. By advocating policy direction and ignoring the process by which industrial policy should be adopted, many of those who advocate industrial policy imply that the issue has clear technocratic solutions when the debate is actually over whose interests will be served best.

As others have pointed out, the process for deciding on industrial policy cannot be prescribed specifically without knowledge of the particular political setting of a community, a state legislature or governor's office, the Congress, or an administrative agency.[31] Yet the process of formulation and adoption of policy is key in determining whether any policy, no matter how justifiable economically or socially, succeeds in achieving its explicit goals. Disagreements unresolved in the formulation process, different implicit aims, and the involvement of particular actors with histories of antagonism toward other key groups in a specific institutional setting can mean the process of formulation sows the seeds for program failure.[32] Specifics of the process of formulation – who will be involved in decisions, which interests will have the ears of policymakers, who will write the regulations – should weigh heavily in determining whether different groups want an agency or an elected body to put in place programs for industry.

What Is the Role of Industrial Policy in American Government Action to Strengthen the Nation's Industrial Base, and What Is the Major Purpose of Such Intervention?

Holland's conclusion emphasizes that the United States has a de facto industrial policy evident in every government effort. The story of the machine tool industry shows vividly how high rates of inflation in the 1970s, followed by huge federal deficits in the 1980s and a high value of the dollar in the first half of the 1980s (which made imports cheap and exports expensive), followed by a lower value of the dollar in the last half of the decade all created uncertainty for firms whose livelihood depended on taking a longer-term perspective and investing in research and development for continued innovation. Holland states, "When the government chooses to subsidize speculation instead of productive investment; when the government militarizes the manufacturing and research base of the economy; when the government proves incapable of educating a large number of its citizens; and above all, when the government proves incapable of managing the economy responsibly, it is formulating an industrial policy." He concludes, "Any nation that cannot define, much less assemble, a coherent role for the government in its economy is in trouble."[33] That coherent role should emphasize doing much better at the usual tasks of government – educating the population and managing the economy to provide a more stable environment for investment and long-term planning.

In order to recover economic competitiveness, Lodge states that the direction for American policy should be to promote the strength of "high-value-added, high-profit, high-income industries." He does not dismiss the importance of other priorities – "safety, health, defense, a balanced budget and strong consumer spending"[34] – but his emphasis on ways to promote the competitiveness of certain industries dominated by large corporations means his mention of other priorities is cursory.

Other groups have made recommendations that extend over a broad range of areas.[35] They virtually unanimously back Holland's view that macroeconomic policies must bring more stability to the economy in order to encourage longer-term investments and more research and development. To that end, the size of the federal budget deficit must be reduced, inflation controlled, interest rates stabilized, the rewards to short-term speculation removed. After that, however, two major groups emerge – an oversimplification of the range and diversity of industrial policy directions but one that serves to enlighten aspects of the debate.

One major group agrees with Lodge's view that consortia designed in the style of Sematech for selected industries hold great promise for enhancing international competitiveness. To that end, antitrust laws that have restricted the ability of corporations to join others in research and development should be modified. Agencies like DARPA should be strengthened.[36]

A second major group, also diverse, advocates industrial policy, along with other important policy changes, to "hold out a better promise of increasing productivity, boosting wages and incomes, and distributing the fruits of this growth more equitably";[37] reemploy a labor pool in existing communities;[38] generate enduring prosperity with "equitable sharing of the benefits and costs" through greater participation of workers;[39] and create economic justice with economic growth.[40] Strategic long-term plans for industries, both growing and declining ones, can prevent ad hoc emergency measures; these should be based on "conditionality," promises of investment and skill enhancement, for instance, in return for assistance.[41] The issue of industrial policy, Kuttner argues, is to use protectionism in the context of strategic plans to keep the economy at full employment and to improve industries' performance.[42]

Lester Thurow argues, "What we need is what we don't have: a President willing to tell the people that the news from the competitiveness-productivity front does not bode well for our future standard of living. What we don't have is a political process that would then support a President in changing what must be changed."[43] We are missing at least that much for making industrial policy. Agreement exists that the government's management of the national economy must improve. But which groups should bear the costs of the specific changes that commentators suggest and what those specifics should be is not agreed. Because no clear technocratic solution exists for targeting industries in ways that enhance national growth, because the effects of such targeting efforts are uneven among regions and demographic groups, and because such programs could not necessarily be implemented effectively, the proposals of Lodge and others like him amount to a case for redistribution to the types of industrial sectors he specifies and away from other uses. Perhaps the political will exists to make that redistribution under the veil of the argument that the purpose is promoting national economic growth, but this is far from the explicit aim of arguments for industrial policy.

Neither the Republican administration nor the Congress under Democratic leadership has displayed determination to stop the increasing inequality in the distribution of income and wealth in the nation or to deal directly with the social economic disasters that the decline of major industries creates in specific places.[44] As long as this political climate persists, national industrial policy measures are not likely to serve the interests of those whose economic opportunities are narrowing nor to achieve the ends of the second major group advocating industrial policy.

NOTES

1. "The Government's Guiding Hand," *Technology Review*, 94 (February/March 1991): 35-40.

