Autos: A Challenge for Industrial Policy

After a decade of turmoil, auto companies want some coddling as they face massive retooling and an uncertain future

Last year was the worst one the United States automobile industry has ever faced. Production fell 20 percent, more than 300,000 auto workers were laid off at the peak of unemployment last summer, and the Big Three automakers suffered some $4 billion in losses. Chrysler still staggers on the brink of bankruptcy, Ford suffered heavy domestic losses, and even General Motors, the world's biggest automaker, failed to make a profit for the first time in its history. And Japan for the first time surged ahead of the United States to become the world's biggest auto producer.

The industry's predicament, which brings into focus many of the issues involved in "reindustrialization" of the United States, is the top priority for Drew Lewis, the new Secretary of Transportation. He is heading a task force that will make recommendations to the President on financial aid to the industry, regulatory policies, and possible restrictions on Japanese imports. How the Reagan Administration chooses to grapple with the problem will be an indication of its stance toward the nation's other declining industries.

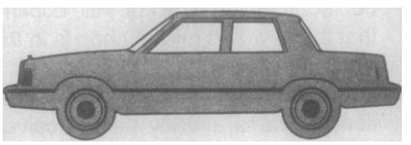
How did autos get in such a fix? The immediate causes were the rising fuel prices following the Iranian revolution of 1978, and the invasion of the American market by Japanese manufacturers, who captured a record 21 percent in 1980.

But many other forces have contributed to the present situation. A report issued in January by outgoing Transportation Secretary Neil Goldschmidt says that "management has neglected the need for production efficiencies, rigorous quality control and farsighted product development"; labor sought short-term gains without taking into account the long-term health of the industry, and government has "loaded the cost of social and environmental regulation onto automakers without a careful examination of the total cost and cumulative effect."

The auto industry is now gasping for breath as it enters an era that will see the most rapid technological change in its history, coinciding with structural changes leading to consolidation and internationalization of the industry as a whole.

The auto industry has never been known for its strengths in long-term planning. It is structured to respond to the demands of a relatively predictable market. Automakers have been largely insulated from foreign competition because for 30 years Americans drove a different kind of car—bigger, more powerful and luxurious—than the rest of the world. Technological change was incremental and chiefly applied to design. The industry, with its enormous fixed capital costs, is not geared up for swift retooling; it takes about 6 years for a completely new design to progress from the drawing boards to production. Because the companies were responding to short-term consumer preference, it was not until the government forced them that they started making big investments in safety, emission control, and fuel economy.

It would be unfair to say the industry has been sitting complacently on its collective tail fins until the latest oil shock. It might well have kept feeding off the fat in its system had it not been for the gyrations of the oil market in the 1970's and the government's response thereto. The industry had sensed a move in consumer preference toward smaller cars at the beginning of the decade, and by the time of the Arab oil embargo in 1973 it had proceeded with "downsizing" of some cars (shrinking existing models, much as has been done with candy bars) but had not yet prepared viable entries in the subcompact field. The public, encouraged by the promise of continued price controls on oil, soon became convinced that the oil shortage was a hoax trumped up by the oil companies, and by 1975 car buyers were back clamoring for gas-guzzlers. General Motors could not sell its Chevettes, then the most fuel-efficient domestic car on the market, and Toyotas and Datsuns were piling up at the docks. Meanwhile, Congress had put the industry in a bind by passing the Energy Policy and Conservation Act in 1975 which mandated new fuel economy standards while at the same time stimulating the appetite for big cars by keeping gasoline prices down. To meet overall fuel economy requirements auto companies were on the verge of giant new investments in technology to make big cars fuel-efficient. Companies were spared this at the 11th hour when the Shah fled Iran at the end of 1978. Gasoline prices shot up and the demand for big cars plummeted. Chrysler, which had been concentrating its resources on middle-sized ("compact") cars, was out in the cold. Ford and GM, which had been supplying a large portion of the European small car market in manufacturing facilities abroad, were not prepared for another sudden shift in the domestic market. Japan, with years of experience in making cars that run on (uncontrolled)



Chrysler Corp.

$3-per-gallon gasoline, was poised and ready to flood the market.

As one observer, Richard Shackson of the Mellon Foundation says, "At the time of the oil embargo the auto industry was about where the railroads were at the end of World War II." They had come to an abrupt end of a period of artificial prosperity, and managements, complacent after decades of dominating their field, found that old solutions were useless in the new competitive situation. Shining coaches had been turned into pumpkins.

The auto companies figure they need 5 years to get back on their feet. Already snappish at being rushed through timetables for enhanced safety, pollution mitigation, and fuel economy, they have no choice but to spend huge amounts of money for retooling when sales are at an all-time low. This program, which will cost an estimated $80 billion by 1985, appears to be the condition for future viability of the industry and must be undertaken in the face of what has been called the "hemorrhaging" of U.S. car volume, cash flow, and jobs.

