

# Global Macro Research - Insight

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### China's electrification set to amp up geopolitical tensions

The country's sudden emergence as an electric vehicle powerhouse and leader in the sector's supply chain will have major ramifications for the global auto industry, sparking further efforts by the US and the EU to protect Western firms.

### **Key Takeaways**

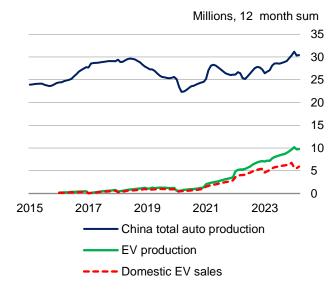
- The automotive industry is being shocked by China. Industrial policy has super-charged Chinese firms' rise to become the main manufacturers and suppliers of electric vehicles (EVs).
- As domestic demand has eased and excess capacity has emerged, China has increasingly turned to export markets.
- This is not entirely a China story though. Western brands have a prominent role in Chinese exports, complicating the Western policy reaction, particularly in Europe.
- The US is determined to keep China out of its domestic market, with a Trump presidency potentially leading to a more aggressive tariff and rules of origin policy.
- In contrast, the EU will take a more measured approach as it seeks to remain WTO-compliant and advance its green transition. This approach is however likely to do little to protect its auto supply chain.
- Reducing reliance on China remains a Western policy priority, but decoupling the EV supply chain may prove challenging given China's dominance in the critical minerals and battery production spaces.
- Building domestic capacity and new sources of critical raw materials risk amplifying excess capacity. It is unlikely that US and European policymakers have fully understood the cost of decoupling.

### The China electric shock

Over the past few years China has emerged as an electric vehicle (EV) manufacturing powerhouse, threatening to upend traditional auto makers and their supply chains.

Indeed, the country became the world's largest producer and exporter of cars in 2023. BYD overtook Tesla in Q1 2024 and is now the world's largest EV maker. China's EV production has risen by a factor of 10, and now accounts for a third of all autos produced in the country (see Figure 1).

Figure 1: China has bet heavily on EVs



Source: Haver, abrdn (May 2024)

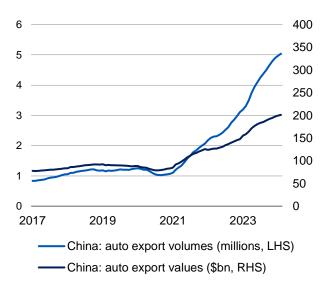
China's industrial policy has helped drive this shift, creating a fiercely competitive domestic market, which is likely to undergo significant consolidation in coming years.



Cheap loans, tax breaks and consumption subsidies have all played a role in driving competition and technical progress.

But China's auto makers are now increasingly struggling with excess capacity, in part as domestic EV sales have eased. Global markets and exports have helped to take up the slack. Overall auto export volumes have risen by a factor of 5, while values are up 2.5 times (see Figure 2).

Figure 2: China is now a major auto exporter



Source: Haver, abrdn (May 2024)

But this doesn't just apply to EVs. Internal combustion engine (ICE) exports to Russia have surged – reflecting the retreat of Western-aligned firms following the Ukraine invasion – while emerging markets have also been importing a mix of EV and ICE cars to varying degrees.

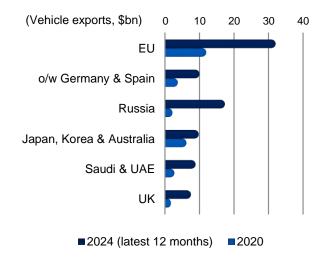
What is more striking is the near trebling of exports to the European Union (EU) (see Figure 3), reflecting a more open trade environment for foreign manufacturers, in which government EV consumption subsidies do not discriminate on origin. Indeed, Europe appears to be the destination for around 40% of China's EV exports, while China's share of the EU's auto imports has risen from 8% to 18%.

In addition, Western auto makers have substantial operations in China and account for almost half of "Chinese" EV exports to the EU.

Tesla alone makes up around 40% of the EVs that are shipped from China to the EU, while joint ventures between European firms, such as BMW, and Chinese firms account for another 10% or so.

