

Outlook for the Industry

Panel Discussion

Compiled by Ryohei Akai, moderator

What does the future hold for the automobile industry?

—The outlook is for global integration of production and markets.

—Transnational cooperation encourages competition, stimulates research and development, and ultimately produces a better car.

—Demand looks good, but market diversity has opened the door for new competitors. Japanese automakers cannot afford to be complacent.

Joining journalist Ryohei Akai and the University of Tokyo's Masakazu Iguchi in this special discussion for *Journal* readers are Honda's Noboru Okamura, Nissan's Yoshitada Uchiyama, and Toyota's Hiroyasu Ono.

Akai: There is no clear demarcation between today and tomorrow, and the automobile industry's future is already taking shape. Two of the more conspicuous developments to date are the many advances in automotive technology and the tendency to produce overseas.

In technology, Japanese automakers have developed very efficient production systems providing very good quality vehicles. However, they know they cannot rest on their laurels, and major efforts are being made at all of the companies to develop the technology needed to maintain their strategic edge.

Honda was the first Japanese company to begin production in the United States, but Nissan followed quickly and is now expanding from pickup trucks to passenger cars. Meanwhile, Toyota has entered into a joint production arrangement with General Motors and is now talking about producing on its own as well. Mazda and Mitsubishi have also fol-



Ryohei Akai, editorial writer with the Nihon Keizai Shimbun

lowed suit and firmed up plans for manufacturing in the United States.

Okamura: Given that the automobile is basically a machine, the two goals in its design and production are efficiency of operation and effective integration into man's total environment, including such problems as driving comfort and anti-pollution innovation. These are still very elusive goals. Even though there is much talk about electronics and new materials, experimentation with new technology alone is not enough to produce a better car. There is still considerable room for the kind of basic research that is essential to building a better machine of any kind.

Uchiyama: In terms of safety, for example, we have yet to come up with a vehicle that can be easily and safely driven by the elderly and the handicapped.

As we grow into the information age there is also a need to develop the kind

of data processing technology that will make the automobile more sensitive and responsive to external conditions. New approaches to technological research and development are needed if these kinds of needs are to be met.

Ono: It is essential that we respond to the growing diversity of customer needs and the increasingly important issue of how the automobile meets contemporary societal and environmental concerns. Many of these solutions are to be found in more wide-ranging and more intensive research and development. Until recently, the Japanese automobile industry has concentrated largely on improving productivity, lowering costs, and improving product quality. The time has come, however, for us to take the next step beyond productivity.

Iguchi: Automobile technology has considerable breadth and depth. It is much more than simply electronics and data processing capability. There is a third technology, as it were, concerned with effectively incorporating the automobile within society and making it fit in with societal and environmental concerns. The first step is to anticipate what the consumer is going to want. We will not get anywhere unless we produce vehicles that effectively meet our customers' needs.

Ono: There are still a lot of improvements needed, but gimmicks are not going to sell a car. The more than four billion cars currently in use worldwide are not disposable products easily replaced by some other product with new features. An automobile is an expensive purchase, and the customer buys it with the intention of using it for some time. The high

percentage of individual ownership of automobiles means that the automobile is considered a durable and has to be a reliable machine.

The tempo of technological innovation is very rapid, but, unlike some new electronic appliances, we cannot expect to come up with an "all-new" car every two or three years. Automobile technology is different, and it requires effort to gradually build on a solid technological base.

Okamura: Take the much-touted new materials, for example. These new materials have considerable potential, but there are still many problems. The materials manufacturers are doing their best, but they do not really know the market.



Noboru Okamura, chairman of Honda Motor Co.

We automakers know our customers' needs best, and the new materials cannot be effectively applied for automotive technology unless materials manufacturers and automakers work closely together. The automobile is made up of so many interacting parts, it's impossible to simply replace one of these parts without considering the others.

Iguchi: High technology is not a goal in itself, but simply the means of meeting increasingly sophisticated and complex social needs. In terms of the many problems the automobile raises for society, Japan is, for better or worse, a testing ground for solutions, and in this sense is a focus of world attention. Despite our densely packed population and extremely limited land space, we are one of the world's major consumers of automobiles. There is probably greater tension in the people-automobile conflict in Japan than anywhere else. Adversity breeds wisdom, and Japan is in a perfect position to take the lead in resolving the noise and air pollution, safety, parking, and other problems associated with the automobile. The resilience we have shown in the face of the oil crises and the success with which we have applied our-



selves to the issue of emission controls testify to Japan's effectiveness as a testing ground. I see no reason why the Japanese automobile industry should not take the lead in making the automobile a safer, cleaner, and better means of transport and leisure.

U.S. lesson: adjust to change

Akai: The Japanese automobile industry has so far taken the lead in efficient production technology. The question now is whether it can maintain this lead.

