

The Chinese Automotive Industry in 2016

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Foreword

In the last 30 years, China has shifted from a centrally planned to market-based economy and has experienced rapid economic and social development. Particularly since China's admission to the WTO in 2001, China's economy has grown rapidly and has attracted worldwide attention. China is now the second largest economy in terms of GDP and is also a leading producer and consumer of many different product categories. Automobiles are a good case in point.

In the last few years, China's economy has been adapting to the so-called new normal conditions, but its auto market has grown more vigorously and is expected to maintain stronger growth powered by SUV and electric vehicle sales. China outstripped the United States in 2010 to become the world's largest market for new vehicles. The penetration rate of the auto market in China is still quite low and offers great potential for the future, in spite of the limitations imposed on some cities. Urbanization and the emerging middle class will drive the development of China's auto industry. New technologies, such as the development of the electric vehicle, strongly supported by the Chinese government, can be developed much faster in China and have a greater impact than in other parts of the world.

As discussed in the foreword of the previous edition of this book by then CEIBS President Professor Zhu Xiaoming, Industry 4.0 presents a golden opportunity for smart transportation and China's auto industry. The concept, which originated in Germany, aims to improve the competitiveness of industries using new manufacturing and digital technologies and enable them to become the first movers in this new industrial revolution.

In October 2015, during German Chancellor Angela Merkel's visit to China, Premier Li Keqiang agreed with her on the need to strengthen coordination of economic strategies, given that China is pursuing similar programs to integrate conventional industry and information technology.

Opportunities and challenges go together. Competition among players in the Chinese auto industry has become much fiercer in domestic and global markets. Although there are still gaps between Chinese and leading international automakers, they are steadily being reduced each year and Chinese automakers' learning ability, marketing capability, flexibility and determination to join the global competition certainly cannot be underestimated.

Professor Jaume Ribera has been teaching at CEIBS for almost 30 years and has observed the Chinese market as a foreign expert. The rest of the authors, experts from IESE, CEDARS and Roland Berger, join Prof. Ribera in offering their insightful observations and sharing their knowledge of the industry.

If you're interested in knowing what's happening in the auto industry in China, this book is worth reading. It provides foreign readers with insights into China's auto industry and also highlights many great learning opportunities for Chinese automakers.

Prof. Li Mingjun

President and Professor of Management, CEIBS



Foreword

More than 30 years ago, I started organizing one of first major auto industry events at IESE Business School with the support and now with the leadership of Marc Sachon. In 1994, I invited a Chinese businessman in the industry, Mr. Ma Yue, the President of Dongfeng Motor Group, to the event. But it wasn't because I had grasped the impact China would have on the industry. It was more because China had started manufacturing automobiles at a steady rate and it was necessary to see this as an opportunity and study it.

The automotive industry is one of the most important drivers of the economy. It creates jobs, stimulates technological development and has a positive impact on other sectors of the economy such as raw materials, logistics, finance and consulting. But the auto industry is also full of difficulties because it is cyclical in nature and so fiercely competitive. Parts of its value chain are highly capital intensive and the entire industry is often shaken by major upheavals that weed out the players with slow reaction times.

A quick look at the Chinese industry shows that these difficulties have caused many companies to merge, sell out or be taken over. Examples include companies such as Nissan-Renault, Fiat Chrysler (Fiat is now made up of Alfa Romeo and Lancia, which were originally independent), Geely-Volvo and many more.

Another relevant aspect of the Chinese auto industry is its market development, which has led China to become the world's leading market in terms of the number of vehicles. But there are other market developments involving consumers that will determine how the industry develops in important areas such as the purchasing decision (with potential buyers visiting dealerships, shopping online and doing a combination of the two), the kind of vehicle (with a growing choice of conventional, electric, hybrid and soon self-driven vehicles), and the options of buying, sharing and renting. Global use of information and communication technologies makes these options more accessible in a society that is evolving rapidly, especially in countries such as China, which has experienced rapid, sustained changes in its economic, cultural and social progress.

Marc Sachon and Jaime Ribera both have extensive knowledge of the automotive industry and China. Since the 1980s, Jaime Ribera has been a member of the team that was able to launch CEIBS, an outstanding business school in China. CEIBS now boasts contacts all over the world, such as its strong alliances with IESE and Harvard Business School. Marc Sachon honed in on the automotive industry several years ago as one of his chief areas of academic and professional interest and he also accepted the responsibility of organizing IESE's annual Automotive Industry Meeting, which addresses the challenges facing the industry and the most relevant topics for managers.

