

China's Car Industry Competition Map

Peter Drucker, the famous American management master, has once called the auto industry the "industry of industries." Due to the high integration and relevance of automotive products, its level of development can not only represent the level of industrialization of a country, but also play an important role in promoting the country's economic development. Therefore, the auto industry has always received universal attention from the countries around the world. During the negotiation process for China's accession to the WTO, special protection clauses were set for the auto industry that is considered as our "infant industry". It's been seven years since China's entry to WTO. With foreign auto enterprises flooding in, the competition pattern in China's auto industry has been changed. However, in the meantime, our domestic auto enterprises have also been developing and strengthening.

Automobiles are classified into commercial cars and passenger cars, neither of which could replace the other in terms of the economic sense due to the great differences between them in target user, product features, pricing and market characteristics. Therefore, the analysis tend to involve the respective discussion of commercial car industry and passenger car industry. According to the standard of "Statistical Classification of China's Vehicle Models", passenger car include cars (i.e. basic passenger cars), MPV, SUV and cross cars (Mini-bus). Since MPV, SUV and other passenger cars have just started in China, the proportion of the concerned sales is quite small. Cars (i.e. basic passenger cars) constitute the majority of the passenger car industry and there have been systematic and consistent statistical data in car industry, which provide the essential actual condition for the deep research. That is why this paper limits the research to car industry only, trying to give an analysis of the development strategy of China's native auto enterprises by using the theory of late-developing advantage and the theory of competitive advantage while depicting China's car industry competition map.

1. China's car industry overview

Table 1 illustrates the basic information of China's car industry with the indexes of historical development, and industrial concentration, etc.

It can be seen from table 1 that there has been a steady year-by-year increase in the proportion of car production to the auto output. The year 2006 saw the car production exceed half of the total vehicle production for the first time, which suggests that the growth of cars is faster than that of the whole auto industry. Since the 21st industry, China's car industry has been growing at a high speed with a rapid expansion in the size of the market. By 2007, the sales of cars had reached 4,726,600, with year-on-year increase of 23.46%. According to the statistics from the China Automobile Industry Association, there is an obvious increase in the variety of

car series of 1.6 liters and above among the main varieties of cars compared with the previous year. Among them, the sales of series with displacement between 1.6L and 2.0L (2.0L included) reached 1,445,500 (occupying 30.58%), up 45.67% year on year; the sales of series with displacement between 2.0L and 2.5L (2.5L included) reached 516,600 (occupying 10.93%), up 26.56% year on year. In addition, there was a more rapid increase in the sales of series with displacement between 3.0L and 4.0L (4.0L included). The total sales added up to 12,100 in 2007 up by 4.5 times over the previous year. Nevertheless, there has still been a low demand for the cars with low displacement in the market. The total sales of car series with displacement lower than 1.3L were only 730,200 (occupying 15.45%). Compared with the previous year, the market occupation rate has decreased by 3.70%. The sales of the series with displacement less than 1L were only 251,700, down by 30.90% than the previous year. In view of the car production and sales, China has become the third largest auto country after the US and Japan. However, in terms of the car population, the number of automobiles owned by private people in China was 35,340,000 by the end of 2007, of which the number of private cars reached 15,220,000. That is, every 1000 persons in China possess less than 30 automobiles now while the number is 120 for global average and 750 in the United States. It indicates that the overall auto consumption in China is comparatively low and still has a great development potential.

Table 1 China's car industry overview

Year	Total		cars				
	Production	Growth (%)	Production	Proportion (%)	Growth (%)	Number of Firms	CR3 (%)
1991	708820	---	81055	11.44	---	12	---
1992	1061721	49.79	162725	15.33	100.76	12	---
1993	1296778	22.14	229697	17.72	41.16	12	80.8
1994	1353368	4.36	250333	18.5	8.98	13	84.5
1995	1452737	7.34	325461	22.4	30.01	13	82.6
1996	1474905	1.53	391099	26.52	20.17	13	87.3
1997	1582628	7.30	487695	30.82	24.70	12	81.8
1998	1627829	2.86	507103	31.15	3.98	12	83.0
1999	1831596	12.52	566105	30.91	11.64	19	78.8
2000	2068186	12.92	607445	29.37	7.30	20	69.1
2001	2341528	13.22	703525	30.05	15.82	23	55.4
2002	3253655	38.95	1092762	33.59	55.33	23	52.8
2003	4443491	36.57	2037865	45.86	86.49	29	45.2
2004	5070452	14.11	2312561	45.61	13.48	38	36.4
2005	5707688	12.57	2767722	48.49	19.68	45	29.2
2006	7279462	27.54	3828446	52.59	38.32	46	27.4
2007	8882400	22.02	4726600	53.21	23.46	47	28.3

