

# The Problem With “Overcapacity” in China’s Automotive Industry

*The debate over China’s auto exports is bedeviled by narrow definitions and mis-measurement that risks encouraging the wrong policy response*

John Paul Helveston, Paul Triolo, and Jonas Nahm

The U.S., EU, and Canada have recently imposed steep tariffs on imported Chinese-made electric vehicles (EVs). The justification for these measures is familiar and alarmist: China’s EV industry is producing more cars than it can sell domestically, and this “overcapacity” will flood international markets with low-priced vehicles, overwhelming and ultimately collapsing domestic auto industries. Sounds pretty scary, right?

Of course, the notion that Chinese EVs will quickly dominate all markets without tariff countermeasures vastly oversimplifies consumer behavior and market dynamics, and ignores the realities driving increases in Chinese vehicle exports — the majority of which are internal combustion engine (ICE) vehicles, not EVs.

Misdiagnosing the threat of Chinese EVs comes with risks of its own, and jumping to protectionist measures could [backfire](#). It also gives domestic automakers protected markets free from foreign competition, removing pressure to lower prices and harming consumers. A careful consideration of the underlying dynamics in China’s automotive industry is needed.

## Misunderstanding Overcapacity

Part of the issue is a misunderstanding of “overcapacity” and conflating it with other reasons why firms export products. Indeed, “overcapacity” has become the prime buzzword in Washington DC when referring to trade with China across a broader range of sectors, with some arguing that it is an unavoidable feature of Chinese industrial policy. A number of recent articles cite aggregated vehicle sales, production, and export data, which can lead to misleading conclusions. In a recent [Foreign Affairs article](#), for example, one graphic displays a graph comparing EV sales, exports, and “excess output.” The data comes from standard sources, but it is unclear how the “excess output” measure is derived.

The data also appears to compare apples and oranges on EV production. In particular, total EV production numbers appear to resemble *overall* auto production levels in China, including both EV and ICE vehicles. Demand for ICE vehicles has been falling for seven straight years in China, and it is here that most of the Chinese auto industry’s excess capacity now lies.

By failing to make the critical distinction between ICE vehicles and EVs, graphs such as the one in *Foreign Affairs* end up suggesting that the supposed more than 12 million “excess capacity”

vehicles produced each year in China over the past five years were all EVs. That figure is close to the U.S. auto market's entire annual sales.

In reality, China's automotive industry is now rapidly transitioning to EV production, which in turn is leading to changes in the way vehicles are sold and manufactured. Automakers such as NIO are selling more cars on demand, while there are more direct-to-consumer sales, similar to Tesla's approach in America. Smartphone maker Xiaomi, which launched its new SU7 in March, booked nearly 90,000 reservations on the first day of its release. The upshot is that EV inventories appear to be at normal levels, enabling auto makers to better respond to changes in demand. With new models and upgrades coming quickly, EV companies are not simply cranking up capacity but rather are much closer to the demand signals coming from consumers. China is on track to sell over 11 million EVs in 2024 — hardly a market with low demand.

Another source of confusion is the lack of a clear definition of “overcapacity.” The term usually refers to firms maintaining under-utilized production capacity, sometimes due to natural market cycles, but also due to structural policy reasons. Normally, this creates incentives for firms to find new markets by lowering prices, which drives up demand and clears the market.

In China, [structural overcapacity in multiple industries](#) is a common phenomenon that is often policy-induced: policy intervention can create incentives to invest in production capacity beyond what the market can consume, or prevent uncompetitive firms from exiting. China's institutional arrangements have long favored production over consumption, and in many industries this imbalance is problematic, both for China's own domestic economy and for global trade. But the problem is much more pronounced in traditional commodities like cement and glass than in complex products such as EVs and [semiconductors](#). In fact, the [evidence shows](#) that the top Chinese EV exporters — BYD and SAIC — are actually operating at close to full production capacity.

### **Misunderstanding China's Rising Vehicle Exports**

China's EV exports fall into three major buckets:

- 1) Tesla, which primarily ships Model 3s from its Shanghai Gigafactory to Europe
- 2) Other foreign firms manufacturing EVs in China, including BMW, Mercedes-Benz, Renault, and VW
- 3) Chinese original equipment manufacturers (OEMs).

