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Electric vehicles: is Europe still in the driver's seat?

Competition between China and Europe in an age of mobility transition

EXECUTIVE SUMMARY

On June 8, 2022, the European Parliament voted to ban the sale of new internal combustion engine (ICE) cars in Europe by 2035. The ban is part of the European Union's goal to achieve climate neutrality by 2050, specifically targeting greenhouse gas emissions (GHG) of individual passenger cars, given that road transport accounts for 60% of transport sector emissions across Europe. While the ICE ban could be a significant step towards the EU's climate goals, its success depends on the automotive industry's ability to adapt, in addition to the development of necessary infrastructure for electric vehicles (EVs). The latter will prove crucial to ensuring that the 2035 deadline is met. However, at the same time, the transition is already disrupting the European automotive industry, which plays a critical economic role for the region as it is one of the last strongholds of European manufacturing and accounts for 7% of the EU's GDP.

At the same time, rapid EV uptake in China adds further complexity to the challenges facing the European automotive industry. The size of the Chinese automotive market and the long-term strategies deployed by Beijing over the past 20 years have led to the emergence of national champions in EVs. China's dominance, or at least its preeminence, in the global and European EV market can no longer be ignored. In 2023, BYD, a Chinese car company, surpassed US-based Tesla in the number of vehicles sold globally despite Tesla's pioneering role in the EV market and its status as a model for electrification of passenger cars. Chinese EVs are now widely exported to Europe, often at significantly lower prices than their European competitors. Backed by substantial financial support from the Chinese authorities and benefiting from unparalleled vertical integration, Chinese EV-makers and battery manufacturers are now in direct and fierce competition with traditional European automakers. In response to the threat posed to Europe's automotive sector and following anti-dumping investigations the European Commission imposed higher duties on Chinese EV imports in July.

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Whether the EU can pursue industrialization through import substitution is, for now, uncertain. Drawing on the example of the US in the 1980s when it responded to rising Japanese competition, Brussels may be envisioning a form of "reverse offshoring". Tariff and non-tariff barriers could, in theory, push Chinese manufacturers to relocate EV production closer to consumer markets. This could potentially lead to the emergence of a European EV ecosystem, where Chinese manufacturers and battery producers play pivotal roles. However, this shift harbors certain risks. It could cause significant disruptions in the European automotive value chain and reshuffle the hierarchy of car brands on the region. Ultimately, failure of this strategy would present a difficult dilemma, namely whether to prioritize the 2035 climate goals or safeguard the long-term industrial sustainability of the EU automotive industry.

The electric car marks a decisive breakthrough for the European car industry

European regulations target passenger cars

The European Parliament and the Council of the EU adopted the European Climate Law, a landmark piece of legislation aimed at significantly reducing GHG emissions. Under this Act, the EU sets the target of cutting net GHG emissions by at least 55% by 2030 (compared to 1990 level), as part of the "Fit for 55" package and its target to be climate neutral by 2050. This legislation is a cornerstone of the European Green Deal which outlines the EU's comprehensive strategy for reaching climate neutrality.

The Act specifically targets the transport sector, which is a major contributor to GHG emissions, accounting for approximatively 25% of total EU's total emissions, and up to 45% when excluding the energy sector. Given that individual passenger cars contribute to more than half of emissions of road transport, i.e., 15% of the EU's total GHG emissions, the European Commission therefore has proposed a ban on the sale of internal combustion engine (ICE) cars in the EU by 2035 **(Table 1)**.

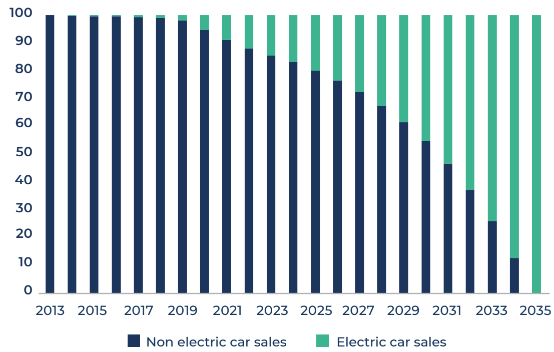
Nevertheless, the regulation includes a review clause mandating the European Commission to conduct a comprehensive assessment in 2026, evaluating the progress toward achieving the zero ICE sales by 2035. The political agreement reached by EU member states in 2022 faced a significant challenge in March 2023 when Germany sought to review the terms. Spain recently endorsed Germany's stance on this issue.