Source: SHI Zhonghua *A study on Industry Evolution of China's Car Industry* [D]Fudan University,2006

Website of CAAM(China Association of Automobile Manufacture)

The rapid expansion of China's car market size benefits from China's economic development and the increase of residents' purchase capacity on one hand; On the other hand, it is also due to the loosening of the government's control policy. For example, the "Catalogue System" has been replaced by "Product Certification System" (which means the reduction of administrative barriers) and the "Limit of number of auto manufacturers" has been cancelled, etc. The huge market demand and high profits as well as the loosening of relevant control policies stimulated the rapid increase in the number of car manufacturers, which surged from 12 in 1998 to 47 in 2007, while the industry concentration (CR3) was decreasing year by year, dropping to the lowest point--27.4% in 2006. Regarding this, some Chinese scholars thought that we should fully exert the intervention function of macro-control and speed up the production concentration when confronted with the reality of China's auto industry characterized by a great number of car manufactures with small scale, too low industrial concentration and weak international competence. Such views were somewhat reflected in the new "Auto Industry Policies" implemented as of 2004. However, the author thinks the present "low industrial concentration" happens to be an inevitable process for China's modern car industry to participate in market competition by breaking the administrative protection. The simple "administrative intervention" cannot but send the car industry back to the old path characterized by backwardness protection.

2. Competitive situation in China's car industry

In 2007, the top ten car manufacturers in terms of sales in China's car market were as follows in order: FAW-Volkswagen (458,300), Shanghai Volkswagen (445,800), Shanghai GM (432,000), Chery (321,500), FAW Toyota (269,100), Dongfeng Nissan (261,200), Guangzhou Honda (249,500), Geely (219,500), Changan Ford (213,100) and the Shenlong (207,300). The total sales of the above 10 enterprises amounted to 3,077,300, occupying 65% of the total sales of cars in the same year. There were either established brand Sino-foreign joint ventures or new ones established less than 5 years ago, or newly-emerging state-owned and private-owned Chinese enterprises among the 10 mentioned manufacturers, which fully exhibited the competitive pattern of current China's car market filled with strong rivalries.

The present competitive situation in China's car industry can be observed from the characteristics of the three kinds of enterprise of different natures, i.e. foreign-funded, state-owned and private-owned enterprises.

With the temptation of a huge market demand, foreign auto manufactures entered China one after one to set up joint ventures typical of foreign-funded enterprises. In the auto industry policy implemented since 2004, there are mainly three restrictions of the government on foreign auto manufacturers' setting up joint ventures in China: 1. The domestication rate shall be no less than 40%; 2. The shareholding ratio of foreign-funded enterprises shall not exceed 50%; 3. At most two joint ventures are permitted to be set up by each foreign manufacturer.

Table 2 shows when and how the global auto manufacturers entered China. It can be seen from the table that among the world top 500 auto enterprises selected

by *Fortune*, all the auto giants except Renault and Volvo have set up joint ventures in China for local production. In terms of the time entering China, apart from the pioneer Volkswagen and Peugeot, GM's entry in 1997 signals the flood-in of foreign-funded auto manufacturers.