Naturally, they want some help from the government. First of all, they want some kind of voluntary restraint agreement to be negotiated with the Japanese before their autos have captured an irrevocable share of the American market. Companies also want Congress to slow down on safety, antipollution, and fuel economy requirements. Finally, they

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want more favorable treatment from the government in the form of increased investment tax credits and accelerated depreciation schedules for new equipment. Ford consultant Fred G. Secrest has even proposed that autos should be treated as an "infant" industry by the government, deserving of trade protection now that it is no longer being subsidized by artificially low fuel prices.

It has become increasingly clear to all concerned, though, that the disease of the auto industry has a more complicated etiology than sudden, unexpected rises in petroleum prices. Rather, the Iranian-induced oil trauma and the Japanese penetration have only brought into relief a situation that has been long building.

The perceived urgency of the situation was manifest at a meeting about the Japanese and American auto industries convened by the University of Michigan in Ann Arbor in January. The conference attracted about 1000 people—twice the number originally expected—who heard some pretty cataclysmic talk. Donald Ephlin of the United Auto Workers spoke of the need to make revitalization of the industry a national goal; otherwise "we can sit back and watch the industry that provides the backbone of our economy wither away and die." Senator Donald Riegle (D–Mich.), calling the situation "desperately serious," compared it to the challenge of World War II.

The auto people made appeals for measures to free up capital and shore up their competitive position. But there was also recognition that Americans have something to learn from the Japanese model, which was most often referred to in the context of their quality-control arrangements and the cooperative management-labor relationships. Most participants agreed with Robert E. Cole, director of the university's Center for Japanese Studies, that the U.S. industry has a quality problem. He noted that the high quality of Japanese products had raised the standards of American buyers. He warned that the Japanese were moving into new quality-related areas such as dealer servicing, and that if the public's perception of lower American quality was not to undergo further deterioration, management would have to shift incentive systems away from the emphasis on production and toward more rewards for quality work.

According to one observer, Richard Tropp of the Environmental Protection Agency, the most noteworthy aspect of the affair was the new level of sophistication and realism that characterized both management and labor attitudes. As recently as 8 months earlier, said Tropp, both management and labor were too wedded to doctrinaire positions for either to accept responsibility for the current situation. Now, he said, they appeared ready to stop blaming "exogenous" variables like the Iranian revolution and to recognize the existence of fundamental problems. Hard times have "made us realize we were both in the same boat" says GM vice president David S. Potter.

If the conference reflected a new willingness to give as well as take, it also demonstrated the persistent failure of auto management to look into the longer term. All the talk was on the next 5 years. Little attention was paid to the probable shape of the industry by the end of the century or to the possibility that someone might come along with a new, much cheaper product to mop up market expansion in the coming years, most of which is expected to occur in the developing countries.

Short-term fixes may tide the industry over the next 5 years, but as Goldschmidt's report said, "Our task . . . is to describe a vision of what we want America's auto industry and industrial base to look like at the end of the transition. . . ."

So far, there is not a firm consensus on the future role of auto manufacturing in the American economy.

Certainly, the American market will no longer be separate from the rest of the world. Observers generally agree that the coming years will see the fiercest competition ever, and that by the end of the century the scene will be dominated by perhaps eight or ten major international companies, including GM, Volkswagen, Fiat, Nissan, and Toyota, primarily manufacturing "world cars," supplemented by an indeterminate number of smaller companies producing specialty lines. Says Larry Jenney of the Office of Technology Assessment (OTA), "What is happening worldwide is a great stirring and interpenetration of each others' markets, coupled with a great deal of merging and joint venturing." The U.S. industry will then be scarcely recognizable as such, as "sourcing" for parts and components is increasingly dispersed around the world, including developing countries, and final assembly plants increasingly located in countries where labor is less costly. This dispersal will be further hastened by the proliferation of "local content" laws in the developing world, which require that a certain percentage of a car sold in a country has to be manufactured or assembled there.

This restructuring is accompanied by the introduction of a new generation of manufacturing technology featuring thoroughgoing automation, computerization, and robotization. This will bring higher quality and productivity and more flexibility to the production process; it also has obvious consequences for the work force. Direct auto manufacturing in the United States, which at its peak employed almost 1 million workers, now employs about 600,000, and most people believe the lost jobs are gone for good. Furthermore, the proportion of skilled to unskilled workers will rise steadily as automation proceeds.