EU regulations will have a severe impact on non-BEV manufacturers in Europe

The EU car market remains predominantly dominated by non-hybrid internal combustion engine (ICE) vehicles, accounting for 48% of sales year-to-date[1]. Hybrids (HEV) and Plug-in Hybrids (PHEV) have seen strong sales growth in Europe and account for 37% of sales in H1 2024. Only Battery Electric Vehicles (BEVs) will be allowed for sale from 2035 and at the present time 85% of current car sales do not comply with this law. In the first half of 2024, battery electric vehicles only ranked fourth as the most common engine type, making up 12.5% of total sales, despite showing a notable increase of over 30%.

With total car sales expected to grow by 2-3% by 2035, achieving the EU's target of 100% EVs sales would require an annual growth rate of 14% in BEV sales as of 2024 **(Chart 1)**. The current pace of growth, as well the 37% sales growth recorded in 2023, suggests that this could be within reach. However, European production of EVs is currently lagging, with much of the sales increase in 2023 reflecting a rise in imports of Chinese electric cars.

Chart 1 -EV sales projection to reach in the EU 2035 deadline (in % of total car sales)



Source: Eurostat, Coface calculations

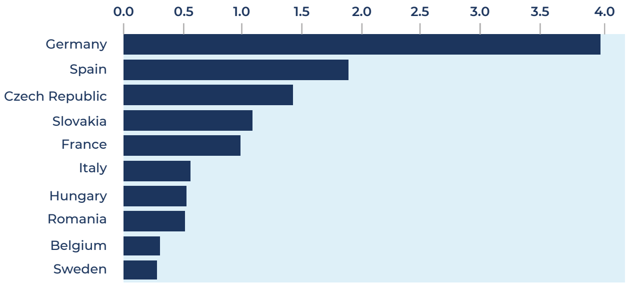
Table 1 - Timeline and Key Milestones for the EU's 2035 ICE Vehicle Ban

Date	Deadline	EU & Carmakers announcements about EV value chain
2021	Proposal of the "Fit for 55" package including 2035 target	General Motors announces it will become all-electric by 2035
		The EU launches the European Raw Materials Alliance to secure the supply of critical raw materials for the energy transition
		Volvo pledges to become a full-electric car brand by 2030
2022	Formal adoption of the regulation by the European Parliament & Council	Volkswagen Group aims to have 70% of its European sales electric by 2030
		Ford announces investing USD 22 billion in car electrification by 2025
		BMW targets 50% of its global sales to be fully electric by 2030
		Investment in the EU's first large sacle lithium refinery in Portugal
		The EU approves funding the European Battery Alliance
2025	First interim target: 15% reduction in GHG emissions from new cars & vans compared to 2021 standards	
2029	Second interim target: 55% reduction of GHG emissions of new cars & vans (from 2021 standards)	
2030	Continued reduction efforts and increase in zero-emission vehicles sales; GHG reduction target of 55ù from 1990 standards	
2035	Internal combustion engine vehicle ban for sale; only zero-emission new vehicles; 100% reduction of GHG emissions from cars & vans	
Post-2035	Existinf ICE vehciles can still be used; focus on expanding EV infrastructure and further GHG emissions	

1 - January-July 2024, ACEA

Furthermore, engine production in Europe is concentrated in a few countries **(Chart 2)**, with more than half of EU's engine plants located in Germany, Poland and Italy. The ban on the sale of ICE vehicles by 2035 will directly impact these sectors as their production will no longer be intended for the European market. In this context, the recent closure of a Volkswagen site in Germany last September could be interpreted as an early sign of a broader trend since it was the first such closure within the German soil since the brand was created.

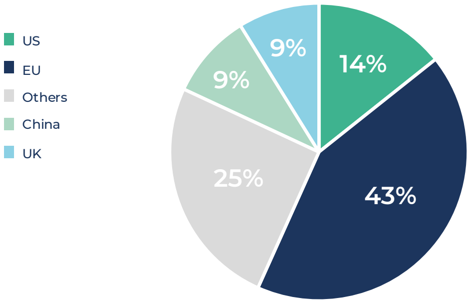
Chart 2 - Production of passenger cars in the EU (in million units, 2023)



Source: European Automobile Manufacturers' Association (ACEA), Macrobond, Coface

Most European car production is destined for the European market. Some 70% of cars produced in Europe are exported to another EU country. For instance, 75% of passenger car exports from Spain and Czech Republic are sent to other EU member states. In contrast, Germany's automotive industry relies more heavily on extra-European exports, with over 50% of its exports sent outside the EU, including the United Kingdom, the United States, Türkiye, and China **(Chart 3)**. The EU automotive trade balance remains positive in volume terms, with the EU exporting 4.7 million passenger cars and importing 3.3 million units. The EU therefore demonstrates a high level of "self-sufficiency" in automotive manufacturing capacity, particularly with ICE vehicles.

