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in the Chinese Auto Industry:  
The Cases of Shanghai Volkswagen and Tianjin Daihatsu**

Chunli Lee

Jin Chen

Takahiro Fujimoto

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**Different Strategies of Localization in the Chinese Auto Industry:  
The Cases of Shanghai Volkswagen and Tianjin Daihatsu**

Chunli Lee

(Visiting Fellow of Tokyo University / Senior Research Fellow of  
Development Research Center, the State Council of P. R. C.)

Jin Chen

(Ph.D. Student of Graduate School of Tokyo University /  
Associate Professor of Tianjin Commerce University, China)

Takahiro Fujimoto

(Associate Professor of Tokyo University)

## Abstract

Along with the process of economic reform and policy of opening to the outside world, China's auto industry has come to a point of new development. Since the manufacturing technology of cars is much more complicated than that of commercial vehicles, China has adopted a different strategy to develop its car industry-- incremental localization by introducing foreign capital and technology, deviating from the "self-reliance" approach in its commercial vehicle production.

This paper will focus on the character of China's car market, system of car manufacturing, and outline of localization policies, based on the field surveys conducted on Shanghai-VW, Tianjin Daihatsu, relevant parts makers, administrative organizations in August 1995 and March, April 1996, the authors will compare and examine the differences in the localization strategies and production systems between Shanghai-VW and Tianjin Daihatsu. By doing so, we intend to establish a base for further research and survey on the future Chinese auto industry.

The authors focus on this different cases of Shanghai-VW and Tianjin Daihatsu, since they are the two largest passenger car production enterprises in China representing quite different patterns of China's enterprises respectively.

# Different Strategies of Localization in the Chinese Auto Industry: The Cases of Shanghai Volkswagen and Tianjin Daihatsu

Chunli Lee, Jin Chen, Takahiro Fujimoto

## 1. Introduction

### 1.1. Theme

Localization in the process of economic development is a topic that has been long discussed. Along with the process of economic reform and policy of opening to the outside world, China's auto industry, which has been trying to realize substitution for imports, has come to a point of new development.

In terms of its production technology, the Chinese auto industry at the stage of switching from commercial vehicle (esp. truck) production to car manufacturing. After 1984 China's major auto makers began to form technical tie-ups or establish joint ventures with foreign auto companies, accumulated and digested the production and management technologies, and promoted localization gradually. This eventually led to the establishment of the "Big 3, Small 3, and Mini 2" system toward late '80s and '90s. Generally speaking, the manufacturing technology of cars is much more complicated than that of commercial vehicles. Therefore China has adopted a different strategy to develop its car industry-- incremental localization by introducing foreign capital and technology, a strategy often seen in other developing countries, but deviating from the "self-reliance" approach in its commercial vehicle production.

Although some research has been conducted on the overall industrial organization of Chinese auto industry and the "Big 3, Small 3" system, no one has attempted to examine the localization strategy in China's car production and compare the production systems between typical companies.<sup>1</sup> Although remarkable research has been done on the overall auto industries and localization in developing countries, China has been excluded from the research because of its different economic system.<sup>2</sup>

Since China is a culturally and economically diversified nation, its industries and companies are unique in their own way. When conducting research on China or formulating and entry strategy in China, it is

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<sup>1</sup>New researches on China's car includes Takayama, Y. (1991), Chen, C. (1994).

<sup>2</sup> For example, researches on overall auto industries in the developing countries and localization include Baranson (1969), (1971), and Mitsubishi Research Institute (1979), Odaka, K. (1983), Odaka, K. et al. (1988).

dangerous to reach a hasty conclusion without looking deeply into its diversification. In the Chinese auto market, there is surplus demand and shortage of supply. The companies, with little pressure of competition, have discretion to choose different strategies. Meanwhile, being restricted by central, local governments and foreign capital, the Chinese auto companies are faced with a competitive environment that is more complicated than for American, Japanese and European counterparts. Therefore, while general discussions are necessary in examining China's auto industry, more specific approach should be taken in researching each region and company.

Since it is impossible to discuss the diversity of Chinese economy and draw the overall picture of Chinese auto industry, this paper will focus on the character of China's car market, system of car manufacturing, and outline of localization policies. Based on the field surveys, the paper will compare and examine the differences in their localization strategies and production systems between Shanghai-VW and Tianjin Daihatsu. By doing so, we intend to establish a base for further research and survey on the future Chinese auto industry.

