

INDUSTRY STUDIES

International Competition, Automotive Decline, and Regional Economies

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This article reviews some recent books on automotive competition that broadly focus on the rise of the Japanese industry and the competitive decline of the traditional North American industry. Each book suggests, if not always explicitly, a likely structure for and distribution of future automotive manufacturing. The implications of these analyses for national and regional automotive production vary substantially. Some scenarios call for further erosion of domestic production in the face of international competition and pressures to move remaining activity to offshore locations. Other scenarios suggest a revitalization of domestic automotive production, although not necessarily within the traditional companies.

Kurt Hoffman and Raphael Kaplinsky, *Driving Force: the Global Restructuring of Technology, Labor, and Investment in the Automobile and Components Industry* (Boulder, CO: Westview Press, 1988).

Davis Dyer, Malcolm S. Salter, and Alan M. Webber, *Changing Alliances* (Boston: Harvard Business School Press, 1987).

Clifford Winston and Associates, *Blind Intersection?* (Washington, D.C.: The Brookings Institution, 1987).

David Halberstam, *The Reckoning*, (New York: William Morrow and Company, Inc., 1986).

Maryann Keller, *Rude Awakening: The Rise, Fall, and Struggle for Recovery of General Motors* (New York: William Morrow and Company, Inc., 1989).

The United States faces a continuing challenge from many nations to its worldwide economic preeminence, and that challenge is significant across all traded goods and services. No nation currently poses so serious a long-term challenge as does Japan, nor does any industry face more intense Japanese competitive pressure today than does motor vehicle manufacturing. The question of how well the United States, or Western Europe, for that matter, can survive, let alone defeat this challenge has dominated the lives of many businessmen for almost 2 decades now, and the past decade has witnessed the scholarly and analytic communities turning to consider that question. This article reviews a selection of books that focus on the automotive industry.

Although these books often address quite different central issues, each ultimately directly confronts the problem of the competitive performance of the U.S. industry in the face of serious and direct competition from the Japanese industry since the early 1970s. In so doing, many of them indirectly offer insight into another important issue: what will the structure of automotive production likely be over the next few decades, and what does that structure imply about the location and siting of automotive production activity worldwide?

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These are not trivial issues, nor are they of interest only to various stakeholders in one or another national (or regional) automotive industry. Manufacturing in general, and automotive manufacturing in particular, traditionally supports large numbers of well-paying jobs across the skill spectrum, and thus plays a substantial role in many economies. In the United States, domestic automotive production accounts for the consumption of significant output from numerous other industries, ranging from plastics and steel to electronics and machine tools. Declining automotive production directly depresses demand for the goods of these industries. Moreover, automotive production spans an enormous range of design, engineering, production, and marketing activities, mimicking virtually all the processes and functions of manufacturing in general. Thus automotive stamping is related to appliance stamping, and its casting and assembly operations are like those in many other industries. If the auto industry cannot be competitive with foreign manufacturers, and must eventually decline even further, might not many, or even most other manufacturing industries ultimately face a similar fate?

AUTOMOTIVE COMPETITION

Automotive manufacturing summons two images to mind. For some, it calls to mind a growing, energetic, beehive of activity, a central industry offering promises of employment and the good life, a crucial driving force of the economy. For others, it means shuttered plants, an industry in decline, shattered dreams, and lost opportunities. Both of these images are accurate, if somewhat exaggerated, but their accuracy depends on time and place. The first image applies to the traditional North American industry—the Detroit manufacturers and their suppliers—from roughly 1910 through the 1960s, and to Japan today. The second, unfortunately, may be more descriptive of Detroit today, as the industry and its benefits are receding, if not altogether disappearing.

Detroit's "Big Three"—Chrysler, Ford, and General Motors—U.S. vehicle production fell behind Japanese production in 1980, and remained behind throughout the decade. They continue to face severe competitive challenges from the Japanese manufacturers. These challenges are, and will remain, so strong that some analysts are now seriously asking a question that would have been ridiculous just a decade ago: can the Big Three survive in anything like their current form? The Japanese manufacturers appear to be capable of bringing a new car to market considerably faster, and their plants able to produce profitably a more varied mix of vehicles at lower volumes. They enjoy high ratings for vehicle quality and reliability, while their performance and styling appears to have strong appeal, especially to younger buyers.

The Big Three are still losing passenger car market share, as their North American production accounted for just 61% of the 1989 U.S. market, down from some 71% at the beginning of the decade. This share loss has resulted in production losses, as Big Three 1989 passenger car production fell almost 6% below 1980's level, although the passenger car market grew over 10% from the decade's beginning to end. However, they are now losing share more to the Transplants or NAMs¹, the U.S.-sited facilities of offshore (currently all Japanese) manufacturers, rather than to imports. In 1980, Volkswagen's now closed Pennsylvania plant accounted for just under 2% of the U.S. passenger car market; the seven NAMs opened and operated by the Japanese since then took about 10.5% of the 1989 market.² These plants have numerous important competitive advantages. They have lower labor costs, primarily due to lower fringe benefit costs for a younger workforce and the few retirees they must support. They also have higher productivity levels, a carefully selected and trained workforce, the financial backing of their Japanese parents, and benefit from any image advantage Japanese cars might possess.