Chart 3 - German car exports by final destination (value, share in %, 2023)



Source: TradeMaps, Coface

Consequently, the EU's automotive market is divided between a robust domestic sector – which will face significant pressure by 2035 due to the ban on internal combustion engine (ICE) vehicle sales – and a diversity in export and import partners across different EU countries. One of the challenges for the European automotive industry is therefore to make a successful transition to EVs while preserving its export capacity. In 2023, the EU automotive sector contributed a trade surplus of EUR 98 billion.

EU struggling to reach its own target

Industrial capacities in the EV's value chain are currently inadequate

The development of EV production capacity mainly concerns mining and battery manufacturing. Europe has made significant investments in mining capacity, notably in Austria where European Lithium received approximately EUR 15 million to advance its Wolfsberg Lithium Project, and Germany where BASF obtained a EUR 5 million EU grant for rare earth element recycling. However, these initiatives seem to be largely insufficient given the volume of critical materials required by the energy transition and EVs industry. The Critical Raw Materials Act is a benchmark for European mining policy. It sets production targets of barely 10% of the demand of critical materials for the energy transition.

The same applies to battery production. The EU has launched several initiatives in this area, but they remain largely insufficient. The European Battery Alliance (EBA), created in 2017, plays a central role in this effort. With over EUR 3 billion invested by the EU, the EBA aims to build a competitive and sustainable battery industry in Europe, boosting production capacity significantly by 2025. It coordinates investments, facilitates partnerships, and supports key players in the battery supply chain. Additionally, the Important Projects of Common European Interest (IPCEI) framework aids in developing gigafactories. The "IPCEI on Batteries" has provided around EUR 3.2 billion in public funding for essential battery projects across member states. But the EU's investment plan falls well short of the investment needed. Only 3% of capital expenditures needed in the battery supply chain by 2030 (EUR 125 billion) have been made so far.

Lack of infrastructure is holding back EV sales growth in the EU

Beyond the supply chain challenges, the expansion of EVs in Europe is closely tied with the availability of charging infrastructure. As at the second quarter of 2024, Europe had five million BEVs and 3.6 million PHEVs, supported by 767,924 public chargers **(see Table 2 next page)**. This results in an average of 11 EVs per charger, whereas the EU recommends a ratio of one charger per 10 BEVs. While the European average seems close to the targets, it masks major disparities between countries. Sweden leads with 10.8% of its total car fleet consisting of BEVs or PHEVs, followed by Luxembourg (9.6%), Denmark (9.1%) and the Netherlands (7.7%). By contrast, the EU average is much lower at 3.0%. Countries leading the way in electrifying their vehicle fleets also boast the lowest charger-to-vehicle ratios. Conversely, Poland is one of the bloc's laggards, with only 0.4% of its fleet electrified and 3,846 light vehicles per charger.
The installation of new chargers in the EU increased by 41% between the second quarter of 2023 and the second quarter of 2024, with 220,000 new chargers added. However, given the current installation rate, the EU's 2030 target of 30 million EVs and 3.5 million chargers would require more than 12 years. While the Netherlands has already reached the required number of chargers and other countries such as Belgium, Denmark and Sweden are on track to meet the target, all other European countries are liable to miss the target. For instance, at the current rate, Croatia, Poland and Malta would not even reach the target in this century. If we consider assumptions of even more rapid EV uptake projected by the Fraunhofer Institute, the issue of charger availability is clearly further exacerbated.

Table 2 - Overview of the European E-Vehicle fleet and the charging system and the EU forecasts for both (as at Q2 2024 for selected countries)