## **1.2 Research Method**

This paper is the result of field surveys conducted on Shanghai-VW, Tianjin Daihatsu, relevant parts makers, administrative organizations in August 1995 and March, April 1996. The surveys included interviews and plant tours. Efforts have been made to fully use the existing data. The data, otherwise noted, are all based on the writers' interview.

## **2. The System of "Big Three, Small Three & Mini Two" and the Passenger Car Market**

The system of "Big Three, Small Three & Mini Two" reflects the current policy of the Chinese government, which restricts entries into the passenger car market and allocates car production to 8 manufacturers. This policy aims to substitute foreign cars by protecting domestic car makers--a measure taken by the government after reflecting upon the disperse industrial organization of commercial vehicle production due to heavy entries. In reality, there were 124 auto makers in China in 1993.

Among the car makers, First Auto Works (FAW)-VW and Shenlong (with Citroen) are directly under the auspices of central government. Shanghai-VW and the Small Three--Beijing Jeep (with Chrysler), Tianjin Daihatsu and Guangzhou Peugeot are controlled by the local

governments. And the Mini Two--Chang'an Suzuki and Guizhou Air (with Fuji Heavy Industries) are under the administration of Ministry of Aviation and Space Flight. In terms of the time of entry, the 2 big makers of the central government and the Mini two were late in entering the passenger car market (in the '90s) compared to the 4 makers (in the mid '80s) is very important in understanding the market structure of passenger car in China.

In terms of technical cooperators and pattern of cooperation, the European auto makers dominate the market. Especially Volkswagen has established joint ventures with two companies of the Big Three and manufactured locally three different brands: Santana, Golf/Jetta and Audi. Its market shares were 36.1% (90,000 units of the three brands out of a total of 249,000) in 1992 and 58% (145,500 units out of a total of 250,000) in 1994. On the other hand, the Japanese makers have tied up with the relatively lower ranked companies--one of the Small Three and the Mini Two. Except for Chang'an Suzuki, Daihatsu and Fuji Heavy Industries only provide technical licenses to the Chinese Counterparts. The Japanese are late in entering the passenger car market and reluctant to invest heavily in the industry.

The most conspicuous characteristics of China's car market are rapid growth of the market because of shortage of supply, seller's market, and high price due to the high import tariffs imposed by the government. In a market that is secluded from the competition of the world market, priority is given to the "amount" of supply over competitiveness and product performance. The domestic auto makers have been able to meet customer needs, which are not highly specific, in a non-diversified market. In the meantime, the high price and the government's policy of restricting entries brought monopolistic profits to the car manufacturers. This vicious cycle of car manufacturing is important in understanding the production system of China's auto industry.

### **3. Local Content Policy**

#### **3.1. Definition of Local Content Rate**

China's local content policy is intended to increase local content rate on the basis of restricting import of complete cars. According to the State Planning Commission, the local content rate is calculated as bellow:<sup>3</sup>

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<sup>3</sup> Chen, C. (1994), p.126.

$$\text{Local content rate (\%)} = \frac{\text{manufacturer's price} - [\text{CKD price (CIF)} + \text{tariffs}]^*}{\text{manufacturer's price}} \times 100\%$$

\* The price in 1985 is used as the basis price.

Each auto maker calculated its own local content rate using the above formula. The China Research Center for Automobile Technology (in Tianjin), an affiliate research institute of Ministry of Machinery Industry, will assembled a group of technicians to examine the self-reported result. The local content rate is thus determined by the government's technological department.

### **3.2. Policies Concerning Local Content**

#### **(1) Import Tax of Complete Cars**

China Imports complete cars to supplement the shortage of domestic supply and therefore imposes high tax on them. As of January 1, 1994 new tariff rates went into effect--110 to 150% on passenger cars, which are lower than the former 180 to 220% but still very high compared to other countries.<sup>4</sup>

#### **(2) Import License**

The central government uses import license and import quota to regulate and restrict the import volume of cars.

#### **(3) Local Content Rate and "Classified Tariff" on CKD Parts**

The government links tariff on imported CKD parts with local content rate, and calls this "Classified Tariff". By doing this, the government intends to reward the auto makers that increase their local content rate and penalize those that make little efforts. The tariffs on imported CKD parts are:<sup>5</sup>

(a) First 3 years -- 50%

(b) Local content rate after the 4th year

40% -- 60% = 48% tariff

60% -- 80% = 32% tariff

under 40% = 80% tariff

<sup>4</sup> According to the report in *Ming Po Daily* (Hongkong) on December 31, 1993.

