

The Growth of Independent Chinese Automotive Companies

(Second Draft for Discussion)

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1 Overview of Current Chinese Automotive Industry

China's first automobile manufacturing base, FAW (First Automobile Works), was built 50 years ago. From then on for over 30 years, there was no big progress in the Chinese automotive industry on both production and technology sides. Production capacity was low, and technology was outdated. From the middle 1980's, with the establishments of joint ventures, the Chinese automobile industry began to develop faster than before. So far, all of the world's major automakers, such as General Motors, Toyota, Ford, Volkswagen, DaimlerChrysler, Nissan-Renault, PSA Peugeot Citroen, Honda and BMW, have established joint ventures in China*. In particular, the joint ventures control about 90 percent of China's passenger car market.

The major players in the Chinese automotive industry

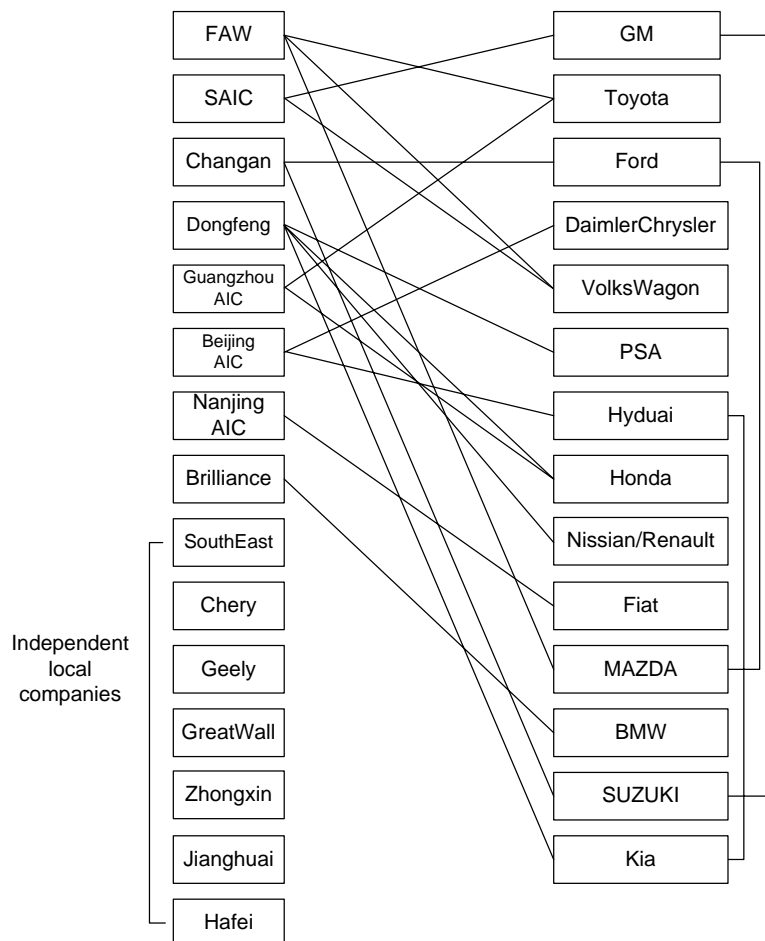


Figure 1-1: The major carmakers in the Chinese automotive industry

* The Chinese government ruled in its "Automobile Industry Policy" that the foreign auto companies can only make engines and finished cars in China together with Chinese local manufacturers, and the foreign companies are not allowed to have the majority (over 50 percent) of share holdings in the joint ventures.

In particular, after China's entrance into the World Trade Organization in 2001, the automotive industry began to boom remarkably faster than ever. The table below shows the statistics of the automobile production of China in the past 10 years.

Table 1-1: Historical statistics for the automotive production of China

Year	Truck		Bus		Car		Total Autos	
	Output (million)	Growth rate	Output (million)	Growth rate	Output (million)	Growth rate	Output (million)	Growth rate
1995	0.5960	/	0.2162	/	0.3370	/	1.4527	/
1996	0.6251	4.88%	0.1895	-12.35%	0.3829	13.62%	1.4752	1.55%
1997	0.5736	-8.24%	0.2656	40.16%	0.4860	26.93%	1.5825	7.27%
1998	0.7356	28.24%	0.3211	20.90%	0.5071	4.34%	1.6300	3.00%
1999	0.8396	14.14%	0.4249	32.33%	0.5710	12.60%	1.8320	12.39%
2000	0.8629	2.78%	0.5779	36.01%	0.6070	6.30%	2.0700	12.99%
2001	0.8901	3.15%	0.7207	24.71%	0.7036	15.91%	2.3417	13.13%
2002	1.0920	22.68%	0.8647	19.98%	1.0920	55.20%	3.2510	38.83%
2003	1.1244	2.97%	0.9978	15.39%	2.0716	89.71%	4.4439	36.69%
2004	1.5147	34.71%	1.2395	24.23%	2.3163	11.81%	5.0705	14.10%

Source: China Year Books (1995~2003) and FOURIN China Auto Weekly (2004)

The figure below shows the trend of auto production in the past ten years.

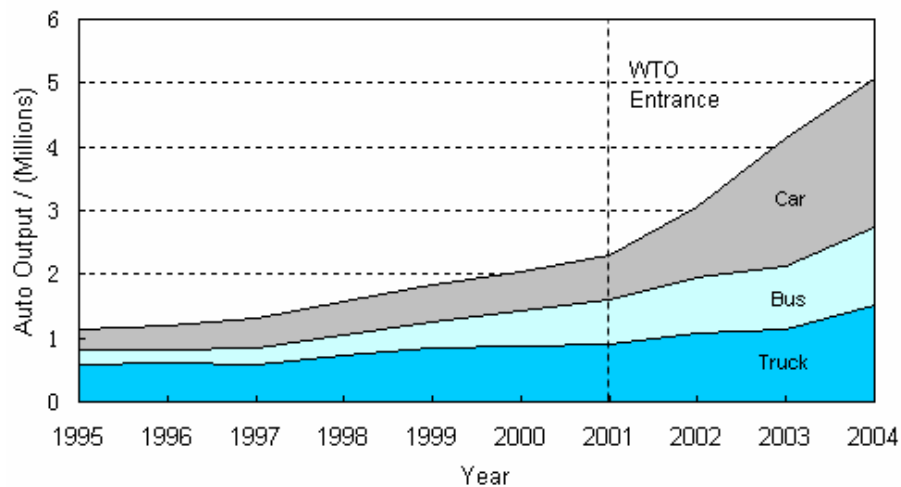


Figure 1-2: The change of automotive outputs in the past ten years. Source: China Year Books

In 2002 and 2003, the Chinese automotive industry developed extremely fast. The overall production climbed up by 38.8 % and 36.7 %, and the passenger car production grew up 55.2% and 84.99% in 2002 and 2003 respectively. There was almost no inventory at the end of the two years.

The major pulling force came from the fast expanding passenger car market. One of the reasons is the growing disposable income of Chinese people has served as a driving force to boost China's sedan demands. Especially, the explosion of urban middle-class wealth boosted the car market from 2000. And after China entered WTO, more car companies entered the market, and more diversified car models have been introduced. This also stimulated the car-buying enthusiasm of the potential consumers. A few years ago, cars were mainly purchased by the governments and companies for business use. Now cars have turned to be personal consumable and private car consuming has become the mainstream of auto consuming. The report by the Economic Research Institute of National Planning Committee in 2004 predicted that about 5 million private car consumption potential will be released in the next 3 to 4 years. And the statistic data also showed that personal purchase has been accounting for more than 50% of car consumptions and more than 70% in the urban areas (Forward Position in Economics, Aug. 2004, page 28). In the distributing catalog of the passenger car sales in 2004, small car and basic car occupy the majority of car sales. This also indicated the increasing personal purchases.

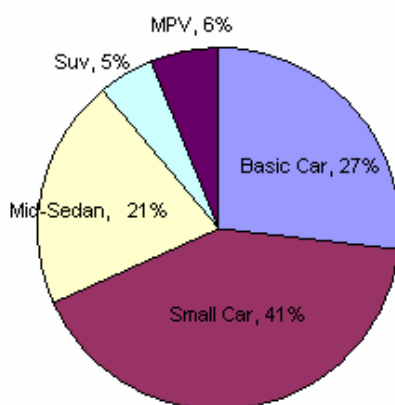


Figure 1-3: Domestic passenger car sales share by segment (year total). Source: FOURIN China Auto Weekly.

The prosperity in the automotive industry in 2002 and 2003 attracted a lot of investments to expand the capacity and the production, hence the competition went fierce. Therefore, to avoid overheated investments and over capacity, from the beginning of 2004 the government started to implement a few finance-based cooling down policies, including

discouraging bank lending and slowing approval for investments. Besides the macro adjustments, consequent lower lending from the banks and frequent price cuts continue to keep consumers away. Many potential price-sensitive Chinese consumers delayed buying a car since they think the price will keep going down.

In fact, in the year 2004, the total auto output still climbed up by 14.1% year-on-year to 5.071 million units, including 2.32 million cars, 1.51 million trucks and 1.24 buses, counting for 45.7%, 29.9% and 24.0% of the total production respectively. The sales of China-made vehicles also amounted to 5.071 million units last year, an increase of 15.5 per cent from 2003. On the passenger car side, its output grew 11.7 % to 2.31 million units, and sales climbed 15.2 % year-on-year to 2.33 million units (imported vehicles are not included). Obviously, the output increase in commercial vehicles contributed more than the passenger cars to the overall growth. The fast overall economic and industrial development stimulated the demand for the commercial vehicles. In general, China's auto production and sales had grown about 15 percent on average even year in the past ten year. And China expects to surpass Germany next year and be the third largest auto producer in the world, only after the U.S. and Japan.

Although China's ratio of export over the total production is still tiny, the exports speeded up in 2004. According to Xinhua News, China exported US\$8.2 billion of vehicles and components, jumping 73% from 2003. In the mean time, the imports grew by 13.1 % to US\$16.3 billion. The adverse balance of automobile trade has shrunk from US\$9.7 billion to US\$8.1 billion. The exports included 406,000 entire vehicles and CKD parts worth US\$779 million. Low value-added trucks and special-purpose vehicles accounted for the majority of China's entire vehicle exports. And, because most of exporting deals are one-off, without the scale effect, there are no advantages for the cost controls in the after-sale service network buildup and ocean transportation. China produced over 5 million autos including 2.3 million passenger cars, only 0.4 percent of which are exported. The production is mainly digested by the domestic market. Along with the growth the overall production capability and economy of scale, and with the pressure of mounting competition in the domestic market, the exports are expected to grow even faster in the next few years. (Automotive Weekly)

In 2004, there have been five local automotive companies with sales above 500,000 units, including FAW (First Automotive Works), SAIC (Shanghai Automotive Industry Co.),

BAIC (Beijing Automotive Industrial Co.), Changan Automobile Co. and Dongfeng Motor Company. The top five automotive groups sold 2,904,809 autos in 2004, 57.3 percent of the total sales in China's 2004 entire automobile market. The detailed sales data for major Chinese auto companies are listed in the table below. Among all, BAIC's car sales boomed the fastest due to the success of Elantra sedan produced by its joint venture with Hyundai. The independent automaker Geely also increased sales very fast, while other young tigers' sales dropped, such as Chery, Brilliance, Great Wall, Zhongxing, etc.