This study on the auto industry in China by Marc Sachon and Jaime Ribera is a highly valuable contribution by people with the know-how and experience to do it.

I can only express my appreciation for a job well done.

Prof. Pedro Nueno

President and Professor of Entrepreneurship, CEIBS
Professor in the Department of Entrepreneurship, IESE



China Europe International Business School



The China Europe International Business School (CEIBS) is a non-profit joint venture established in 1994 with the financial and political support of the Chinese government and the European Commission. Ranked eighth worldwide (MBA ranking by *Financial Times*, 2009) and first in Asia for eight consecutive years, CEIBS is the leading center in the region for organizing industry forums that bring together industry leaders, senior government officials and renowned academics in an open, neutral environment to discuss and debate the hot issues facing China and the world.

Website: www.Ceibs.edu

CEDARS



CEDARS is a provider of market intelligence, consulting services and solutions on the Chinese automotive industry. We are an ISO 9001:2015 certified company by SGS.

CEDARS' Unique Features:

1. Chinese local brands
2. Export market oriented
3. Independent (only serving overseas distributors and the like)
4. Solutions (China agent; auto parts; RORO shipping)

CEDARS' Services:

- Providing leading consulting services in the Chinese automotive industry
- Recommending the best Chinese brands and liaising for overseas distributors
- Building long-term partnerships through integrity in business practice

Website: www.cedars.hk

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IESE Business School



IESE Business School, the graduate school of the University of Navarra, with over 50 years of history, has been at the forefront of management education and research, developing and inspiring business leaders who strive to make a deep, positive and lasting impact on the people, companies and society they serve.

The IESE faculty is made up of over 100 full-time professors and around 70 external collaborators who represent almost 30 countries and hold PhDs from the world's top business schools. Their dedication to teaching, the impact of their research and their experience working with companies around the world are central to IESE's continued success in providing excellence in management education. IESE pioneered automotive industry research in Europe through its annual Automotive Industry Meetings (now preparing the 30th edition), where researchers and industry executives discuss the future and changing trends in this exciting sector.

IESE programs are ranked among the top in the world in *Financial Times*, *Economist* and *BusinessWeek* lists. IESE alumni make up an international community of more than 40,000 business and non-profit professionals and entrepreneurs spanning over 100 countries. Every year the Alumni Association organizes hundreds of education sessions and reunions that create links, enable networking and make IESE a valuable, ongoing experience.

Website: www.iese.edu

PORT OF BARCELONA



The Port of Barcelona is a Southern European gateway that provides an extensive network of logistics and transport services to connect international trade routes with the main European and Mediterranean markets and North Africa.

In the automotive industry, the Port of Barcelona is positioned to be Europe's southern hub. The Port's terminals are the biggest car facilities on the Mediterranean and are served by a well-trained and motivated workforce and management. The Port's unique rail connection to Europe and strategic geographic location make it suitable for distributing cars throughout Europe and North Africa and for shipping exports from Southern and Central Europe overseas. Spain is the second biggest carmaker on the European market.

The Port enjoys good sea connectivity and is making progress towards establishing regular services with the Far East to avoid the extra sailing days involved in taking vessels to Northern Europe. The Port's aim is to consolidate itself as the Southern European hub for Asian markets. The Port of Barcelona is the sponsor of the Chair of Logistics at CEIBS, which was created in December 2000 with the goal of promoting relations between Chinese and European researchers and practitioners, and fostering research on logistics aimed at top-management decision making. Due to its origins and location, the Chair has its main focus on companies in Europe and China with trade in the other region.

Website of the Port of Barcelona: <http://www.portdebarcelona.cat>

Website of the Chair of Logistics: <http://www.ceibs.edu/barcelona>

Roland Berger



Founded in 1967, Roland Berger is one of the world's leading strategy consultancies. With 50 offices in 36 countries and over 2,400 employees, the company has successful operations in all major international markets and has built its expertise on its extensive experience working with clients for over 40 years.

Roland Berger supports leading international corporations, non-profit organizations and public institutions in all management issues. The company is based on global Competence Centers organized along functional and industry lines. This allows the company to offer customized, creative solutions devised by our experts at different Competence Centers.

Providing support in the implementation phase is particularly important to Roland Berger, the only consulting firm of European origin among the global Top 5. All Berger employees strive to adhere to our three core values: excellence, entrepreneurship and empathy.