<sup>5</sup> According to the public information provided by Shanghai-VW.

If the auto maker achieves 40% of local content rate after the 4th year, it can avoid the penalty of high tariffs--a life-and-death choice for a company. By achieving 60% local content rate and capitalizing on preferential tariff rate, Shanghai-VW succeeded in reducing the costs of supplying CKD parts.

#### **4. The Production System of Auto Markers: the Shanghai-VW Model**

Shanghai-VW indicates the direction of local content strategy for the Chinese auto industry. Shanghai-VW boasts the highest production volume and local content rate in the whole industry. Meanwhile since 1990, its total sales and revenues are among the top in the upper ranked 300 foreign-owned companies.<sup>6</sup> Since Shanghai-VW occupies a pioneering position in China's car industry, we would refer to its production system as "Shanghai-VW Model" in this paper. The characteristics of this system will be analyzed while examining the contributing factors to the system.

##### **(1) Choice of Car Model**

The choice of car model and volume explicitly indicates the production information obtained by three sides--the foreign multinational corporation, local government, and local maker. Once the car brand is decided, the overall production plan can be formulated--from plant design, parts supply and volume to purchasing schedule and marketing.<sup>7</sup> In 1985 Shanghai-VW started to produce "Santana", a luxury (by Chinese standard) small car, as a domestic car model. From 1992 it introduced Passat (the wagon version of Santana), consolidating its models on a company level. By adopting the OEM production system characterized by a single introduced model, Shanghai-VW can be viewed as an orthodox KD production example functioning as a transplant of a multinational corporation in a developing country.

##### **(2) Management Organization**

Shanghai-VW has a functional management organization, with board directors responsible for different divisions. Unlike working under Japan's paramedic management organization, each board director in Shanghai-VW has tremendous discretion on his own business. German board directors and middle management control such important

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<sup>6</sup> According to the reports in *People's Daily* on June 22 and in *China Daily* on October 29, 1993.

<sup>7</sup> Mitsubishi Research Institute (1979), p.49.



management activities as sales, purchasing, finance, as well as the R&D, production control, and quality control departments. In general the management of Shanghai-VW is dominated by the Germans.

### **(3) Parts Supply System**

Because Shanghai-VW is purely a KD assembly maker, its in-house rate is low. In 1992 the local content rate of its in-house made parts was 18.35%. It mostly relies on parts supply from outside. In 1988 it introduced the Japanese-style cooperation scheme. It formed the "Shanghai Santana Local Content Cooperative" by bringing together the parts makers, banks, universities, and research institutes. A supplier network was formed under the umbrella of Shanghai Auto Industry Corporation (SAIC). In 1991 133 companies (organizations) joined the cooperative. The "Shanghai Santana Local Content Coordination Office", which is directly under the Shanghai Municipal Government, gives general guidance on management to the auto maker and parts makers, especially plays a leading role in coordinating finances and material supply for the auto maker. The municipal government built a "local content foundation" by adding 28,000 yuan (16% of total price) to the retail price of each car, provided special low-interest loans to the parts makers in Shanghai area. To foster parts makers, the government needs huge sums of money, which is covered by raising the product cost. Other passenger car manufacturers imitate this method, resulting in high prices of cars.

### **(4) Product Development System**

Generally speaking, the right to develop new models lies in the hands of the Germans. The new model of Santana (Santana 2000) was jointly developed by VW in Germany, Shanghai-VW and Autolatina-Group (Brazil-Argentina VW), and put into the market by the end of 1994. The new Santana has two styles: sedan and wagon. In addition to use of EFI, there was changed in styling and interior finish. improvements in fashion and amenity. The wheel base was extended to 108mm, leaving bigger space inside the car. Since it was a semi model change, there were only 377 newly developed parts. Thirteen Chinese parts makers participated in the preliminary development as "design-in " partners.<sup>8</sup> For the Chinese this was the first model change of passenger car in a real sense, and was the learning period for the product development technology.

### **(5) Marketing System**

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<sup>8</sup> According to the report in *China Automobile News*, August 2, 1993.

