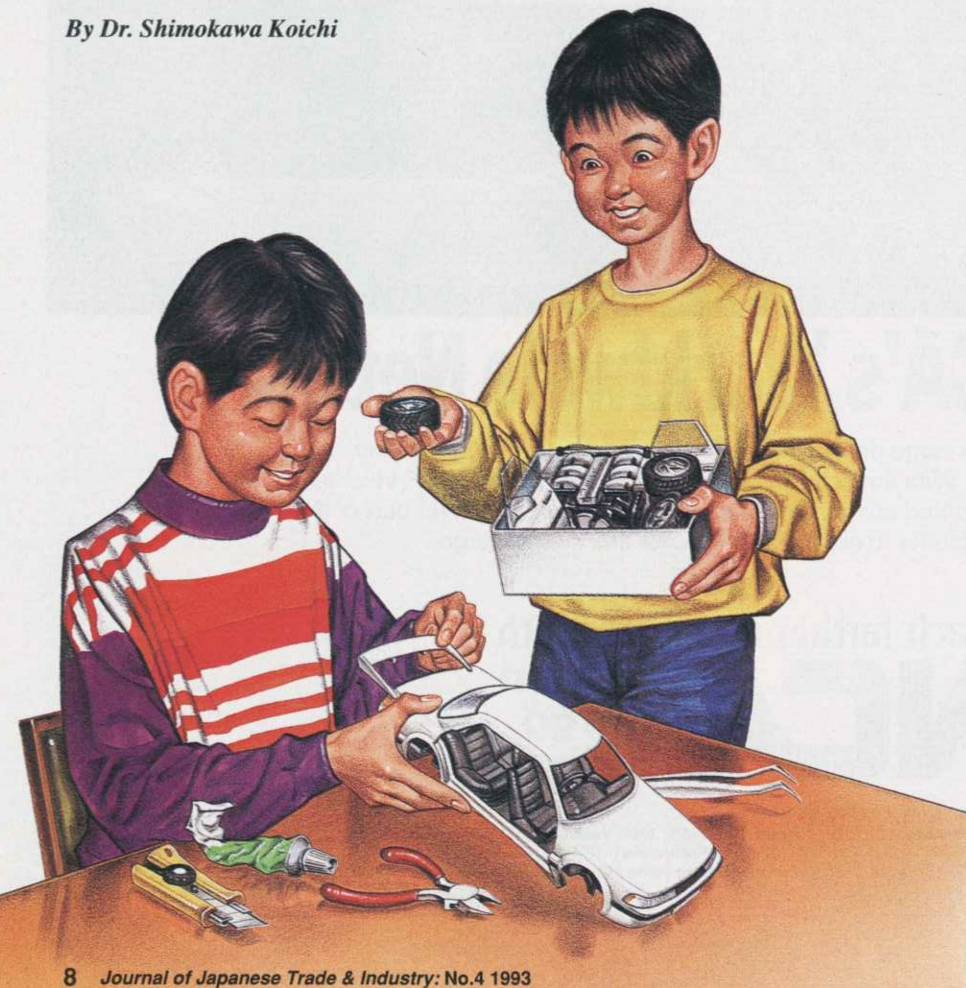
The Auto Industry Enters an Era of Restructuring and Globalization

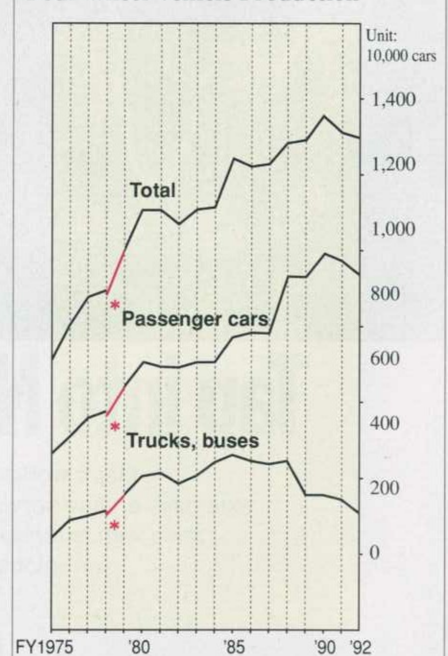
By Dr. Shimokawa Koichi



The Japanese auto industry, together with the electronics industry, is one of the country's leading industries, accounting for 13.1% of major domestic industrial production. Annual auto production peaked at 13.48 million in 1990, up from 20,000 vehicles—mainly trucks—just after the Second World War. The expanding domestic auto market, as well as the expansion of exports, accounted for this growth with an increase in production of as much as 670 times in less than 45 years.

