Chinese Vehicle Exports: Electrified

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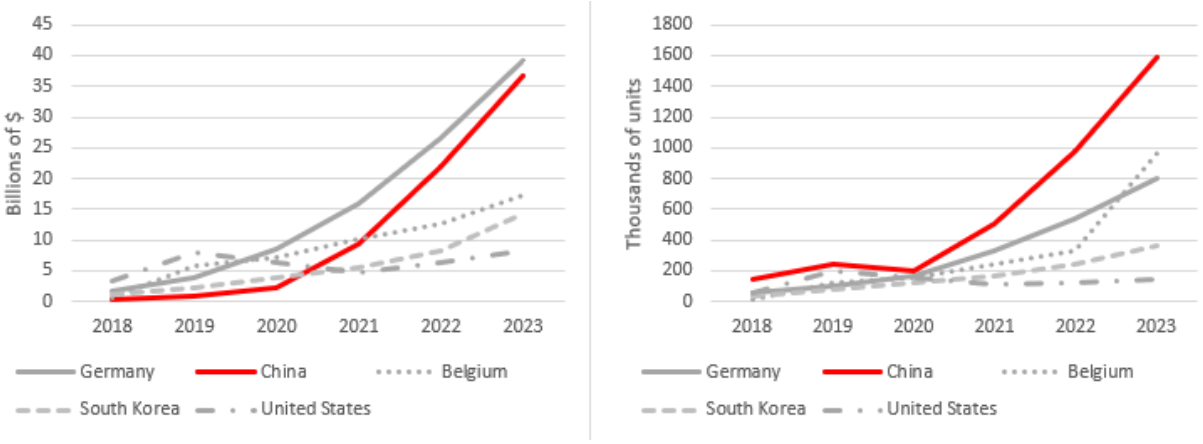
From 2018 to 2023 Chinese electric vehicle (EV) exports increased rapidly in terms of quantity and value. It appears that Chinese EV exports are also improving in quality, with higher unit prices and a greater share of exports going to high-income countries. This growth has been driven by a loosening of joint venture (JV) requirements for EV manufacturers by the Chinese government and the development of higher quality EVs by domestic Chinese manufacturers. Chinese EV exports to the United States did not increase significantly during 2018–23, but competition in third-country markets negatively affected U.S. EV exports during this period.

Chinese EV Exports Are Increasing Rapidly

Chinese EV exports increased 1,016 percent from 2018 to 2023, to nearly 1.6 million EVs exported in 2023 (the largest volume of any exporter). The value increase in Chinese EV exports was even greater, up 12,334 percent from $295 million in 2018 to $36.7 billion in 2023 (figure 1). China has also been the second-largest exporter by value of EVs since 2021.

Figure 1: Value (left) and quantity (right) of global EV exports by country, 2018–23