However, there are also some encouraging signs for Detroit. The Big Three are fundamentally more competitive than they were at the beginning of the 1980s, and few U.S. industries have withstood Japanese competitive pressure as well as they have. The Big Three have narrowed the Japanese quality, productivity, and fuel economy advantages, while maintaining their lead in the safety arena, and may now have a price advantage over their Japanese competitors. Moreover, they are gaining market share in light duty trucks and vans, increasing their share from about 80% in

1980 to 86% in 1989. This is important because of the growth of this segment of the market, from about 21% of the total light vehicle market in 1980 to just under 32% in 1989.³

These continuing efforts to be competitive constitute bad news for some individuals and communities, however essential they may be for the Big Three's survival. There is serious overcapacity targeted on the U.S. market, perhaps as much as 30% more production capacity than the market can support, and that almost surely means another round of plant closings, production cutbacks, and job losses. This will affect not only the individual workers who lose their jobs, but will also create concentrated economic problems in the many communities that are heavily dependent on the automotive industry. Competitively forced productivity improvements will further erode jobs throughout the industry. Even if these job reductions can be handled through retirements and voluntary quits rather than by layoffs, with fewer adverse consequences for individuals, the industry will offer fewer jobs to the next generation of workers.

What has happened and is likely to happen in the future? What does it mean for the central role of the automotive industry in the U.S. economy, and even more central role throughout the "Frostbelt" — Michigan, Ohio, Indiana, Illinois, and, to a lesser extent, Pennsylvania and Wisconsin? What has happened is the central question addressed by this collection of books, and, by extension, each has some insight or prediction to offer about the future prospects for automotive manufacturing in national and regional economies. The books represent different perspectives and traditions, and are addressed to different audiences; thus their emphases and explanations also differ. However, that is a source of collective strength, since the complexity of the automotive industry almost assures that there is no one answer or view that applies across all its myriad activities and operations.

Kurt Hoffman and Raphael Kaplinsky, drawing upon political and economic analysis traditions, most directly address the issue of the structure and location of future automotive manufacturing. Their analyses and predictions are cautiously optimistic from the perspective of developed automotive producing regions, portraying the decline of the traditional Big Three as reflecting changes in the nature of production, but arguing that these very changes confer some locational advantages for continued production in the developed regions. If some work will inevitably be lost to offshore competitors and offshore sourcing of materials, parts, and components by domestic manufacturers, much work can remain anchored in the current automotive economy of the United States.

Davis Dyer, Malcolm Salter, and Alan Webber argue that the globalization of automotive competition has significantly altered the industry's competitive dynamics. It is no longer the familiar company against company competition, with players sharing the same fundamental business environment and enterprise system of management, labor, and government relations. Now competition between companies may be largely determined by the advantages and disadvantages conferred on a company by its national enterprise system. There are two critical components to this system that directly affect competition in the marketplace. First, the management-labor relationship determines how well a company can organize and motivate employees to make low cost, high quality products. Second, the management-government relationship determines the incentives for investments that support product differentiation. While there are some encouraging signs of change in the United States, the industry is permanently damaged, and will continue to decline even further.

Clifford Winston and his coauthors focus explicitly on one aspect of Dyer, Salter, and Webber's enterprise system, evaluating the effects of government regulations on the competitive health of the U.S. auto industry. They find that recent government policies have had decidedly mixed effects, and they particularly call for the termination of restraints on Japanese imports. They forecast a future that finds the Big Three competing relatively successfully against imports, earning adequate profits, but requiring lower employment levels as productivity improves and they increasingly rely on sourcing production goods from abroad.

David Halberstam reviews the recent histories of Ford and Nissan as paradigmatic of the competition between the U.S. and Japanese auto industries and industrial competition between the two countries in general. He focuses on two companies, and often individuals within each

company, and he perhaps provides the best overall description of the complex sources of the differential competitive success of the U.S. and Japanese industries, broadly touching on numerous diverse factors. He makes few specific predictions, but his analysis suggests further erosion in the competitive position of the U.S. auto makers, with further decline in their domestic economic activity and the jobs they offer. Unfortunately, Halberstam's book has probably received less notice than it merits because of sharp reversals in the competitive success of Ford and Nissan coincident with its publication.

Maryann Keller focuses on just one company, General Motors, portraying the competitive challenges it has faced for the past few decades, and closely examining its strategic responses, especially during the 1980s. She provides the most automotive detail of any of these books — market shares, investments, profits, and so forth — and provides excellent highlights of the details of competitive decisions, factors, strategies, and developments. She highlights the role of GM's entrenched corporate culture in producing failing leadership and resistance to change throughout its extensive bureaucracy. Keller suggests that even if GM comes back, it will likely be at lower market share, supporting fewer jobs, and requiring additional loss of employment as it pursues offshore sourcing strategies.

THE CHANGING STRUCTURE OF AUTOMOTIVE COMPETITIVENESS

If we are to understand what the structure and distribution of automotive production will be in the coming century, we must have some understanding of what it is today, and how it came to be that way. It is perhaps particularly important to understand how it has shifted over the past two decades, and what factors account for that shift. We can never exactly predict the future development of so complex an industry as auto, but the better we understand it, the less egregiously in error we are likely to be. Each of these books offers its own particular definition of the current situation of the U.S. industry⁴, how that situation developed, and thus have differing expectations about its future.

PRODUCTION SYSTEMS

Hoffman and Kaplinsky's *Driving Force* specifically examines what evolving competitive factors and dynamics in the automotive industry mean for the possible future roles of developing countries in the worldwide automotive industry. In particular, they are concerned whether the activities of transnational corporations will foster an international division of labor, such that developing countries will take on an increasing share of automotive component production, contributing more to the process than simply low-wage production sites.