But in 1992, due to weak domestic demand, auto production declined to 12.5 million. Considering continuing cuts this year, production is likely to decline again for the third consecutive year (Figure1), the deepest cuts ever.

Fig. 1
Four-wheel Vehicle Production



*Knock-down sets not included from FY1978

Japanese Auto Industry, Japan Automobile Manufacturers Association, 1993

Growth years over

Historically, the previous two cuts in production experienced by the Japanese

Photo: Isuzu Motors Ltd.

Isuzu's Fujisawa factory

auto industry lasted for one year each—1974 and 1982. Production fell in 1974 as a result of the first oil crisis that depressed demand, and in 1982 due to the combined impact of the second oil crisis and voluntary U.S. auto export restraints introduced in 1981. In both cases, production recovered the following year, as exports to the U.S. and the Middle East rose in 1975 and to Europe in 1983. The bottom line is that the Japanese auto industry was able to sustain a one-way growth supported by market expansion in Japan and overseas, and through its international competitiveness developed during this expansion.

The situation is different, however, in the current three-year-old auto recession: Weaker domestic demand can no longer be covered by expanding exports because of simultaneous recessions in industrialized regions (the United States, Europe and Japan); trade friction obstacles to expanding exports to the U.S. and Europe; and deteriorating profitability in exports to industrialized countries, especially the U.S., Japan's largest export market, due to the recent appreciation of the yen. These changes in the domestic and export markets have been the underlying factors causing unprecedented reductions in auto production. But the direct and most important factor is a weak domestic demand for autos. After rising sharply from 5.8 million in 1987 to a 7.8 million peak in 1990, domestic demand fell two years in a row to 6.9 million in 1992.

These adverse business conditions have pushed automakers' profits down; three out of Japan's 11 automakers fell into the red. Combined annual current profits for Japanese automakers dropped more than 50% to ¥500 billion from around ¥1.1 trillion during the peak years. Even Toyota Motor Corp., the strongest earner among domestic automakers, couldn't stop its profits from rapidly shrinking from over ¥700 billion to only ¥300 billion.

After such severe profit declines, Japanese automakers can no longer expect the one-way growth trend in the past to continue. In response, they have taken up major strategic changes, trying to establish an earning structure that can endure low business growth while stepping up overseas local productions to cope with deteriorating export profitability. In other words, they have entered a new era of pursuing global strategies for stepping up overseas local production for the long run, while simultaneously, through restructuring and rationalization, trying to reduce the break-even point that had risen too high during the past high economic growth period.

Pillars of competitiveness

Since the beginning of the 1980s, the Japanese auto industry had consistently increased its competitive power and sharply expanded its international market share. For example, in the most important North American auto market, the Japanese share rose from 13% in 1978 to about 24% in 1981; in the European market, its share rose from 8% in 1978 to 15% in 1982. This rapid rise in market shares did not fall, it actually sustained a moderate increase throughout the '80s, creating the belief that the Japanese auto industry was the most competitive in the world. Why, then, within three years, has its profitability deteriorated so quickly? Is it because its international competitiveness was founded on a false basis, or because the sources of its competitiveness have been lost with the post-bubble shrinking domestic market and deteriorating export profitability?

To answer this we should identify the Japanese auto industry's sources of international competitiveness. The most obvious is its superior production system which achieved both high quality and efficiency, represented by the just-in-time production system. The flexible production system, involving multi-functional workers who turned out multi-product production, has achieved a level of efficiency and quality that cannot be attained through Western-style high-volume mass-production.