Table 1-2: The sales of major Chinese automotive companies

Companies	Total Sales (units)			Passenger Car Sales (units)		
	2004	2003	Growth rate	2004	2003	Growth rate
FAW	1,013,300	903,777	12.12%	620,886	557,378	11.39%
SAIC	848,542	782,036	8.50%	617,257	597,518	3.30%
BAIC	530,993	336,657	57.73%	173,924	70,454	146.86%
Changan	504,805	410,745	22.90%	157,171	117,319	33.97%
Dongfeng	503,308	471,594	6.72%	212,383	214,552	-1.01%
GAIC	209,551	122,608	70.91%	202,066	117,130	72.51%
Jianghuai	127,607	94,478	35.07%	0	0	/
Geely	105,879	81,252	30.31%	105,879	81,252	30.31%
Brilliance	99,572	118,869	-16.23%	19,690	29,956	-34.27%
Yuejing	95,275	100,280	-4.99%	26,553	36,901	-28.04%
Chery	86,568	90,367	-4.20%	86,568	90,367	-4.20%
Jiangling	74,715	61,374	21.74%	0	0	/
Southeast	60,069	83,535	-28.09%	28,693	33,557	-14.49%
Great Wall	55,091	58,603	-5.99%	55,091	58,603	-5.99%
Zhongxing	28,114	28,701	-2.05%	0	0	/

Source: FOURIN China Auto Weekly

In the passenger car aspect, as shown in the information table below, joint ventures are still leading players while there were also two independent car makers -- Geely (8th) and Chery (10th) -- standing in the top ten in the last year. Beijing-Hyundai's sales expanded the fastest, about 176.42%, pushed by the sales of the Elantra sedan launched in late 2003. Moreover, Changan-Ford, FAW-Toyota and Guangzhou Honda also increased 172.35%, 73.15% and 72.51% respectively. Honda has moved up to the No.3 position in China's

passenger car market only after VW and GM. This mainly relied on Accord which took the first place in the mid-size sedan catalog.

Table 1-3: Passenger car sales by makers

Companies	2004			2003			Growth Rate	Share Change
	Sales	Rank	Share	Sales	Rank	Share		
Shanghai VW	355,006	1	15.3%	396,023	1	17.0%	-10.36%	-1.8%
FAW-VW	300,118	2	12.9%	298,006	2	12.8%	0.71%	0.1%
Shanghai GM	252,109	3	10.8%	201,282	3	8.7%	25.25%	2.2%
Guangzhou Honda	202,066	4	8.7%	117,130	5	5.0%	72.51%	3.7%
Beijing Hyundai	144,090	5	6.2%	52,128	11	2.2%	176.42%	4.0%
Tianjing FAW	130,031	6	5.6%	117,335	4	5.0%	10.82%	0.5%
Changan-Suzuki	110,052	7	4.7%	100,018	7	4.3%	10.03%	0.4%
Geely	105,879	8	4.6%	81,252	9	3.5%	30.31%	1.1%
Shenglong (PSA-Dongfeng)	89,129	9	3.8%	103,126	6	4.4%	-13.57%	-0.6%
Chery	86,568	10	3.7%	90,367	8	3.9%	-4.20%	-0.2%
FAW-Toyota	81,879	11	3.5%	47,287	14	2.0%	73.15%	1.5%
Dongfeng Yueda Kia	62,506	12	2.7%	51,008	13	2.2%	22.54%	0.5%
Fengshen (Dongfeng-Nissan)	60,784	13	2.6%	65,108	10	2.8%	-6.64%	-0.2%
FAW Hainan Mazda	53,205	14	2.3%	43,046	15	1.9%	23.60%	0.4%
FAW Car	50,798	15	2.2%	51,314	12	2.2%	-1.01%	0.0%
Changan-Ford	47,119	16	2.0%	17,301	18	0.7%	172.35%	1.3%
Beijing Jeep	29,834	17	1.3%	18,326	17	0.8%	62.80%	0.5%
SouthEast Car	28,693	18	1.2%	33557	16	1.4%	-14.49%	-0.2%

Source: FOURIN China Auto Weekly

Among all the passenger car products, Jetta is still the best seller as it has been for many years. The top selling passenger car models are list below.

Table 1-4: Top selling models by segment

Catalog	Model	Sales (Units)
Mid-large Sedan	Accord	105,358
Small Car	Jetta	153,916

Basic Car	Charade	113,143
MPV	Buick GL8	29,086
SUV	Pajero V33	27,230

Source: FOURIN China Auto Weekly

To face the challenges for the sustainable development of China's auto industry, in the last year, the government regulators released a few new policies, including the "New Automotive Industry Policy", "Regulations for Automotive Loans", "Passenger Car Fuel Efficiency Limit". And in line with the WTO agreements, the historical auto import quota was cancelled, and the tariff rate for imported entire cars was decreased to 30% on January 1st, 2005, and expected to drop to 25% by July 1, 2006. The tariff for auto parts has been lowered to 10%. However, a few sources also have reported that the tariff for auto parts will be re-increased to 30% in order for limiting CKD production and supporting the development of local part suppliers.

In general, in the past five years, a few positive changes have happened in the Chinese automotive industry: the government reformed the automotive industry policy and loosed its control over this industry; the government began to encourage and support private auto consuming which helped the expansion of the passenger car market; along with the increase of foreign investments and the entrance of civilian private capital into China's auto industry, the overall production capacity and the economy of scale have been growing fast; along with the entrance limit being loosen, the competitive market environment formed, vehicle prices kept going down, and private car buying grew quickly and became the major purchasing power; the part industry grew quickly, and the specialization and globalization developed quickly; automobile related services, including auto finance, repair, maintenance, insurance, are being improved quickly; the government is speeding up the construction of transportation infrastructures to support the growth of private automobile ownerships.

After the blowout in the last two years, the Chinese auto industry is cooling down and expects to be more mature and stable. However, the Chinese auto market is far to be saturated according to the economic size, strength and growing posture of China. So far, the total highway mileage of China is No.2 in the world, but the ratio of vehicles/mileage is only 1/3 of the U.S., 1/5 of Japan, 1/6 of Germany and 1/12 of Korean. And China has 13

motor vehicles per thousand persons at the same level of Taiwan, Japan and Korea in the 1960's, while the current numbers are 600 for the United States, 500 for Japan and 400~500 for Europe. Assuming every 100 people buy one automobile in a year, the country's auto sales increment will be 13 million, more than double this country's auto production in 2004. However, although keeping this tiny purchasing rate, it will still take over 50 years to reach the auto reserve level of the United States. Although the GDP per Capita of China is only about US\$1,265 so far, but in the coastal provinces, the average personal income has surpassed US\$4,000. The purchasing power has been at the level which can make the flood of household car consumption. Therefore, the vehicle reserve of China is still very small and the market potential is huge, although the auto outputs and sales have been growing very fast.

In general, driven by China's steady economic growth, the auto market volume will keep expanding and is widely expected to exceed 10 million units annually by 2010 and 16 million units by 2020. Hence the major international automakers in China's automotive industry, including Volkswagen, GM, FORD, Toyota, DaimlerChrysler and etc., are all expanding their capacities in China. For example, Volkswagen, the biggest foreign car maker in China, plans to add an investment of 60 billion Yuan (US\$7.2 billion) and double its annual production capacity to 1.6 million cars in China by 2008. GM, the No.2 foreign automaker in China, also plans to spend over US\$3 billion to more than double its annual production capacity to 1.3 million vehicles by 2007.

2 The Burgeoning Independent Chinese Auto Companies

One of the interesting phenomena having been happening in the Chinese auto industry is the fast development of a few independent local auto makers which did not exist a decade ago, including Chery from Anhui, Geely from Zhejiang province, Great Wall and Zhongxing from Hubei province and etc, Those young and independent companies have been burgeoning like the bamboo shoots after a spring rain in China's automotive industry. The direct cause is that the central government loosened its strict regulation on the car production license. Therefore many civilian capitals, which had been eager to enter the profitable Chinese auto market for a long time, were injected into a few new auto companies to produce and sell automobiles from around 2001.

There are three major ways through which the new investors chose to enter the Chinese automotive industry, which was regarded as the most profitable industry in China.

- 1) Transformation of motorcycle companies. Example: Geely in Zhejiang province and Lifan in Chongqing.

Overcapacity has existed in China's motorcycle industry for a few years. The expansion of automotive market provided the motorcycle companies with new opportunities and ways out. And the experience of producing motorcycles is their advantage to make this transition.

- 2) New auto companies funded by capitals from other industries, mainly consumer electronics industry. Example: Bird and Aux in Jiangsu province.

Having accumulated enough initial capital and faced the competitive competition in China's mature consumer and household electronics market, a few electronic companies invested and reorganized some small and weak entire auto companies and part companies, because they believed the Chinese automotive industry has higher profit margins and can become their new profit sources. However, most of these companies have failed. Both Bird and Aux have quitted the automotive industry because they lack the experience in the mechanical manufacturing industry, and get in at a bad time the competition was getting intense.

- 3) Transformation of automotive part companies. Example: Chery in Anhui province.

Part companies also have good understanding and experience for the automotive industry. Entire automobiles have higher added value than auto parts, therefore a few local part companies chose merger and reorganization with each other, and formed new

entire car makers.

The fast growth of China's economy and the skyrocketing domestic auto market provided those young companies with a good surviving environment. And so far, many of them have thrived among the large local automakers, and their foreign partners. To some extent, the emergence of those young independent Chinese auto companies, their operation modes and performance are reflecting the transformative changes in the global automotive industry. Because of being tiny, intrepid but ambitious, those young and independent Chinese auto companies are called young tigers by the foreign media.

The Chinese government decided to develop the automotive industry from 1987 in a planning economy era. From then on, joint venture has been the main formation in this industry. Especially in the passenger car side, more than 90% of cars produced in China are branded by foreign automakers. The biggest three state-owned automakers, FAW, Dongfeng and SAIC, are all tied with foreign auto giants. Without brands and independent product technologies, the Chinese partners of the joint ventures lost autonomy. They have few self-developed products and few exports. In addition, due to the market power of the foreign partners of the joint ventures, most of their cars are priced much higher than in the mature auto markets of the developed countries. This is unusual and unreasonable for a low-income developing country's market.

The young tigers are taking an opposite approach different from the big state-owned companies and their joint ventures. First, the young tigers all have their own brands and develop their own product technologies independently by various ways. They attracted engineers from the old-style state-owned companies, developed car models under its own managerial control by ways of joint development, R&D outsourcing or reverse engineering. For example, in order to cut costs for the all-new product development, Geely and Chery developed their initial products by reverse engineering approaches. After accumulating plenteous capital, they have been able to outsource the new product development to experienced foreign companies, or jointly develop new products. Another example is Brilliance Auto, BMW's Chinese partner. Brilliance also has its independent car division and developed its Zhonghua sedan by outsourcing and cooperating with European design companies from the beginning. Another point is most of the young tigers do not produce foreign models by paying royalties, because they want to build their own brands which can generate future value, develop their technical capabilities via reverse engineering or joint

R&D with specialized automotive technology companies, and reduce the non-production costs.

Second, their products are mostly economic cars priced very cheap and aimed at the low end market. This is because low end cars require less sophisticated technologies and are also more appropriate for the Chinese consumers' purchasing ability. For example, Chery QQ (similar to Daewoo Matiz) and Geely Haoqing (similar to Daihatsu Charade) are priced only about \$6100 and \$5800 respectively. Chery also developed higher level cars. Its "Oriental Son" is comparable with Accord, but sells at only Accord's half price. Those cheap cars are targeted at the price-sensitive Chinese consumers, most of who are buying their first car.