Uchiyama: At least as far as small cars go, Japan is a world-class competitor. However, we cannot ignore the very strong moves to apply advanced technology as the American auto industry works to upgrade production technology. GM and the other U.S. automakers are investing in new facilities and equipment on a mammoth scale, and this is stimulating the entire industry. We will have to take note of this and look to our own technology if we are not to be overtaken and outdone.

Iguchi: The U.S. auto industry is making a remarkable comeback. At the FISITA (Fédération Internationale des Sociétés d'Ingénieurs des Techniques de l'Automobile) congress last year, GM President Kenneth MacDonald stressed that the competition in automobiles is competition in technology. GM, he said, is the world's foremost control computer maker, and I was very impressed by GM's determination to invest in future technology.

GM is a fast study. They are learning Japanese techniques very quickly and applying electronic data systems (EDS) in organizing the Saturn project. The whole project is a major gamble—and an impressive display of power that is certain to have global repercussions.

Ono: GM is so big. Until recently, it was not applying its incredible resources very efficiently or effectively, but now that it has started moving, it is somewhat frightening to think what it can do with its investment and technology capabilities. I do not think we can afford to be at all complacent.

Akai: GM recently bought Hughes Aircraft. Hughes' aerospace technology can be expected to be very useful in building the car of the future. The use of EDS to streamline its organizational structure and GM's recent establishment of an industrial robot production company in a joint venture with Fanuc are further indications of its commitment to the future. When Japanese automakers refer to the American automobile industry, they usually have GM in mind. The world's automobile industry still seems to revolve around GM.

Uchiyama: Because GM stands out so much, we tend to overlook what is going on at Ford and Chrysler. We have to be careful to take everything into consideration in formulating strategy, or we can easily get ourselves into trouble.



Yoshitada Uchiyama, executive vice president of Nissan Motor Co.

Akai: What do you think of GM's Saturn project?

Ono: Obviously, GM feels that the conventional approach and conventional technology are inadequate to today's requirements, and they have decided to take a radically new approach and see what happens when advanced technologies are applied. If all goes well, they can use the feedback from the project to improve their other operations. In this sense, it is a vast experiment to pave the way for a major overhauling of all of GM's production processes.

Okamura: We will have to keep an eye on the Saturn project, but the most important thing is to anticipate and meet the customer's needs. The Saturn project is not the only way to do this, and we should also be looking at other roads to the future.

Demand looks good

Akai: In considering the future of the automobile industry, another issue that comes to mind is that of internationalization. The voluntary restraints on Japanese auto exports to the United States, for example, highlighted the limitations of exporting and focused attention on the merits of local production. With five Japanese automakers establishing production bases in the United States, what will the situation be like in 1988, for example, when each of these Japanese companies is producing 200 to 300 thousand units per year there?

Okamura: The competition is going to get fiercer, but it will do that anyway. Local production is not the problem. In fact, it is a large part of the answer, since it contributes to local employment and helps us stay abreast of the market.

Ono: In the United States, as in Japan, much depends on demand trends. Even

in the United States where it seems as if everyone has a car, there are still predictions that demand will average two million per year for the rest of the decade. GM's Chairman Roger Smith is one of the optimists, and he has been saying that the global automobile market should be up 50% to 60 million units, a third of which will be in the United States. The real question is how much the world automobile market will grow.

There are 480 million vehicles in use around the world today, and this is expected to hit the 600 million mark by the mid-1990s. And when you consider the replacement demand, a 60-million-a-year market does not seem implausible. The automobile industry is approaching maturity and is very vulnerable to economic and world trends, but I still believe there is room for continued growth.

If we look only at production capacity, by 1988, the Japanese automakers in the U.S. may be producing between 1.2 and 1.3 million units a year. I am not predicting straight-line growth, but I think we need to have the production capacity to ride out the market ups and downs.

Uchiyama: It all depends on how strong U.S. demand is. Personally, I think the U.S. economy still has a lot of strength left in it and we can expect auto demand to continue to grow.

Iguchi: According to a recent study by a team of researchers from the seven leading automobile producing countries, world car registration will probably increase by nearly 50% by the year 2000, to somewhere between 600 and 700 million units. This estimate excludes China, where market trends are still difficult to read with any degree of accuracy.

Okamura: Even without China, the outlook appears bright. As long as no new vehicle appears that is capable of supplanting the automobile, it would seem to be clear sailing for the rest of the century.

Uchiyama: Corporations are always optimistic when the economy is doing well. According to a recent report from West Germany, manufacturers can expect about 2 percent growth in auto demand in the industrialized countries as long as they continue to produce quality cars that meet consumer needs. In the United States, the demand for quality cars is likely to increase, and we should remain competitive as long as we continue to make vehicles that will meet customer requirements.

Ono: Competition helps to lower costs and stimulates the production of increasingly better cars. Healthy competition is also the most likely to lead to innovation.