Secondly, Japanese automakers have a unique parts procurement system which encourages a long-lasting cooperative relationship with part suppliers to guarantee quality and enhance the suppliers' technological development. As a result, they have the most competitive parts suppliers in the world as well as a supply system with excellent cost performance, quality lead time and technological development capacity.

Third, in relation to efficient and flexible production and a superior parts supply network, its product developing system is also quite efficient. Parts suppliers participate in new car development from the early stages. Its engineering system is fully integrated because the walls dividing each engineering section have been eliminated under the strong leadership of a chief engineer enabling simultaneous development from each section. Japanese automakers, therefore, require much fewer processes and engage in product development at a cost lower than Western makers, and have shortened lead time for new car development to an average of four years compared to about eight years in the West.

Given these advantages in international competitiveness, why did their profitability drop so abruptly after only three years of production cuts? Profit margins have always been thin due to the competitive posture exerted by the presence of as

many as 11 competitors—as opposed to the few oligopolies in the West. Even in good years the industry's average profit margin was only 2.4%, much lower than shipbuilders or steel makers which had already undergone restructuring. This meant that the auto industry offset low profitability, which couldn't be raised in a competitive environment, with a high growth in sales. Severe domestic competition, however, actually strengthen individual competitiveness and was a major reason for the survival of 11 companies, which avoided corporate mergers or industry-wide restructuring. But this competitive posture could only have been sustained by continued growth in the auto market, both domestically and overseas.

Naturally, when market growth stopped, low profitability began to immediately affect earnings. Moreover, Japanese automakers missed an opportunity to institute drastic restructuring when they faced a sharp appreciation of the yen triggered by the G-5 summit in 1985. This did force them to initiate some rationalization, but it was soon abandoned due to growth in domestic auto demand accelerated by the economic bubble. Domestic auto demands sharply expanded from 5.8 million to 7.8 million units in three years. Not only volume grew but demand shifted to the higher end—bigger cars or more luxuriously equipped versions of the same model.

Partly as a result, the number of designs for different versions of each model rose sharply from 100 to more than 200 in 10 years. Also, automakers accelerated new car introduction and shortened model change cycles in response to increased demand. These factors increased developing costs. Moreover, many makers boosted their production capacity with the most advanced automation systems, especially on the assembly lines, to cope with a bubble economy induced labor shortage. Costs were also pushed upward, not just due to heavy capital investment, but also because demand lagged behind expanded production capacity. In short, the policies adopted by the auto industry—excessive car versions, higher number of parts, higher product developing costs and heavier factory investments—sharply raised their break-even point.

Carmakers used to be profitable with an operating rate of 82% to 83%, but now they need to operate at 90% or more, in some cases as high as 95%, to turn over a profit. In fact, the decline in annual unit production from the 1990 peak of 7.8 million to the current 6.9 million is only 0.9 million, and the current level is still 1.1 million higher than that of 1987. Nevertheless, a decline of only 0.9 million caused a deterioration in profitability and saddled some companies with losses. This is obviously due to the abnormally high break-even points of automakers, which in turn resulted from the assumption that the high growth bubble economy would continue for years.

Local production strengthened

Higher break-even points and lower production, due to a weaker domestic demand, have brought the Japanese auto industry into a new era of restructuring and rationalization. Some of the measures which have been taken include a 20% to 30% cut in excessive car versions, fewer and more common parts, a revision in model change costs, a revision and possible extension of model change cycles, liquidation of some unprofitable factories and concentration of production in more efficient factories, revisions in business fields to concentrate the resources into stronger fields (Isuzu Motors Ltd. has lowered its car production to specialize in trucks and diesel technology), and complemental business tie-ups with competitors in the field where scale merits cannot be expected. The last measure cited has, in particular, been widely adopted among Japanese makers: Isuzu Motors and Honda mutually supply cars and small trucks to complement each other's weakness; Suzuki supplies mini-vehicle engines to Mazda; Nissan supplies small vans to Mazda. These kinds of tie-ups are likely to be extended to foreign makers.

Photo: Nissan Motor Co., Ltd.