In addition, young tigers are dedicated to export and set up plants in other countries, because in order for surviving in the tough competition in the auto industry, they have to and also have the independence to seek any possible markets in a global range. Compared with the joint ventures which are managed in accordance with the international partners' global strategies, they have more flexibility and autonomy to explore overseas markets. Chery and Geely started their exports soon after their first product launch into the domestic market. The market downturn in 2004 also pressured them to explore new markets. In 2004, almost all of China's sedan exports, about 10,000 units, were from Chery and Geely. Moreover, Zhongxing auto, a mainland-Taiwan joint venture, exported more than 7,100 pickups and SUVs, the biggest volume among the Chinese automakers. Due to the limited quality and brand power of their products, the exports mostly go to developing countries with loose emissions standards. However, this situation is changing. Both Chery and Geely have announced their plans to sell cars in the United States and Europe. But first their products have to meet the stringent safety and environment criteria and get approvals from regulators of those developed countries, such as DOT and EPA in the United States.

As a matter of fact, due to the special advantages of China's manufacturing industry and the competitiveness of "China Price", Chinese commodities, including household electronics, computers, furniture, textiles and etc., have successfully infiltrated into the markets of western countries, and have strong competitiveness in these markets. The other industries' successful experience of exporting to developed countries has given the Chinese automotive young tigers big confidence to succeed.

Besides direct exports, young tigers are also setting up plants jointly with local partners in other countries. For example, Zhongxing plans to build additional four to five assembly plants overseas by 2005 in North African and South American countries to assemble its own brand of pickups and sport utility vehicles. Currently, this company has three plants in Egypt, Viet Nam and Turkey. Chery has set up CKD plants in Iran and Malaysia. Brilliance is negotiating to build a CKD plant in an African country to assemble its self-developed Zhonghua sedan. Assembling automobiles in developing countries can help these companies skip import tariff and enjoy even cheaper land and labor costs than in China.

In fact, with the pressure from the exportation wave of the young tigers and the government policy promoting auto exports, the state-owned auto giants also began to go abroad by operating their independent divisions. For example, FAW exported more than 10,000 self-branded automobiles in 2004, including “Liberation” trucks and “Red Flag” sedans. Changan Motor, China's third largest automaker based in southwestern Chongqing Municipality, Ford and Suzuki’s partner, has built CKD plants in Viet Nam and Pakistan, and expects to kick off producing its own brand light-duty trucks in the first half of 2005. Moreover, a few joint ventures including Shanghai GM, Shanghai VW, and Guangzhou Honda also began to export small amounts of autos.

The young tigers also have driven the “Big Three” (FAW, SAIC and Dongfeng) and other big state-owned local automotive companies to change their development strategies. The fast development of young tigers and the corresponding favor from the public and the media have made the central government aware of the importance of self reliance for China’s automotive industry. In the new “Automotive Industry Policy” released on July 1st 2004, the government promised to encourage and support companies with self-reliance operations and self-developed products with intellectual property. This policy transformation has driven the big local state-owned automotive companies to develop and consolidate their strength of independent operations by various ways. For example, SAIC has taken over 48.92% share holdings of Ssangyong Motors (No.4 South Korean auto firm) with US\$500 million. And it is also preparing to invest up to 1 billion pounds (US\$1.9 billion) for a 70 percent stake in the British automaker MG Rover. The strategy of SAIC is to obtain its own independent competitiveness in product technologies by purchasing and controlling foreign experienced companies with bad financial conditions and good product development capabilities. Different from SAIC, FAW is pursuing to strengthen its truck

brand “Liberation” and “Red Flag” sedan which are both self developed and has a 50 year history. FAW has famous Chinese brands and also has a good R&D force trained via the cooperation with its foreign partners including VW, Toyota and Ford-Lincoln. So FAW chooses to apply its own R&D capability to improve independent products with intellectual property. However, another one of the old Chinese “Big Three”- Dongfeng, still sticks to relying on its joint ventures. It has the most complex and bulkiest joint ventures with Nissan, PSA, Honda and Kia.

The young tigers burgeoned and grew up from the boom of China’s auto market from 2001 to 2003. However, currently they have to face the challenge of the cooling down of China’s auto market. And the rapid growth and expansion of themselves are also testing their managerial capabilities. So far they operate well. For instance, in the passenger car sub-market, Geely increased its production, sales, rank and market share while Chery dropped slightly in the flat year 2004. Now, they are actively exploring oversea markets.

The young tigers are attracting more and more attention in the global auto industry. In particular, the operation modes of these Chinese young tigers are challenging the long-term rules in the automotive industry, like economy of scale, learning effects, technical capability accumulation and brand power. They have broken into a highly scale and experience driven industry and seem to be doing well. Their emergence reflects a few transformative changes in the automotive industry, such as specialization, design outsourcing, production modularization, globalization and technical diffusion and fusion. The young tigers have been a positive power to optimize the competition environment and speed up the maturing process of China’s automotive industry.

In the following Chapter, Chery is chosen to be the case for detailed investigation because it has a typical profile incarnating the characteristics of the Chinese young tigers.

3 Case Study: Chery Automobile Company

3.1 Introduction

Chery Automobile Company is one of the fastest growing independent auto manufacturers in China. Its production and sales boomed from its beginning to produce passenger cars. In 2003, Chery produced 91,223 and sold 90,367 cars, ranking 8th among the auto firms in China and sharing about 4% of the total Chinese auto market. Besides, it has exported or signed contracts to export cars to 26 countries. The most remarkable news is that, with the cooperation of Visionary Vision LLC, Chery is going to sell cars in the North American market from 2007. With a short history from 1997, Chery has developed very fast and its ambitious development plan has attracted the attention from the global automotive industry.

Chery originated from the automotive project of the local government of Wuhu City in Anhui province. Although close to Shanghai, Anhui province is one of the poorest provinces in China. There were almost no major heavy industries. And Wuhu is a very small city in Anhui province. The city governors were looking for opportunities to develop local economy and catch up with the fast economic development of the whole county in the 1990's. After a long term investigation, they found that the automobile industry in China was extremely profitable because of the scarce competitors and the high profits of auto products. This was caused by the central government's strict regulations (entrance limit, high import tax, small import quota, etc). And the automotive industry can also bring along the development of many related industries. Due to these causes, the Wuhu local government set up their plan of developing the local automotive industry and began to look for all possible opportunities.

The real opportunity showed up when the governors of Wuhu city visited the automotive companies in Europe in 1995. Being informed of that British Ford had an engine assembly line to sell at that time, they decided at once to buy it for initializing their automotive project. Finally, they brought this assembly line and some type of engine technology from British Ford with 25 million dollars in 1996.

To build up an automotive company can not be without professional automotive engineering experts in both aspects of production and product technologies. But it is very

difficult to attract talents to work and live at a poor place like Wuhu. Therefore, Wuhu governments tried all the means to dig possible talents and experts from existing big automotive companies in China. The most important person in the growing history of Chery is undoubtedly Tongyao Yin, who is currently the president and CEO of Chery. Yin graduated from Anhui Hefei University of Industry with a major in automotive engineering. He had worked in FAW for 12 years and was the manager of FAW-VW's JETTA plant before he went to Wuhu city. He once won the prize for "Top Ten Excellent Young Employees of FAW" and had a good fame in FAW. Wuhu invited him to lead the new automotive project with his experience in automobile manufacturing. Yin accepted the invite because first he was born in Anhui. Second, he was eager to do something great, like producing unalloyed Chinese indigenous cars. At that time, although Wuhu had no existing assembly plants, no engineers, no enough money, they have strong motivation to produce cars by themselves. Afterwards, Yin pulled a few of his friends in college and in FAW to join the enterprise of creating a new independent automotive company in Wuhu. It is said in total more than one hundred people transferred from FAW to Chery. The biggest attraction for them is that Chery is a self-reliance company and aims to develop and produce unalloyed Chinese indigenous cars by themselves. It is a challenging but also attractive point for many Chinese professionals who hope to contribute to developing Chinese indigenous automotive products and technologies.

Due to the central government's strict entrance limit on automotive projects at that time, this project failed to get license from the central government to produce cars. So they set up an auto part companies first. In March 1997, Anhui Automotive Part Industrial Company (AAPIC) was formally founded. It was incorporated by 5 previous automotive part companies owned by the Wuhu government with an initial registered capital of 1.75 billion Yuan (US\$210 million). Although the Wuhu automotive project is out of the central government's plan and even forbidden by the central government, it had the surreptitious support from the local and provincial governments.

Xialai Zhan, the Wuhu mayor assistant at that time and thereafter the mayor, took the position of AAPIC's first president. Actually, Xialai Zhan was just the one in the Wuhu government to manage its automotive project. Therefore, in fact this company was operated by Wuhu local government and surreptitiously supported by Anhui provincial government. Though it is not legitimate for government officers to run business in China, Xialai Zhan stayed at the positions of Wuhu Major and AAPIC (and subsequent Chery)

president for around 7 years. Finally, he was forced to step down in year 2004 under the pressure from the media and the criticism of the central government. Anyhow, as a matter of fact, the local government operation on the enterprise protected the new company at its initial development stage.

Although they had no license of producing entire cars from the central administration of the automotive industry, they never stopped the car production plan initialized in 1995. The initial engine production in AAPIC was just a preparation for the whole car production in their plan. In 1998, the factory for entire car production began construction and in December 1999, the first “Qi Rui (Chery)” sedan rolled out of its assembly line, only seven months after AAPIC assembled its first engine. In 2000, this company produced about 2,000 cars. To make this unlicensed car company alive, the local government forced the cab companies in Wuhu city to purchase the first batch of Chery cars as taxi.

Later, because the central government found that AAPIC was manufacturing entire cars without any legal license, AAPIC was ordered to shut down. To survive from this regulation, AAPIC negotiated with SAIC, one of the “Big Three” in China, to join this state-owned company. Finally, SAIC accepted AAPIC, but AAPIC’s had to demise 20% of its registered asset (about US\$42 million) to SAIC. And the company name was also changed to “SAIC-Chery Automobile Company”. So the word “Chery” first came into the company name and Chery Automotive Company could begin to produce cars legally from then on. In this deal, Chery also require SAIC “not to invest, not to manage, not to take risks and not to cut a melon”. Therefore, except the company name, Chery kept its organizational independence.

Actually, with a logo of SAIC on the car body, Chery cars mislead the consumers to regard them as being produced in Shanghai. Shanghai-produced cars meant high quality for a long time in China. Obtaining good enterprise fame from the new title is an unexpected but good side effect of being part of SAIC. Afterwards, the national automotive industrial regulation was loosened according to the government’s market economy promise to WTO, so Chery finally received its license in 2001. Since then, Chery had tried to separate from SAIC. From the SAIC side, because from 2003 GM has been angry with Chery QQ subcompact which looks like a copy of GM Chevrolet Spark (Daewoo Matiz), SAIC, which relies on GM very much, has to be far away from Chery. In September 2004, SAIC announced that it has shed its 20 percent stake in Chery (Xinhua News). It was also said

Chery actually bought out its share from SAIC in informal media resources. Anyhow, Chery has been a totally independent company again.

The sales of Chery’s first model “Feng Yun” (means “Wind & Cloud”) launched in 2001 was a big success. “Feng Yun” is a comparable model to the three most popular joint venture models (“Santana”, “Jetta” and “Fukang”) in China, but its price is 1/3 lower than these three. Chery sold out about 28,000 Feng Yun sedans in 2001 and over 50,000 in 2002. In 2003, the strongest blast made by Chery in China’s auto market was that Chery introduced three independently-designed cars (QQ, Oriental Son and Qi Yun) in one year. This never happened with a local Chinese automotive company. Especially, the three models were designed to meet the taste of Chinese auto consumers and priced according to their purchasing ability. The sales of the three models were very good that year. QQ actually became a top ten model in the Beijing car market in 2003, and Oriental Son became one of the “Top 10 most popular family cars” (Beijing Morning). In 2003, Chery sold 90,367 cars, ranking 8th among all the passenger car firms in China.