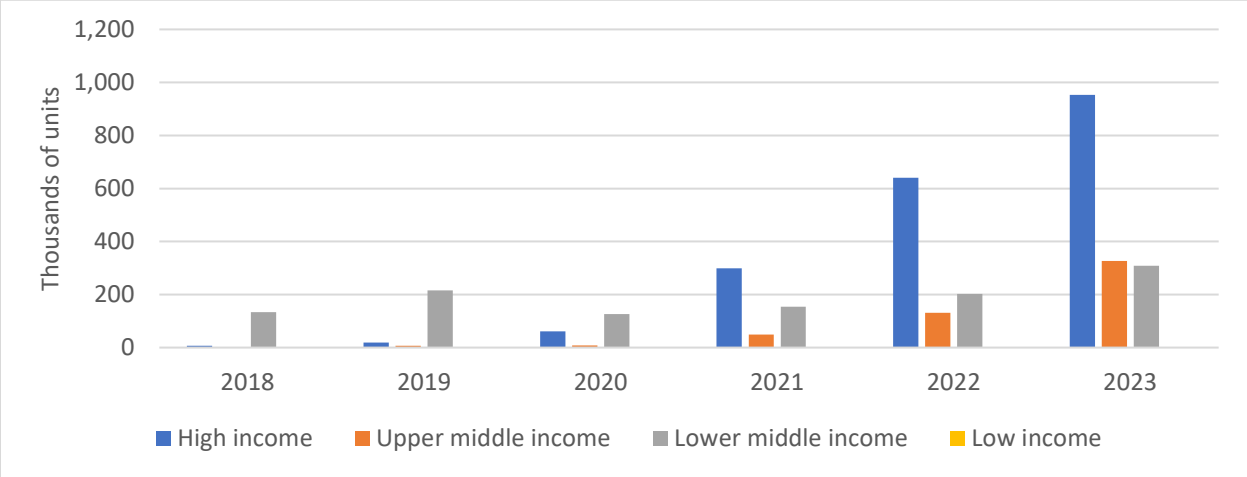


Source: S&P Global Market Intelligence, "HS subheadings included: 8701.24 (electric road-tractors), 8702.40 (electric buses), 8703.80 (electric cars and SUVs), 8704.60 (electric trucks and work vans)," accessed December 7, 2023, and February 15, 2024.

Note: Due to what appears to be an error in South Korean export quantity data, South Korean exports to India are excluded from the quantity figure.

Improvement in the quality (as shown by higher unit prices) of Chinese EVs led to increased Chinese EV exports to higher income countries, which drove the increase in quantity and value of Chinese EV exports. During 2018–23 the average unit value of Chinese EV exports increased from $2,000 to $23,100. Concurrently, high-income countries' share of Chinese EV exports by volume increased from 4.9 percent to 60 percent (figure 2). China's EV exports to low-income countries were relatively stable during this period. Trade data indicate that the vehicles being exported to high-income countries are of significantly higher unit value than those exported to lower-income countries, which implies that they include higher quality vehicles with larger batteries, more technology, more interior space, and safety features.

Figure 2: Number of Chinese EV exports by income level of destination country, 2018–23



Source: S&P Global Market Intelligence, "HS subheadings included: 8701.24, 8702.40, 8703.80, 8704.60," accessed February 15, 2024.

Note: Income designations come from the World Bank. For more see: World Bank Country and Lending Groups.

Reasons for Growth of Chinese EV Exports

The loosening of JV requirements for EV manufacturers and domestic development of globally competitive EVs are key factors to China's EV export growth. In 2018 the Chinese government agreed to allow foreign manufacturers to produce EVs without an equal-share, Chinese JV partner. Under these new rules, established foreign producers began exporting EVs from China. Tesla built a 750,000 unit assembly plant in Shanghai without a JV partner, and BMW and Renault renegotiated with their prior JV partners to produce EVs in new JVs that they controlled. (BMW now owns 75.0 percent of its JV with Brilliance and Renault has 50.1 percent of its JV with Jiangling Motors). All three manufacturers became significant exporters of EVs from China, making up a significant share of high-value Chinese EV exports. Tesla became China's largest EV exporter in 2019. Domestic EV manufacturers, including longstanding Chinese manufacturers (BYD, Ora, MG, and Roewe) and startups (Aiways, Nio, and Xpeng), also improved the quality of their EV offerings and began exporting to the EU.

Effects on United States Industry of Increasing Chinese EV Exports

Since 2018, the U.S. tariff on most EV imports from China has been 27.5 percent (2.5 percent MFN and an additional 25 percent Section 301 tariff). Despite the high tariffs, U.S. EV imports from China increased from $7.2 million to $388.8 million during 2018–23 but were still only two percent of U.S. EV imports. An additional factor holding down Chinese EV exports is that Tesla, the largest seller of EVs in the United States, supplies the United States with EVs produced domestically instead of China. On the other hand, U.S. exports face Chinese competition in third-country markets. For example, Tesla's Chinese EV exports to the EU appear to have displaced U.S. EV exports of that model, which declined from $4.1 billion in 2019 to $538 million in 2022. However, exports of U.S. EVs to the EU bounced back to $2.7 billion in 2023.

Sources: S&P Global Market Intelligence, accessed December 7, 2023; USITC Dataweb/Census, accessed December 7, 2023; Goh, "What Is Driving Chinese EV Exports and Their Price Competitiveness?" September 14, 2023; Webb, "BYD Reigns Atop China's Electric-Vehicle Market," November 29, 2023; NDRC, "外商投资准入特别管理措施 (Negative List for Foreign Investment Access)," 2018; Groupe Renault, "Groupe Renault And JMCG Officially Establish A Joint Venture For Electric Vehicles In China," July 17, 2019; Shirouzu, "BMW To Buy Control Of China Venture In 'New Era' For Foreign Carmakers," October 11, 2018.