CARP Scrapped

The Reagan Administration has put the kibosh on the Cooperative Automobile Research Program (CARP), one of the Carter initiatives for fiscal 1981. CARP, according to a Department of Transportation (DOT) official, grew out of the call by former transportation secretary Brock Adams for a push to "reinvent the car" through a stepped-up program of research jointly funded by the government and the auto industry. It was to commence with an appropriation of $12 million in fiscal 1981, matched by industry contributions, and was to become a $34 million a year program by 1986. But it had not yet gotten off the ground because of dismal economic conditions afflicting the industry.

Now, according to the Reagan budget plan, it has been decided that "the automobile companies rather than the federal government are in the best position to decide what kind of research to undertake and when to do so." The DOT task force currently studying the industry is likely to recommend stimulation of research through fiscal incentives such as investment tax credits and accelerated depreciation allowances.—C.H.

As manpower requirements change, so will those for materials and components, a shift that will have far-reaching effects on supply industries. Carbon steel is being replaced by high-strength steel, and total auto industry demand for steel, 20 percent of which goes to it, may be reduced by half. Rubber use is also going down as companies increasingly resort to cheaper foreign suppliers, and there will be increased use of aluminum and plastics.

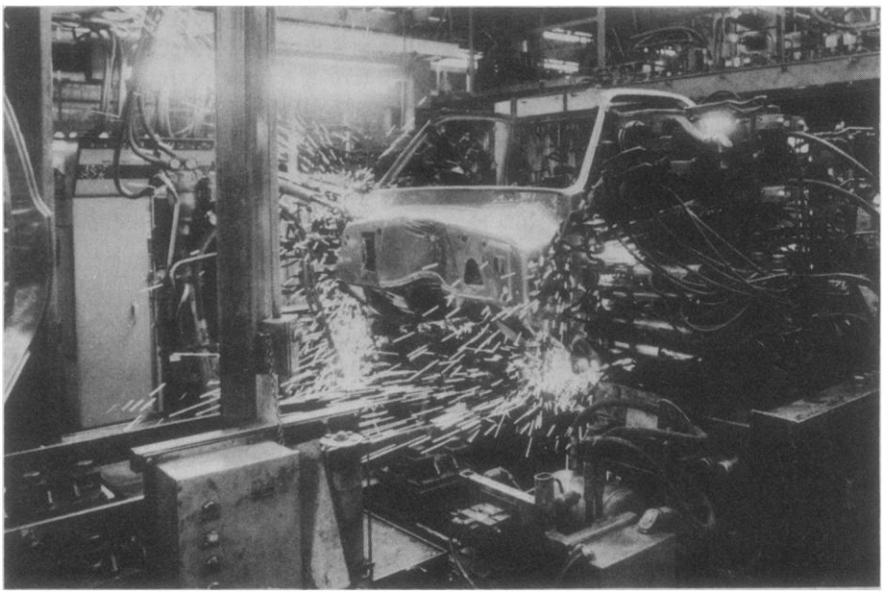
While new process technology is being introduced in the workplace as fast as economic conditions will allow, there are no surprises expected in the foreseeable future in automobile technology.

Historically, technology has undergone incremental change; almost all improvements, from World War II until the first emission requirements took effect, followed the "trickle down" pattern—that is, new developments such as automatic transmission, electronic ignition, air conditioning, and fuel injection were tried out in the top-of-the-line cars, and if they met with consumer favor were gradually introduced down the line. And until the mid-1970's the bulk of these refinements had to do with comfort and convenience rather than efficiency. "The pattern of change was very slow," says Jenney of OTA, as befits a mature industry that was comfortably responding to modest yearly shifts in consumer preference.

Now, although the state of the economy has prevented the industry from making significantly increased commitments to research and development budgets, the focus has shifted to technology to enhance engine efficiency. These fall into three broad categories: engine efficiency, transmission efficiency, and total weight reduction.

Despite quite a few years of experimentation no one has succeeded in coming up with a widely marketable alternative to the present spark ignition internal-combustion engine. The Brayton or gas turbine engine and the Stirling engine have been around since the last century. They have the potential advantage of being able to run on less refined gasoline but there are still obstacles to mass development. Also under development is the "continuously variable" transmission which in effect makes available an infinite number of gears to supply continuous and optimally efficient match of engine output with speed.

But of all three efficiency pushes, weight reduction will provide the earliest payoffs. Mass conversion to front-wheel drive cars eliminates a good deal of weight without loss of interior space by eliminating the drive shaft to the rear wheels. Changes to lighter weight materials accomplishes much of the rest. Jenney says that GM has managed to reduce the average test weight of its cars from 4500 pounds in 1975 to 3600 in 1980, and by 1985 the average is expected to be under 3000 pounds. An estimated 10 gallons of fuel per year is saved for every 100 pounds taken off a car.



General Motors

General Motors assembly plant

The spread of automation, now widely employed in welding, will be crucial to raising productivity in the 1980's.