2. Lodge, *Perestroika for America*, p. 82ff.; John Holusha, "An Industrial Policy, Piece by Piece," *New York Times*, July 30, 1991, sec. C, p. 1; Philip Shapira, "Modern Times: Learning from State Initiatives in Industrial Extension and Technology Transfer," *Economic Development Quarterly*, 4 (1990): 186-202, see p. 195.

3. Experts on the American economy do not all agree that the following indicate problems that signify national economic illness. See R. D. Norton, "Industrial Policy and American Renewal," *Journal of Economic Literature* 24 (March 1986): 1-40; Robert Z. Lawrence, *Can America Compete?* (Washington, DC: Brookings, 1984); William J. Baumol, Sue Anne Batey Blackman, and Edward N. Wolff, *Productivity and American Leadership* (Cambridge: MIT Press, 1989).

4. *Economic Report of the President*, transmitted to the Congress, February 1991 (Washington, DC: Government Printing Office, 1991), Table B43.

5. Committee on Technology and International Economic and Trade Issues, National Academy of Engineering, and Commission on Engineering and Technical Systems, National Research Council, *The Competitive Status of the U.S. Machine Tool Industry* (Washington, DC: National Academy Press, 1983), p. 41; U.S. Department of Commerce, International Trade Administration, *1991 U.S. Industrial Outlook* (Washington, DC: Government Printing Office, 1991), chap. 19.

6. U.S. Bureau of the Census, *Statistical Abstract of the United States: 1990* (Washington, DC: U.S. Government Printing Office, 1990), Table 651; *U.S. Industrial Outlook 1991*, chap. 17; Lodge, *Perestroika for America*, pp. 74, 94.

7. *Economic Report of the President*, 1991, Tables B105, B109.

8. Ibid., 1991, Tables B46, B47.

9. U.S. Congress House of Representatives, Committe on Ways and Means, *Overview of Entitlement Programs—1991 Green Book*, 102d Cong., 1st sess., May 7, 1991, p. 1138. Bennett Harrison and Barry Bluestone, *The Great U-Turn: Corporate Restructuring and the Polarizing of America* (New York: Basic Books, 1988); Greg J. Duncan, Timothy M. Smeeding, and Willard Rodgers, "W(h)ither the Middle Class? A Dynamic View" (Paper prepared for the Levy Institute Conference on Income Inequality, Bard College, July 16, 1991); Joe T. Darden, Richard Child Hill, June Thomas, and Richard Thomas, *Detroit: Race and Uneven Development* (Philadelphia: Temple University Press, 1987), pp. 11-65; discussions with representatives of the Steel Valley Authority and the Monongahela Valley Initiative, Pittsburgh and the Monongahela Valley, PA, September 1991.

10. For example, David A. Stockman and Jack Kemp, "Avoiding a GOP Economic Dunkirk," *Wall Street Journal*, December 12, 1980, p. 28; Christopher Conte, "The U.S. Message for Ailing Industries," *Wall Street Journal*, April 6, 1981, p. 20; U.S. Congress, House of Representatives, Hearings before the Committee on Banking Finance and Urban Affairs, "Industrial Policy," 98th Congress, 1st sess., Washington, DC, 1983.

11. For example, Martin Feldstein, ed., *The American Economy in Transition* (Chicago: University of Chicago Press, 1980), pp. 2-5; the annual *Economic Report of the President*, submitted to Congress each January, reiterated the position through the 1980s.

12. For example, Barry Bluestone and Bennett Harrison, *The Deindustrialization of America* (New York: Basic Books, 1982), pp. 244-57; Martin Carnoy and Derek Shearer, *Economic Democracy: The Challenge of the 1980s* (White Plains, NY: M. E. Sharp, 1980); Samuel Bowles, David M. Gordon, and Thomas E. Weisskopf, *Beyond the Waste Land: A Democratic Alternative to Economic Decline* (Garden City, NY: Anchor Press, 1983).

13. Felix Rohatyn, "The State of the Nation's Industry—All Talk and No Action," *Washington Post*, July 20, 1980, p. G4; Committee on the Machine Tool Industry, Manufacturing Studies Board, National Research Council, *The U.S. Machine Tool Industry and the Defense Industrial Base* (Washington, DC: National Academy Press, 1983).

14. For instance, Lester C. Thurow, "The Productivity Problem," *Technology Review* 83, no. 2 (November/December 1980): 40, 51; Neal R. Pierce and Carol Steinbach, "Reindustrialization—A Foreign Word to Hard-Pressed American Workers," *National Journal*, October 25, 1980, pp. 1789-88; Ezra F. Vogel, *Japan As Number One* (Cambridge, MA: Harvard University Press, 1979), pp. 232-33.

15. Robert B. Reich, "Making Industrial Policy," *Foreign Affairs*, 60 (Spring 1982): 852-81; Robert B. Reich, *The Next American Frontier* (New York: Times Books, 1983).