Year 2003 is the time Chery developed the fastest. To the end of 2003, Chery has already built up a sales network of 345 dealers, 54 service stations and 100 4S shops throughout China. The covering rate of its network has ranked 3rd only after Shanghai VW and FAW-VW in China. (Chery.cn News)

In 2004, Chery did not introduce new models into the market. And because of the economy cool-down policy of the central government and the harsh price-cut competition, many potential consumers delayed their car-buying plans. Finally, the passenger car market in 2004 almost kept the same size as year 2003. And Chery also kept at the same production and sales level as 2003 as well.

Table 3-1: Historical statistic data for Chery Automobile Company

Year	Capacity	Production	Sales	Revenue (Billion Yuan)
2000	No Info	No Info	2,000	No Info
2001	No Info	No Info	28,000	2.4
2002	120,000 cars	50,398	50,155	4.3
2003	120,000 cars	91,223	90,367	8.2

2004	300,000 cars 400,000 engines	85,000	86,568	No Info
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Source: Xinhua.net, Lu Feng Report, Annual Report for Anhui Auto Industry Development 2003, IT Manager World July 2004, etc.

The slow-down in 2004 alarmed Chery and other young tigers. In order to decrease the risk of relying on the domestic market, Chery has speeded up its exportation and expansion plans in the oversea markets. In fact, Chery started exports from 2001 soon after it formally launched its first model. The first deal was about 1,000 cars exported to Syria. So far, Chery has signed contracts in 26 countries about exporting cars or setting up local CKD plants. Especially, Chery has signed a contract with the American company VisionaryVehicles LLC to export 5 models in the United States from 2007. Their first step plan is to sell 250,000 autos in the first year.

Chery's announced target for year 2005 is to sell 180,000 cars, including 102,000 units in China and 78,000 units in the oversea markets. From the beginning of 2005, the domestic car sale has started rebounding. 10,778 Chery cars were sold out in the domestic market in January, with a backlog of orders for more than 3,000 units, and 1,100 cars were shipped to Cuba, which are part of a 5,100-unit contract with the Cuban Government (Chery.cn News, 2005).

So far, the production capacity of Chery is about 300,000 entire cars and 400,000 engines per year. And it is still building new plants to expand the capacity to 700,000 units per year for realizing its grandiose plan. President and CEO Yin said that the near-future development plan of Chery is to expand the capacity to 1 million units before 2010, 40% of which are for exportation. (Chery.cn. News, 2004)

3.2 Characteristic Analysis

3.2.1 Technical Capabilities

For a long time, there were no originally developed indigenous car models in China's auto market. The Chinese automakers manufacture cars by using models from their joint venture partners. For example, although SAIC, a world top 500 company, is the largest passenger car manufacturer in China, it produces no domestically self-developed cars.

Dongfeng is similar. FAW has its own sedan brand “Red Flag”, but the sales are relatively small.

It is easy for the joint ventures to obtain product technologies because the foreign partners have a large stock of car models. However for Chery, a young company, how can it obtain car models to produce?

In fact, the product technologies for Chery’s first product “Feng Yun”-- a variant of Jetta III -- were obtained from a Spain auto company. To purchase product technologies is a normal way for manufacturing companies without independent R&D capabilities. However, surprisingly, in 2003 Chery introduced three different new models (QQ, Oriental Son and Qi Yun) and claimed those models were all domestically developed by itself.

Therefore, the question comes to be: How can Chery, a newly-startup company, achieve its product development capability so fast? The answer is Chery actually gained a strong technical force formed by experienced engineers moving from Dongfeng. And this group of people developed QQ, Oriental Son and Qi Yun in one year.

The Chinese state-owned companies normally rely on the technologies from their foreign partners, and ignore the importance of independent research and development. After establishing joint ventures with Nissan, Dongfeng lost the managerial control for new product development and gradually gave up independent R&D, and the technical center of former Dongfeng became non-significant for the top managers. The engineers in the Dongfeng R&D center had no tasks to do since all the product models were transferred from foreign partners. At the end of 2001, a few engineers in the R&D center of Dongfeng had planned to leave. Chery got to know this, so it warmly invited those people. Finally, a group of more than twenty Dongfeng engineers, mostly from the sedan department of Dongfeng R&D center, came to Wuhu and helped Chery to develop its own car models. The members of this research team had been working together for a long time so that they are tacit with each other. They once took the charge of modification and localization for the previous Dongfeng-Citroen joint venture and some of them once had been trained by Citroen in France.

There is an innovative relationship between these Dongfeng engineers and Chery Automobile Company. When these engineers arrived first, they were worried about if

Chery would become another Dongfeng since Chery is also a government-owned company. To eliminate their worries, Chery provided financial support as 2/3 share and these engineers provided talent capital as 1/3 share, to jointly start up a new specialized automotive design and development company - “Jia Jing Technology Company” (Jia Jing means beautiful scene). Then Chery “outsourced” its R&D projects to Jia Jing Co. Technically, Jia Jing has its operational independence and hopes to be a specialized automotive design company.

The car models designed by Jia Jing successfully supported Chery’s initial development and market outspread. But this is only the first step in Chery’s plan to improve its independent product R&D capability, which includes four phrases:

Phase 1 Cooperating with Jia Jing Company, they have developed 5 models;

Phase 2 Jointly developing new products with foreign specialized automotive and engine design companies, and training engineers of its own through the cooperation programs;

Phase 3 Designing a few low-end models independently in Chery’s R&D center and achieving the capability for a complete new car development process gradually;

Phase 4 Establishing mature R&D capabilities for a full line of passenger vehicle products, from the low end to the high end, from sedan to SUV and MPV.

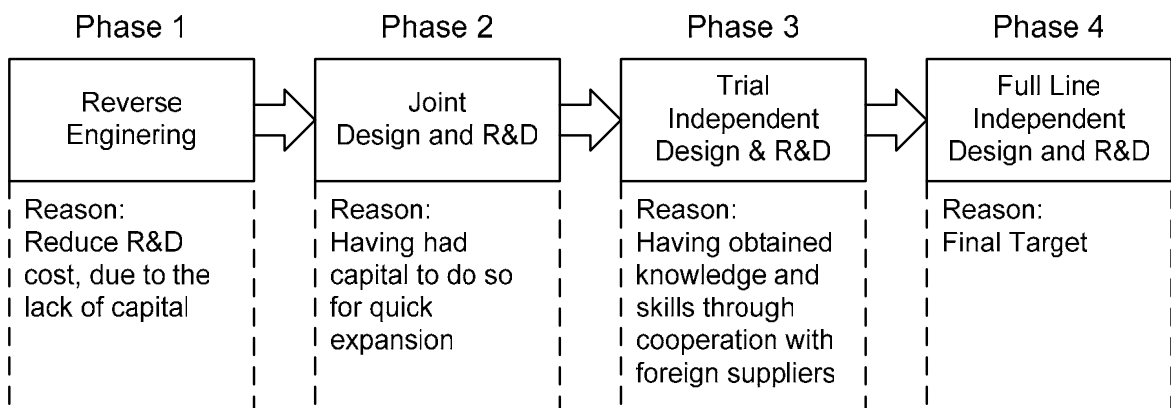


Figure 3-1: The strategy of Chery for developing technical capabilities

So far, Chery is at the phase 2. Chery is collaborating with Italy-based Pininfarina (designer of the Ferrari sports cars), Bertone (designer of the world famous Lamborghini) and some Japanese design company to develop totally new cars aimed at the U.S. and European auto markets. And from 2003, in order to equip its future full line passenger cars, Chery has been working with AVL, the world famous Austrian engine design company, to develop 18 up-to-date engine models, from 0.8 L to 4.2 L and all meet Euro IV emission standard. To implement this joint research program, Chery set up an “AVL Department” in its R&D center focusing on automotive engine technologies. Till the end of 2003, there have been over 200 researchers and more than 10 world-class engine test platforms in this engine division. In addition, Ricardo Consulting Engineers Ltd of England is developing sophisticated hybrid/electric drive-trains for Chery. (Chery.cn news and Visionary Vehicles website). The strategy of obtaining product technologies from various technology sources actually prevents Chery’s technological dependence on a specific company or technology source. This then brings Chery its bargain power and then low fee for design outsourcing.

One other point we should notice is that Chery is not purely outsourcing its R&D jobs to foreign companies. In fact it hires foreign companies to work jointly with engineers of Chery and trains these engineers via the cooperation programs. Chery hopes this kind of joint mode could efficiently help develop its own capabilities for new product development.

At the same time, Chery also has been constructing its own R&D capability. Chery’s automotive research center (500 engineers so far) is expanding toward the target of having 3000 researchers by the end of 2006, and setting branches in Beijing, Shanghai and overseas cities. So far, the engineers in Chery’s research center are mainly composed of newly-graduated college students who lack experience in practical automotive product development. Therefore Chery invited a few engineers from overseas automotive companies, including Ming Xu, an expert from Detroit-based Visteon Company, which is the second largest auto part supplier in the United States. Dr. Xu worked in Detroit for 18 years. He came to Chery and assumed the director of the R&D center. Furthermore, there are also more than 20 foreign experts hired in Chery R&D center, including 12 Korean experts from Daewoo.

At the same time, Chery also has actively participated in the National 863 Key R&D Program “Electrical Vehicles”. In fact, it has developed several hybrid car models which

passed the tests of National Ministry of Science and Technology (NMST). In particular, NMST has planned to set up the “National Research Center for Efficient and Environmental Automotive Technologies” in the Chery R&D center. This also indicated the efforts of Chery to develop self-reliance automotive technologies have won the support from the central government.

So far, Chery is actually at the phase 2 of its technical capability development strategy. Via utilizing all possible resources of technical forces, Chery has released and is going to release a few products of which it has independent intellectual property, as shown in the graph below.

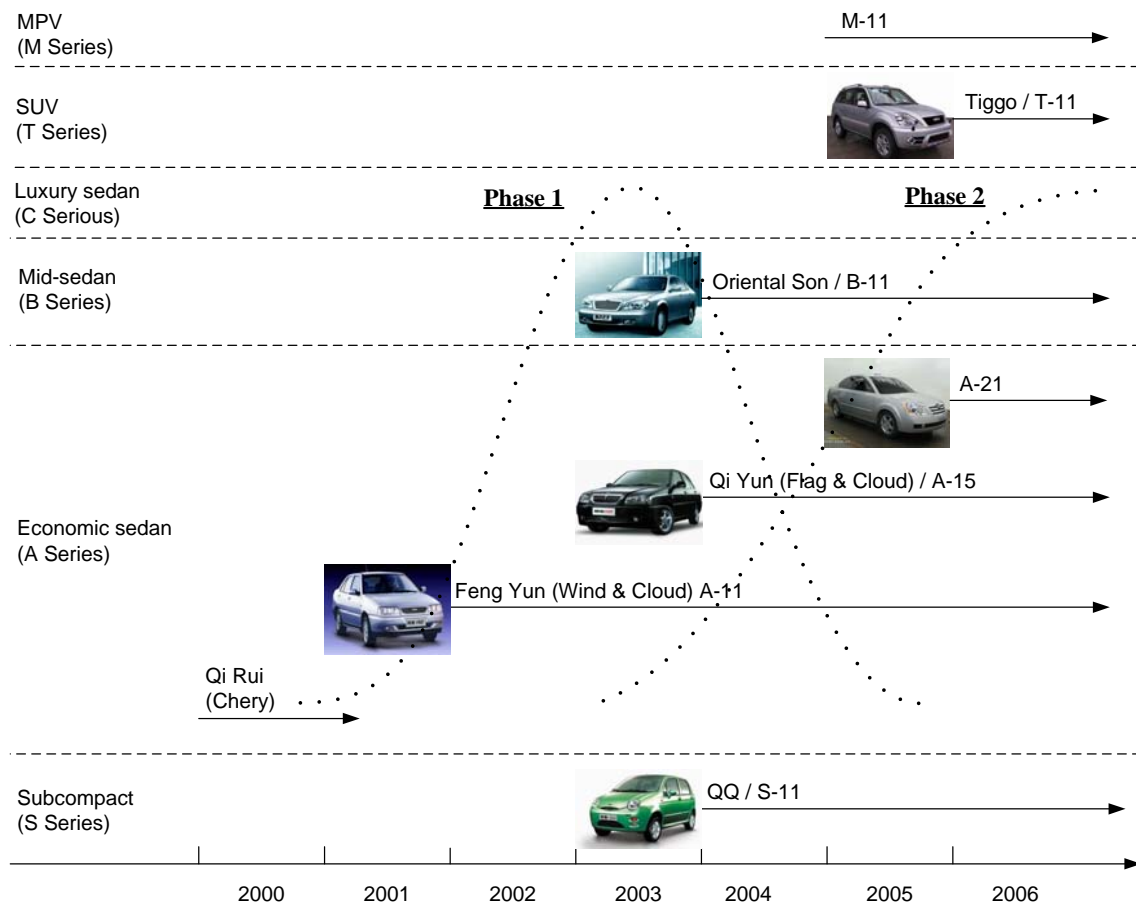


Figure 3-2: The product line development and product development strategy life cycle of Chery Automobile Company.