Nissan Motor's plant in England

While such cost cutting restructuring proceeds, another important strategy for the Japanese auto industry—globalization and localization—is increasing. Eight Japanese automakers have invested a total ¥1.1 trillion in 11 factories in North America with an annual capacity which has already reached 2.55 million units. At least 1.7 million units are scheduled to be produced in North America this year, which would upset exports from Japan and local production (Figure 2). It should be noted that higher yen rates damage export profitability and ¥125/$1.00 is the maximum for exports to remain profitable. Now that the dollar is traded about ¥110/$1.00, a locally produced car is estimated as at least $1,000 cheaper than an exported one. This should provide an additional drive for the expansion of local production.

Local production is also proceeding in Mexico and Europe, especially in the U.K. Now localization is accelerating by raising local content to 75% to 80%, increasing the number of local managers and local production development. The involvement of local parts suppliers in designing from the early stage of local product development should also dramatically raise local content ratios.

An expansion of local production and more localization would lead to a formation of global production networks linking Japan, North America, Europe and Asia, facilitating a mutual currency risk hedge system by global labor division and mutual complement. At this moment, however, overseas Japanese factories are barely reaching profits on an annual basis, and not until the end of this century will the huge prior investments and facility expansion expenses, especially for engine factory building, be realized. Nevertheless, this major trend towards globalization seems

irreversible.

At first glance, it may seem that there is a contradiction between the precipitating profitability of Japanese automakers, in the aftermath of the economic bubble bursting, and the high reputation for international competitiveness they enjoyed a few years before. The truth is that the drop in profitability is a temporary phenomenon reflecting a sharp rise in break-even points of companies brought on by managerial judgments made during the bubble period, that is assuming continual growth. Ongoing restructuring would bear considerable results in one or two years which would prove the potential factors supporting international competitiveness have not been lost. However, even with short-term benefits from successful restructuring, it will be difficult for Japanese automakers to hold on to their international markets without a successful global strategy. To bring their global strategies success seems to be a huge task which may take years, at least until the end of this century. This will not yield full results before overall localization is achieved, not only in production but also in product development, part resourcing and management, and linked to each other as a global network. Japanese automakers must adapt their domestic competitive edge to their global business performance.

The Japanese auto industry is now undergoing a trial of restructuring and faces the challenge of real globalization. Under new market conditions, no longer the constant growth of the past, they must create flexible business and production systems invulnerable to cyclical changes in business climates. In pursuit of such a difficult and risky challenge, companies that fail to navigate the right course might disappear. However, corporate takeovers are not likely to happen as advantages realized by mergers have become unimportant. What is likely to happen is an intensification of global networks based on reciprocal business tie-ups of various forms: joint product development, mutual parts supply, mutual wheel supply, and joint venture production across borders. The drive towards formation of business tie-up networks will further differentiate the companies, regardless of size, capable of constantly enhancing their technology and productivity from the ones that cannot. This is the situation Japanese automakers are now facing.