16. Holland, *When the Machine Stopped*, p. 270.

17. Ibid., chaps. 10-12; pp. 270-73.

18. Ibid., chaps. 11, 12.

19. Lodge, *Perestroika for America*, p. 4; see also David B. Yoffie, "Orderly Marketing Agreements as an Industrial Policy: The Case of the Footwear Industry," *Public Policy* 29 (Winter 1981): 93-119.

20. Lodge, *Perestroika for America*, pp. 110-11.

21. Paul R. Krugman, "Targeted Industrial Policies: Theory and Evidence" in *Industrial Change and Public Policy* (A symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 24-26, 1983).

22. Paul R. Krugman, "Is Free Trade Passé?" *Economic Perspectives* 1 (Fall 1987): 139.

23. Charles Schultze, "Industrial Policy: A Dissent," *Brookings Review* 2 (Fall 1983): 7.

24. Ibid., 9.

25. Paul Krugman (Seminar at the Institute for Public Policy Studies, University of Michigan, Ann Arbor, MI, October, 1990); Krugman, "Is Free Trade Passé?" 142.

26. Terry M. Moe, "The Politics of Bureaucratic Structure," *Can the Government Govern?* ed. John E. Chubb and Paul E. Peterson (Washington, DC: Brookings, 1988), pp. 328-29.

27. R. Kent Weaver, *The Politics of Industrial Change* (Washington, DC: Brookings, 1985); John Zysman and Laura Tyson, eds., *American Industry in International Competition* (Ithaca, NY: Cornell University Press, 1983), chap. 1; Chalmers Johnson, ed., *The Industrial Policy Debate* (San Francisco, CA: Institute for Contemporary Studies, 1984), chap. 1; Peter J. Katzenstein, *Small States in World Markets* (Ithaca, NY: Cornell University Press, 1985); John Freeman (Seminar in the Minnesota Development Policy Workshop, State and Regional Research Center, University of Minnesota, Minneapolis, MN, 1987); Thomas J. Anton and Rebecca Reynolds, "Old Federalism and New Policies for State Economic Development" (Discussion Paper, Taubman Center for Public Policy and American Institutions, Brown University, Providence, RI, n.d.); Philip Trezise, "Industrial Policy in Japan," in *Industry Vitalization*, ed. Margaret E. Dewar (New York: Pergamon, 1982); Werner Menden, "Industrial Policy in the Federal Republic of Germany," in *Industry Vitalization*, ed. Dewar.

28. Lodge, *Perestroika for America*, chaps. 1, 4, 5, 6, especially pp. 201-2, 204, 208.

29. Holland, *When the Machine Stopped*, chaps. 2, 3, 5, 15.

30. Harrison and Bluestone, *The Great U-Turn*, pp. 183-4; Robert Kuttner, *The Economic Illusion: False Choices Between Prosperity and Social Justice* (Philadelphia: University of Pennsylvania Press, 1984).

31. For example, Bluestone and Harrison, *The Deindustrialization of America*, p. 232.

32. Margaret E. Dewar, *Industry in Trouble: The Federal Government and the New England Fisheries* (Philadelphia: Temple University Press, 1983), chaps. 3, 5; Matt Kane, "Analysis and Politics behind the Minnesota Employment and Economic Development Act: A Case Study in Formulation of State Economic Development Policy" (A Plan B paper submitted in partial fulfillment of the requirements for the degree of Master of Arts in Public Affairs, University of Minnesota, Minneapolis, MN, June 1987); Jeff Schneider, "Policy Formulation in State Economic Development: A Look at the 1983 Economic Development Fund Legislation" (A paper prepared for Public Affairs 8591, University of Minnesota, Minneapolis, MN, April 1986).

33. Holland, *When the Machine Stopped*, p. 276.

34. Lodge, *Perestroika for America*, p. 205.

35. For a summary of many groups' recommendations, see Michael Dertouzos, Richard K. Lester, Robert M. Solow, and the MIT Commission on Industrial Productivity, *Made in America: Regaining the Productive Edge* (Cambridge: MIT Press, 1989), Appendix 1.

36. For example, *Global Competition: The New Reality*, Report of the President's Commission on Industrial Competitiveness (Washington, DC: Government Printing Office, January 1985).

37. Harrison and Bluestone, *The Great U-Turn*, p. 170.

38. Ann R. Markusen, "Planning for Industrial Decline: Lessons from Steel Communities," *Journal of Planning Education and Research* 7 (Spring 1988): 173-84.

39. Ray Marshall, *Unheard Voices: Labor and Economic Policy in a Competitive World* (New York: Basic Books, 1987), pp. 297-302.

40. Kuttner, *The Economic Illusion*.

41. Harrison and Bluestone, *The Great U-Turn*, p. 184.

42. Kuttner, *The Economic Illusion*, p. 115.

43. Lester C. Thurow, "Global Trade: The Secrets of Success" (a review of Michael E. Porter, *The Competitive Advantage of Nations*), *New York Times Book Review*, May 27, 1990, p. 7.

44. For accounts of what such social economic consequences have been in one region, see Darden et al., *Detroit*; University of Michigan Detroit Area Study, "Separate and Unequal: The Racial Divide" (Report to the Detroit Tri-county Area, University of Michigan, Ann Arbor, MI, December 1989).