Overall, 25% of EVs sold in Europe in 2024 are expected to be produced in China, but Chinese brands are forecast to take just 8% of the market share.

Figure 3: Europe and Russia have been major growth areas for China's auto makers



Source: Haver, abrdn (May 2024)

Since the three largest German manufacturers sell about as many cars in China as they do in Europe – and are heavily reliant on Chinese suppliers for battery technology – it is perhaps no wonder they are not pressing the European Commission for a strong response to China's support for its auto industry. Indeed, China still represents the largest growth market, with an average of 185 vehicles per 1000 people, compared to a rate of 800 in the US and 580 in Germany.

That said, corporate and national interests may not always align across the EU. French auto manufacturers sell few cars in China, while the broader impact of China's inroads into Europe's auto market may be far wider-ranging. Autos make up around 10% of EU manufacturing value added, while the figure can be twice as high in emerging European economies, such as Czechia and Slovakia.

Moreover, while we think excess capacity will eventually drive consolidation within the Chinese market, the China shock could get worse before it gets better: BYD has capacity to produce 4 million cars a year already – in 2023 it made 3 million – and is in the process of building plants in Brazil, Hungary, Thailand and Uzbekistan, while considering expansion in Indonesia and Mexico.

Emerging markets, excluding China, are unlikely to match Europe as a source of demand for EVs in the near term given infrastructure challenges. But rising demand in markets such as Thailand highlights that there is some potential. Indeed, we expect developing Asia and MENA to be fast growing consumer markets.

China's rapid rise and the spillover of excess supply onto international markets is generating geopolitical backlash. However, policymakers are taking different approaches to the challenge; the US is firmly protectionist while parts of South-East Asia and Europe are more open.



### US policy keeps the door closed to Chinese EVs

The market share of Chinese EVs in the US is minimal and US policymakers want to keep it that way.

President Biden recently announced that tariffs on Chinese EVs would rise from 25% to 100%, while tariffs on lithiumion batteries for EVs will rise from 7.5% to 25%.

The investigation into data and cybersecurity risks posed by Chinese EVs illustrates the national security current that now runs through US policy, and also the risk that even a "small yard, high fence" approach continues stake more turf.

A Trump presidency would likely take a tougher approach. He has been highly critical of EVs, arguing that the entire industry supports the Chinese economy and that Chinese manufacturers will use factories in Mexico to attempt to circumnavigate tariffs. Trump's proposal is to increase the tariff on Chinese EVs to 200%, while rules of origin may be tightened more aggressively to stop Chinese firms from manufacturing in Mexico and shipping north of the border.

## Europe is set to take action, but conflicting aims are likely to blunt the effect, leaving auto makers exposed

In October 2023 the EU launched an investigation of China's EV sector. This is not due to conclude until November 2024, but provisional documents show the EU believes it has sufficient evidence showing Chinese vehicles are receiving significant subsidies. Provisional tariffs could be introduced from July.

This is likely to result in tariff increases of 10-15 percentage points, taking overall EV tariffs to 20-25% – deliberately below US levels. The EU's desire to remain WTO-compliant and meet its target of ending sales of internal combustion engine cars by 2035, implies the Commission will be attempting to strike a balance across several fronts, which will water down the strength and effectiveness of any action.

Moreover, the Commission will be acutely aware that action could spark retaliation from China. This could range from announcing export controls on the critical minerals needed for electric vehicle production within Europe, to measures that would hit production and sales within China.

## Critical minerals and the battery supply chain present challenges

Although the most high-profile action taken by developed economies against China is currently focused on finished electric vehicles, an even bigger concern from a geopolitical perspective may be critical minerals and battery manufacturing.

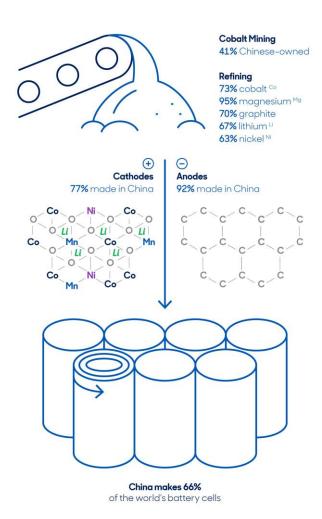
But avoiding dependencies on China is going to be extremely difficult.