Most of their theoretical focus is on how three factors affect production siting and the international allocation of production operations. First, they explore the type of embodied technology employed in the production and distribution of goods, especially whether it is focused within an activity, within a sphere of activity, or between spheres of activities. Second, they examine the nature of the labor process, including task allocation, control, and the relationships between management and labor. Third, they examine the nature of interfirm relationships in the production chain. They argue that these factors usefully define three stages of industrial production. The first, *manufacture*, is most importantly characterized by the emergence of the factory as a controllable work environment; the second, *machinofacture*, is highlighted by the embodiment of labor activities in machines, the developing division of labor, increasing mass production, and detailed control over worker behavior.

The third stage, which we are now entering, is *systemofacture*. This stage has three key characteristics. First, technology is focused on activities that cross traditional functional and organizational spheres, and is largely based on microelectronics. Computer-aided Design (CAD), linked with Computer-aided Manufacturing (CAM) is a primary example. Second, the labor

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process invests a greater measure of control and wider variety of skills within the individual worker, to permit flexibility and high quality production. Third, the relationships between a manufacturer and its suppliers must move from a restricted exchange largely determined by piece-price to a broader functional relationship emphasizing numerous performance dimensions, including quality, technical and engineering contributions, and the management of more complex subassemblies and components.

Hoffman and Kaplinsky argue that manufacture favored dispersed production and location near markets, but that the economies of scale of machinofacture favored centralized production at low cost locations. After World War II, the relatively open and liberal trading order and the specific needs of the U.S. transnationals that dominated the world economy fostered the higher development of machinofacture through the pursuit of varied production locations. This accounted for relatively high levels of foreign direct investment in developing countries.

Now we face a world where productivity and unemployment differentials across economies inevitably foster protectionism, reemphasizing production siting near final markets. Moreover, labor's lower share of cost and the labor requirements of systemofacture seriously undercut the traditional low wage advantage of developing countries. Finally, the developing interfirm relationships place a premium on locating supplier activity near manufacturing activity. This analysis, then, suggests that vehicle production location decisions will favor more advanced industrial locations, with their more developed markets and labor supplies, and that the requirements of proximity will draw suppliers to these same locations.

The authors take the international automotive industry as an appropriate case study to explore these points in more detail, providing a useful overview of automotive competition among the United States, Western Europe, and Japan. They argue that automotive production is undergoing a fundamental change, no less significant than the introduction of mass production in the early years of this century. To summarize, they contend that the traditional model of automotive production, including mass production of identical vehicles, relying on low skill and focused worker effort, and sourcing parts and components from low labor cost locations is inconsistent with the requirements of competitive success today. These requirements include responding to the automotive market's demand for differentiated products, utilization of broadly skilled labor and more complex technology to achieve flexible and high quality production, and likely technical and trade restrictions on worldwide cost-based sourcing.

Thus we see Japan's initial offshore production efforts in vehicles rather than parts and components, and location in advanced industrial economies like the United States and Western Europe, to supply both production and markets, rather than in developing countries, as export platforms for developed economies. Japanese moves offshore to developing countries invariably involve specific circumstances, such as domestic content regulations, needs to balance foreign exchange, or the preservation of market access, rather than a general strategy of locating in low cost areas.

This is certainly good news for established centers of automotive production, and bad news for a number of developing nations that hoped to use automotive component exports as centerpieces for their industrial development efforts. However, Hoffman and Kaplinsky recognize that some factors will mitigate the immediate flowering of all the implications of their analysis, and that their analysis does not imply invariant production location in advanced economies.

First, for the United States, the authors raise serious questions as to how well the Big Three understood the Japanese production strategy, the most fully developed example of systemofacture, and its implications for production siting. Thus the Big Three continued to seek offshore sources for both vehicles and parts and components, and to close existing domestic production facilities. Second, even if the Big Three and their major suppliers understood the competitive imperative of moving to systemofacture production, they felt pressured to meet the immediate Japanese challenge by pursuit of low cost offshore sources for vehicles and part and components. The authors see this as likely to be self-defeating in the long run.

Third, we are likely to see regional trading arrangements or blocks emerge, and Mexico may pose a substantial threat to U.S. sited production even if the U.S. industry evolves to a more

systemofacture approach. Mexico is close enough to permit some level of JIT (Just-In-Time) production sourcing⁵, promises sufficient skilled labor, and may be more adaptable to the new system's demands for changed labor relations. Fourth, the advent of Japanese automotive production of parts and components as well as vehicles in the United States will in all likelihood capture business at the Big Three that has gone to the domestic supplier industry in the past. This will mean economic dislocation in its traditional production regions and centers.

Driving Force provides the best analysis of the automotive industry within the context of broader issues of economic development that I have seen. Nevertheless, its treatment of automotive competition is flawed in three ways. First, the U.S. market is described a number of times as characterized by price-based competition. This was true at the supplier level of the industry, but since World War II has certainly not been true at the vehicle level. Numerous analyses have shown that GM exercised price leadership throughout this period, and the Japanese have followed GM price leadership since their second market entry. To be sure, the Big Three tried to keep prices low, because of the effects of price on total demand. The lower manufacturing costs of the Japanese provided them a formidable competitive advantage. However, that advantage lay in the higher returns they secured, supporting investment and profits in the face of a fiercely competitive home market, and the threat of price competition. Price competition in fact has not yet developed.

