



Opinions

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Will China Become a New Leader in the Auto Industry?



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Over the past 30 years, China has rapidly developed into a major producer in the steel, shipbuilding, and mobile phone industries. However, despite the full support of the government, China has yet to reach the world level in the automobile industry. Although the market share of Chinese local brands has increased considerably due to the promotion of some domestic companies such as Chery, Geely and BYD, various joint ventures and foreign companies (GM, Volkswagen, Hyundai Kia, Nissan, etc.) are still leading the Chinese and global markets. It is therefore an interesting issue whether the Chinese auto industry will be able to successfully leap forward or remain at a limited stage in the future.¹

With regard to the issue, new changes are recently emerging in the industry. The electrification of automobiles is under way as IT technology is applied to the automobile. The electrification of automobiles refers to

¹ PARK Junki, YOON Jongseok, LEE Hyun Tai (2017), "Recent Development and Prospect of China's Electric Vehicle Industry: Focused on China's Industry Policy," The Journal of Contemporary China Studies, Vol. 18, No. 4: 101-140. (in Korean)



the diffusion of electric vehicles replacing an internal combustion engine, which relies on fossil fuels, with an automobile power system using electric energy. The Chinese auto industry is also changing with the emergence of this technology paradigm. In the first half of 2015, China emerged as the world's No. 1 electric vehicle market, with electric vehicle production exceeding 70,000 units. BYD, a Shenzhen-based company, has grown into a company with vertical integration from battery to car. The Chinese government is striving to develop electric vehicles not only for the development of the automobile industry but also to solve its energy and environmental problems. The government is also encouraging Chinese local companies to rapidly internalize key technologies such as batteries through cooperation with global companies and auto component companies, gaining a lesson from the previous failure of Chinese local companies to accumulate technological capabilities in internal combustion engines. Thus, although China has had limited success in its technological development and market securing efforts for internal combustion engine vehicles, there is a possibility that it will gain the lead of the automobile industry with the proliferation of electric vehicles.

However, considering the special characteristics of the automobile industry with a long technology cycle, it will still not be easy for China to take the lead in the automobile industry despite this technological paradigm shift in the near future. First, the popularization of electric vehicles is progressing very slowly compared to IT products such as smart phones. That is why it is easy for traditional automotive powers to maintain the initiative. Second, the problem of establishing a charging infrastructure, which is very important in the era of electric vehicles, also makes it difficult to rapidly increase market demand. In fact, in China, the lack of charging stations for the growing number of electric vehicles has become a big problem. As of the first half of 2014, the cumulative sales volume of electric vehicles is about 60,000 units while the number of chargers is only about 25,000. In the Energy Conservation and New Energy Automotive Industry Development Plan (2012-2020), the Chinese government announced plans to significantly expand its chargers by 2020 in line with electric vehicle production. However, the expansion of the charging infrastructure requires tremendous financial resources. Huatai Securities announced that it needs at least 435 billion yuan (81 trillion won) to expand the charging infrastructure for the electric car era. In addition, China's local technology competitiveness has not yet reached the level of Tesla, other global car companies, and battery companies in Korea and Japan. Until now, Chinese local enterprises have enjoyed various government policy support measures such as subsidies, but as the market gradually opens up, it is getting harder for the government to provide support. Therefore, if competition intensifies in the near future, Chinese consumers are likely to adopt a global

brand of electric cars with technological and brand advantages. The fact that it takes a significant amount of time to accumulate brand value also poses a constraint on Chinese electric cars and battery companies.

Despite these limitations, however, it is also possible that China will take a leap forward in the automobile industry. The emergence of smart cars such as autonomous vehicles or connected cars, and innovations in business models such as the proliferation of shared economies, are converging with the development of electric vehicles, resulting in new technological paradigm shifts and changes in market demand conditions. For example, BYD has been rapidly accumulating technologies related to smart driving in cooperation with IT companies such as Baidu, LeTV, and ZTE in the areas of artificial intelligence and communication technologies. With regard to the shared economy, a surge in the use of electric vehicles in the form of rental or vehicle sharing has led consumers to reduce the cost of using electric vehicles, accumulate experience, and eventually increase demand for electric vehicles. This new ecosystem in the automobile industry is expected to drive further development for China's electric cars and its automobile industry. Therefore, the great development of the Chinese automobile industry is likely to come from a new paradigm shift prompted by electric cars and a new ecosystem that combines automobiles, IT and the shared economy. In the end, how well Chinese local companies make use of this new environment will ultimately determine whether the Chinese auto industry can lead the global auto industry in the future. **KIEP**