The Chinese market is a key pillar of Roland Berger's international expansion. Since its first project in China in 1983, the consultancy has grown rapidly: the five Chinese offices (Shanghai, Beijing, Hong Kong, Taipei and Guangzhou) currently have 360 consultants dedicated to working extensively with both leading Chinese and international companies, and helping them successfully master their unique challenges.

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Junyi Zhang joined Roland Berger in 2004 and focuses on the automotive industry and related value chain business. Junyi is responsible for OEM operation topics, including supplier business, IPE (innovation, product, engineering), e-mobility, and investor support-related topics in Greater China. He has a broad client portfolio that includes many SOEs, MNCs, and listed companies.



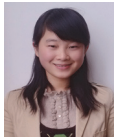
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I. EXECUTIVE SUMMARY AND METHODOLOGY

▪ Macro Analysis of the Finished Vehicle Industry

Industry Development

The two main features of the development of the Chinese automotive industry are:

- High speed. The industry is very young compared to the industries in the developed market, as it has only been operating in earnest for the last 30 years. However, it has a high speed of development and is quickly catching up to the auto industries in more developed countries.
- High long-term growth with an uneven short-term sales performance. In 1999, China was producing fewer than two million vehicles, whereas 16 years later, production reached 24.5 million units. The average growth rate was much higher between 2006 and 2010 than between 2011 and 2015.

The Future of the Industry

China is currently one of the world's three largest auto producers, along with the United States and Japan. China has not been as affected by the global recession as Western countries. According to the China Association of Automobile Manufacturers (CAAM), sales reached 24 million units in 2015 and more autos were sold in China than in the United States or Japan. According to CAAM estimates, Chinese auto sales will increase by 6% to 26 million units in 2016.

The auto industry's potential in China is exceptional due to the growth of GDP per capita as well as a burgeoning middle class. According to the International Monetary Fund (IMF), there were 600 million automobiles in the world in 2005 and there will be 2.95 billion by 2050. The IMF expects there to be more autos in China than in the United States by 2030 and for there to be as many autos in China in 2050 as there are in the entire world today.

However, we should keep in mind that the automotive industry in China is not a mature one. The vehicle-to-population ratio (an indicator used to measure industry maturity) is much lower than in the United States, Europe and Japan. Furthermore, after-sales service and other services such as financing, service centers and the used auto market are still underdeveloped.

Exports

Chinese vehicle exports have been mired in a downtrend since 2013 due to geopolitical instability in countries such as Iraq and Ukraine, economic hardships caused by weak commodity prices in Chile and Brazil, higher import tariffs, quotas and other trade barriers in Algeria and Brazil, and worries about Chinese vehicle quality and safety.

The ratio of exports to domestic sales is still very low, around 3% in 2015¹. The main region receiving exports of Chinese autos in 2015 was Asia (excluding the Middle East), which accounted for 28% of all exports. South America was the number two importer with a 26% share.

In order to be sold in Europe and the United States, autos made in China have to pass the homologation process for those markets. This represents a major difficulty for Chinese companies (most Chinese vehicles do not meet the required safety and quality standards). Besides mandatory approval from the European Union, autos imported to Europe need a minimum score on the Euro NCAP². Otherwise, the market will reject them. There are homologation regulations in all countries, but the European Union and the United States are the most restrictive markets.

▪ Micro Analysis of the Finished Vehicle Industry

There are 70 registered automobile manufacturers in China. Chinese provinces have a high level of independence and most of them are the size of many European countries. Almost all of these provinces have seen the creation of at least one automobile manufacturer and the provincial or local government has protected one or several manufacturers.

- **Joint ventures (JVs) are among the largest Chinese companies and multinationals (MNCs).** MNCs are not allowed to produce autos in China unless they form a JV with a Chinese company. The MNC cannot have more than 50% of equity. MNCs can only form passenger auto JVs with a maximum of two Chinese companies. They are also allowed to build two commercial vehicle JVs in China. For example, SAIC Group has partnered with VW and GM in the passenger auto sector, with Iveco in the truck sector and with the Volvo Group in the bus sector.
- **Chinese companies can be state-owned**, i.e., supported by the government, such as SAIC, FAW, DFM and BAIC, **or can be privately owned**, most of which are younger and independent, such as Geely, BYD and Great Wall.

The main objective of automobile manufacturers in China is to gain market share on the domestic market. China is the most attractive market for passenger cars in particular (thanks to growing private ownership). However, some Chinese companies are also making great efforts to export abroad. They are mostly private companies such as Great Wall and Geely.