Country	Total light-duty Vehicles (2023)	BEV	PHEV	Share of BEV/PHEV to all vehicles	Chargers	Growth number/rate of chargers in the last 12 months (YOY)	Number of EV per charger	Number of total vehicles per charger	EU forecast: EVs on the street in 2030	EU forecast: total chargers needed in 2030	EU forecast: new chargers needed until 2030	Years it would take given the current growth rate
Germany	52 446 510	1 516	1 076	4.9%	151 572	58 465 (63%)	17	346	5 428 791	638 681	48 7109	8.3
France	44 387 164	1 097 166	611 660	3.8%	137 439	34 450 (34%)	12	323	4 594 560	540 536	40 3097	11.7
Italy	44 442 469	267 294	267 687	1.2%	47 558	10 260 (28%)	11	934	4 600 284	541 210	49 3652	48.1
Spain	30 041 334	199 215	210 462	1.4%	31 170	3 796 (14%)	13	964	3 109 609	365 836	33 4666	88.2
Hungary	4 743 787	56 828	21 141	1.6%	3 870	698 (22%)	20	1226	491 034	57 769	53 899	77.2
Poland	30 482 009	61 159	52 062	0.4%	7 925	3 394 (75%)	14	3846	3 155 223	371 203	36 3278	107.0
Malta	361 262	4 199	3 908	2.2%	107	12 (14%)	76	3376	37 395	4 399	4 292	357.7
Denmark	3 226 258	183 339	108 857	9.1%	29 125	13 039 (81%)	10	111	333 953	39 289	10 164	0.8
Sweden	5 689 323	329 750	285 451	10.8%	45 326	14 078 (45%)	14	126	588 908	69 283	23 957	1.7
Netherlands	10 006 073	495 003	278 152	7.7%	167 411	28 807 (21%)	5	60	1 035 739	121 852	already reached	–
EU	**289 826 007**	**5 008 251**	**3 613 379**	**3.0%**	**767 924**	**22 1819 (41%)**	**11**	**377**	**30 000 180**	**3 529 433**	**2 761 509**	**12.4**

Source: EAFO, Coface

The EU will have to address the issue of the EV affordability

Beyond infrastructure availability, one of the most important factors is the price, as the electric version of the same model is often significantly more expensive. For example, according to the German automotive driver's association ADAC[2], the selling price of the electric BMW iX2 was EUR 3,000 (6.1%) higher than the petrol version (EUR 49,400) in Germany in April 2024. The all-electric version of the Fiat 500 was even twice as expensive as the hybrid version. If the refueling or charging costs are factored in, the gap between different engine types narrows significantly over time depending the assumption made for electricity and petrol prices, but EVs nonetheless remain more expensive on average. This is why EU countries have repeatedly introduced state support measures to accelerate the number of electric cars on their roads.

In 2024, many EU countries are offering registration subsidies. One key incentive is purchase subsidies, with 18 out of the 27 EU countries offering them for vehicle purchases made by individuals. Cyprus and Malta, two countries with a low number of EVs, have the highest purchase subsidies with up to EUR 11,000 per individual. Moreover, in 14 countries the installation of private home chargers (such as wallboxes) is supported in some form. Other smaller incentives include free parking in cities or subsidies on charging costs. Several others also reduce ownership taxes and involve exemptions from road taxes. While these incentives primarily target private individuals, they also aim at encouraging companies to switch their fleets from conventional engines to EVs.

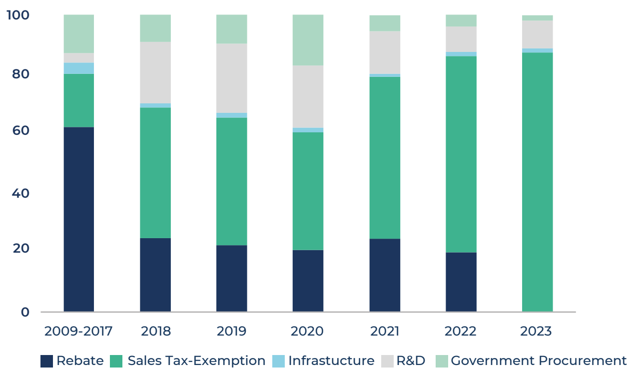
China takes centre stage while Europe looks on

Beijing has prioritized the automotive industry as a central element of its industrial development strategy. As early as the 1950's, the creation of First Automobile Works (FAW)[3] endorsed the Chinese government's ambition to establish a robust automotive industrial base[4]. Despite these efforts, the automotive sector in Europe, the US, and Japan retained a significant technological lead in the 20th century, particularly in ICE technology. But in the 2000s, China turned to EVs and currently holds the top position. China is a two-headed hydra as substantial and unwavering government subsidies support a highly integrated value chain.