Okamura: With consumer preferences and needs becoming increasingly diverse, there is ample opportunity for each manufacturer to come up with unique features that will appeal to a certain segment of the market. People have been saying for a long time that there are more automakers than the world market can support, but I have yet to see any significant change in our numbers. Nor do I see any reason for the situation to change.

Global market encourages competition

Akai: Just as the U.S. market seems to embody all of the features of the world market, there is a definite and rapidly expanding trend among automakers, including those in the newly industrializing countries, to engage in horizontal integration of production across borders.

Ono: There have been many changes within the industry. We have come through a period of overcapacity, survived the oil crises, and emerged as a mature industry. One of the major changes in the market during this period has been the shift toward smaller cars. Internationally, cooperation and collaboration are on the increase in both technological cooperation and production joint ventures. The car is truly a world product that knows no national boundaries. We must consider the auto industry in global terms. We should be talking



Hiroyasu Ono, executive vice president of Toyota Motor Corp.



about Toyota, Nissan, and others as multinational companies, not as Japanese companies.

Uchiyama: The same is true of parts makers. Japanese parts makers should be supplying parts not only for Japanese automakers, but for American, German, and other manufacturers as well—just as Japanese automakers are buying parts from American and West German suppliers. This kind of integration into a truly global market encourages competition and stimulates research and development.

Iguchi: A car may bear the name of one of the major automakers, but open the hood and you're likely to find parts made in South Korea, Europe, the United States, and almost anywhere. It's hard to say exactly what the country of origin is.

Uchiyama: This trend can only continue. Just recently, GM has started buying parts from NKH Spring and Akebono Brake to take advantage of the parts production technology that Japan has so painstakingly developed. And in fact, this is the way the market is supposed to work, and it is symptomatic of the trend toward global integration of both production and markets.

Okamura: While that is definitely the trend, I also see a kind of nationalism emerging and efforts to create something distinct to a specific country. Also, while there is a lot of collaboration among com-

panies in different countries, there is still very little integration at the management level. There is still a fierce desire to maintain independence and national identity where it counts.

Iguchi: Even though there is not much difference among countries, there is a growing trend toward market diversity within a given country. In Japan, for example, you have some people who prefer large, expensive cars and others who just want a little car to run errands with. In production, flexible manufacturing systems (FMS) are greatly simplifying the process of producing small numbers of many different products. It has become much easier to customize production.

Akai: Yet when you consider the increasing integration of the global automobile market and the growing tendency to integrate production horizontally, it would seem that the only long-term choices are either to tie up with one of the giants or to be an independent maker of luxury cars.

Okamura: Some companies will join groups while others will probably prefer to limit themselves to specific areas of collaboration. Each company will have to make its own decision.

Uchiyama: I think it is still premature to speak of corporate grouping, though I do agree that more and more companies will deliberately choose to follow a larger company's lead or to cooperate in some respects.

In Japan, we are already seeing technical cooperation between companies in what would at first glance seem to be completely unrelated industries. It would be strange indeed if companies in the same industry did not find it equally profitable to work together.

Ono: The auto industry cannot survive without collaboration and cooperation. Until recently, we have only had to be concerned with the domestic market and domestic demand. But as the market internationalizes, we have to consider how to survive in the global context. We need to reconsider our production technology within this global context.

Akai: So far, our discussion has centered primarily on the industrialized countries. There are, however, increasing numbers of automakers and parts suppliers in the newly industrializing countries.

Diversity of demand invites new makers

Iguchi: There is still some debate whether the newcomers from the newly industrializing countries will be able to



Masakazu Iguchi, Ph. D., professor at the University of Tokyo

make a go of it in the global auto markets. Most researchers seem to be skeptical, but I think the South Korean manufacturers, for one, will capture a certain share of the global auto market. The diversity of consumer demand has opened up the way for new market entrants competing in specialized segments.

Uchiyama: Korean cars are already doing well in Canada. They are inexpensive, easy-to-drive cars. The automobile registration and production capacity figures for South Korea today are very close to what they were in Japan two decades ago. Like Japan before the 1964 Tokyo Olympics, Korea is preparing for the 1988 Olympics with vigorous nation-building and industrial modernization. There are still problems being encountered in building a strong parts industry, but I would look for considerable growth by the Korean auto industry in the world market over the next decade or two.

Okamura: The Korean manufacturers have carved out a new market for their cars in Canada. They have a lot of advantages, including preferential tariffs, government backing, and ready access to technology from the front-running industrialized countries, but I do not see how anybody can fault the effort that they have made. Still, their success is by no means ensured.

Ono: They still have a long way to go, and the automobile industry demands a strong manufacturing base in materials, machinery, parts, and everything. Nonetheless, we need to keep an eye on the newly industrialized countries as they drive to catch up with us. We will have to have astute product planning and strong research and development if we want to stay ahead.

Uchiyama: Management is important, but what it boils down to is the ability to develop and commercialize frontier technologies in market-oriented ways. Any company that does that will be a survivor. ●

