

## Chapter4. The Automotive Industry in Taiwan and Malaysia: The Unique Growth Mechanism

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# Chapter 4

## The Automotive Industry in Taiwan and Malaysia: The Unique Growth Mechanism

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### Introduction

The automotive industries in both Taiwan and Malaysia have achieved dramatic growth since the late 1980s. The average annual output growth rates in the last five years (1988-1993) have reached 7.6 percent in Taiwan and 17.7 percent in Malaysia. As a result, Taiwan produces 405,000 cars per year, and Malaysia 180,000 (Table 1).

This rapid growth in the automotive industry, however, has strong contrasts; the intensification of market competition led growth in Taiwan, while strong governmental intervention brought about the rapid growth of the industry in Malaysia.

This paper compares the recent trends in the automotive industries of Taiwan and Malaysia, by examining the characteristics of the development process since 1985. It also examines the future prospects for the industry in both economies.

### I. Taiwan: Intensified Market Competition

#### 1. An Automotive Industry Which Has Changed Greatly Since 1985

Taiwan's automotive industry has quite a long tradition. The oldest vehicle manufacturer on the island, Yue Loong Motor Co., Ltd. was established in 1953. Yet the development processes before and after 1985 have been entirely different; after 1985, not only was the principle of automotive industrial policy altered, but the growth mechanism of the industry also changed dramatically.

Prior to 1985, the drastic increase in demand, a result of the island's rapid economic growth and the protective measures taken by the government, led

growth of the automotive industry. Production increased particularly after the mid-1960's, when rapid economic growth enlarged the domestic market.

**Table 1 Comparison of the Automotive Industries of Taiwan & Malaysia**

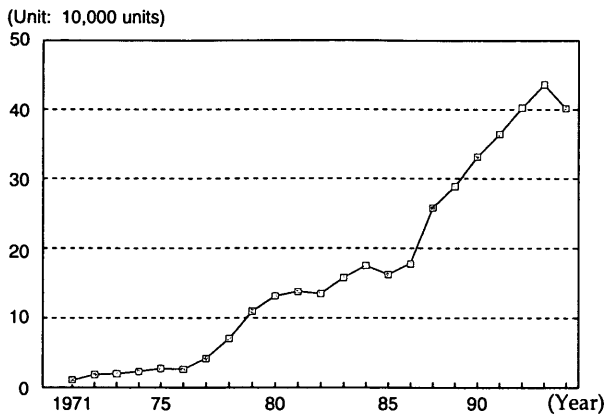
	Taiwan	Malaysia
Number of assemblers	11	9
Number of units produced (1993) (unit: 10,000 units)	40.5	18.0*
Share of passenger vehicle units (unit: 10,000 units)	26.8	14.5*
Number of imported vehicles (1992) (unit: 10,000 units)	19.1	5.8
Car ownership ratio (units per capita)	5.0 (1993)	7.4 (1991)

Source: Prepared from *Jidosha Sangyo Handobukku, 1995 nenban (1995 Automobile Industry Handbook)*, Nikkan Jidosha Shimbunsha (Daily Automotive News) and others.

Note: The asterisk (\*) indicates statistics for the Malaysian peninsula only.

During this period, however, the production systems of the vehicle manufacturers were generally inefficient, largely because of the government's policies. Since the beginning of the 1960's, the government had regulated the establishment of new vehicle manufacturers, introduced a strict local-component policy, and imposed high import tariffs. Before 1985, these protective policies contributed to the growth of the industry through import substitution, as the enlarged domestic market itself was beneficial to domestic vehicle manufacturers. At the same time, however, the protective measures caused the oligopolization of the market and created an inefficient atmosphere in the assemblers' production systems.

**Figure 1 Changes in the Production of Vehicles in Taiwan (1971-93)**



Source: Prepared from monthly editions of *Industrial Production Statistics Monthly, Taiwan Area, The Republic of China*.

Realizing the failures of these policies in 1985, the government announced the "Automotive Industry Development Plan," a gradual liberalization policy, whereby the regulation of new establishments was eased, and the import tariff rate and the local-component ratio were lowered. The plan also encouraged the introduction of foreign capital and technology.