The Chinese government has made the EV ecosystem viable

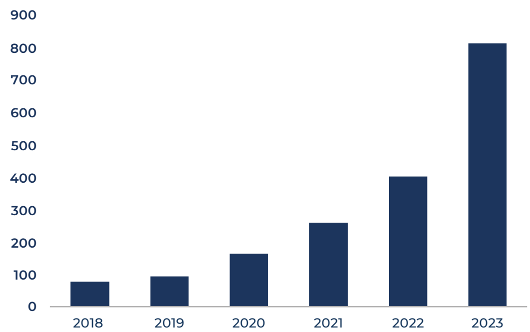
The rise of major national companies in China is a direct outcome of Beijing's strategic policies aimed at fostering domestic champions through substantial financial support and educational protectionism until these companies are sufficiently developed to compete on the global stage. According to the Centre for Strategic & International Studies, Chinese government support cumulatively totaled USD 231 billion from 2009 to 2023, including USD 45 billion in 2023 alone (**Chart 4,** *with the spreading*). We must also consider subsidies for other parts of the supply chain, including miners and battery manufacturers. According to its annual reports, CATL, the world's largest battery manufacturer, alone received USD 800 million in government subsidies in 2023[5] **(Chart 5).** This amount represents a central allocation, supplemented by additional provincial support mechanisms where CATL operates production facilities.

Chart 4 - Composition of Chinese industrial policy support (in %)



Source: Center for Strategic and International Studies (CSIS), Coface

Chart 5 - Chinese subsidies to CATL (USD Millions)



Source: Center for Strategic and International Studies (CSIS), Coface

2 - ADAC: Kostenvergleich Elektroauto, Benziner oder Diesel: Was ist günstiger? https://www.adac.de/rund-ums-fahrzeug/auto-kaufen-verkaufen/autokosten/elektroauto-kostenvergleich/
3 - China FAW Group Corp., Ltd. (First Automotive Works) is a Chinese state-owned company and is currently the second-largest of the "Big Four" state-owned car manufacturers of China, together with SAIC Motor and Changan Automobile.
4 - Oliver, N, Holweg, M & Luo, J 2009, 'The past, present and future of China's automotive industry: a value chain perspective', International Journal of Technological Learning, Innovation and Development, vol. 2, no. 1-2, pp. 76-118. https://doi.org/10.1504/IJTLID.2009.021957
5 - Center for Strategic Studies & International Studies

Beijing's substantial backing for its industrial sector includes tax incentives, funding for facility construction, low-interest loans, and investment in research and development (R&D) **(Chart 4)**. Government expenditure on R&D is notably high compared to other nations and has yielded significant results. Since 2013, Chinese research institutions have contributed to 20% of all academic publications on automotive batteries. This research has driven considerable technological advancements, particularly in the development of low-cost lithium iron phosphate (LFP) battery technology. By 2023, China registered 660 patents related to electric motors, surpassing Germany, the world's second-largest patent holder in this field, with 400 patents. For instance, CATL has spent more than USD 2 billion on R&D.

On the one hand, the strong government support, often at the provincial level, has artificially fueled the EV ecosystem in China and has resulted in over a hundred players in the sector. The dependency of many of these companies on state support is well known to Beijing, which has adjusted its support mechanisms over the past decade. Today, the focus has shifted to tax exemptions rather than rebates. On the other hand, these public subsidies have enabled manufacturers to develop a wide range of products, enhance their production capabilities, and invest in R&D. As a result, they have significantly reduced their production costs **(Chart 6)**. Given the intense competition in the domestic Chinese market the price of EVs sold in China is two to three times lower than in export markets.

Chart 6 - Producer Price Index for Chinese automotive manufacturing (2010=100)

Source: China National Bureau of Statistics (NBS), Macrobond, Coface

Vertical integration is a considerable advantage for China's EV ecosystem

The emergence of Chinese companies in the EV and battery industries highlights the considerable technological and industrial progress that China has made. The advancement is the result of a sustained industrial strategy focused on sectoral development. China's achievements in this domain are largely attributed to the development of its domestic companies, driven by the vertical integration of the value chain and significant financial support from the central government.

Chinese companies have invested heavily in global mining operations to secure critical materials. The Chinese government has actively supported the mining sector through policies such as the "Made in China 2025" initiative which includes significant funding for mining and material processing technologies. The National Development and Reform Commission (NDRC, 2023) has outlined plans to increase the domestic production capacity for key minerals by 15% out to 2025. Chinese firms hold significant mining rights in key resource-rich countries. For instance, China's Zijin Mining Group has a 68% stake in the Kolwezi copper and cobalt project in the Democratic Republic of Congo. Additionally, Chinese companies have secured over 50% of the lithium mining concessions in Argentina and Chile. China is a leading global player in the mining and supply of critical raw materials. For instance, it produces approximately 60% of the world's rare earth elements which are crucial for various high-tech applications. The country also accounts for about 60% of the global supply of refined lithium. Moreover, China has engaged in strategic stockpiling of critical raw materials. For example, China's reserves of rare earths account for 35% (44 million tons) of global reserves according to the US Geological Survey, thereby helping the country to mitigate risks associated with supply chain disruptions and price volatility.