Why Chery can develop its technological capability so fast while the “Chinese Big Three” cannot?

A few reasons contributed to the technological capability development of Chery.

- Organizational Autonomy

Compared with the “Big Three” Chinese state-owned automotive companies which rely on joint ventures, Chery and other young tigers are independent and self-reliance enterprises. Therefore, from an organizational point of view, these independent companies naturally have all the autonomy to develop their own products and improve technological capabilities. In other word, organizational autonomy makes it possible for Chery to develop its own cars, regardless of how it develops.

- Talent Force

Without highly talented engineers, Chery can not develop a car independently. One success of Chery was it actively made use of the excess talent resources (experienced engineers) in other state-owned automotive companies which disregard R&D.

- Reverse Engineering

Reverse engineering proves to be an effective way for a start up company to develop products. Chery started to develop its products by imitating Jetta and Daewoo Matiz. However, from a view of its long-term development, the company is supposed to develop products originally and to form unique and uniform characteristics for its products. This is necessary for building and enforcing the brand power.

- Design Outsourcing

With the demand of deepening specifications, the role of suppliers in the automotive industry is more and more critical. It is becoming a trend that besides components many automotive companies also outsource design tasks to other more specialized part and technology suppliers, like Delphi, Bosch, Vision and AVL, etc. This is also widely regarded as the disintegration of the value chain in the automobile industry. So the automakers can be focused on technology integration and improvements of production efficiency. For Chery, after accumulating enough capital in the boom of China’s auto market, it also has been outsourcing its product design tasks to a few world famous specialized automotive technology suppliers.

3.2.2 Production Management

To increase production efficiency, lower costs, and improve product quality, Chery has put many efforts to apply advanced manufacturing management methods into its production lines.

As a new company, it is easier for Chery to incorporate Lean, Six Sigma and other advanced production management principles than other old state-owned Chinese automotive firms, like FAW and Dongfeng. Chery implemented the quality control systems and standards, such as ISO9001 and ISO/TS16949, from its establishment.

TPS (Toyota Production System) has been introduced into many Chinese auto companies from 1982. However, due to the differences of enterprise structures and styles between Chinese and Japanese companies, the effective incorporation of basic TPS ideas is not easy. In fact, in Chinese automotive companies, the practical application effects of TPS are limited.

In order to improve the TPS applications in factories, Chery hired a famous Japanese production management expert from Mitsubishi Japan, in September 2002. This expert is famous for improving field management in the automotive industry. He led an independent TRMS team (named as TRMS, the abbreviation of his name) to implement TPS ideas in Chery assembly lines. Their first project was the application of TPS in the factory for the sedan “Oriental Son” which was put into market in 2003. A few improvement measures have been promoted according to the practical problems in the production fields. So far, due to his great contribution, Chery denominated a production line by his name.

Chery also hired an experienced expert from Germany to help manage its general assembly plant. He once worked in German Volkswagen for 39 years and FAW Volkswagen for 3 years. In total there are more than 20 foreign experts working in the different factories of Chery Automobile Company.

Chery received its ISO/9001 certification in 2001 and its ISO/TS16949 certification in September of 2002. Then it became the first Chinese automotive manufacturer with

ISO/TS16949, which is the most advanced and strictest quality control system in the global automobile industry.

Moreover, to improve its production system management, the SAP/ERP system by IBM was put into use in Chery from October 2002.

Before 2003, Chery cars were regarded as “cheap but with low quality” in China’s automotive market. However, it is a surprise that from the J.D. Power quality report for January ~ July of 2004, Chery QQ ranked first among all the subcompacts sold in China, while the GM Spark (Daewoo Matiz, which the Chery QQ imitated) ranked only fourth (SINA Auto News). The report said every 100 Chery QQ cars have only 374 defective points, 85 points lower than the average. This report indicated the measures of Chery to improve its product quality have taken effects.

With the competitive prices, improvements of quality, and all-new product designs, the general competitiveness of Chery keeps increasing in the auto market of China. In the “Brand Competitiveness Report of Passenger Cars in China” released by CCID Consulting Company in December 2004, Chery ranked first among the local automotive companies and ranked sixth among all the automotive brands in the Chinese market (SINA Auto News).

3.2.3 Product Characteristics

Chery entered the Chinese auto market in 2000, which once was regarded as a bad time for car business because almost all the international auto makers chose that time to set up or expand their joint ventures in China. The competition started to be tougher and tougher from year 2000. But surprisingly, Chery developed very well in the following years. It sold 2000 cars in 2001, and the number rose to 28,000 in 2001, 50,155 in 2002, and 90,367 in 2003. In 2003 Chery was the 8th largest car maker in China. Now its car market share in China is about 4%. As a start-up company, Chery’s products have their unique advantages contributing to its fast development.

1) Price

One of the key factors is the low price of Chery products. The price is an important factor

to influence the decision of emerging price-sensitive Chinese private car consumers. The cheap cars of Chery met the price requirements of those consumers to some extent.

For example, in 2001, Chery “Qi Yun” car, which belonged to the same class as Jetta and Santana, sold at a price 88,000 Yuan (US\$10,602), about 1/3 lower than that of the former two. The following table shows the price comparison between Chery models and comparable models produced by joint ventures.

Table 3-2: Prices of Chery cars and the comparables

Types	Comparable Models and Brands	MSRP	
		(10,000 Yuan)	(10,000 US\$)
Subcompact	Chery QQ 0.8L AT	4.98	0.60
	GM Spark 0.8L AT	6.28	0.76
Economic Sedan	Chery Feng Yun 1.6L MT	5.98	0.72
	VW Jetta 04 1.6L MT	9.78	1.18
	VW Santana 3000 1.8L MT	14.50	1.75
	Critoen Fu Kang 1.6L MT	8.08	0.97
Sedan	Chery Oriental Son 2.0 AT	12.68	1.53
	VW Passat 2.0 AT	21.90	2.64
	Honda Accord 2.0 AT	22.98	2.77
	GM Regal 2.0 MT	20.68	2.49
SUV	Chery Tiggo MT	13.00	1.57
	Honda CR-V 2.2L M/AT	23.98	2.89
	Hyundai Tucson 2.5L MT	17.98	2.17
	Beijing-Jeep outlander 2.4L MT	17.28	2.08

Source: auto.sina.com.cn

(US\$ 1=8.3 Yuan)

There are a few explanations for the low prices of Chery cars, including, low costs for product development, low labor cost and low price margin.

The low price mainly comes from low costs. The following factors have contributed to lower costs:

A. Low cost from product imitation

At its initial stage, Chery had very low costs in developing a new product, since it

started its product R&D by imitating existing models. If Chery paid royalties to buy foreign car models, or develop products from the beginning and from every component, the costs would be tremendous. For example, Chery designed “Feng Yun” based on a Jetta Spanish variant, and developed “QQ” based on Daewoo Matiz.

Utilizing indiscriminately the part supply systems of SAIC and FAW also reduced the costs for independent part design and purchase. For example, due to the familiarity to Jetta of those people who transferred from the FAW-VW joint venture, Chery purchased the parts for “Feng Yun” from the part suppliers in the Jetta part supply system. After joining in SAIC, Chery began to apply VW-SANTA parts to its products.

B. Low cost from improving production management

In the previous chapters, we have discussed Chery’s measures to improve production efficiency and to reduce manufacturing costs. Those efforts should have contributed to lower overall costs of Chery cars.

The low price also comes from lowering margins. For a long time, the China car market is famous for high profits. This is mainly due to the long time monopoly of several joint ventures under the protection of the national automotive industrial policy. After China’s entrance into WTO, more and more joint ventures were set up. But the foreign auto manufacturers still “tacitly” keep higher product prices than those in oversea markets, such as the United States and Japan.

They have a few reasons to do so. First, the Chinese auto market is still expanding in a transitional period, so the plenteous price-cut space should be kept at this moment to prepare the future price competition when the market goes to be saturated. Second, the Chinese consumers are not as experienced as American or European consumers who know better about how much a car is really worth. This situation is sort of collusion in an oligopolistic market. The table below shows the big price differences of a few cars in both China and the U.S. auto markets.

Table 3-3: Prices of foreign car models in China and the U.S. automotive markets.

Models	China Market		U.S. Market	Price Gap (US \$)	
	MSRP (Yuan)	MSRP US \$	US MSRP (US \$)		
2004 Buick Regal	298,000	35,904	25,190	10,714	
2004 Audi A6 Tiptronic	523,200	63,036	40,170	22,866	
2004 Passat 1.8T Manual	229,900	27,699	22,355	5,344	
2004 Corrolla 1.8 Manual	151,800	18,289	14,085	4,204	
2004 Honda Accord 2.4 DX	261,800	31,542	16,390	15,152	
2004 Honda Odyssey	276,700	33,337	24,995	8,342	*
2004 Honda CR-V LX	239,800	28,892	19,995	8,897	*
2004 Hyundai Sonata GL Base	165,800	19,976	16,594	3,382	
2004 Hyundai Elantra GLS	156,000	18,795	13,844	4,951	
2005 Jeep Grand Cherokee	429,000	51,687	31,555	20,132	*
2004 BMW 325I	408,000	49,157	28,795	20,362	

Source: auto.sina.com.cn, www.kbb.com, (US\$ 1=8.3 Yuan)
www.cars.com*.

Although in order to compete with the well-known brands, Chery set the prices of its products much lower than those of the joint ventures, it can still get enough margins for every car sold. This is because the car price in the Chinese market is still extraordinarily high.

In addition, Chery takes the advantage of the low labor costs in its factories. Anhui is one of poorest provinces in China. It is an agriculture area, and there are few modern industries. The excess labor resources and the low industrializing level determine the low wage for the workers.

2) Design for Chinese Consumers

The other reason Chery can become a mainstream auto manufacturer in China so soon is its localized design. The initial Chery cars all imitated foreign existing models, but the limited modifications on car shape succeeded in meeting the taste of Chinese consumers. Most of the previous models (Feng Yun, QQ, and Oriental Son) sold very well. QQ actually is one of the best sellers in the past 2 years and the Oriental Son also obtained many prizes by auto magazines.