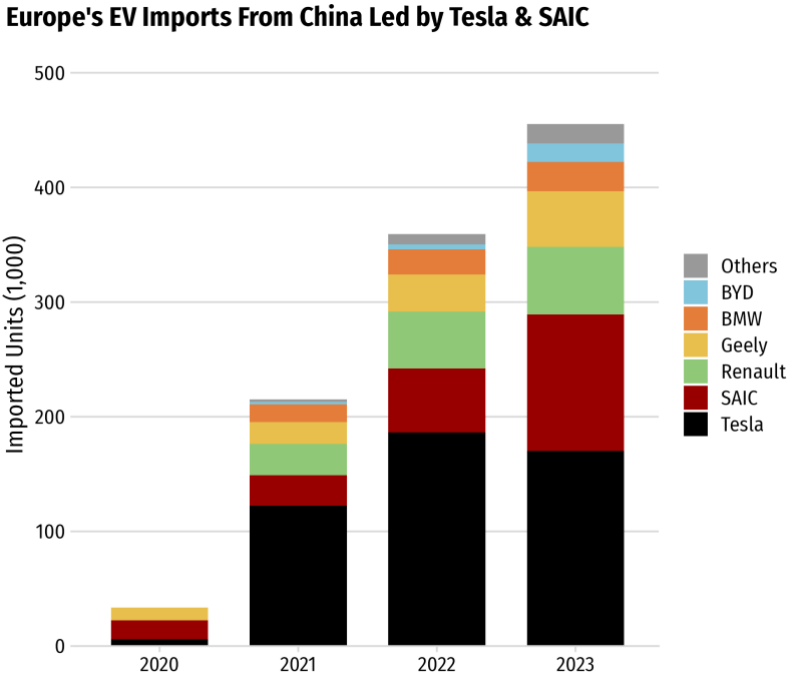
Foreign brands like Tesla are actually relying on China as an export base more than Chinese brands like BYD. In fact, the domestic market remains the overwhelming focus of Chinese EV makers, where demand for EVs remains high. This differs significantly from other major auto producing countries like Japan, Germany, and South Korea, where most production is for export.

Of the Chinese firms exporting EVs, the share of exports remains concentrated in a few firms, with BYD and SAIC together comprising [42 percent of EV exports](#) in the first six months of

2023. Only Tesla exported more in this period (39 percent of total Chinese exports), while other Chinese brands accounted for only 9 percent of exports.

The low prices these highly competitive firms are able to achieve are not the result of underutilized factories, but rather years of effort in improving production efficiencies and upgrading technological capabilities. Yes, China’s government has historically supported its domestic EV industry via a wide range of subsidies, but those are not the source of competitiveness in China’s EV sector today. With competitive products, these firms are now entering global markets, just as other automakers have done throughout history. It is also worth noting that BYD began producing vehicles in 2003, and SAIC started as a joint venture with GM in 1997. These are not new firms in the global automotive landscape: Even Tesla has now been producing cars in China for nearly five years, having established its Shanghai gigafactory in December 2019.

While Tesla is the largest EV exporter from China, European brands like Renault and BMW also comprise a sizable chunk. Chinese brands like BYD and Geely round out most of the remaining exports. Tesla now has a plant in Germany, and BYD will soon open a large production facility in the EU, which may reduce the overall number of exports there from China. This is indeed a common historical trend among competitive automakers: export first to establish a brand and market presence, then localize production to scale. Even with the EU’s new tariffs on Chinese cars ranging from 17.4 percent to 38.1 percent, these imports are likely to continue for some time before local production capacity comes online.



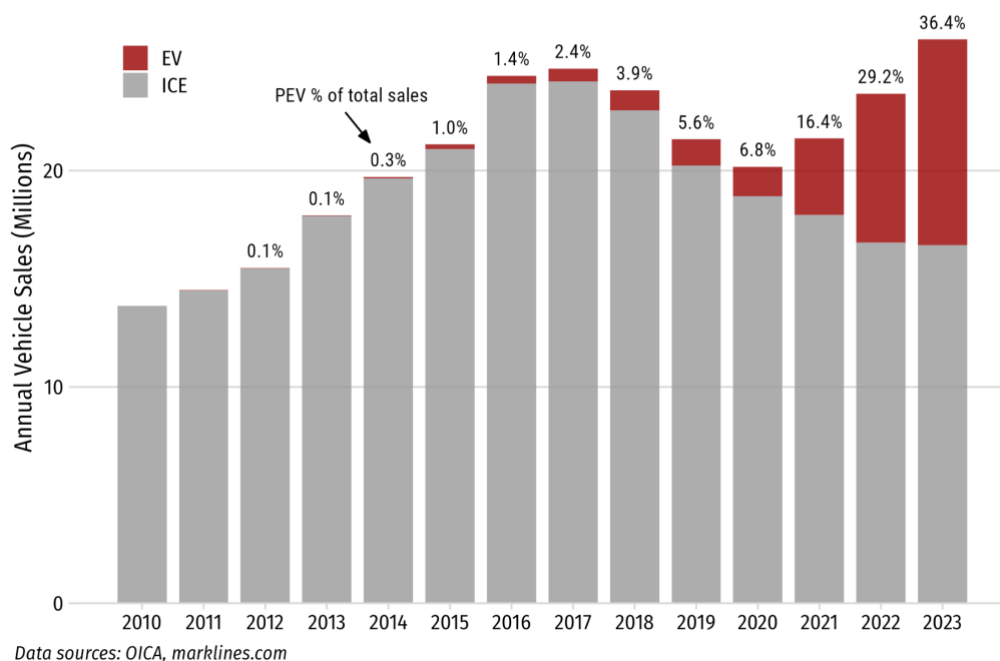
Data sources: HSBC  
Note: SAIC brands include MG, Maxus, and IM; Geely brands include Volvo, Polestar, Smart, and Zeekr.