Chinese companies have demonstrated a form of "specialized vertical integration" entering both upstream and downstream segments of the EV battery supply chain. This approach includes upstream firms moving into battery materials and recycling, and vice versa. Notable players have extensively integrated their operations across the value chain through acquisitions, joint ventures and strategic investments. For example, CATL integrates both mining and refining processes, and is responsible for about 32% of the global lithium-ion battery market share for 2024. The strategy has enhanced China's competitive edge by fostering robust ties between EV producers, battery manufacturers, and component suppliers, thus strengthening the domestic value chain and supporting rapid growth in production and technology development. China's strategy of moving upmarket in various sectors has been naturally transposed to the EVs segment. By way of example, formerly a producer of batteries for mobile phones and small electronic devices, BYD gradually became a producer of batteries for electric vehicles and launched its first car on the market in 2005. It took BYD 20 years to become a major car manufacturer, rolling out three million units by 2023, half of which were BEVs.

The EU appears restricted in its ability to implement a genuine strategy of industrialization through import substitution

The collision between the European automotive strategy, driven by its goals to reduce GHG while keeping production in Europe, and the manufacturing reality of the EV sector is increasingly obvious at geographical, industrial and regulatory levels. The recent tariffs might be a first step to creating a real industrial European policy, but the EU is still facing fierce competition from China, especially given its limited leverage in negotiations with Beijing.

The 4th of July, 2024, the EU has implemented countervailing duties on EVs imported from China, with adjustments made according to brand. Given the competitive distortions associated with Chinese public subsidies to domestic carmakers, the EU has enacted additional anti-dumping measures on imports of Chinese EVs. These new tariffs range from 9% to 36.3%, in addition to the existing 10% standard duty. Brussels has increased these tariffs to 17% for BYD, 19.3% for Geely, and 36.3% for SAIC.

The final tariff rate will be determined based on the outcomes of investigations and the practices of specific manufacturers. The proposed tariffs aim to mitigate the negative impacts of dumped imports and safeguard the EU's domestic automotive sector.

Over the short term, the new tariffs will impact the sales of Chinese EVs in Europe due to the immediate increase in prices. Chinese manufacturers wishing to continue exporting to Europe have three potential strategies: to reduce their profit margins to offset the rise in selling prices, to lower their production costs to maintain their margin levels while absorbing the tariffs or to balance the margins drop by increasing the volume of exports and sales in Europe. We expect a mix of those three scenarios.

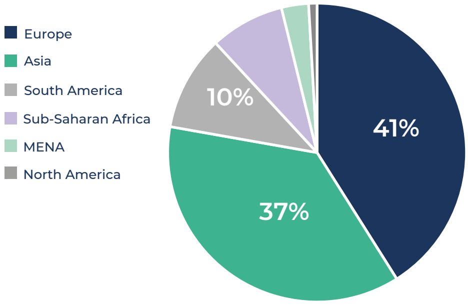
Chinese investments in Central and Eastern Europe as well as Mediterranean countries

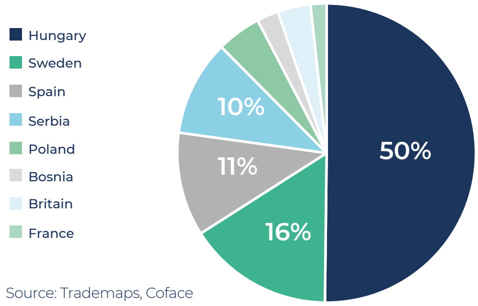
Europe was a preferred destination for Chinese investment in the automotive sector in 2023 **(Chart 7)**. Recent trade barriers should increasingly stimulate new Chinese investment. Central and Eastern countries' automotive sectors might more particularly gain from EU tariffs on Chinese exports and increased Chinese investments in Europe **(Chart 8)**. A prime example of this strategic move is BYD's decision to establish its first European passenger car factory in Hungary. The construction of BYD Auto Hungary began in May 2024, with the plant expected to become operational in 2025. Alongside BYD's expansion, CATL are investing in EV-related facilities and CATL's Debrecen plant, due to begin production in 2025, will supply batteries to major automakers. At the same time, CEE countries are now a vital pillar of the European automotive industry. Their accession to the EU and support from EU funds have helped to modernize their domestic manufacturing base and infrastructure and to be integrated into the regional automotive value chain, which has been heavily utilized by German manufacturers.