As a result, intense competition suddenly appeared after 1985 in Taiwan's automotive industry. First, the number of vehicle manufacturers increased from seven in 1985 to eleven in 1993. Second, as the import tariff rate was lowered, the number of imported cars grew rapidly. The share of imported cars in the total sales of passenger cars was 13 percent in 1985, 43 percent in 1989, and 33 percent in 1993.

As competition intensified, the production growth rate accelerated significantly. The number of cars produced on the island increased rapidly from around 160,000 in 1985 to 400,000 in 1993 (Figure 1).

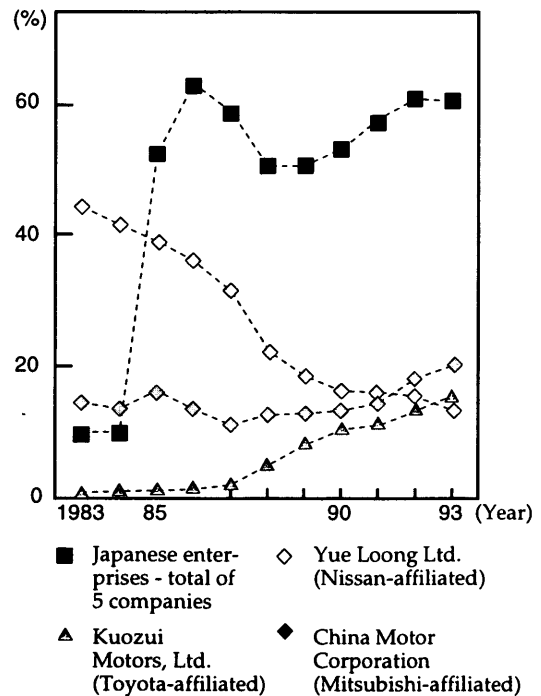
Thus, fierce competition among private vehicle manufacturers has played the major role in Taiwan's automotive industry since 1985. This is the most distinct feature of the growth mechanism after 1985, contrasting with the one prior to then. It also contrasts with the recent development process of the Malaysian automotive industry, which is primarily led by the government.

## 2. The Expanded Presence of Japanese Enterprises

There is also a clear distinction between the characteristics of the leading manufacturers in the industry before and after 1985. The manufacturers that have played the leading role in the recent rapid growth are those that have received capital from Japanese vehicle manufacturers, while the manufacturers that led production activities before 1985 were those of one hundred percent Taiwanese capital, as in the case of Yue Loong Motor Co.

Figure 2 shows the changes in the Japanese assemblers' share of Taiwan's total domestic production. The Japanese assemblers' share started to grow rapidly after 1985 and reached 61 percent in 1993.

**Figure 2 Share of Japanese Enterprises in the Total Production**



Note: Japanese enterprises include Sanyang Industry Co., Ltd. Strictly speaking, the company is not a Japanese enterprise as it receives funding from US Honda Corporation. However, it has been included as the Japanese enterprise because US Honda Corporation is a wholly owned subsidiary of Honda Motor Co., Ltd, thereby recognized as a Japanese enterprise in Taiwan.

There were factors on both the Taiwanese and Japanese sides that brought about the expansion of the Japanese manufacturers' share. Firstly, the existing vehicle manufacturers, faced with the need to cope with severe market competition after 1985, attempted to improve production and management systems by introducing capital and technology from Japanese enterprises. For instance, Yue Loong Motor Co., which had maintained the top position in the domestic market, and whose slogan since foundation had been "national industry", started to try to improve the quality of its production and management systems by accepting investment from Nissan Motor Co. in 1985. Secondly, in order to deal with the appreciation of yen after the Plaza Accord in 1985, Japanese assemblers actively began to invest in Taiwan coupled with the aim of securing a position in Taiwan's growing domestic market. Particularly after 1987, the New Taiwan dollar started to appreciate rapidly, and exporting from Taiwan became very difficult. As a result, competition among Japanese vehicle manufacturers in Taiwan over the domestic market became even harsher. Since Kuozui Motors, Ltd. (a Toyota-affiliated company), started production of passenger cars in 1989, competition to obtain share in Taiwan's domestic market among Japanese assemblers such as Toyota, Nissan and Mitsubishi has become increasingly keen. Thus, the recent rapid growth of the Taiwan's automotive industry is attributable to the intensified competition between assemblers that are in close cooperation with Japanese manufacturers.