Table 2 Joint ventures of foreign auto manufacturers in China

Enterprise Name	Sales (10 thousand US dollars)	Chinese joint ventures	Time of establishment	Shareholding ratio (%)
Toyota Motor	230,201	FAW Toyota ^{*1}	2002.8	50:50
		Guangzhou Toyota	2004.9	50:50
General Motors	182,347	Shanghai GM	1997.6	50:50
		SAIC-GM-Wuling	2002.6	50.1:34:15.9
Daimler Chrysler	177,167	Beijing auto DaimlerChrysler	2005.8	50:50
Ford	172,468	Changan Ford	2001.4	50:50
		ChanganFord Mazda	2006.3	50:35:15
Volkswagen SAIC public	149,054	Shanghai Volkswagen	1985.3	50:50
		FAW-Volkswagen	1991.2	50:50
Honda	105,102	Guangzhou Honda	1998.7	50:50
		Dongfeng Honda	2003.7	50:50
Nissan	94,782	Zhengzhou Nissan	1993.3	80:20
		Dongfeng Nissan	2003.6	50:50
Peugeot	71,005.7	Guangzhou Peugeot ^{*2}	1985.3	22
		Dongfeng Peugeot Citroen ^{*3}	1992.5	32
		Dongfeng Peugeot	2002.10	50:50
Hyundai Motor	66,666.0	Dongfeng Yueda KIA	2001.11	50:25:25
		Beijing Hyundai	2002.10	50:50
Fiat	65,031.1	Nanjing Fiat ^{*4}	1999.4	50:50
BMW	61,476.7	BMW Brilliance	2003.5	50:50
Renault	52,103.2	---	---	---
Volvo	35,091.0	---	---	---
Mazda Motor	27,764.7	Changan Ford Mazda	2006.3	50:35:15
		FAW Mazda	2007.1	70:30
Suzuki Motor	27,048.1	Changan Suzuki	1993.6	65:35
Mitsubishi Motors	18,833.6	South East Motor ^{*5}	2006.4	34:33:32

*1: Its predecessor was Tianjin Toyota Motor Co., Ltd. established in 2000.

*2: Shareholder composition: Guangzhou Automobile Plant (46% stake), Peugeot (22% stake), CITIC (20% stake), the National Bank of Paris (4% stake), the International Finance Corporation (8%) . Because of serious losses in 1997, the joint venture relationship among the above shareholders was lifted.

*3: In the company, the Dongfeng accounts for 31.9%, PSA Group 25.6%, Citroen 3.2%, Peugeot 3.2%, BNP Paribas 0.5%, French Bank Societe Generale 2.1%, State Development Bank 16.7%, and Oriental Asset Management Corporation 16.7%.

*4: In December, 2007 the joint venture relationship between Fiat and Nanjing Automobile Company was lifted.

*5: The joint venture is set up by China's Fujian Automobile Industry Corporation, Taiwan's China Motor, and Japan's Mitsubishi Motors.

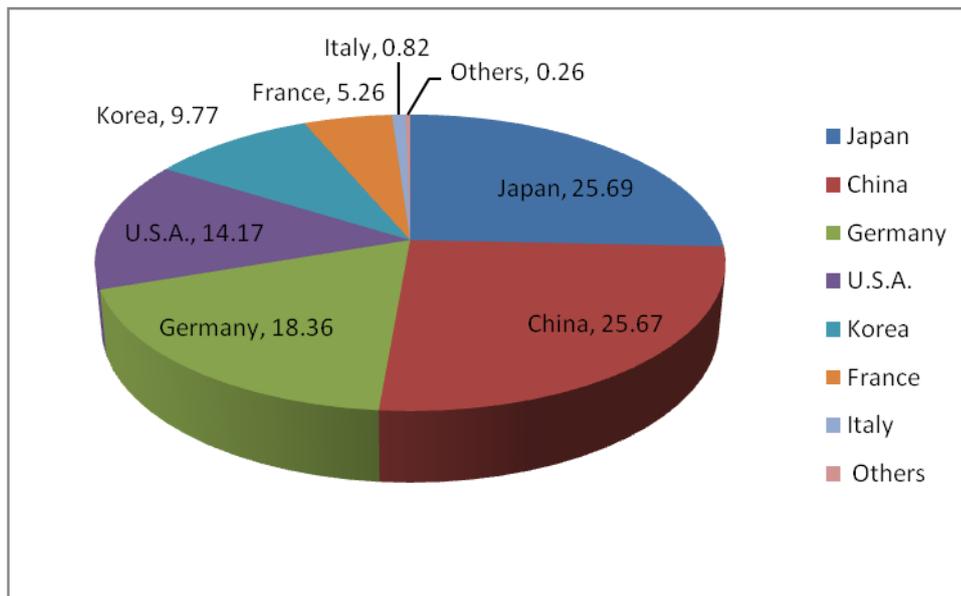
*6: The sales data were sourced from 2007 world's top 500 enterprises rankings of *Fortune*.