The previous models were based on non-correlated existing models from different sources. But via deeper original design, the new models are changing to have some unique style which the consumers have never seen on other cars. By investigating the new models of Chery, it is easy to find out the uniform style of the body design, especially styling on the engine hood panel and the front end of different Chery cars, as shown in figures below. Chery is trying to form its symbolic design styling, like what Toyota, Honda and Hyundai have achieved.



Figure 3-3: Chery new models with identified uniform design elements.

3.2.4 Intellectual Property

An obvious characteristic of Chery's development history is that it is always involved with intellectual property dissensions. Due to limited R&D capabilities at the initial stage, Chery did reverse engineering design based on a few existing car models and purchased parts from other joint ventures' local part supply systems. Along with Chery's fast development, the related foreign automakers began to crusade against Chery. Surprisingly, Chery's major rivals are just VW and GM, the No.1 and No.2 international automakers in the Chinese automotive industry.

- Chery V.S. VW

The first case is related to VW. Due to the working experience in FAW of many Chery managers who transferred from FAW, as a matter of fact, Chery designed its first cars by imitating the platform of Jetta. After Chery joined SAIC in 2001, Chery purchased the same parts of the VW Santana sedans to equip its Feng Yun sedans, from the same suppliers of Shanghai VW. Due to its ignorance for intellectual property protection, Chery used components attached with VW logo in Feng Yun sedans without any changes. This

angered VW, and Chery had to compensate VW 30 million Mark. (Business Week Chinese, November 15, 2003)

Due to this incident, VW complained the rule of China that foreign automakers may build cars only in venture partnerships with local players, because this exposes the technologies to, and shares manufacturing processes with even competitors who now are sharing the same venture partner.

Now, many bitter global rivals find themselves sharing the same Chinese partner -- usually one of China's Big Three -- First Automotive Works, Shanghai Automotive Industry Corp. or Dongfeng Motor Corp. -- and the same network of suppliers. For example, Nissan Motor and Honda Motor have joint ventures with Dongfeng, Volkswagen AG, Ford Motor Co.'s Mazda and Toyota build cars with FAW, while Volkswagen AG and General Motors share SAIC. Given this odd network of partnerships, intellectual property is hard to be protected. --David G. McIntyre, The Detroit News, Dec 8, 2003

- Chery V.S. General Motors

Another big case is the design dispute between GM Chevrolet Spark and Chery QQ.

In May 2003, Chery released QQ subcompact with a remarkable low base price of 49,800 Yuan (US\$6,000). Due to the striking resemblance of QQ to GM Chevrolet Spark, which is also called Daewoo Matiz in other countries, before long GM announced that the QQ subcompact of Chery Automobile Company as being a copy of GM Chevrolet Spark. The figure below shows the body configurations of Chery QQ and GM Chevrolet Spark. From then on, whether or not Chery QQ has copied the appearance of SPARK and infringed the patent right of GM has been in a worldwide heated debate.

Chery QQ, released May 2003



GM SPARK, released Dec. 2003



Figure 3-4: The configurations of Chery QQ and GM Chevrolet Spark.

Both Chery QQ and GM Spark are targeted at the sub-market of mini cars. GM Spark was released six months later than Chery QQ and had a relative higher base price of 61,800 Yuan (US\$7,446). Spark is much more expensive because it is assembled by KD mode. Therefore, Spark failed to take the market share from QQ due to its later launch and higher price. And QQ is outselling the Spark by a ratio of 6-to-1. The following graph shows the sales performances of Chery QQ and GM Spark from January to July of 2004 in the Chinese auto market.

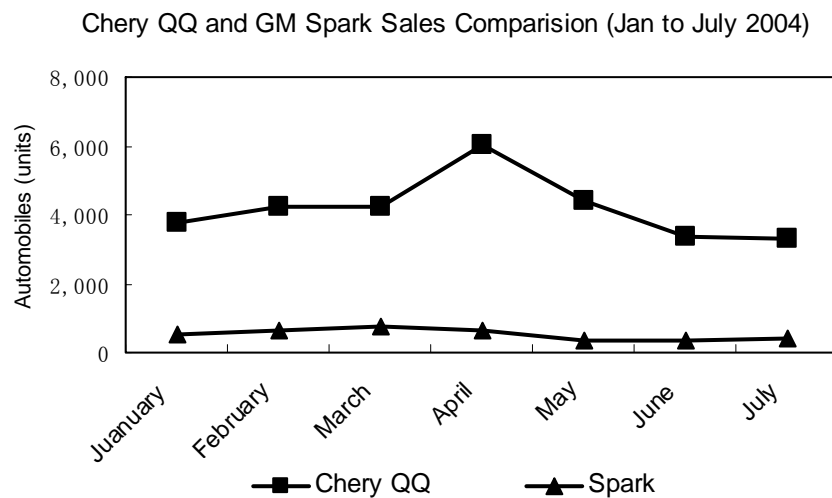


Figure 3-5: The sales of Chery QQ and GM Spark in 2004. Source: The Automotive Information Net

GM spark fails in front of Chery QQ in the market, then GM accuses Chery of copying Daewoo Matiz without paying any royalties to Daewoo or GM on the Chinese and overseas media. However, Chery certainly denied this accusation. Chery claimed that it developed QQ independently on its own with a little inspiration from Daewoo Matiz. In fact, Chery filed a design patent for QQ on January 28, 2002 and was granted on January 15, 2003, while GM has no design application filed for Spark in China. Chery also reported that it went through the whole design process in a two-year period, and has been granted 27 patents for the technologies and designs applied on QQ subcompact, and has mastered all the parameters and data for the design and manufacture of QQ. Therefore, it is untenable for GM to sue Chery for infringing copyrights. (Business Week Chinese version, November 5, 2004, page 64)

The original design of Daewoo Matiz included no safety airbags. If Chery uses the same

design and technical features of Daewoo Matiz on QQ, it will be weak in the safety aspect. GM called for help from the Chinese government administration in charge of the automotive industry, and required Chery to take safety tests for QQ in public. With the pressure, Chery had to take three standard safety tests at the Tianjin National Lab for Automotive Crash Safety Test. But all the test results were approved as good. Moreover, in the early 2004, GM organized a public simultaneous 30,000 Km field road test in Hainan province for Chery QQ and Spark. However again, the result was that the Chery QQ was far superior. Chery QQ performed very well while Spark occurred a few problems during the test. (21 Century Economy Report)

At the same time, with the pressure from its partners GM and VW, SAIC announced that it had shed its 20 percent stake in Chery in September of 2004 and it no longer had a relationship with the Anhui-based Chery Automobile Company.

Meanwhile, the National Ministry of Commerce and the National Office for Protection of Intellectual Property Rights (NOIPR) also investigated this case in Chery Automobile Company with the request from GM. In September 2004, the NOIPR declared that, according to the evidence provided by General Motors, Chery can't be identified as infringing the copyright of GM, nor carry out illegal competition activity under the Chinese laws. And NOIPR encouraged the companies to solve this dissension through mediation or legal means.

Therefore, after one year long controversy without any results, in December 2004, GM finally filed a lawsuit to the Shanghai No. 2 Intermediate Court against Chery for alleged piracy of GM Daewoo Matiz, in the name of GM Daewoo Auto & Technology Co Ltd. The court is investigating this pending case (Forbes.com, December 16, 2004)

According to the analysis of some Chinese law experts, it is difficult for GM to win this lawsuit since Chery has been granted the design patent of QQ while GM has no design patent for Spark in China. However, GM's lawsuit at least can hinder Chery's expanding exports of QQ to a few countries. According to the relative rules of WTO, GM has the right to request all the countries to stop importing Chery QQ during the lawsuit period. It is reported that, so far Egypt, Lebanon, Malaysia, Columbia, Brazil and a few other countries have received the request from GM. And Malaysia has paused its imports of 10,000 Chery cars, while Columbia and Lebanon refused GM's request.

Regardless of the result for this lawsuit, after accumulating enough capital and experience, Chery has already been able to do original design work for its new models with the cooperation from other international automotive technology companies from Italy, Germany, Japan, Austria and etc.

3.2.5 Exportation Strategies

One of most obvious development strategies of Chery is to export. Chery's management team was committed to taking a global view, so it started export from year 2001 when it first received the permission from the central government to produce cars. Especially, facing the market downturn in 2004, Chery speeded up its exportation steps to minish the dependence on China's domestic market. Chery announced that it exported 1,100 units in 2003 and 8,000 in 2004 which counted for about 50% of the country's overall car exports. Its main exports included Feng Yun, Qi Yun, QQ, Oriental Son and even newly released MPV New Crossover and SUV Tiggo. In 2005, the planned number of exports is 78,000 units. This surprising and ambitious plan was made according to Chery's fast expansion of sales network in the oversea markets.

Chery's first export was to Syria in October 2001, seven months after its entrance to China's domestic market. The latest exporting news is Chery took over 1,100 cars from the Cuban government and an order for 4,000 cars from the Tourism Bureau of Cuba, in January 2005. So far, Chery exports cars to more than twenty countries including Syria, Iraq, Iran, Egypt, Algeria, Libya, Bengal, Cuba, Malaysia, and a few other countries. Most of these countries are developing countries in Southeast Asia, Middle East, Africa and South America. Israel became the first developed country Chery entered. During the 2004 Beijing International Auto Exhibit, the biggest Israeli auto part company BENNY MOSHEKADURI signed a contract with Chery to import its cheap luxury cars from 2005 with a price about US\$22,000. (WWW.PEOPLE.COM.CN, News).

However, all the exportation deals are at a small level of thousands. To keep such a wide sales network with a small amount of consumers for each country, Chery will be confronted with the difficulty to provide good after-sale services. Moreover, small scale exportations also increase the unit cost of Chery cars from transportation fee.

At the same time, to provide better localized before- and after-sale services and reduce the costs on marine transportation, Chery has launched CKD (Completely Knocked Down) projects overseas. In 2003, Chery began its project with Iran SKT Co. to set up a CKD joint venture with a capacity about 50,000 autos in Northeast Iran. Chery provides product technologies and production assembly line technologies according to the contract. This CKD project has started operation producing 20,000 cars this year, making Chery the first Chinese automaker to produce own brand cars abroad.

On November 12th, 2004, Chery signed a contract with Malaysia ALADO Company about exporting and setting up a CKD joint venture to produce and assemble six models of Chery cars in Malaysia. ALADO is a subsidiary of BSA group, the biggest Malaysian aluminum alloy manufacturer. The first step is to export 10,000 Chery QQ subcompacts, then to begin CKD production.

Moreover, Chery is also negotiating with companies in Middle East and South American, including Pakistan and Venezuela, to set up joint ventures in those regions and produce Chery cars by CKD means. Operating joint ventures can help Chery provide better services locally. And the CKD projects, especially in Iran and Malaysia, may help Chery realize its fast jumping sales goal in 2005.

Chery has looked for entrance to the North American and European markets for a long time. The biggest shock wave made by Chery at the beginning of 2005 was that it signed a contract with the U.S. company VisionaryVehicles LLC to start exporting five models and 250,000 Chery cars to the North America (U.S., Canada and Mexico) market from year 2007.

The automotive market in the United State is the most competitive. For Chery, there were both successful examples like Toyota and Hyundai and losers like Yugo. It is worth to mention Yugo cars from which Chery can take lessons. Yugo cars were cheap, but weak and not as comfortable and not as equipped compared to the average American cars. Therefore the American consumers gradually gave Yugo away. It finally failed and withdrew in 1992 mainly due to its poor product quality. Chery's strategy is also to sell cheap cars, but with good options and good qualities. Different from Yugo, Chery aims to cut costs and prices while keeping good quality by taking advantaging its special Chinese style manufacturing efficiency.