Shanghai-VW turns over almost all of its manufactured cars to the Shanghai Auto Industry Corporation, its authorized supervising department. The Shanghai Auto Industry Supply and Sales Company is responsible for selling the cars. Until 1988 all the cars had been turned over the Ministry of Commodities. The turn-over rate to the central government has decreased to 20%, leaving 80% of the cars to be sold by SAIC itself. Shanghai-VW is selling its own cars within the tax-exempt amount. Along with the establishment of after-service networks, the manufacturer will enlarge its own sales in the future.

All these accomplishments of Shanghai-VW have been achieved with the support of the Chinese central government, which determined its pioneer status.<sup>9</sup> The government not only gave Shanghai-VW preferential treatment in taxes, but also provided convenience in foreign currency and material supply. In the meantime, the Shanghai government has positioned the auto industry as the city's "first leading industry", and has supported Shanghai-VW. The coordination of central, local governments and company in their efforts of achieving localization is an important factor for the success of Shanghai-VW.

## **5.The Production System of Auto Makers: The Tianjin Daihatsu Model**

Tianjin Daihatsu(TD) is also known as Tianjin Automobile Industry Corporation(TAIC). It began to produce Hijet mini-vehicle series(high roof van, low roof van & small truck) and Charade mini cars along with the technology introduction from Daihatsu of Toyota group from the mid-1980s. Tianjin Daihatsu is the most promising developed enterprise in China's automotive industry within the this decade, which is the second largest passenger car production base in China just after Shanghai-VW and the largest mini-vehicle production base as while. In March, 1996, the project between Tianjin Daihatsu and Toyota, joint ventured production of 100,000 engines with the displacement of 1.3L, was officially approved by Chinese government. TD will develop its production of large cars gradually in the future with planned annual productivity peaked at 300,000 units by the year of 2000. <sup>10</sup>

### **(1)The Prior Production History of Parts & Components**

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<sup>9</sup> Pioneer status--the government provides preferential tax treatments and other protections for the companies that certain requirements for a certain period of time. For details please refer to Adachi, Ono & Odaka (1980).

<sup>10</sup>According to the report in *Japan Economic News* on April 4,1996.

Tianjin began its production of parts & components as early as the 1950s, and established Tianjin Parts & Components Company in 1964. In the 1960s, the parts & components industry developed rapidly and the vehicle production (mainly little truck and small van) started in 1965. It used to trial-produce passenger cars but failed to put into production in 1974. The automotive industry was defined as the most important pillar industry by Tianjin government in 1980. And Tianjin Automobile Industry Corporation (TAIC) was founded in 1982, incorporating the previous scattered 50 plants and improving its production system. It merged previous 5 assembly plants into 2 plants,<sup>11</sup> increasing its production capacity of parts & components and concentrating on the manufacturing of popular products in market.

## **(2) Choice of Car Model**

Upon entering the 1980s, TAIC organized its R & D professionals to conduct disintegrated analysis on the Japanese-made mini-vehicles and undertook market survey in order to fill up the gaps in China's mini-vehicle market. TAIC also sent its professionals to Japan's Suzuki and Daihatsu to conduct further research and survey in 1983, ending up with the choice of the technology introduction from Daihatsu related to the 40% interchangeability of parts & components between Daihatsu's Hijet mini van and Charade mini car. TAIC undertook its technology analysis and market follow-up survey by importing several units of Charade mini cars in 1984. In 1986, TAIC signed the contract with Daihatsu to introduce its production technology of the newly released Charade model for 1987, and began the immediate integrated production in its Hijet assembly line in 1987. But at that time, the choice of car model based mainly on the response of market and the manufacturing difficulties of latest model were not estimated enough.

## **(3) The Relationship with Government**

Tianjin Daihatsu is subordinate to Tianjin government. In the early stage of technology introduction, DT was assisted by local government instead of the central government. At first, the central government just agreed TD to introduce mini-vehicle technology. The central government had to adjust its policy because large quantities of foreign cars poured into China's market around 1985. As a result, the central government permitted Tianjin Daihatsu to undertake its small-lot production in mini-

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<sup>11</sup> Basing on the public information Provided by Tianjin Automobile Industry Corporation

vehicle assembly line by introducing mini-car production technology. The technology introduction of TD stemmed from its self-accumulation of capital and bank loans without any financial assistance from the central government. The production scale has developed rapidly after the technology introduction, becoming the second largest car production base in China. The central government finally defined Tianjin Daihatsu as one of the four largest car production bases within China and provided supplementary investment in 1994.<sup>12</sup>