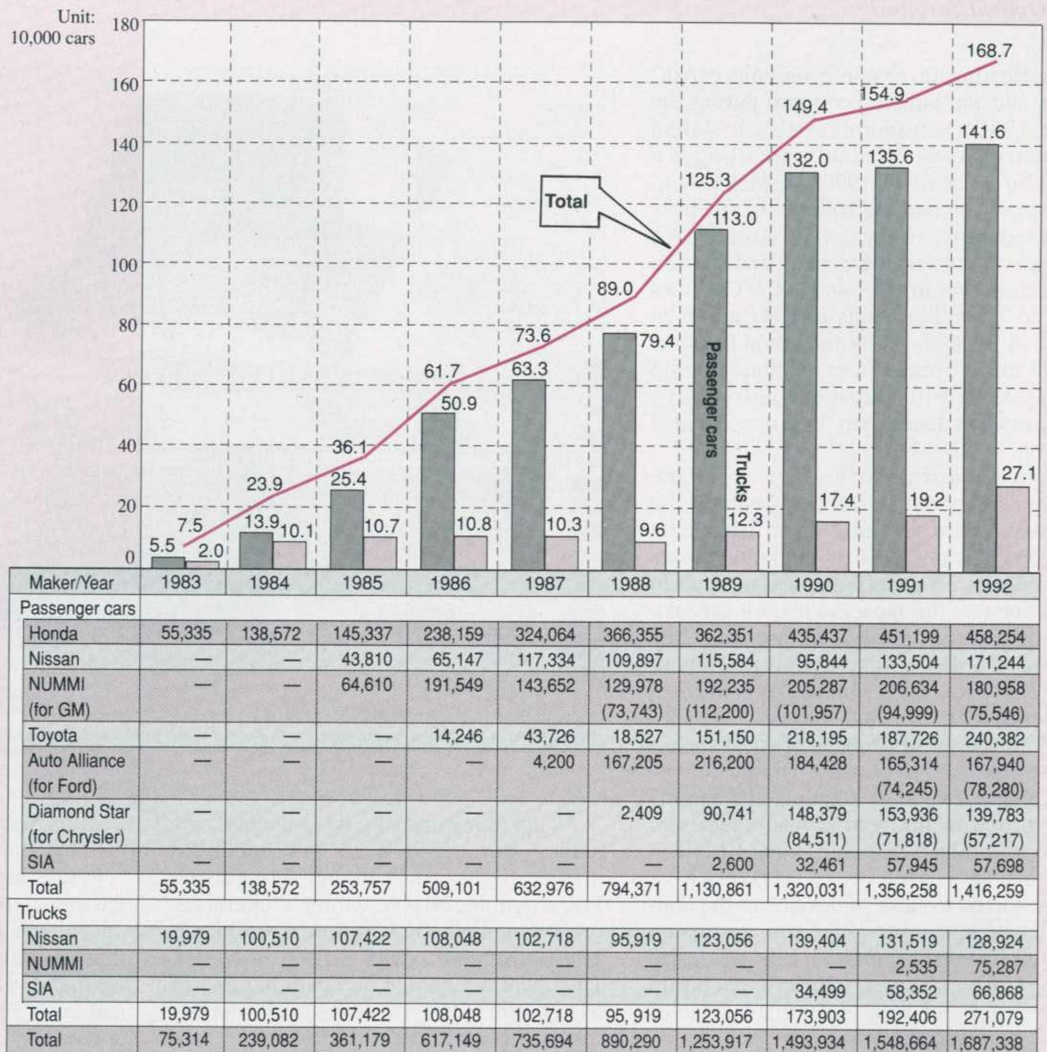


Fig. 2
Japanese Vehicle Production in the U.S.

Maker/Year	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Passenger cars										
Honda	55,335	138,572	145,337	238,159	324,064	366,355	362,351	435,437	451,199	458,254
Nissan	—	—	43,810	65,147	117,334	109,897	115,584	95,844	133,504	171,244
NUMMI (for GM)	—	—	64,610	191,549	143,652	129,978 (73,743)	192,235 (112,200)	205,287 (101,957)	206,634 (94,999)	180,958 (75,546)
Toyota	—	—	—	14,246	43,726	18,527	151,150	218,195	187,726	240,382
Auto Alliance (for Ford)	—	—	—	—	4,200	167,205	216,200	184,428	165,314 (74,245)	167,940 (78,280)
Diamond Star (for Chrysler)	—	—	—	—	—	2,409	90,741	148,379 (84,511)	153,936 (71,818)	139,783 (57,217)
SIA	—	—	—	—	—	—	2,600	32,461	57,945	57,698
Total	55,335	138,572	253,757	509,101	632,976	794,371	1,130,861	1,320,031	1,356,258	1,416,259
Trucks										
Nissan	19,979	100,510	107,422	108,048	102,718	95,919	123,056	139,404	131,519	128,924
NUMMI	—	—	—	—	—	—	—	—	2,535	75,287
SIA	—	—	—	—	—	—	—	34,499	58,352	66,868
Total	19,979	100,510	107,422	108,048	102,718	95, 919	123,056	173,903	192,406	271,079
Total	75,314	239,082	361,179	617,149	735,694	890,290	1,253,917	1,493,934	1,548,664	1,687,338

1. NUMMI is a Toyota/GM joint venture; 2. Auto Alliance: Mazada/Ford; 3. SIA: Subaru-Isuzu Automative Inc. *Ward's* magazine

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