These developments notwithstanding, the auto industry cannot now look forward to any major technological breakthroughs. Electric engines, which some see as propelling fleets of urban cars in the future, are still hampered by the fact the lead-acid battery is sluggish and heavy, has a limited range, and takes a long time to recharge.

As for alternatives to petroleum, alcohol is the major near-term contender, but these fuels made from biomass are seen as competing with food crops for the same land, water, and fertilizer. Many people regard hydrogen as the most attractive fuel of the future, but serious problems of cost, storage, transport, and mass production remain to be solved.

Given the overall picture: market saturation in the developed world; unpredictable growth in the Third World; internationalization and automation in manufacture; rising oil prices and no significant fuel alternative in sight, what should the long-term strategy be for the United States?

A number of all-purpose measures have been proposed. The Goldschmidt report calls on the government to coordinate energy policy with industrial policy, one means being to implement a standby gasoline tax to make increases in petroleum prices gradual and predictable. He also advocates redefining antitrust laws so as not to hamstring structural adjustments and joint ventures, and measures to help the industry obtain more capital.

One of the major areas requiring a new approach is not economic but political in nature, relating to relationships between the government, industry, and labor. The adversary model for resolving differences has become increasingly costly; there has been a steady deterioration of goodwill and trust between industry and regulatory agencies, particularly during the Carter Administration. The Goldschmidt report suggests replacing the adversarial regulatory process with a "negotiating process, comparable to that used in other countries," as well as restructuring of regulations "away from one based on penalties and toward one based on incentives."

On the labor-management front, concessions are indicated on both sides. Auto workers worldwide receive higher wages that other manufacturing sectors, and the differential in the United States is higher than it is anywhere else. Thus it may be advisable for auto workers to follow the lead of Chrysler workers and accept delays in wage increases. In return, management will have to be prepared to turn some real power over to workers. Cole quotes a senior auto official as saying "we wrote off the workers as contributors to the organization in the 1930's when they unionized." Now says Potter of GM, "the whole issue of worker involvement will have to be addressed in the 1980's."

Some American plants have profited by yielding more responsibility for quality control to workers, as is done in Japan. But U.S. management is still far behind Germany, where a system of "codetermination" puts union representatives on corporate supervisory boards, and Japan with its "bottoms up" method of consensual decision-making. Given the historical climate of management-labor relations in the United States, improvements will not evolve automatically. But they may be what is required to induce labor to give its support to new measures to improve productivity and to limit contractual demands in times of financial stress.

Beyond these measures, policies will have to reflect long-term decisions about the future of America's traditional industrial base.

The vision of former Secretary Goldschmidt is threefold: an American industry producing high-quality cars at competitive prices, using predominantly American workers; the "substantial retention" of U.S. work force currently in manufacturing jobs; and redevelopment of communities and regions that have been home to industrial workers. However there is by no means a national consensus on these points. Although it is likely auto manufacturing will remain a major U.S. industry, it is conceivable that the bulk of production could be moved abroad. It is also possible, if unlikely, that the government could decide to allow for permanent shrinkage in the nation's traditional heavy industrial base and concentrate instead of stimulating growth in high-technology areas. This is a policy, at least, that could be inferred from the report of the President's Commission for a National Agenda for the Eighties, created by President Carter. That report calls on the country to adopt policies that accept the inevitability of economic decline in the North and Midwest in favor of growth in the Sunbelt states.

The people who think about such things are in wide agreement that the United States is ripe for an industrial policy. Just what that term implies is vague, but it appears to mean that the government would concern itself not only with "macro" economic policies—that is, taxation, trade, and monetary policies, but also with "micro" economic decisions which involve addressing industry on a sector-by-sector basis, as the Japanese have done. This means arriving at some concensus on the larger direction of society and economic growth. For example, if a rapid transition to the much vaunted information economy is desired, industrial policy would entail actions to encourage "sunrise" industries such as microelectronics and bioengineering, while taking measures to promote shrinkage of heavy industries such as steel. Alternatively, the government could decide that despite the ill times that have befallen some industries, they deserve whatever propping up is necessary because of their anticipated future value. Such a policy initiated 25 years ago for American railroads would probably be looked upon these days as a fine piece of foresight.

A move toward an industrial policy has long been resisted in this country because it smacks of favoritism and centralized planning. But times are changing. The Reagan Administration has come into office at a time when the lines are beginning to be drawn for a national debate over the future character of the U.S. economy. There is no telling yet whether Reagan will opt for development of an industrial policy, or whether he will cling to the free market philosophy even if that leads to further decline of the country's heavy industry base. Whatever combination of policies the Administration opts for, the auto industry, as America's premier manufacturing industry, will be the first testing ground for new strategies.

—CONSTANCE HOLDEN

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