After learning the lessons of Peugeot's failures in China in an earlier time (the withdrawal of Guangzhou Peugeot and the operation difficulties of Dongfeng Peugeot Citroen) and due to the improvement of China's policy environment, the foreign auto enterprises that entered China later mainly adopted the 50:50 share arrangement. Furthermore, a majority of foreign auto enterprises have set up two joint ventures in China in order to take advantage of China's local preferential policies and relevant resources of China's domestic auto manufacturers to the greatest extent. The present China's car market is not different from the "Expo of World Cars". China's state-owned automobile enterprises can be classified into three categories.

The first category include some traditional state-owned automobile enterprises re[resentated by FAW Group, SAIC, Dongfeng Group, and Beijing Auto Group. Such enterprises, with long history of auto production, relatively rich production experience and sound ability of market operation, tend to enter joint-venture relationship with foreign partners for car manufacturing. For example, the FAW Group has established joint ventures respectively with Volkswagen, Toyota and Mazda. The second category involves those enterprises shifted from military to civilian purposes represented by Chang'an Automobile, Hafei Motor and Changhe Car. Such enterprises, strong in production base, are unique products during China's economic transformation process. However, due to some reasons at the transition period, they mostly started from the manufacturing of mini-vans before entering the car market. The third category indicates the newly-emerging state-owned auto enterprises represented by Chery, Brilliance, GAIG (Guangzhou Automobile Industrial Group), Fujian Motor Group. Such enterprises have little or no experience in car production alone but their evident late-developing advantage has made them the strong competitive forces that cannot be esteemed lightly. Especially the Chery Automobile established in 1997 had the annual sales of 321,500 in 2007, ranking the fourth among car companies. With its strong competitiveness, it set a good example as well as provided valuable reference experience for the development of local Chinese car companies. In the Chinese passenger vehicle market, there is the third kind of competition strength represented by some private enterprises like Geely Group, BYD, and Lifan. Since its entry to passenger vehicle field in 1997, Geely has obtained fast growth with its flexible business mechanism and sustained independent innovation. It ranked the 8th among the top 10 domestic car manufacturers with the sales of 219,500 in 2007. As a strong manufacturer of lithium batteries, BYD is expected to occupy a favorable position in the development of hybrid electric vehicles. As a manufacturer of motorcycles, Lifan has a rich experience in international operation and production.

Thanks to the efforts of Chinese domestic auto enterprises, our car manufacturers have not only impacted by The market shares of foreign enterprises in 2006 are as shown in Figure 1. It should be particularly noted that the market share of Japanese enterprises surged to 25.69% in 2006 from 15% in 2001, surpassing Germany and becoming the "biggest winner" in China's car market.

Figure 1 The market shares of foreign enterprises in 2006 (%)



Source: Website of CAAM(China Association of Automobile Manufacture).

3. Late-developing advantage of China's car industry

The US economic historian Gerschenkron founded the theory of “late-developing advantage” in 1962 based on his summary on the successful experience of such countries as Germany and Italy in catching up with advanced countries in economy. The theory was later developed by the US economist Levy, Brezis, and Paul Krugman, etc.

The late-developing advantage is a special favorable condition due to the status of some countries with late development. It does not exist in those countries with early development, nor can be created by the late-developing countries with their own efforts but absolutely coexists with the relative backwardness of the economy in those countries, i.e. an advantage from the backwardness itself. In contrast with early development, late development mainly involves the time dimensions. Tension may be produced between the economic development and the reality of stagnation in those comparatively backward countries, which will further form the social pressure and stimulate innovation system to promote the local alternatives to fill the lack of prerequisites. The backward countries can only creatively choose a development path different from the early-developing countries by absorbing the successful experience or learning the failure lessons. Technology introduction is a primary factor to guarantee the high-speed development of those countries to be industrialized. The late-developing countries can save costs and time in scientific research for the rapid training of qualified personnel and the for promotion of industrialization at a high starting point by introducing the technology and equipment from advanced countries. Meanwhile, the introduction of funds can also solve the problem of fund shortage in the industrialization process of the late-developing countries.