### 3. Strengthening Guidance to Promote Outside Orders and the Development of the Components Industry

The severe competition among the vehicle manufacturers has also had a great impact on the components industry. Table 2 details the changes in the industry's output. It can be seen that components production has increased dramatically along with the enlargement of car production since 1985. More importantly, at the same time as the quantitative enlargement of the components industry, its recent growth has

also led to qualitative improvements. The industry, which had been stagnating in the oligopolistic atmosphere of the car market, has taken off under the liberalization process since 1985.

The primary driving force for this improvement is the fact that the assemblers, facing fierce competition, increased technical assistance to components suppliers in order to improve their own competitiveness. Kuozui Motors is particularly known for extending powerful technical assistance to components suppliers. When I carried out field investigations in the summer of 1993, several components manufacturers pointed out that the effective technical assistance of Kuozui Motors had had a great impact on the island's components industry.

Secondly, along with the investments by Japanese vehicle assemblers after 1985, many Japanese components assemblers began their own operations in Taiwan. In particular, investment by Toyota-affiliated and Nissan-affiliated components manufacturers, and their introduction of Japanese-style production and management had a significant impact on the components industry in Taiwan.

Hence, intensified competition among the assemblers, especially among Japanese-affiliated manufacturers, is the primary driving force behind the recent growth of the components industry.

This is in contrast to the Malaysian components industry, which, as we shall see later, has expanded through the protective policy of the government.

### 4. Future Prospects: WTO Membership and the Future of the Automotive Industry

Despite its recent rapid growth, Taiwan's automotive industry now faces various problems. This section discusses the diseconomies of scale that are one result of the flood of assemblers, as well as the difficulties that Taiwan's membership of the WTO, to be realized in the near future, will produce. It also discusses the prospects for Taiwan's automotive industry.

As mentioned above, fierce competition among assemblers has been the engine of the industry's recent growth. There are at present, however, 11 assemblers

**Table 2 Changes in the Output of the Components Industry in Taiwan**

	1986	1987	1988	1989	1990	1991	1992	1993
Output (unit: million yuan)	36,960	45,962	52,492	65,131	59,108	65,685	74,610	75,938
Growth: (%)	14.7	24.4	14.2	24.1	-9.2	11.1	13.6	1.8

Source: Same as Figure 1.

operating on this small island, the same number as that of major assemblers in Japan, although Taiwan's annual automotive production was only 3 percent of that of Japan in 1993. Clearly, Taiwan has too many assemblers, and the production system of each manufacturer is inevitably inefficient as a result.

The issue of diseconomies of scale is particularly serious for components manufacturers, which should enjoy the benefits of economies of scale more effectively than the final assemblers. One study shows that out of 72 components produced on the island, only 27 were internationally competitive in terms of price. Although the level of Taiwan's components industry has recently improved, it is still far below international levels.

Since 1991, the government has obliged Japanese assemblers to export components back to Japan. The main aim of this policy is to foster the components industry by enlarging its scale of production, while at the same time trying to reduce the trade deficit with Japan. This policy, however, has not yet solved the industry's fundamental problems.

Moreover, Taiwan's membership of the WTO will probably have a serious impact on the automotive industry, as further liberalization will be required. For instance, some protective measures that remained even after 1985, such as import restrictions on finished vehicles from certain countries such as Japan, and regulations on the local-component ratio, will have to be alleviated or removed. In addition, tariff rates will be lowered.

The removal of the import ban on Japanese cars will cause particularly serious damage to assemblers on the island. Even from the standpoint of Japanese assemblers and components manufacturers in Taiwan, the import of Japanese vehicles will press the management of their subsidiaries on the island. Although Taiwan is currently considering plans to introduce a tariff-quota system, the industry will face a difficult situation in the near future.

Thus, although Taiwan's automotive industry has been achieving rapid growth, the circumstances surrounding it are becoming increasingly severe. Recently, the necessity of "concentrating production into the top 3 assemblers" has been frequently discussed in Taiwan. A restructuring of the industry is inevitable.