In addition to European countries, a few countries on the periphery of the EU could benefit from the reconfiguration of the regional automotive value chain **(Chart 8)**. In the future, Serbia should attract the most EV investments from China and the EU **(Chart 8)**. It can provide domestic mineral supplies and relatively low labor costs. We expect low-cost capacities of refining and manufacturing of components and batteries to attract Chinese investments. Chinese companies should see an opportunity to replicate their industrial model of a highly integrated value chain. On that score, Xi Jinping visited Serbia last May and reaffirmed the economic and political partnership between Beijing and Belgrade. With China investing EUR 5 billion over 10 years, Serbia could become a key partner for Beijing in producing EVs on Europe's doorstep. For its part, the EU also has Serbia in its sights as part of its EV strategy. At the Critical Materials Summit, the European Commission announced on July 19, 2024, the signing of a memorandum of understanding with Serbia to supply the EU with lithium from the Jadar Valley. This development follows Belgrade's recent authorization of a lithium extraction project by Rio Tinto.

Additionally, some Mediterranean countries will benefit from the European EV market **(Chart 9)**. Morocco and Turkey already stand out. Morocco has emerged as an increasingly attractive partner due to its production of cobalt and phosphates, critical materials for EV batteries. Its strategic geographical location and favorable trade agreements with the EU provide a competitive alternative to Europe, especially amidst current trade tensions. Notably, Gotion High-Tech has invested EUR 1.2 billion to build a factory in Morocco with initial production capacity of 20 GigaWatt hours, expandable to 100 GWh. Additionally, companies Hailiang and Shinzoom have announced significant investments of EUR 410 million and EUR 420 million, respectively, in the Tanger Tech industrial zone.

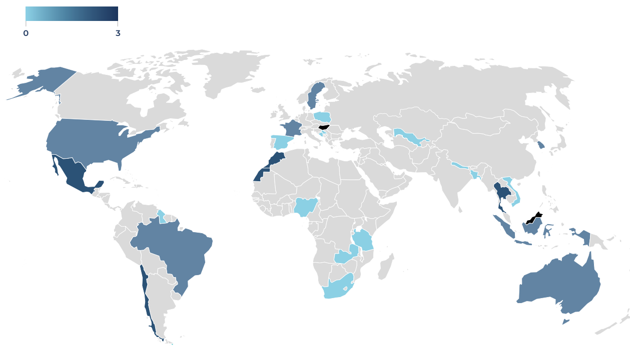
Chart 7 & 8 - Chinese investment in automotive industry by world region (7) and countries in Europe (8) in 2023





Source: Trademaps, Coface

Chart 9 - Automotive greenfield projects from Chinese investments (in number of projects in 2023)



Source: The Heritage Foundation, Coface

The option of non-tariff barriers

However, the tariffs implemented by the EU do not bridge the price gap between EU and China EVs. For instance, BYD, has price differences of about 80% to 100% between its models sold in China and those in Europe **(Table 3)**. To truly bridge the prices between the Chinese and European markets, surcharges in the range of 45% to 55% would be necessary. Furthermore, given that Chinese carmakers are facing demand issues in their domestic market the attractivity of the EU EV market will remain strong in medium term. Also, Chinese carmakers keep reducing their production cost, making tariffs policies non-viable in the longer term.

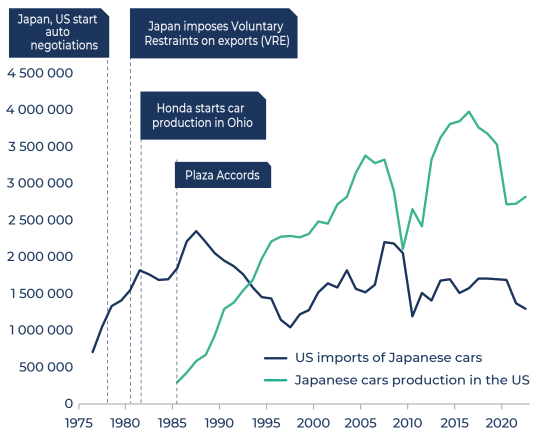
Table 3 - Volkswagen and BYD EV models comparison in Germany and China (prices in EUR)