#### **(4) Management Organization**

The personnel in management division of Tianjin Daihatsu are all Chinese and the administration personnel in each division are almost technicians. TD did not have the experience of big-lot car production before and therefore in the early period of technology cooperation, Daihatsu professionals often came to Tianjin from Japan for technological instructions. TD focuses on self-management but has not formed a full-line Total Quality Control(TQC) system and absorbed Japanese management experience systematically. Even though Japanese technicians are not satisfied with the product quality of TD, they do not participate direct production management due to their peculiar relation of providing technology.<sup>13</sup> TD may probably introduce Japan's lean production after the establishment of joint venture with Toyota in the near future.

#### **(5) Parts Supply System**

Tianjin Daihatsu established certain specified parts production foundation from the 1960s and the quantity and quality of some parts, like Piston Ring, Wiper, Automobile Horn, Door Lock and Air Cleaner, maintained their leading status and high performance in China. The localization of parts production for Hijet was mainly processed in Tianjin local plants and the quality problem came into existence because of the foreign currency and time constraints. It was very difficult for TD to introduce the manufacturing of newly released Charade car in 1987 and became very cautious because TD had to undergo overall inspection itself. TD conducts technological improvements at parts plants in Tianjin area as while as expanding its order scale aiming at the improvement of parts quality. Anyhow TD still engages in the promotion of parts production in its local region. Along with the rapid growth of its productivity, TD will

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<sup>12</sup>From [*The Chinese Automobile Industry Yearbook 1995*],p.48.

<sup>13</sup>Minami Ryoshin(1988),p.82.

raise the production level of its parts plants by introducing foreign technology.

#### **(6)Product Development System**

TAIC possesses its mini automobile research laboratory, which primarily concentrating on the assimilation & digestion of technology introduction of mini van & mini car and design & innovation of parts. Meanwhile it also undertakes market survey and product development plan. It tried to design and develop the derivative model of three-box Charade(two-box as its prototype) in 1991. Even though its innovation was restricted within the simple body outlook change, the research laboratory of TAIC did not make a success and finally purchased all dies from Japan's Daihatsu.

#### **(7)Marketing System**

Tianjin Daihatsu always devotes to overall market survey before its new products are put into market, followed by the immediate release for its enlargement in market share. The products of TD are almost vertically sold by its sales subsidiary---"Tianjin Automobile Industry Sales Company". TD incorporated sales, supply of spare parts and after service, accelerating the enlargement of its market share by building up its after service stations all over China after 1984.

The success of Tianjin Daihatsu stemmed from the present measures of high import tariff protection instead of the direct assistance and investment from the central government. TD develops rapidly by high quantity acceleration of car demands in China's automobile market, characterized by low level of product quality.

### **6.The Complex Comparison between Shanghai-VW and Tianjin Daihatsu**

Shanghai-VW and Tianjin Daihatsu are the two largest passenger car production enterprises in China representing quite different patterns of China's enterprises respectively.<sup>14</sup> The comparison analysis and interpretation will be focused on the formation factors of these two bases in the following sections.

#### **(1)Production History**

Shanghai-VW is formerly known as Shanghai Automotive Industry Corporation (SAIC) with its first success of car trial-production in 1958 and the implementation of batch process in 1964. SAIC maintains its

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<sup>14</sup>Referring to Figure 1.

pioneer status as the largest car production base in China with the annual production of over 5,000 units in 1980 for instance. The predecessor of Tianjin Daihatsu was Tianjin Automotive Industry Corporation, which made efforts to trial-produce cars and failed to put into production till the 1970s. Upon entering the 1960s, parts industry developed to certain extent, but its production capacity was still very low merely producing little trucks and small vans without any experience of passenger car production.

## **(2) Choice of Car Model**

Shanghai-VW had the experience of passenger car production for many years, and introduced "Santana", luxury (by Chinese standard) small car released in 1982 as a domestic car model from German-VW by adopting the OEM production of primary single model since 1985. This model is relatively manufactured easily for Shanghai-VW. While Tianjin Daihatsu adopted an incremental strategy first introducing the production technology of mini-vehicle and later on the production technology of passenger car on the basis of its own production experience. But the gap existed between the newest car model introduced in 1987 and its own production capability, because TD underestimated the manufacturing difficulty of latest model for the end of the 1980s with the simple objective of entering market by newest model.