To be truly independent of reliance on China, Western countries must develop their own domestic EV battery manufacturing capabilities, as well as reduce dependencies on Chinese refined raw materials.

The US is using the Inflation Reduction Act (IRA) to catalyse its own industry, while the European Parliament passed the Critical Raw Materials Act, with similar aims. Australia, itself a major source of critical minerals, has announced plans to double investment in the sector.

But given China's dominance in key minerals and batteries – which are ~40% of the cost of EVs – the ability to disconnect from China seems very unlikely in the near term (see Figure 4).

Figure 4: Disconnecting critical minerals and battery production from China is easier said than done



Source: New York Times, abrdn (May 2024)

Sustained investment may go some way to reducing dependencies on China, but it would be contingent on high levels of political will and consistent policymaking, which are never guaranteed.

Moreover, the push for alternative sources of critical raw materials and to compete with China in battery production risk leading to an oversupply that will add to the costs of decoupling.





Bloomberg NEF is tracking 7.9 TWh of annual battery manufacturing capacity announced for the end of 2025, with China alone making up nearly 6TWh.

This is much higher than demand, which projections forecast at 1.6 TWh, assuming steady EV demand growth and very rapid increase in batteries for storage unrelated to autos.

Since China already dominates the low-end of the cost curve through CATL and BYD, Western battery capacity expansion will likely be uneconomical, requiring governments to swallow large losses.

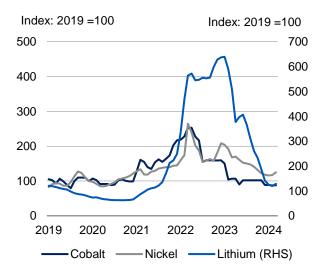
## What does electrification mean for emerging markets excluding China?

For emerging markets, the rise of EVs presents opportunities for the most part, adding to the potential gains from reshoring.

Electrification has already helped several commodity exporters. The likes of Chile, Indonesia, and the Philippines have all benefitted from increased demand for nickel, lithium and cobalt, as have frontier markets such as the Democratic Republic of Congo and Zimbabwe.

However, mining less economically viable mineral reserves in an effort to make production independent from China has its risks. The 80% drop in lithium prices has pushed many miners into loss-making territory, and the prices of other EV-related commodities have also fallen sharply as demand projections have been pared back.

Figure 5: EV mineral prices have retreated sharply



Source: Bloomberg, Haver, abrdn (May 2024)

Moreover, what counts as being sourced from a "foreign entity of concern" (a key definition within the US IRA) could be crucial. Indonesia is potentially well-placed to benefit from electrification, in part as battery makers seek to reduce reliance on Russian nickel. But most of its nickel refiners are Chinese owned, which implies rules of origin will be key to assessing geopolitical risk.

Disruption to the auto industry will also create winners and losers. On the one hand, Eastern Europe is already highly integrated into existing ICE supply chains. But on the other, it could benefit if Chinese manufacturers move EV production closer to the end consumer. Similarly, Thailand may suffer in the transition to EVs, but the government has leant in: corporate tax waivers have generated \$2.2bn worth of investment from Chinese firms and more is expected.

Consumers should at least benefit from falling prices and rising air quality as EVs gain a foothold. Countries that are open to Chinese imports and production – such as South-East Asia and MENA – could perhaps also attract Chinese investment into charging stations and power infrastructure.

That said, it is not just developed markets pushing back when their domestic brands are under threat. Brazil's and Türkiye's moves to restrict EV imports may be replicated in other EMs.

#### A defining moment

Whether the West chooses to protect its legacy auto makers or take advantage of cheap Chinese EVs to aid the green transition is set to become a defining feature of industrial and environmental policy, and geopolitics.

The US has already erected high barriers and may go further, while the EU's reaction will be tempered by putting a higher weight on environmental considerations and automakers' desire to remain embedded in China.

The electrification of transport is therefore another key force driving "Globalisation 3.0".

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