Second, Hoffman and Kaplinsky distinguish the performance of the Big Three, but not, in my view, sufficiently. In particular, Ford has been extremely successful, and its efforts worldwide deserve more careful analysis than the authors provide. It is not difficult to argue that Ford, whether purposively or not, managed to learn the message of Japanese success earlier and more thoroughly than GM or Chrysler. It may be that Ford's continued search for offshore sources represents a more coherent strategy and not simply a short-term tactic. After all, both Ford and GM are faced with the challenge of integrating and rationalizing their extensive worldwide activities in some fashion, not developing such activities, the challenge facing the major Japanese manufacturers.

Third, the authors call attention to the greater variety of cars offered by the Japanese throughout the 1970s and 1980s. They did offer more models, and that is important in the market and as evidence of flexibility. However, they did not offer higher levels of "option variability" compared to Detroit's insistence on a standard product, the interpretation these authors provide. An important source of their manufacturing advantage was the restricted number of "option packages" they offered, while the Big Three tried to mass produce vehicles so option tailored that their actual production often approached unit or small batch production. The Japanese appropriately suited their offerings to their production processes: model variability, but little option choice. Thus Honda still offers only four versions of the Accord, the best selling car in the 1989 U.S. market. The discounts the Big Three have offered since the mid-1980s to encourage selection of restricted option packages were very much in imitation of Japanese industry practices, and certainly not a contrasting preference for identical products.

These are important points in understanding competitive developments in the U.S. automotive industry. However, they are not particularly damaging to the overall argument that successful automotive production is evolving to a form of production that the authors call systemofacture. Nor do they undermine the argument that this production form is likely to decrease the direct investment of established industries in developing economies because of the lowered importance of low cost labor and the increased importance of proximity in systemofacture production siting.

Hoffman and Kaplinsky's analysis suggests that the Big Three will continue to have trouble adapting to the demands of systemofacture, and will continue to move activities offshore. That implies that more automotive communities in the United States will face declining employment and possible plant closings. On the other hand, their analysis suggests further expansion of the NAMs, and that can mean more jobs and more plant openings for some communities. Unfortunately, patterns to date suggest that the NAMs and their suppliers are unlikely to locate in the same communities that the traditional industry may abandon, so some communities will suffer while others prosper.⁶ At the same time, they do offer some insight into how a community might try to protect whatever automotive activity it currently enjoys. For the most part, this will involve leveraging whatever advantages of proximity it can muster.

ENTERPRISE SYSTEMS

Dyer, Salter, and Webber, on the other hand, argue that the globalization of automotive competition has significantly altered competitive dynamics, and that this is the crucial change in automotive production over the past two decades. If Hoffman and Kaplinsky see a mix of production and market forces, *Changing Alliances* relies much more on market dynamics to explain changes in automotive competitive success. Companies no longer compete within a national market, where the same fundamental business environment and enterprise system of management, labor, and government relations hold sway. Now they compete globally, and company level competition may be largely determined by the advantages and disadvantages conferred on a company by its national enterprise system.

These authors stress two aspects of that national enterprise system. First, the management-labor relationship is a critical determinant of how well a company can organize and motivate its employees to achieve competitively effective production. The stress on this point seems to obscure the fact that employee motivation may be necessary, but is hardly sufficient for low-cost, high quality production. The second aspect is the relationship between government and management, because that determines the incentives for investments that are critical for supporting the product differentiation required for success in the competitive marketplace. To be sure, such investments are necessary, but successful product differentiation is not a simple function of level of financial investment. It requires talent, organizational effectiveness, and countless other factors as well.

The Japanese enterprise system is particularly well-suited to the emerging global competition. It has six key characteristics: (a) legitimate shared authority and responsibility among all three enterprise elements; (b) all three elements recognize shared as well as distinct interests; (c) decision making is efficient, effective, and emphasizes economic consequences; (d) the system stresses adaptability and flexibility in the face of an environment that is assumed to be ever-changing rather than stable; (e) all elements emphasize the strategic aspects of decisions; and (f) these relationships exist at the company level, and focus on the company in world rather than national competition. These characteristics emerged in a trial and error learning process after the War, often marred by serious disputes and confrontations. In Dyer, Salter, and Webber's view, this enterprise system is the key to Japan's competitive success and rise to be the premier automotive industry in the world.

Three other national industries show sharp contrast with Japan, especially in the nature and functioning of their enterprise systems. The U.S. industry grew as a naturally protected oligopoly, and the adversarial relations among labor, management, and government were competitively neutral as long as the industry dominated world production and its own large market. However, they form major barriers to meeting the international competitive challenge, especially from Japan. The British industry, second only to the U.S. in 1950, has experienced sharp decline as its even more adversarial labor relations and shifting government involvement hamstrung it in the face of international competition. The German industry rebounded impressively after World War II, and performed admirably through the 1960s, based on a complex set of arrangements between management, labor, and government. However, the changing economic environment then exposed rigidity in this German system, particularly in the face of lower growth rates, and, like the U.S. industry, the German industry today faces severe competitive challenges.