## **(3) The Relationship with Government**

Both Shanghai-VW and Tianjin Daihatsu are under the direct leadership of their local governments, supported and assisted to the great extent respectively. Additionally Shanghai-VW obtained the pioneer status from the central government, standardized into national project in the initial period of technology introduction and financially assisted. At the same time, the central government offered SVW preferential treatment in some policies and regulations by low tax rate, foreign currency pre-allocation and material supply. In contrast, TD did not get any investment from the central government even though it was approved as the mini-car production base, which developed completely by technology introduction relied on its own profit accumulation and bank loans.

Concerning the choice of car model and production scale, the central government pursued disparate policy in Shanghai-VW and Tianjin Daihatsu at the early stage of their technology introduction. It permitted SVW to introduce the production technology of "Santana", a luxury small car and TD to introduce the technology of "Charade", a mini car in contrast. Referring to the production scale, the central government

initially approved SVW to produce 30,000 units and TD to produce merely 10,000 units, which was further clarified by the "Big 3, Small 3" strategy of car production structure of the central government. Shanghai-VW was regarded as one of the "Big 3", while Tianjin Daihatsu was viewed as one "small" car production base among the "Small 3". Along with the rapid evolution of TD caused by technology introduction, the central government added it into one of the "Big 4" car production bases with supplementary investment.

#### **(4) Parts Supply System**

Although Shanghai had the foundation of machinery processing and auto assembly technology, the level of special manufacturing technology of automobile parts & components was still relatively lower. Shanghai-VW achieved an agreement with the central government of switching 1/3 parts localization (production & marketing privileges) of "Santana" to China Automotive Parts & Components Corporation and related departments of National Aviation & Space Flight Industry and Weapons Industry. The parts supply system of Shanghai-VW is facing whole China instead of being confined to Shanghai area. While Tianjin Daihatsu implemented its Hijet parts supply system by technology improvement mainly undergone by local parts plants instead of expanding to the whole nation due to the previous foundation of parts production, shortage of fund and non-assistance from the central government. Along with the appearance of quality problem, TD alternated its suppliers for Charade parts in the whole country. But its primary strategy still focused on the increasing technology level of local area.

#### **(5) Management Organization**

Technological assistor dominates the management organization at SVW, therefore German personnel take in charge of important management affairs like operation, marketing & finance and production segments such as R & D, production plan, quality control and etc. The management personnel dealing with suppliers are all Germans. Most importantly, Shanghai-VW assigns one German technology promoter to each supplier for regular inspection and technological instruction referring to each part with the help of "Shanghai Santana Local Content Cooperative". In reality, this technology promoter acts as product manager. The other technological instruction channel for supplier is to invite retired professionals from Germany temporarily, who were experienced engineers or directors. In addition, the whole process of trial-production

of parts is undertaken in German-VW from the very beginning, presenting the centralization at German-VW related to quality control.

In contrast, technology introducer dominates the management organization at Tianjin Daihatsu. During the first period of technology introduction, TD emphasized on the initiative of parts localization on its own side. Because the pattern of the technology introduction at TD was merely the technological assistance by Daihatsu without any capital relation, the technicians from Japan-Daihatsu didn't participate in substantive Total Quality Control despite of the dissatisfaction with the product quality of TD. In the same manner, we can say TD ignored to introduce know-how production system and quality control system from Japan at the time when it introduced the production technology from Daihatsu. The Total Quality Control system has not been established because TD devotes to the increasing of its market share and development of its marketing research & sales system. Great changes will be expected along with the joint-venture project with Toyota in the near future.

## **7. Conclusion**

The analysis will be further undertaken by integrating the previous examination in technology introduction & localization strategy and different factors in the competition privileges between SVW and TD based on the previous perspectives at the beginning of this paper.

(1) The conspicuous characteristic of China's passenger car production is its over 30-year development history with the accumulation of certain experiences compared with other developing countries. FAW began its production of "Red Flag", a large luxury car and Shanghai Automotive Industry Corporation started its production of "Phoenix "(later as "Shanghai") small car both from 1958. But because the mass production system of parts was not set up, car production still remained in the state of craft production with low productivity. Mass production of passenger cars didn't start until the introduction of foreign investment and technology in the 1980s. The establishment of car mass production was first relied on the existing industrial foundation in China. During this process, German-VW anticipated its investment utilizing the foundation(SAIC & FAW) in China. And this is the history of competition privilege and technological background in China's car market for VW.