Unlike China's EV market, the sources of growing ICE vehicle exports from China can be largely explained by two concurrent phenomena: the domestic transition to EVs, and Russia. ICE vehicle sales in China have fallen from a peak in 2017 of 24.1 million to 16.6 million in 2023. As a result, legacy automakers have far more ICE vehicle manufacturing capacity than they need today, leading to an increase in exports.

In contrast, EV sales have exploded, comprising 36.4 percent of new car sales in 2023. That's 9.49 million EVs, up from just 3.52 million just two years earlier. [Recent reports](#) suggest EV sales may reach half of new car sales this year.

### In China, PEV sales grow while ICEV sales slow

After peaking in 2017, internal combustion engine vehicle (ICEV) sales have declined for 7 straight years



Russia's war in Ukraine has given ICE manufacturers in China a temporary market to offload some of this excess capacity. In markets other than Russia, ICE vehicle exports have grown at much less alarming rates, with the Gulf States and Mexico being two important growth markets.

## Differing Global Responses

Regions around the world are responding in different ways to all the change occurring in China. Countries like Thailand, Vietnam, and Brazil are increasingly importing EVs and also welcoming direct investment by leading firms like BYD and Geely. They see a partnership with China as an opportunity to leapfrog past the ICE technology platform and move to a cleaner mobility future.

The EU, which has a far more mature automotive industry, is more concerned about the potential threat of Chinese EVs, though it is more willing to negotiate and accord with WTO rules. EU investigators claim to have done a thorough investigation in China with the

cooperation of a small group of Chinese EV makers, focused on the subsidies each has received from the Chinese government. The EU has also attempted to differentiate between firms based on estimated levels of subsidies received and is willing to negotiate with the Chinese government and EV makers before imposing tariffs. China's Minister of Commerce, Wang Wentao, recently agreed with the Executive Vice-President of the European Commission, Valdis Dombrovskis, on launching talks on EU's anti-subsidy investigation against Chinese EVs.

In stark contrast, the U.S. has leaned heavily into protectionist policies, attempting to block not only Chinese EV exports but also the entire supply chain in China with tariffs on EV batteries and the raw materials needed to make them. These tariffs aim to protect the unprecedented investments the U.S. government has made, via a suite of subsidy incentives in the 2022 Inflation Reduction Act, to develop a China-free EV supply chain.

The U.S. also appears content with blocking (or severely limiting) Chinese direct investment in its domestic industry. Such measures risk increasing prices for the U.S. EV industry and for other goods as the Chinese impose counter tariffs; they also risk slowing down the industrial upgrade American policy makers want to achieve.

Under tariff protection, automakers in North America can continue relying on profits from high-margin, [oversized trucks and SUVs](#) with little pressure to make better and more affordable EVs. Indeed, Ford has recently [announced](#) canceling and delaying major EV projects, all but turning its back on the EV transition for now.

But while the U.S. can block Chinese EVs from its market, it cannot stop the rest of the world from buying them. Many developing nations are now turning to China for a supply of affordable and clean vehicles.

And of course there is the lingering climate crisis to consider. Despite the focus on China's EV exports, the larger problem from a climate perspective is its continuing shipments of ICE vehicles to markets like Russia. The U.S. has little leverage here except to ask China to adopt voluntary ICE vehicle export reductions. Offering Chinese automakers access to the American EV market in exchange for such export reductions could be a productive approach to steer the global auto industry towards EVs more quickly, action that is sorely needed to achieve climate goals.

As global policy makers scramble to address China's surging EV industry, it remains critically important that their decisions be informed by accurate data and a better understanding of the market dynamics at play. China is now in the middle of a major transition from ICE vehicles to EVs, a transition that will need to happen everywhere in the world to address the climate crisis. Rather than close the borders to China's advanced and low-cost electric vehicles on the basis of some vague notion of overcapacity, the rest of the world would benefit from inviting some degree of Chinese competition, and emulating the lessons that have made China's EV industry the most competitive in the world.