The broad strokes of these pictures are essentially accurate and offered in a balanced fashion, although the descriptions perhaps overdraw the current state of these relationships as an achieved steady-state. Indeed only in the case of the U.S. industry is further development and change portrayed as likely, even if there is uncertainty as to the exact form it will take. This seems especially problematic in the case of Japan, where the authors clearly accept the image of a smoothly functioning "Japan, Inc." and fail to note some potentially serious strains and stresses within that system. After all, Japan does face some serious challenges, and these may be more serious than the authors' light treatment of them indicates. In particular, an aging labor force, a restive consumer population that may be decreasing its savings rate, and a system designed for home production growth that is now moving abroad, all present serious potential problems for the

Japanese automotive industry. The Japanese system may prove itself to be as rigid as the German system is portrayed.

Dyer, Salter, and Webber devote three chapters to reviewing the situation of the U.S. auto industry "today." The material in these chapters appears to have been developed at quite different times, and little effort made to update observations, analysis, and examples to reflect the situation current at the time of the book's publication in 1987. As a result, the material had a "dated" quality at the time of publication, and the passing years only accentuate this problem. Moreover, descriptions and analyses that are at the very least implicitly contradictory abound in different sections of the book, indicating a failure to recognize or address differing views over time or authors. For example, Ford is criticized for failing to source vehicles from offshore, largely because of its strategy to improve relations with its labor force.⁷ However, such a sourcing strategy is itself appropriately criticized later⁸, while the core importance of improved and changed relationships with labor constitutes the bulk of hopeful "signs of change" discussed throughout Chapter Nine.

Perhaps the most serious overall problem is in the authors' treatment of GM. Today's reader may well have the feeling that these chapters are drawn from GM press releases and internal communications. By the mid-1980s, serious questions about GM's strategies and responses were already current, yet this treatment portrays many GM efforts as immediately successful, and announced intentions as already or soon to be accomplished facts. The Saturn project is treated throughout this book as promising everything GM claimed for it, and continues to claim for it, even though those claims are now substantially different. The acquisition of EDS and Hughes, moves that raised immediate questions and concerns, are taken at face (and exaggerated) value. Dyer, Salter, and Webber clearly admire GM's reorganization⁹, although that reorganization is not quite as described, nor was its success as unambiguous as the authors suggest and anticipate: this effort had high costs for GM, and has been quietly reversed in a number of key ways, including the reestablishment of Cadillac as a "complete" car company, having responsibility for design and manufacturing as well as marketing. GM is praised for productivity gains it did not achieve, and the high-tech automation strategy is positively evaluated, including the prediction that these efforts "... over the next few years will go a long way toward completely automating for all practical purposes what car and truck production remains in the United States."¹⁰

The authors make a good case that the relationship between government and the automotive industry has been significantly anticompetitive in the new global marketplace, and that the actions of government that help or hurt the industry have fluctuated with little regard to the political affiliation or ideology of the incumbents. They do see some state level efforts, especially in Michigan, that fit their model of enhanced cooperation and improved enterprise system functioning. However, these efforts, like GM's, are readily treated as achieving their goals, rather than carefully evaluated. As a participant in a number of the described Michigan efforts, it is my impression that, while worthwhile, they were neither as coherent nor as broadly successful in shifting the fundamental relationship of management and government as they are described. Nor have state and local economic development efforts shifted as much from "smokestack chasing" through tax and other incentives to more fundamental issues of competitiveness as the authors would have it: a review of the assistance offered the Japanese manufacturers and the rather heated competition between states to land these facilities suggests that such an economic development focus is all too alive and well.

On balance, this book contains many specific factual errors and questionable analyses, yet it provides a useful overview set of questions and a conceptual approach to considering the problems and challenges facing the industry. Although this approach may err in its insistence on the comparative importance of the enterprise system as an almost necessary and sufficient condition for industrial competitiveness, it provides a fuller treatment of the effects of government actions on the industry than the other books under review. The issues it raises and the approaches it suggests are hardly novel or startling, but they certainly merit consideration by management and government alike, and this volume provides the reader with practical interests in economic development a convenient review. While this material is unlikely to assist in securing new facilities (note the discussion of Michigan's creative — but ultimately unsuccessful — attempt to land Saturn), it might

well assist in developing strategies to hold current investments and to improve their survival chances.

POLICY SYSTEMS

Three chapters of the Winston volume focus on the effects of government policy and regulation on the competitiveness of the U.S. automotive industry. These chapters form the core of the book from an economic development perspective. The authors set the stage by an analysis of the U.S. industry's cost competitiveness with Japan. They conclude that the Japanese vehicle makers hold a cost advantage, but that it decreased through the mid-1980s, reflecting the strengthened yen and enhanced competitiveness of U.S. manufacturers.

Winston's analysis of the sources of this Japanese cost advantage is interesting and provocative. The book reports that differences in the cost of funds was not a factor, that differential productivity was less of a factor than most reports suggest, that production scale and product mix provided a substantial Japanese advantage, and that differences in wages were the single most important source of the Japanese cost advantage.

Blind Intersection? then examines the likely market effects of the various agreements that have restricted the imports of Japanese passenger cars into the U.S. market, arguing that continued restrictions may have enhanced the Big Three's share, but were likely to yield lower production volumes. Finally, it argues that these restrictions have cost the consumer more than they have benefitted the automobile manufacturers, have held Big Three production below "normal" levels in 1982 through 1984, and have encouraged the siting of Japanese manufacturing facilities in the United States, to the long-term disadvantage of the Big Three.