As far as China's car industry is concerned, the advantage of late development is mainly reflected in the following aspects:

First, the advantage in choice. For the early-developing countries, the evolution of industrial structure accompanied by the economic growth is the result of natural selection while it could become a conscious goal for the late-developing states who could save a lot of exploration and setbacks. For example, how to overcome the oil's impact on the development of car industry? The auto companies from advanced countries have made a great deal of exploration and research for the development of vehicles driven by new power and thus cost massive time and funds. However, the late-developing China's car industry can make a favorable choice according to the development trend of passenger vehicle industry.

Second, the advantage in approach. It is much easier to absorb and introduce the technological development achievement from the early-developing countries than make exploration and invention from scratch. In fact, Japan, the present car world power, had introduced a lot of technology achievements from the US and Germany during its growing period. It can save the intermediate process and time required by the technological development for China's car industry so as to realize the leap-up technological progress and shorten the technological gap between the early-developing countries and us. In particular, despite the lack of funds and technology in the car industry, China has advantages in labor cost and domestic market which are the key conditions to absorb the capital and technology of the early-developing countries.

Third, the advantage in learning. It is the most important among so many late-developing advantages. It is an important learning process to introduce, digest and renovate the advanced technology of the early-developing countries. Learning cannot only effectively shorten the technological gap between the early-developing and late-developing countries but also save the time and fund required by exploration research. The complexity of car products offers a huge space and possibility for the learning of China's car industry.

4. Competitive advantages of China's car manufacturers

During the 1980s, American scholar Michael E. Porter discussed the sources of enterprise competitive advantages and national competitive advantages respectively in his two books *National Competitive Advantage* and *Competitive Advantage*.

Porter held that there were four key factors determining the national competitive advantages, namely, production factor, enterprise strategy, enterprise structure, industry competition, related and supporting industries, and demand conditions. These various competitive advantages resulted in the four phases of national economic development, i.e. production factor-driven phase, investment-driven phase, innovation-driven phase and wealth-driven phase.

The above analysis shows that China's car industry has been equipped with the other three factors than the related and supporting industry. Therefore, a huge development space for China's car manufactures can be forecast because of the support of the "three advantageous factors" even though our manufacturers are not

able to compete with the world powers in enterprise scale and R&D capacity, etc.

About the source of enterprise competitive advantages, Porter considered it nothing else but the variation and the low cost.

The variation requires enterprises to be able to provide their customers with something unique and valuable. Moreover, a variation manufacture has to explore a variation business mode that can make the price premiums greater than the additional cost for variation. It could be the product itself (appearance and performance, etc.), sales delivery system (perfect after-sales service system including the provision of spare parts) and marketing channels that lay a foundation for the car manufacturers to establish a variation business mode. The complexity of car products provides the car manufacturers with a comparatively large space of choice for the implementation of variation. However, the enterprises implementing the variation should not only have a strong R&D capacity and brand appeal but also undertake the risk that the variation will be copied or not be accepted. But it 's evident that China's car enterprises have no such abilities as beginners.

As a result, low cost will be the inevitable choice for China's car manufacturers. Although low cost does not necessarily mean low price in the theory of enterprise strategic management, it is the basis of low price in the business practices. It should be feasible and rational choice for China's car manufacturers to enter the market with low-end products by fully exerting their advantages of late development and of local production factors and demand conditions before watching for an opportunity to make constant expansion. Chery and Geely are the best cases in point. Brilliance that wished to enter the medium- and high-end market with BMW technology ultimately had no choice but to rely on "Junjie" --- a model of more than 80,000 yuan to reverse its business decline, which also proved from the negative side the inevitability of starting from low-end products. In fact, car production is an industry with very obvious network effect and experience curve effect. In its initial development, it is essential to create and upgrade brand through the expansion of quantity with low-end products.

5. Conclusion

The advance of global economic integration, the wide application of high-tech technology represented by IT and the popularization of people's environmental awareness, are changing the modern automobile industry, which offers a unique opportunity for the development of China's automobile industry (including the car industry). The global auto powers flood in Chinese market, giving China's auto enterprises a perfect opportunity to learn from them. China's auto enterprises can surely gain a share in the world auto industry provided that they observe the situation in a calm, objective and far-sighted way.