(2) The primary features of car production in the 1980s was focused on the evolution of parts industry compared with was focused on the



establishment of truck production system in auto plants in the 1950s. The two parallel tendencies are developments of technology introduction of car production and localization of parts production, rationalized the management organization and its interior production system.

(3) Shanghai government and SVW adopted the strategies of expanding parts supplier network in whole country and further classification aiming at the competition privilege in order to get rid of the historical constraints caused by the low capability of parts manufacturing in Shanghai region. In contrast, TD and other car plants put forward the approach of the establishment of supplier network mainly among their local parts suppliers which resulted in the decrement of product quality.

(4) Along with the technology introduction from foreign countries, China's enterprises are divided into two types: one is to switch primary management right to technology assistor, another is to maintain their original initiative in management. Switching management initiative may result in the merit of complete management introduction from foreign counterparts even though it may take the risk of initiative forfeit. Enterprise may fail to introduce foreign management experience successfully if it concentrates too much on its self-reliance.

(5) By previous analysis, we may conclude that the main characteristics of China's car market are rapid enlargement of market, shortage of product supply and high price seller's market under the government's high import tariff protection. Car makers can deal with this non-diversified market and the customers without high specification with the rapid evolution caused by high profit rate (around 40%) protected by high import tariff. On the other hand, this costly strategy of passenger car decreases the price competition capability of domestic cars directly causing China's automotive industry to challenge the rigorous trials with re-entry of WTO in the future.

Right to the present, China's car makers have obtained various advanced technologies and management experiences from foreign companies, mainly from Europe. Along with the entering of Japan's Toyota and America's GM into China's market in the future, advanced production and management experiences, especially Lean Production, will be introduced. And the competition in China's car market will be further intensified.

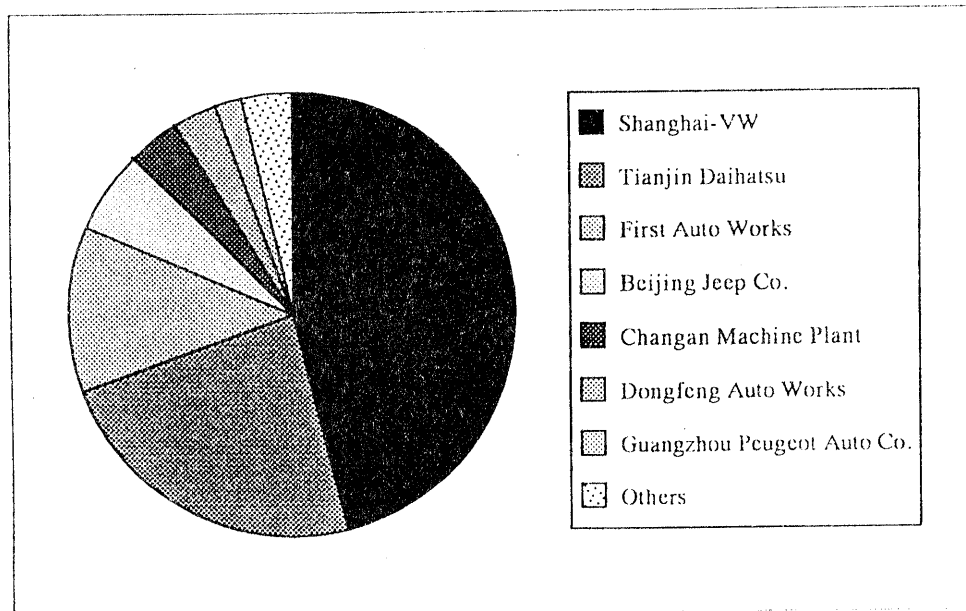
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**Figure 1 China's Passenger Car Production and Market Share (1994)**

