



China's Electric Vehicle Industry

July 2020

The Market

China has the largest EV market in the world, accounting for approximately 45% of the world's EV ownership, while Europe and the US came in second and third at 24% and 22%, respectively. China uses the term New Energy Vehicle (NEV), which includes EVs as well as hybrids and fuel cell vehicles, but in practice is mostly EVs. In 2019, there were 1.2 million EVs sold in China, of which 972,000 were pure electric vehicles.

China still has a low EV market penetration rate, ranking sixth globally, with only 4.44% of all new vehicle sales being EVs. Despite its size, China's EV sector is extremely domestically-concentrated; although half of the top ten best-selling EV makers worldwide are Chinese, China exported only 4,700 total vehicles in 2019.

Chinese EVs use China's own GB/T standard plugs to charge, but the China Electricity Council has been working with CHAdeMo, the Japanese charging standard body, on a new cross-compatible standard called Chaoji. The new standard was announced in April 2020, and commercial vehicles with the standard are expected to hit the market as soon as 2021.

The Players

The top ten EV makers in China in 2018 by number of vehicles sold are on the right. Collectively, these companies sold ³/₄ of the EVs purchased in China that year. All of the above, except for BYD, Geely, and Hawtai, are State-Owned Enterprises.

Because China produces the majority of the world's EV batteries and imposes tariffs on imports, a number of foreign companies have set up joint ventures (JVs) in China to produce EVs. For decades, forming a JV was a legal requirement, although in recent years China has opened up. Tesla became the first foreign EV brand to set up its own wholly-owned production line, but some companies still see value in continuing to invest in their JVs, such as BMW and its partnership with Great Wall Motors.

Key Statistics

45%

China's share of global EVs on the road

40.85%

2015-2019 EV sales volume CAGR

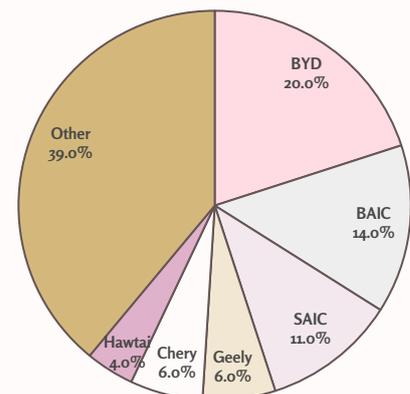
400+

Domestic competitors in China's EV market

Tesla Model 3

Best selling EV in China in H1 2020

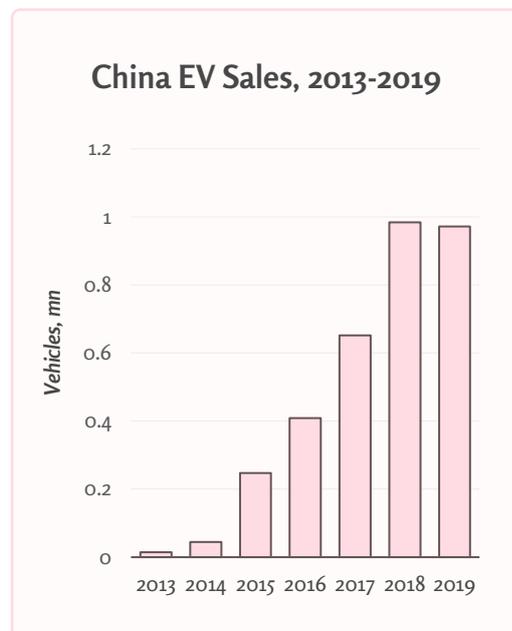
Sales Vol. by Manufacturer, 2018



Industry Drivers

The EV sector in China has benefitted greatly from government support, primarily through consumer subsidies but also through various non-monetary incentives such as preferential license plates. The highest subsidy an EV could receive in 2013 was CNY 60,000 (US\$9,756), but the subsidies have been gradually reduced, and in 2020 the highest subsidy an EV can receive is CNY 22,500 (US\$3,177). The subsidy program was originally scheduled to expire in 2020, but in April 2020 the government extended the subsidy program through 2022.

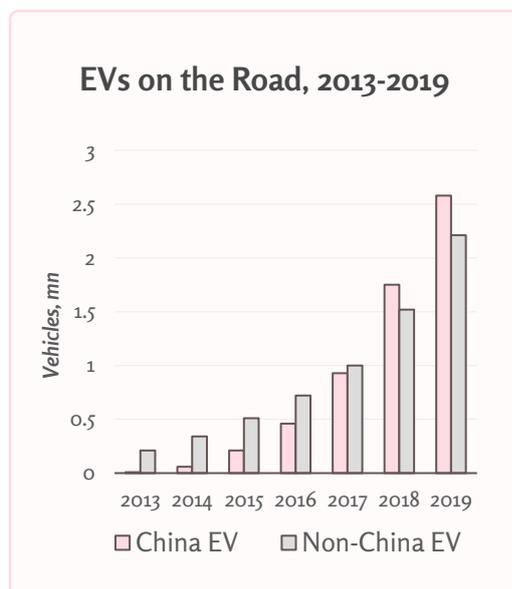
Going forward, as the government reduces subsidies, the industry will also benefit from low labor costs and the fact that China produces the majority of the world's lithium-ion batteries. China's position as a lithium-ion battery producer is partly due to China being the third largest producer of lithium.



Opening Up

Foreign companies have traditionally needed JVs to operate in China, but in 2018 China issued a plan in which foreign automakers can set up shop in China as a wholly-owned foreign enterprise, first for EVs in 2018, then commercial vehicles in 2020, and passenger vehicles in 2022. China has eased up on other protectionist measures as well, as regulators scrapped a list of approved battery manufacturers for EVs in June 2019 that had largely limited EV subsidies to domestically-produced components.

Liberalization has shaken up the market; from 2018 to 2019 the number of units of EVs sold in China by foreign brands (JVs and wholly-owned enterprises) more than doubled to 196,000. This includes the domestically-produced Tesla Model 3, which was the best selling EV in China in the first half of 2020.



The Future

With its massive market and incredible economies of scale with battery technology, China's electric vehicle market has plenty of room to grow, though much depends on the next few years. The industry is ripe for disruption as it consolidates in the wake of COVID-19, subsidies are withdrawn, and domestic EVs compete with Tesla.

About The China Guys

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About the Author

Cory Fitz served in the Military Intelligence branch of the US Army where he learned Korean and Mandarin. More recently, he graduated from SOAS, University of London with an MA in Chinese Studies. He is passionate about new technologies in East Asia, particularly in transportation, and he writes the newsletter China NewSpace, which tracks China's private space sector.

Contact Information

biz@thechinaguys.com

Email

www.thechinaguys.com

Website