In fact, a polarization of assemblers into top and bottom groups has been occurring in Taiwan over the last few years. With the environment surrounding the automotive industry, it is expected that this trend will accelerate further and eventually lead to a greater con-

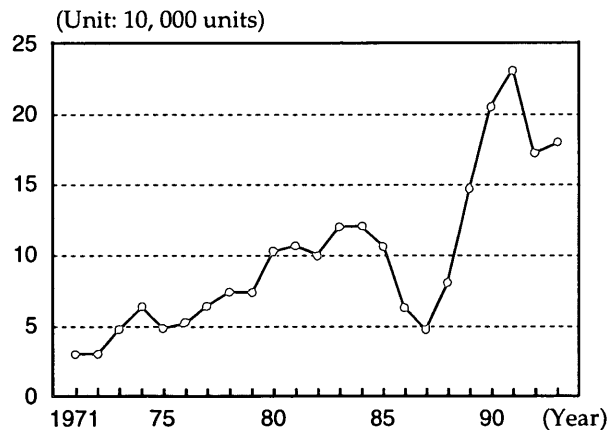
centration of production. The automotive industry in Taiwan is now at a turning point.

### III. Malaysia: Skillful Policy Management

#### 1. The Development of Proton

Malaysia began car assembly production in 1967. Although Malaysia's start was later than that of other ASEAN countries and Taiwan, production increased dramatically. By the beginning of the 1970s, 30,000 cars were already being assembled annually (Figure 3), a figure which exceeded that of Taiwan. During this period, however, there were too many domestic assemblers that were consigned work by foreign manufacturers. As a consequence, the development of the components industry was stagnant.

**Figure 3 Changes in the Automobile Production in Malaysia (1971 - 93)**



Source: Prepared from monthly editions of *Monthly Statistical Bulletin*, Department of Statistics, Malaysia.

Note: Statistics for the Malaysian peninsula only.

The setting-up of Perusahaan Otomobil Nasional Berhad (Proton) in 1983 was an attempt to break the impasse through direct government intervention in the industry. Its aim was to encourage rationalization of the automotive industry, and to promote related industries such as the components industry. The establishment of Proton was also significant as government moved to improve the status of the Bumiputera (Malays and other native ethnic groups) in the automotive industry, where foreign capital and the Chinese had

long dominated. In other words, the Proton project was a part of "Bumiputera policy".

As a result of the emergence of Proton, the Malaysian automotive industry, which had maintained Completely Knocked-Down (CKD) production and had been under the control of foreign manufacturers, began to be concentrated and restructured towards Proton under the strong initiative of the government.

Immediately after the start of production in 1985, Proton faced a recession of the Malaysian economy caused by a fall in the prices of primary products, suffered from the low operating rate, and therefore accumulated deficits.

Proton's market share, however, had already reached 47 percent by 1986. Since then, it has continuously maintained a share of between 60 and 70 percent. This drastic increase in such a short period is attributable to the preferential treatment Proton received from the government. As Proton is a national-policy enterprise set up to achieve rationalization and standardization in the industrial structure, the government protected and promoted Proton by adopting various preferential measures. Reductions in, or exemptions from, import tariffs of goods and commodity taxes at sales were made only to Proton. Civil servants were also able to receive low-interest loans when purchasing SAGA, the passenger car produced by Proton. In addition, due to the Japanese yen's rapid appreciation during this period, the price competitiveness of Proton improved relative to that of Japanese-affiliated assemblers, whose total share had been 80 percent in 1984.

Following the recovery of the Malaysian domestic economy since 1987, Proton's production increased rapidly. It should also be remembered that Proton's business performance recovered as Mitsubishi sent its president to Proton between 1988 and 1993 in order to improve its production and management system.

Along with the increase in Proton's production, the total number of vehicles produced in Malaysia also increased drastically (Figure 3: the fall in 1992 was due to the introduction of a tight-money policy which included a measure to shorten the period of car loans). Seventy percent of the increase in domestic vehicle production between 1987 and 1993 came from the rise in Proton's production. The growth of Proton, supported by preferential protective measures and the recovery of the domestic market after 1987, has contributed to the rapid growth of the Malaysian automotive industry.

## 2. Skillful Policy Management and the Introduction of Competitive Pressures

Thus, the Malaysian automotive industry has been able to achieve rapid growth through Proton's growth, which has been supported by the active intervention of the government. This is its biggest difference from the market-oriented development process of Taiwan's automotive industry since 1985.