To achieve success in the competitive U.S. auto market, Chery is preparing a few totally new models in popular niche categories -- an entry level compact, a mid-size sedan, a luxury coupe, an SUV, and a Crossover – all targeted to be priced 30% below existing comparable vehicles and all carrying a 100,000 mile/10 year warranty. The all-new models are being jointly designed by Chery, Pininfarina and Bertone in the vehicle side and AVL in the engine side, to satisfy the picky consumers in the U.S. market. (Vvcars.com, Visionary Vehicles website)

Besides the wide reported news about exporting to the United States, Chery is also negotiating exports to Europe. In December 2004, Chery invited more than 30 European automotive dealers to participate the show for two new Chery models designed by Pininfarina and Bertone. The feedback showed Chery products also have aroused great interests in Europe. Different from cooperating with a general franchiser in the United States, Chery's strategy in the European market is to franchise dealers in every country. (21 Century Economics Report)

Furthermore, on March 4, 2005, the China Export-Import Bank of China signed an agreement with Chery about a 5 billion Yuan (US\$ 602 million) loan for supporting its international operations in the next 3 years. This also indicated the newly-obtained support from the central government to Chery and other independent and self-reliance local automotive companies. (Finance Daily)

Compared with Chery's ambitious exportation strategy, on the contrary, there are few exports from the stronger joint ventures in China. This is because joint ventures submit to the global strategies of its international shareholders. And some Chinese shareholders gave up the right to make exportation decision when they signed the contracts for joint ventures (Chery.cn News). This difference can also attribute to the organizational independence.

3.2.6 Enterprise Culture

Many visitors to Chery are impressed by its highly motivated and strong willed employees, from the assembly line workers to the president. The key reason is those people are motivated by the goal to produce Chinese indigenous cars and to develop Chinese independent automotive industry. The managers of Chery hope it can become Toyota in the

1950's or Hyundai in the 1970's. Also, the ambitious goal of Chery and its slogan of "Making Chinese Cars" also caused those experienced engineers and professionals from FAW, Dongfeng, even oversea automotive companies to join Chery.

3.3 Comparative Analysis

Chery's start-up performance has a few similarities with other big automotive companies in Asia, such as Toyota and Hyundai. The two companies both once were late comers in the global automotive industry and now have successfully caught up with the western automotive giants. Especially, the same with Toyota and Hyundai, Chery insists the independent and self-reliance developing strategy. Therefore, to compare the external industrial environments and strategies of these companies in their take-off periods will be helpful for predicting the possible future of Chery and other Chinese young tigers today. Among all the aspects, the strategic route for technical capabilities and new product developments is the key factor influencing the sustainable development of a new company, so it is the focus in the following comparison.

Toyota Motor Company was first established in 1937. Toyoda, the founder of Toyota, asked his son to knock down a Chevy car and to develop their first car. Toyota launched its first small car (SA Model) in 1947 by imitating American cars. After the World War, as a late comer in the world automotive industry, Toyota chose the approach of reverse engineering to develop products independently. And by this way, Toyota successfully improved its technical capabilities which supported future innovative product developments. Especially, via the independent imitating process, Toyota generated unique corporate organizational and management modes which have been studied by the rest of the world afterwards. Toyota insists its self-reliance developing strategy from its establishment, and so far succeeds in not only technology and business also its unique corporate organizational structure and culture. In fact, Toyota had formed its innovative "Toyota Production System" when it just had a small production of 155,000 units in 1960. Another Japanese automotive company Nissan chose a different strategic way of relying on technology transfer from outside. It fell in risks in the 1990's and had to reorganize with Renault. So far, Toyota is far ahead of Nissan, for most of industrial and business criteria.

Hyundai Motor Company started in 1967 from a CKD joint venture with Ford Motor Company. But it changed its strategy in 1970 and switched to a self-reliance development

route. As a matter of fact, the later success of its independently developed products benefited much from the learning effects from its previous co-operations with Ford and Mitsubishi. In 1973 Hyundai suspended the joint venture with Ford and began to develop products independently. It is surprising that its production was only 5462 units at that year. Also in fact, when “Pony”, the first self-developed Hyundai car, rolled out in 1975, Hyundai Motor Company only had very small revenue about US\$3 million and 197 R&D employees. In that year, the total auto output of Korea was 36,800 units. Hyundai’s self-reliance product development capability was formed via its joint product development programs with other foreign companies on the basis of Hyundai taking the managerial control. For example, before Hyundai’s mastery of the powertrain technologies in 1991, it had imported engine technologies from multi sources, including Ricardo, AVL and Bosch. This strategy allowed Hyundai researcher and engineers to touch a wide range of advanced product technologies and to prevent dependency on a specific source. On the contrary, Daewoo, the second largest Korean automaker, relied on joint ventures and technology transfer from foreign companies. It went to bankrupt during the Asian financial risk in the late 1990’s. Although Daewoo has been taken over by GM, all the parameters show it is far behind Hyundai in the Korean automotive industry.

As an independent company which insists on the self-reliance development route, Chery has a few similarities with Toyota and Hyundai at their beginning stages. First, regarding the initial market targeting, due to limited technical capabilities and the poor purchasing power of Chinese consumers, Chery chose to start its product line from economic cars and is expanding to a full range. This is the same with the tracks of Toyota and Hyundai. This sameness is determined by the domestic economical environments and young companies’ lack of technical capabilities to develop high end products in the taking-off periods of the three companies.

Regarding the product development strategy, Chery combines the routes of Toyota and Hyundai by doing reverse engineering at beginning, then switching to the joint product development, and planning to self-develop products in the future. The biggest difference between Chery and the other two companies is that, Chery developed its initial models without in-depth understanding good automotive product design, while Toyota and Hyundai successfully developed its technical capability via reverse engineering work. The two advanced companies both spent a long time (5~10 years) in their laboratory to knock down and investigate cars produced by the American makers. They launched their initial

models after obtaining good understanding about the automotive products and technologies. However, in order to quickly capture profits in the booming period of China's automotive market, Chery developed and launched its first major models based on reverse engineering methods very fast in less than one year. Therefore, Chery's first models contain obvious imitation imprints inducing law dissensions with other companies, which never happened to Toyota and Hyundai. Thereby, although Chery has already given up reverse engineering, it still has a long way to go for complete independent new product developments.

Toyota, Hyundai and Chery have different domestic survival environments during their take-off periods. When Toyota took off, the domestic economic car demand had increased rapidly along with the macro economic development of Japan. Similarly, Chery entered the automotive industry in the tide of buying private cars in China, which brought a booming market. Although Hyundai started its independent operation ahead of the prosperity of the country. Due to the protection policy by the Korean government, there are no imported cars to compete with cars manufactured by Hyundai, Daewoo and Kia. Therefore, Toyota and Hyundai took off in a mildly competitive environment, while Chery is suffering the fierce competition among the big state-owned companies, international auto giants and other aggressive young tigers, although the total passenger car market is expanding.

The most impressive similarity for Chery with Toyota and Hyundai is its perseverance on the overall self-reliance development strategy. Self-reliant R&D of new type of cars, engines, transmissions and molds require Chery to spend out its capital obtained in the last 3 years. This brings big challenges and risks. As a matter of fact, before the intellectual property dissension with GM from 2003, Chery had the chance to join the team of international auto giants due to its remarkable performance in China's automotive industry. In May, 2002, Shanghai VW intended Chery to join its venture, in order to eliminate the competition between Chery Feng Yun sedan and VW Santana and Jetta. SAIC also wanted to reinforce its independent brand construction by adding Chery's technical force. But Chery refused, because Chery managers were afraid to lose its independence and brand, then to be the next Daewoo or one like the Chinese "Big Three". Now Chery is still a 100% local government controlled independent automotive company persisting in new product development with its initiative and intending to master the core technologies of auto design, development and manufacture. Also it is suffering huge internal pressure of capital for expansion and self-reliance new product development, and external competitive pressure from the international auto makers. However, the support from the government

may help Chery pass through the independent start-up period.

To summarize, the details of the strategies and other issues are listed in the following table.

Table 3-4: The strategies and external environments for Toyota, Hyundai and Chery in their different take-off periods.

	<u>Toyota</u>	<u>Hyundai</u>	<u>Chery</u>
Ownership	Family	Family	Local Government
Take-off Periods	1960~1970	1980~1990	2001~
Motivation	To produce indigenous cars	To produce indigenous cars	To produce indigenous cars
New Product Development Strategies	Self-Reliance	Self-Reliance	Self-Reliance
	Reverse Engineering ↓ Independent Development	Joint Venture ↓ Joint Development with Multi Technology Sources ↓ Independent Development	Reverse Engineering ↓ Joint Development with Multi Technology Sources ↓ Independent Development
Start-up Product Strategy	From economic cars (to a full line)	From economic cars (to a full line)	From economic cars (to a full line)
Market Environment in Taking-off Periods	Big domestic demand for economic cars; 1964 Tokyo Olympic Games	Small domestic demand; 1988 Seoul Olympic Games	Big domestic demand for cars in all levels; 2008 Beijing Olympic Games
Domestic Competition Environment	Mild competition; Nissan is the major competitor	Mild competition; Daewoo is the major competitor	Fierce competition; Joint ventures and “Big Three” are strong and dominate 90% market share.

Source: Richard M. Steers. “Made In Korea”;
 Donald Kirk. “Korean Dynasty: Hyundai and Chung Ju Yung”;
 Young-suk Hyun. IMVP Report, 1995;
 Du-Whan Rhee. IMVP Report, 1999;

Ruizhu Wang, “New Toyota Production System (Chinese Edition)”.

Besides internal characteristics and external environments, Toyota and Hyundai have similar performances during their take-off years. The take-off decades are from 1960 and 1970 for Toyota and from 1980 to 1990 for Hyundai respectively. During their take-off periods, the two companies both decupled their outputs and exports, as shown in the table below. And surprisingly, the 1964 Tokyo Olympic Games and 1988 Seoul Olympic Games were in the middle of the take-off periods of the two companies. Chery and other young tigers can also benefit from the large economic and social driving effects of the 2008 Beijing Olympic Games. But, can Chery become next Toyota or Hyundai?

Table 3-5: The jump of auto outputs and exports of Toyota, Hyundai and Chery in their take-off periods.

		(Million Units)					
The Take-off Periods		1960		← 1964 →		1970	
		Output	Export			Output	Export
Japanese Auto Industry		0.482	0.039		Tokyo Olympic Games	5.289	1.087
Toyota Motor Co.		0.155	0.006			1.609	0.482
The Take-off Periods		1980		← 1988 →		1990	
		Output	Export			Output	Export
Korean Auto Industry		0.124	0.025		Seoul Olympic Games	1.302	0.347
Hyundai Motor Co.		0.062	0.016			0.676	0.225
The Take-off Periods		2001		← 2008 →		2011	
		Output	Export			Output	Export
Chinese Auto Industry		2.342	0.023		Beijing Olympic Games	?	?
Chery Automobile Co.		0.028	0.001			?	?

Source: The Policy Options for China to Develop Self-reliance Automotive Industry, 2003
 WWW.CHERY.CN, Chery official Website
 China Year Books

In the Chery Automobile Company, there is a famous catchword: learn cost control from Japanese, learn craziness from Korean, learn technological desire from German and learn marketing from the Americans. Chery’s strategy and development route have indicated that Chery’s goal is not to be just a small company which can make profits. It aims to become a professional automotive company like Toyota or Hyundai, even with more advanced features. But for sure, Chery is still a tiny player compared with the international auto

giants and there is a long way to go.

4 Conclusions

Along with the growth of the overall Chinese automotive industry, a few independent Chinese automotive companies with special competitiveness burgeoned and developed very fast in the past five years. This report investigated the external and internal factors influencing their birth and growth, and the characteristics and competitiveness of this type of companies.