Winston argues that proper policy would have been the macroeconomic pursuit of increased demand for vehicles through stable economic growth, and a dollar that traded for fewer yen. Restrictions on trade and encouragement of cooperative arrangements with foreign automakers were not needed, and may have proved damaging over the long run. The report recognizes that U.S. automotive wage rates are not likely to be lowered, and falls back on recommending outsourcing from foreign suppliers to lower average wages. The adverse employment effects should be compensated by efforts to retrain auto workers for other jobs, since transplant operations will not make up the employment loss in aggregate or individual terms.

The wage estimates for Japan that these authors relied on may have been too low, missing some of the important components of the Japanese wage and benefit package, as do many official estimates. Furthermore, if one accepts this analysis as accurate, might not the Big Three at least consider outsourcing work to independent domestic suppliers, especially those that are non-union and low wage? Perhaps even more, might they not turn to the Japanese suppliers setting up production in the United States to serve the NAMs? In view of the central importance this analysis attributes to wage rates, it might well have explored these issues. As the report stands, it is interesting, but offers little hope or insight to economic development efforts in North America, with the possible exception of Mexico.

SOCIAL SYSTEMS

Halberstam describes the serious challenge to American industrial hegemony that has developed over the past quarter century, taking as a case study the contrasting fortunes of Ford and Nissan, respectively the number two producers in the American and Japanese automotive industries. This is an outstanding work, and two unfortunate coincidences have worked against the broader readership it deserves. First, by the time the book appeared in 1986, the competitive fortunes of Ford and Nissan had drastically altered, and, in some ways, even reversed. Ford was definitely back from the brink, gaining on GM's continually eroding market share, and had introduced new products, such as the Taurus/Sable, that were extremely successful. Nissan had

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begun to experience some serious problems, was falling further behind Toyota in market share, and was being criticized in Japan for its new products. Therefore, a book focusing on Ford's deteriorating performance and largely overlooked nearness to disaster and Nissan's competitive ascendancy seemed peculiarly inappropriate and useless to many.

Second, that year saw record sales and profits (but not production) for the domestic Big Three, and the increasing strength of the yen raised questions about the ability of the Japanese industry to maintain its competitive success in the U.S. market. The mood in Detroit was upbeat, and messengers bearing bad tidings were not in vogue. In retrospect, this volume might have served as a useful antidote to Detroit's mood swing, because it certainly addresses fundamental competitive issues that did not go away in 1986, and are again recognized in 1990.

Halberstam selects certain key themes to highlight the relative shift of competitive success between Ford and Nissan, and, by extension, the U.S. and Japanese automotive industries. Most of these are familiar by now to most readers: naturally "protected" Detroit, sitting astride the world's largest market, becoming more and more financially driven at the expense of product and process innovation, an industry that lost its glamour to emerging fields of business; hungry, hardworking Japan emerging from the ashes of World War II, patiently learning, experimenting, and developing a world class industry. The journalistic skills Halberstam has amply displayed in his other works stand him in especially good stead here. He puts flesh and bones on this story, as he focused on a few individuals to portray the broader economic and competitive developments he discusses. He is skeptical, and manages to highlight the problems, conflicts, and false starts that characterize the competitive strategies, tactics, and moves of both industries. He certainly gets beyond the view of Japan as a smoothly functioning economic juggernaut, destined to sweep all before it, without at the same time discounting and diminishing its impressive achievements. He performs a useful service for Detroit as well: he portrays its managers as human, who face complex decisions, who must respond to numerous contingencies and constituencies, and who are far from the "dullards in hindsight" popular in many treatments and analyses.

Nevertheless *The Reckoning*, like many books on Japan, leaves the reader with the overall impression that there is little that an individual U.S. company can do when faced with Japanese competition. If Japanese managers make mistakes, they quickly recognize and correct them. While the problem indeed might lie in us, there is little than we can do about it, without wholesale changes in our political, economic, cultural, and family systems.

CORPORATE CULTURE SYSTEMS

Keller's *Rude Awakening* describes how GM, the dominant domestic (and worldwide) car company, came to recognize the new competitive challenges posed by the Japanese, and has struggled to understand and respond to it. Under Roger Smith's chairmanship since 1981, GM has made a remarkable string of strategic moves. It formed a joint manufacturing venture with Toyota; acquired EDS and Hughes, and ownership or interest in numerous other companies, especially in high tech areas, like machine vision; brought two outsiders into positions of potential influence within the company (Ross Perot of EDS and Elmer Johnson, a Chicago attorney); undertook a massive internal reorganization and consolidation; made huge investments in technology and some plants, while closing others; and invested heavily in a project called Saturn, designed to lead GM into the 1990s and beyond.

The author's description of these events and the connections among them make for fascinating reading, and are themselves well worth the price of the book. I suspect that even those readers who followed these developments closely as they occurred will find themselves looking at them in a somewhat new light, and readers less familiar with the auto industry will find a wealth of detail and analysis with implications beyond one company or industry.

Rude Awakening challenges all of these major GM strategic moves, either in their fundamental conception or in their actual implementation and execution. The final verdict on all of them is that they were either poorly conceived as strategic responses or were executed in ways that seriously

undercut their potential benefits to GM. The ultimate villain is a traditional GM culture that alternately explains the resistance of the bureaucracy or the leadership failures of top management.

Keller brings exceptionally strong credentials to this task: she has a distinguished background as an automotive analyst, a deserved reputation for going beyond the immediate financial numbers to more fundamental issues and problems, and unusual access to GM and industry management, past and present. Perhaps most importantly, she is obviously neither awed nor intimidated by the executives who are the actors in her drama.