As mentioned earlier, the industry began to grow in Taiwan after the protectionist policies followed prior to 1985 were abandoned. In contrast, the Malaysian industry started rapid growth only after the government started to intervene directly in the management of the assemblers, and undertake powerful initiatives. What are the differences?

In my opinion, Proton succeeded not only because existing automotive industry policies protect and promote its growth, but also because these policies do not exclude pressure from market competition. In connection with the key to the recent growth of the Malaysian automotive industry, two points should be made.

The first point is the government's skillful policy management. Once Proton started to grow stably, the government partially removed the protectionist policies supporting it. In addition, when production of Kancil, the Second National Car, began in 1994, the government did not provide preferential measures as it had for Proton. While the government has implemented powerful policies to promote the automotive industry, it has also continued to adjust the extent of its intervention flexibly according to the circumstances. By doing so, it has skillfully tried to avoid the inefficiency trap which inevitably tends to accompany import substitution policies in developing economies. This is very different to Taiwan before 1985, which eventually needed to take a decisive step towards liberalization as its protective policies had created an inefficient market environment and caused stagnation in the industry.

Second, it should be pointed out that Proton has entered the international market through exports. As Proton suffered from stagnant domestic demand immediately after the start of its operations, since around 1989 it has sought a way out through exports. The number of vehicles exported in 1994 was around 21,000, which accounted for 23 percent of total sales. Thus, while Proton has enjoyed an overwhelming share in the domestic market, it has also been exposed to competitive pressures in the international market. In

fact, in the process of increasing exports to Britain, Proton has strengthened technical assistance to its components manufacturers.

Thus, through skillful policy management and the introduction of competitive pressure by entering the international market, the Malaysian automotive industry has been able to avoid the stagnation in development that developing countries implementing import substitution policies are very likely to suffer.

### 3. VDP and the Growth of the Components Industry

Proton's growth has also brought about a rapid expansion of the components industry. Table 3 shows the changes in the sales of its products since 1986.

As can be seen in the table, the industry has grown along with the increase in the demand for components following the enlargement of Proton's production. Ever since the start of its operations, Proton has been aggressive in localizing its components, and its localization rate has reached 60 percent by the standard of the Generalized System of Preferences (GSP). In addition, as will be explained next, Proton's policies to support and nurture the components manufacturers also led to the rapid increase in the production.

In 1988 Proton invested 11 million ringgits to introduce the Proton Components Scheme and started to promote local components manufacturers. Based on this, the government later developed the Vendor Development Programme (VDP) and implemented it in other industries. In 1993 the Tripartite Arrangement System, where the Ministry of International Trade and Industry (Malaysia) mediates components manufacturers, assemblers and financial institutions, was introduced to enlarge the VDP. Thus, the system to support components manufacturers was further developed.

Under the present VDP, Proton provides markets and technical assistance, and the government and financial institutions offer financial aid to targeted components manufacturers. Among them, the prime targets for promotion were components manufacturers

run by the Bumiputera. In 1993, 45 out of 125 components suppliers to Proton were Bumiputera manufacturers. The majority of these were enterprises fostered under the umbrella of Proton since the start of its operations. Proton's policy of promoting Bumiputera components manufacturers can be considered quite successful, as it was able to ease the financial and technical constraints on these manufacturers that had long prevented them from developing. As a consequence, Proton is now often cited as the most successful example of the promotion of small- and medium-size enterprises by the Heavy Industry Corporation of Malaysia (HICOM).

Moreover, as the nucleus of the active spill-over to the components manufacturers, Proton has played a critical role in the formation of human resources in the components industry. When carried out field investigations in the summer of 1994, I came across several cases where Proton technicians had changed jobs to work for components suppliers, or established their own enterprises manufacturing components.

Thus the recent growth of the components industry is basically the result of Proton's projects. In this sense, it owes a lot to the "top-down" promotion policies of the Malaysian government. This is very different from the case of Taiwan, where it was the liberalization of policy and the intensification of competition among assemblers that brought about the development of the components industry.