The three largest Chinese group companies, SAIC, FAW and DFM, have a long history on the Chinese market. They consequently account for over 50% of market share in China. All three are supported by the government and are mainly focused on the domestic market, although DFM also exports a significant number, as discussed below. They have a good dealer network and their main objective is to develop high- and medium-end autos for the Chinese market.

▪ Analysis of Chinese Brands

While the Chinese automotive market is booming, Chinese local brands are not performing well. The total market share of Chinese brands dropped from 60% in 2010 to 49% in 2015. The situation is even worse for the passenger vehicle market, which only accounted for a 43% share in 2015. Because Chinese brands lack core technologies and good reputations, they mainly compete in low-end segments and low-tier cities, leading to narrow profit margins. However, some of them stand out from the pack through hefty R&D investments and aggressive acquisitions.

¹ Based on CAAM data.

² Euro NCAP is an organization that provides an independent assessment of the safety performance of some of the most popular cars sold in Europe.

A few private brands have even demonstrated the ability to take on global rivals thanks to their strong entrepreneurship and strategic market positioning.

The representative Chinese brands in each field are Geely in the passenger vehicle segment, Sinotruk in the truck segment and Yutong in the bus segment.

▪ Analysis of the Parts Industry

The parts industry in China has also experienced profound development. Since the mid-1990s, the Chinese parts industry has gone through technical improvements in terms of production capability, product diversification and management skills. It has also attracted world companies to invest in the Chinese parts market, which is competing with local companies in various parts segments. Experts expect the parts industry to play an increasingly important role in the whole automotive industrial chain.

Yearly sales revenues from parts steadily increased from 2001 to 2015, when they reached 3.21 trillion RMB, almost 19 times the 2001 figure. This is partly attributed to government support and Chinese economic development, and partly to the development of the automotive market and aftermarket in China.

Parts suppliers on the Chinese market are under huge pressure due to competition for market share. At the same time, their profitability is squeezed to minimum levels because automotive OEMs are eager to transfer their own cost pressure to their parts suppliers. The challenges are even greater for Chinese local parts suppliers, which hardly ever receive large orders from OEMs because they lack sufficient technology and quality.

This is a common phenomenon in most core parts industries: Chinese brands lack the core technology and quality that would allow them to compete with foreign parts suppliers. This has led to the dominant position of foreign brands on the Chinese parts market and has left little market share for Chinese players.

▪ Analysis of Electric Vehicles

By 2015, China had sold 450,000 cars and almost fulfilled its 2012 plan to achieve cumulative production and sales of 500,000 NEVs by 2015. Experts say that cumulative production and sales of five million NEVs by 2020 is also achievable. This amazing boom of the electric vehicle industry is due to the government's commitment to helping the industry grow. By April 2015, the government had invested 37 billion RMB in the industry.

▪ Strategic Shifts Towards E-mobility

Today's economies are dramatically changing, triggered by development in emerging markets, the accelerated rise of new technologies, the implementation of sustainability policies, and changing consumer preferences regarding ownership. Digitization and new business models have revolutionized other industries and the automotive industry will be no exception. For the auto sector, these forces are giving rise to four disruptive technology-driven trends: diverse mobility, autonomous driving, electrification and connectivity.

■ Methodology

The main objective of this report was to gather information on the vehicle market and analyze the situation. The first phase consisted of gathering information from secondary research. Our main sources of secondary research were:

- CEDARS database
- China Association of Automobile Manufacturers (CAAM)
- China Commerce Yearbooks
- China Main Customs Administration
- China Passenger Car Association
- Chinese Ministry of Public Security
- InterChina Analysis³
- KPMG⁴
- Roland Berger

In China, data may vary significantly depending on the source and extensive analysis is therefore required to determine which source is more reliable. In this report, we have used data provided by the CAAM and other official sources. The most elaborate data were processed by the authors.

CAAM references to sales in this report refer to delivery from the manufacturer, not retail sales.

During the second phase, several car manufacturers and industry specialists were interviewed. Through the interviews, the information from our secondary research was validated and we acquired great insight from different players in the industry about the current situation and prospects for the future.

■ Note

The annexes form a very important part of this report. In order to understand this report, it is important to be aware of the complexity of the automotive industry in China.

³ Boutique management consultancy for companies doing business in China.

⁴ Global network of professional firms providing audit, tax and advisory services.