Nevertheless, the book is disappointing in several ways. First, it does not sufficiently often step back from the detail it provides to offer the integrated analytic overview that would be extremely helpful to readers lacking familiarity with the auto industry. Thus the final chapter poses the question of whether GM can recapture its former success, but does not provide a clear answer. Instead, it simply details some strategic responses of the 1980s, lists the author's preferred qualifications for the next chairman or chairwoman, and provides capsule descriptions of the candidates. Second, the analysis does not often go beyond the current conventional wisdom among GM critics. A regular reader of the industry press is likely to find the basic analysis and comment quite familiar, with only some of the detail new. Third, there are frequently contradictory threads in this analysis that are never satisfactorily addressed, perhaps because Keller does not recognize them as such. Two examples suffice.

First, in tracing the development of GM into what is portrayed as a rigid, complacent, even arrogant bureaucracy, *Rude Awakening* emphasizes the GM tradition of highly secure and well-recompensed employment, at least for salaried workers. This system promotes a time-serving mentality, a careerist orientation focused on telling superiors what they want to hear, and, ultimately, requires the corporation to carry a lot of expensive dead wood. However, many in the industry have argued that an important part of GM's competitive advantage over Ford and Chrysler in the glory years of the domestic industry was exactly this system of managerial security: it provided GM with a wealth of good-if-not-great, experienced management talent. Ford and Chrysler, with career ladders closer to the military "up or out" model, often found themselves lacking that strong middle management component necessary to any large corporation. Further, many analysts believe that the "permanent employment" tradition of the Japanese automotive industry is a broad-based and fundamental source of their more immediate competitive advantages over the domestic car makers. Job security frees the employee to be innovative, decreases the frequency of "me or the company" decisions, and provides much of the "human face" to a fundamentally authoritarian system.¹¹ Indeed, observers attribute much of the productivity and quality achievements of New United Motor Manufacturing Incorporated (NUMMI), the Toyota-GM joint venture plant in Fremont, CA, to the contractual job security provisions it has maintained in the face of some market difficulties faced by its products. Keller's analysis of GM may be correct, but if it is, then some discussion is in order of how and why GM's system today may differ from earlier times, and how and why two apparently similar systems of employment security can have such different outcomes at GM and Toyota.

Second, the introduction calls on the reader to recognize that GM is a huge, complex corporation, and that no one person or small group of people can be singled out as heroes or villains. Yet the text leaves the reader with the strong feeling that a major problem at GM has been Roger Smith's lack of leadership ability, that had he the sensitivity and understanding that GM's Chairman must have, the implementation of his strategies would have been smoother and more successful. *Rude Awakening* provides one and two sentence descriptions of current GM executives that certainly suggest that a few are indeed heroes, while many are, if not villains, then at least less than admirable. Besides Roger Smith, Bob Stempel, then President and now Chairman, is about the only current GM executive that receives a mixed review. This strikes me as a serious lack of balance, and is a major weakness in the book. It substantially undermines a major message that the book set out to communicate: that the challenge and the corporation are complex, and that there are no obvious, quick, and sure solutions. It encourages us to fall back on an undifferentiated "corporate culture" explanation of GM's problems, and tempts us to target blame on the carriers of that culture, the top managers.

It is difficult to avoid comparing *Rude Awakening* directly with Halberstam's *The Reckoning*. If many readers found the latter weak in terms of industry knowledge, Halberstam more than compensated that by his ability to abstract general issues and points from the wealth of detail available to him. He also provided the reader sufficient detail to disagree with his general arguments and to develop alternative explanations and theories. *Rude Awakening* is curiously disappointing in comparison. It is written more like a lawyer's brief than an analyst's appraisal. It may, quite contrary to the author's intention, provide support for those seeking simple explanations and solutions for the complex competitive challenges the U.S. automotive industry has faced over the past decade, and will continue to face through the next decade.

It is also disappointing to an economic developer, I suspect. Keller takes the same financial/stock value approach to evaluating GM that its own management has used, and treats as inevitable certain developments that other authors challenge. She sees further economic decline for GM in the best of circumstances, and clearly prefers what Hoffman and Kaplinsky would view as a machinofacture strategy: go offshore to find low wages.

CONCLUSION

These books highlight a critical divergence in current thinking about the development and future course of automotive production. On the one hand, some authors see an almost inevitable erosion of production activity in developed economies as the industry pursues lower costs, especially in its wage bill . . . On the other hand, some argue that the nature of automotive manufacturing and the general economic climate favor production in developed economies, advantaged by their markets, infrastructures, and workforces.

These books highlight a critical divergence in current thinking about the development and future course of automotive production. On the one hand, some authors (like Keller and Winston) see an almost inevitable erosion of production activity in developed economies as the industry pursues lower costs, especially in its wage bill. This trend might not hold for Japan, and perhaps not for other countries, to the extent that they can adopt the Japanese enterprise system (Dyer, Salter, and Webber) or social order (Halberstam). On the other hand, some argue that the nature of automotive manufacturing and the general economic climate favor production in developed economies, advantaged by their markets, infrastructures, and workforces (Hoffman and Kaplinsky). However, even this more optimistic view raises the concern that the Big Three, in spite of these advantages, will continue to chase cheap labor, and thus move more activity to developing economies.