### 4. Future Prospects

In September 1994, Perodua, a joint-venture enterprise with Daihatsu Industry, began sales of the Kancil (660 cc), the Second National Car following the SAGA produced by Proton. In addition, the government is planning to start production of a Third National Car by establishing a joint venture with Citroën of France. Proton has also announced a plan to construct a second factory by the year 2002, with a production capacity of 250,000-300,000 cars annually.

**Table 3 Changes in the Total Sales of the Components in Malaysia**

	1986	1987	1988	1989	1990	1991	1992	1993
Total sales (Unit: 1,000 ringgit)	106,606	127,438	189,574	279,864	418,741	608,846	529,933	830,649
Growth (%)	-36.6	19.5	48.8	47.6	49.6	45.4	-13	56.7

Source: Prepared from monthly editions of *Monthly Industrial Statistics, Peninsular Malaysia*, Department of Statistics and *Monthly Manufacturing Statistics, Department of Statistics*.

Moreover, Proton has actively advanced abroad in recent years. It now plans to manufacture components in the Philippines, eventually leading to the joint production of passenger cars in the country. It also intends to begin the production of small buses in Vietnam in partnership with Mitsubishi.

Proton's plan to introduce engines from British Rover has also attracted attention. The Malaysian government has criticized Mitsubishi, the partner of Proton, insisting that their technology transfer is slow. Here, Malaysia's intention of extracting advantageous conditions by encouraging competition among its foreign partners is clear.

The presence of foreign enterprises in the automotive industry is growing in many developing countries today, as is the case of Taiwan. Yet Malaysia has attempted to secure negotiating power against foreign capital through powerful initiatives by the government.

Thus, the Malaysian automotive industry has recently attracted attention as a model for automotive industry policy in developing countries. There are, however, several issues that Malaysia will probably face in the future.

The first of these is the outlook for Proton's exports. At present, its exports to Europe are greatly dependent on the GSP granted by the European Union. For example, in Britain, one of the major importers, the price of the least expensive Proton product is no more than 28,000 ringgit, which is cheaper than its lowest price of 30,000 ringgit in Malaysia. This is because import tariffs are not imposed on Proton's products in Britain, as preferential treatment is extended to Malaysia. As exports expand, however, the application of the GSP to Malaysia in the European market will probably be removed. The future of Proton, and that of the Malaysian automotive industry, depends on whether or not it can, by taking advantage of the period while GSP applies, acquire long-term international competitiveness.

The second issue concerns the government's capacity to obtain and judge information. As previously mentioned, the skillful maneuvers of the government led to the success of Proton today. Yet, whether the government is able to introduce appropriate policies over a long period of time is open to question.

The third issue relates to the competitiveness of the components industry. As outlined above, the com-

ponents industry in Malaysia has been fostered under the powerful protection of the government. This active intervention has been successful in producing a number of components manufacturers and providing new potential for industrial development in Malaysia, where the accumulation of supporting industry had been lacked for a long period.

However, the Malaysian components industry certainly has various potential weaknesses. Particularly among Bumiputera manufacturers, there are enterprises which would not have been able to start business were it not for the government's help. The ability of the components industry to cope with a crisis is questioned. The real strength of the components industry in Malaysia will be tested when it faces a recession or a change in government policy in the future.

Finally, it should be pointed out that the policies which have protected and promoted Proton have often clashed with the interests of other sectors. For instance, the preferential measures to Proton have continuously eroded the existing markets of other assemblers. Consumer choice has also been restricted by the policy, as buyers have little option but to purchase relatively expensive Proton products. Also, imported vehicles and the products of other companies are highly taxed to create conditions favourable to Proton. It cannot be denied that one critical key to the success of Proton lies in the transfer of economic rents from other sectors.

The difficulties listed above are common in the automotive industries of developing countries. It will be when Malaysia achieves compatibility between the interests of consumers and policies to establish local automotive industry that it will truly offer a policy model to other developing economies in the promotion of the industry. Thus, the future course of its policy management attracts the greatest attention.

#### **Note:**

At the time of its establishment, Proton's equity was divided as follows: Heavy Industry Corporation of Malaysia Bha. (HICOM), 70 percent; Mitsubishi Motor Company and Mitsubishi Trading Co., both 15 percent. When Proton's stockholders were listed in 1992, Mitsubishi Motor Company and Mitsubishi Trading Co. each had 8.7 percent of shares.