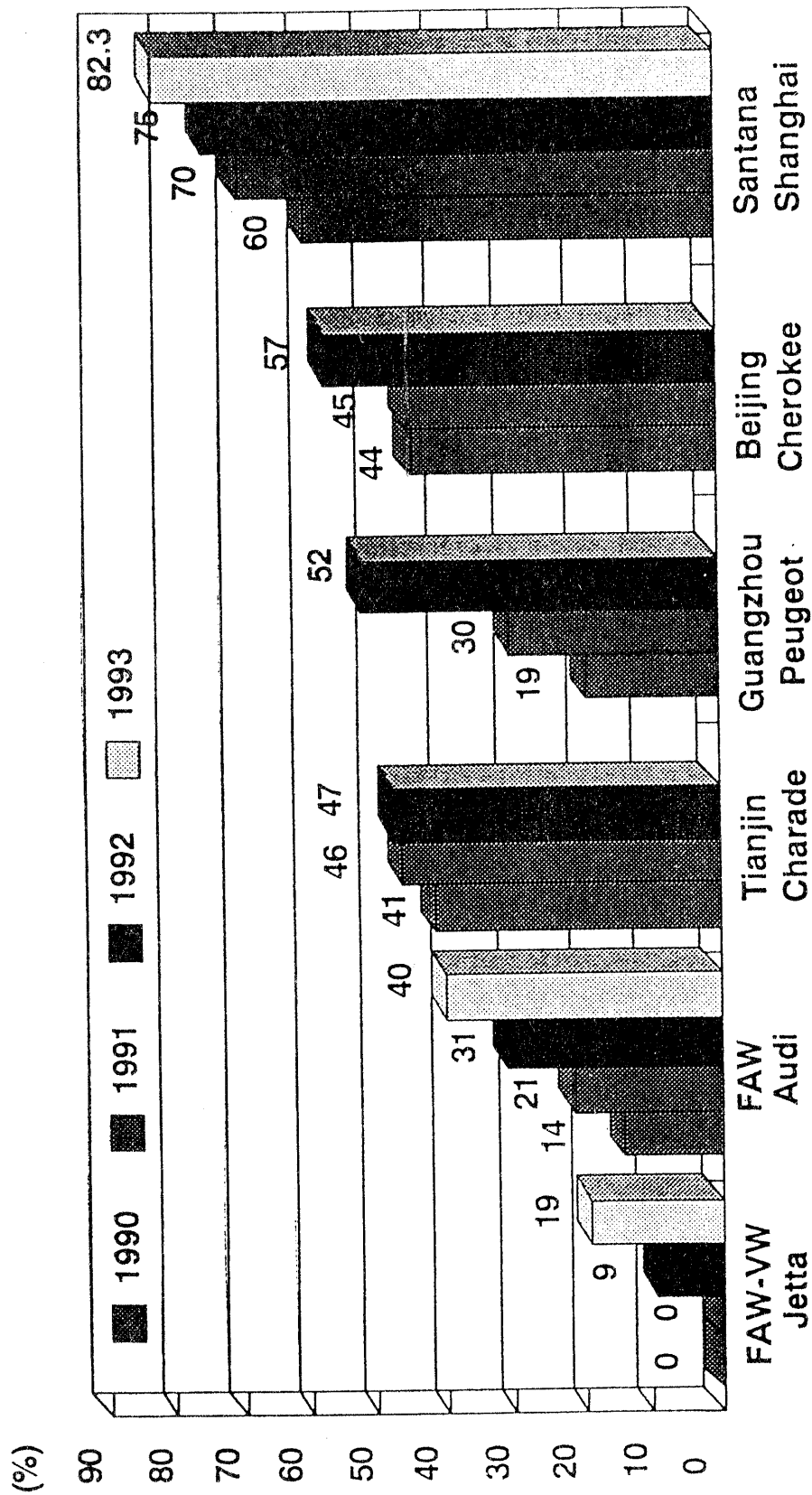
Volume: unit Share: %

	A	B	C
1	Car makers	Units produced	Market share
2	Shanghai-VW	115328	46
3	Tianjin Daihatsu	58500	23
4	First Auto Works	30196	12
5	Beijing Jeep Co.	14703	6
6	Changan Maching Plant	10020	4
7	Dongfeng Auto Works	8010	3
8	Guangzhou Peugeot Auto Co.	4485	2
9	Others	9093	4
10	Total	250333	100



Source: *Zhongguo Qiche Gongye Nianjian 1995* (Yearbook of the Chinese Automobile Industry), p. 290.

Figure 2 Local Content Rate of Main Car Models in China



Source: Yearly editions of Zhongguo Qiche Gongye Nianjian (The Chinese Automobile Yearbook).