The underlying issue for the analysis of economic development is whether automotive production — and, by extension, other manufacturing — is more effective and efficient when it is disaggregated or when it is tightly linked. Proponents of a disaggregated approach stress that the manufacturer can secure competitive products through outsourcing to other companies and by sourcing from less expensive production areas abroad, and thus each operation can be optimized both for cost and quality. Proponents of tight linkage argue the importance of optimizing the entire system, including multiple national markets and production sites, a strategy that may require suboptimizing at subsystem levels in order to maintain control over and preserve expertise throughout the entire production system. These books clarify the terms of this debate, rather than bring it to any closure.

Further, these books suggest that the economic development practitioner faces some serious strategic choices and constraints. If one assumes that disaggregated production will triumph, then one must logically look forward to continued erosion of automotive production in high wage North America. If automotive production will inevitably leave North America, then the economic benefits associated with existing or new automotive production facilities is more limited and shorter term, and their value correspondingly reduced.

Moreover, existing sites of traditional Big Three production have little choice but to try to buttress these current activities, since there will be few alternative activities to pursue. Little additional automotive investment will be available in the United States and Canada, and there will be few opportunities in other manufacturing sectors, which will soon follow the disinvestment route of automotive production. To be sure, there may be expanded Japanese automotive investment, but these will be largely unavailable to the established, traditional centers of automotive activity, and, from a disaggregated perspective, should soon follow the Big Three in the pursuit of lower wage production offshore. Unfortunately, there is no clear indication of buttressing strategies that are likely to be successful, because the argument ultimately focuses so much on wage rates that are unlikely to fall and are generally immune to influence from economic developers.

Economic developers outside the traditional manufacturing areas will have little chance of securing diminishing Big Three investment, as GM's "Southern Strategy" of the 1970s, which netted significant investment for some locales, is unlikely to recur in a climate of disinvestment. NAM supplier investments are likely to be restricted to the region of the NAM assembly plants, away from the historic center of automotive production, but still within a relatively limited geographical region close to those centers.

If on the other hand, one inclines to the view that tightly linked production systems have a substantial competitive edge, then one can look forward to a continuing significant, although perhaps changing, role for North American automotive production. Automotive investments then represent a more attractive and longer term target for North American economic development efforts at the regional and local level. This perspective also requires efforts to protect current automotive investments with some coherence. They may be targeted to improving the local enterprise system; developing the infrastructure, including suppliers, that confers competitive advantage; or supporting a workforce that suits the demands of a tightly linked system. All these efforts are to some extent within the traditional domains of local economic development efforts.

However, Hoffman and Kaplinsky's concerns about the offshore strategies of the Big Three and their suppliers still support some pessimism about Big Three investments in new facilities over the next decade. This pessimism is reinforced by the traditional industry's concern with improving its relationship with its workforce, a concern that will likely foster a strategy of reinvesting in existing capacity rather than seeking replacement capacity in North America. This is good news for communities seeking to buttress existing investment. The tight linkage argument also suggests that the potential expansion of the NAMs and their suppliers constitute a very attractive target for economic developers, assuming that they fall within the geographical and labor market characteristics these investors prefer. These investments are likely to reflect U.S. market success, and be less at risk to an offshore sourcing strategy than might be the case with Big Three investments, because the Japanese manufacturers appear to be following a Hoffman and Kaplinsky systemofacture strategy.

No one can say whether disaggregation or tight linkage strategies, if either, will become the dominant mode of automotive production over the next few decades. To date, no national industry nor any company is exclusively pursuing either of these strategies, nor are they likely to in the near future. If these books present one clear lesson, it might be that the complexity of automotive manufacture and the intensity of the competition surrounding it make it very difficult and indeed risky to make predictions about the relative success of a particular strategy, a national industry, or a specific company. These books neither claim to achieve, nor do they in fact achieve final, unambiguous certainty. However, they significantly clarify some of the uncertainties of past and current events and should make the reader a more informed and careful observer of the future development of automotive production and competition.

NOTES

1. For "New American Manufacturers," a term some industry people feel is less offensive than the more popular "Transplant."

2. Author's calculations from data provided in Motor Vehicle Manufacturers Association of the United States (MVMA), *MVMA Motor Vehicle Facts & Figures '81* (Detroit: MVMA, 1981), p. 12 and MVMA, *MVMA Motor Vehicle Facts & Figures '90* (Detroit: MVMA, 1990), pp. 14-15.

3. MVMA, *Facts & Figures '81*, p. 14; MVMA, *Facts & Figures '90*, pp. 13 & 19.

4. The term "U.S. industry" often covers the automotive production activities of Canada and Mexico as well, since these are largely controlled by and coordinated with the activities of the U.S. Big Three.

5. Just-In-Time sourcing relies on low inventory manufacturing, requiring close coordination and frequent delivery from suppliers.

6. See, for example, Richard Florida, Martin Kenney, and Andrew Mair, "The Transplant Phenomenon," *Commentary*, Winter 1988, pp. 3-9.

7. Davis Dyer, Malcolm S. Salter, and Alan M. Webber, *Changing Alliances*, pp. 166-169.

8. *Ibid.*, p. 179.

9. *Ibid.*, pp. 157-158.

10. Ibid., p. 159. This prediction continues to look woefully in error, exaggerating the ease of designing and implementing automation, especially in the complex assembly operations characteristic of automotive production.

11. See, for example, Robert E. Cole, *Work, Mobility, and Participation: A Comparative Study of American and Japanese Industry*. (Berkeley: University of California Press, 1979).