In fact, these new companies came out with the central government's policy of loosening entrance control around 2001. And in the following years, the Chinese automotive industry, in particular the passenger car market prosperity was aroused by the overall economic development, the boost of personal purchasing power and the government's policies of encouraging private car consumption. This provided these startup companies with a good environment for their initial growth. The following causal networks summarize the major external economical, political and social environment factors and their relationships that influence the development of the young tigers.

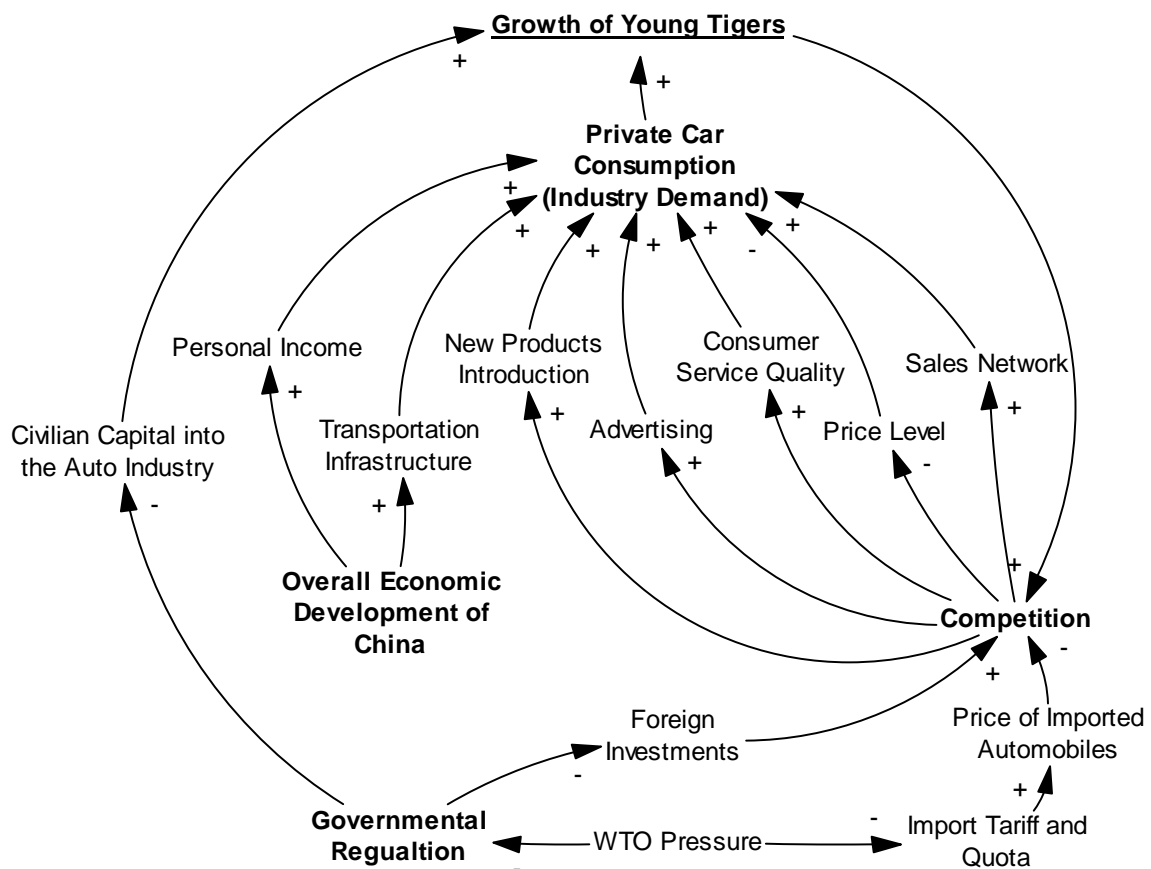


Figure 4-1: A system dynamics view on the external environment influencing the growth of

young tigers.

The advancement of the modern CAD and virtual design technologies facilitated the prevalence of reverse engineering in small companies. This helps small companies simplify the design process and reduce costs for the new product development. And along with the globalization trend in the global automotive industry, resources and manufacturing jobs can be optimized through the worldwide redistribution, and technologies are diffused and fused better in this global wide distribution process than ever. So far, most of independent young companies start their automotive enterprises with tiny capacities and weak technical capabilities, by utilizing reverse engineering, outsourcing R&D to specialized designers, and purchasing parts they can not produce from suppliers. The globalization in the automotive industry and the corresponding changes have made economy of scale and technology accumulation no longer the invincible barriers in this industry.

The case study on Chery Automobile Company also explored the internal reasons which boosted the prosperity of these young companies, some of which are listed below.

- a) Attract experienced engineers/talent force from big state-owned Chinese automakers and oversea auto companies;
- b) Take advantage of the mature local part supply systems for joint ventures of the international automotive giants;
- c) Flexibly obtain product technologies by various ways, including reverse engineering, design outsourcing and joint developments with foreign designers, and accumulate knowledge and skills of its own during this process;
- d) Stress production system management to reduce manufacturing costs;
- e) Take advantage of the excess labor resources and then the low wages in Anhui, one of least industrialized provinces in China, where Chery is located.
- f) Start from low end car market then go up.

Two other factors played more substantial roles. First, Chery insists on self-reliance development strategy and has its total organizational autonomy, although it is also a local government owned company. On the contrary of the big state-owned companies relying on joint ventures, Chery feeds back promptly to the market conditions and operates like a private company. It has flexible strategies for product development, production management, and market exploration. The second reason is Chery sets its patriotism

entrepreneur spirit and enterprise goal as “Producing Chinese Indigenous Cars”, which successfully attracted many experienced professionals and talents in the automotive industry, not only from other large domestic companies, but also from overseas automotive companies. This enterprise goal also makes Chery’s employees highly motivated and willed.

Chery is just an epitome for the young and independent Chinese automotive companies. They have similar development strategies and profiles due to the similar enterprise organizational mode and industrial environment. Therefore, most of the factors discussed above can also apply to the other young tigers. The casual networks in Figure 4-2 were applied to interpret the complex systems dynamics between the corporate strategies and performances in these young and independent Chinese automotive companies (See next page).

Due to their fast growth and active exportation strategy, these local-branded independent automotive companies have gained more and more supports from the public consensus, and then now the policy and financial supports from the central government. This is a big change because the central government disliked and forbade this kind of small automotive companies for a long time. The central government’s previous macro planning policy aimed to develop the Chinese automotive industry with high property centralization and economy of scale. This environmental change also begins to drive the Chinese “Big Three” and other state-owned auto companies to speed up their self-reliance operations.

Although being confronted with the cooling down in year 2004, with their organizational autonomy and the huge earnings from the success in the previous years, the young tigers have all been boosting investments on capacity expansion and R&D, charging into new segments and making grandiose plans to export, even into the markets of developed countries. To take the advantage of the opportunities in the booming domestic market, and to avoid the risk of depending on the domestic market, expansion and exports are necessary. Regarding this point, the failure of Yugo would be a good lesson for those young tigers to improve product quality and service while expanding. In order for the sustainable development, it is very important for them to pay more attention to enhance their self-capabilities and competitiveness in the aspects of product development capabilities, production management, product and service quality and etc step by step, through cooperation with foreign partners and engagement

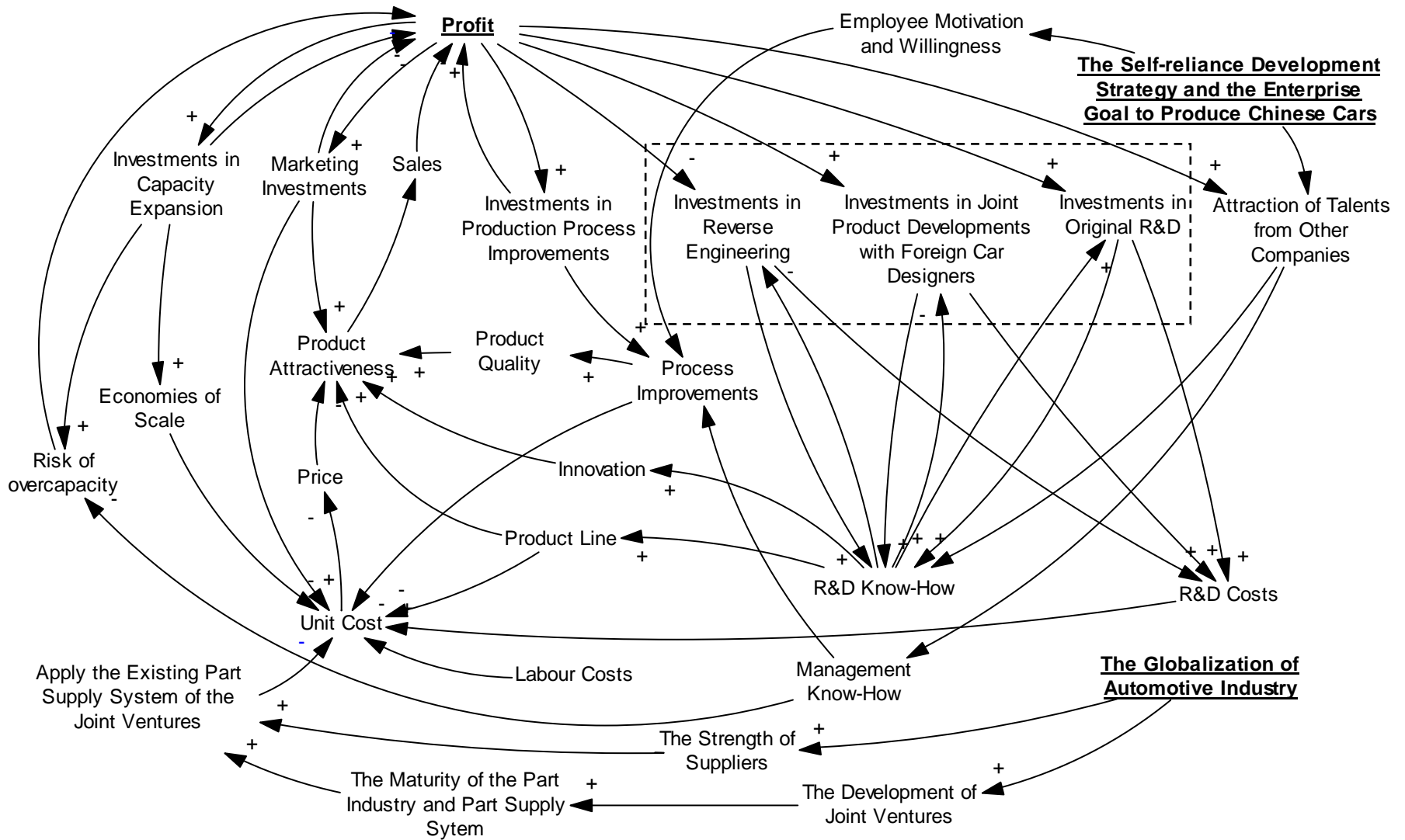


Figure 4-2: A system dynamics view on the internal factors influencing the development of young tigers

into the international markets. In fact, the young tigers should also learn the successful experience of Toyota and Hyundai about how to break through the stiff start-up stage.

However, expansion strategies will bring opportunities as well as risks. The failure of Daewoo Motor Co. is another good lesson for them. In the 1980's and 1990's, aided with bank loans, Daewoo tried to expand worldwide with its low price products via direct exports and building oversea plants. But because of formidable debts, ultimately it went to bankrupt in 2000. Therefore, the Chinese young tigers should avoid over investment and unaffordable financial risk, and pay attention to enforce management capabilities and marketing know-how which are necessary for the sustainable rapid growth.

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