OEM	Model	Price in Germany	Price in China	German price premium relative to China	Battery kWh	Horsepower
Volkswagen	ID.4	46 335	31 011	49.4%	77	204
BYD	Seal U Comfort	41 990	21 769	92.9%	72	218
Volkswagen	ID.3	32 975	21 011	56.9%	58	204
BYD	Atto 3 Comfort	37 990	17 923	112%	60.5	204

Source: Rhodium Group, ADAC, Coface

Non-tariff barriers could complement the package of tariff measures. Establishing quotas would represent an additional measure to further restrict access for Chinese EVs to the European market. For instance, to protect its automotive industry the US negotiated with Japan in 1981 to limit Japanese exports to 1.68 million vehicles until 1984, and subsequently to 1.85 million units until 1985. To circumvent these quotas, Japanese automakers in the 1980s adopted various strategies that included the creation of manufacturing facilities in the United States **(Chart 10)**. The first major Japanese plants were opened in the 1980s, with Honda pioneering this approach by launching a facility in Ohio. Once assembly operations were relocated, Japanese manufacturers began offshoring other aspects of their value chain, including spare part production, and research and development.

Chart 10 - Timeline of Japan-US passenger car trade (by number of vehicles)



Source: Japanese Automotive Manufacturers Association, Coface

Negotiation margins for Europe appear to be quite limited at present. For instance, during the trade tensions between the US and Japan in the 1980s, Japan agreed to implement export restrictions. However, Tokyo's decision was closely tied to the US' position of strength over Japan in the immediate post-war period and throughout the latter half of the 20th century. When Japan agreed to restrict its automotive exports to the US, the American market accounted for 45% of its total vehicle exports. Furthermore, against the backdrop of the Cold War, Japan's sovereignty had relied on the US army since Japan's surrender on September 2, 1945.

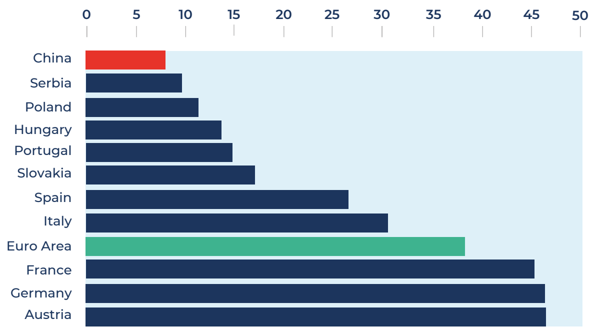
EU-Chinese EV trade is ultimately a matter of cost

Chinese manufacturers may also choose to pursue a hybrid solution, namely assembling vehicle kits to circumvent tariff and non-tariff barriers. To minimize production costs in Europe while maintaining market access (**Chart 11 illustrates the significant disparities in hourly labor costs)**, Chinese carmakers may choose to assemble vehicles from pre-assembled parts produced in China. This approach, known as CKD (Complete Knock Down) or SKD (Semi Knock Down), involves shipping disassembled vehicle kits to Europe for final assembly. For example, starting in September, Stellantis will begin assembling the T03 electric car produced by its Chinese partner Leapmotor at its plant in Tychy, Poland. This strategy could significantly enhance the Chinese manufacturer's presence in the European market. By assembling the T03 in Poland, the vehicle may qualify for local incentives, such as the EUR 4,000 bonus in France, provided it meets the local integration threshold. This move not only helps Chinese manufacturers manage costs but also aligns with European policies aimed at encouraging local production and economic integration.

The main obstacle hindering the building of Chinese factories in Europe is the substantial difference in production costs **(Chart 11)**. History reveals that it was ultimately the Plaza Accords **(Box)** and the rebalancing of the monetary system in favor of the US dollar that had the most significant impact on car production in the US.. In 1996, 11 years after the signing of the Plaza Accords, imports of Japanese vehicles to the US had declined by 55% and had been replaced by US-based production of Japanese cars. Simultaneously, yen appreciation against the US dollar to the tune of 47% made Japanese cars more expensive, thus reducing their demand in the US. This is exactly where Europe encounters its most significant constraints. Europe does not possess the geo-economic influence to reduce significantly the production cost gap with China, and therefore cannot achieve a similar rupture to the Plaza Accords in the 1980s.

It should also be added that in response to declining exports, Japanese automakers chose to export only their highest-end vehicles (luxury models like Lexus and Infiniti), which are the most expensive and hence the most profitable to compete with American models. Part of the increase in quality can also be attributed to compliance with federal safety and emissions regulations.

Chart 11 - Hourly labor costs for the automotive industry in 2023 (in EUR)



Source: Eurostat, China National Bureau of Statistics (NBS), Macrobond, Coface

THE PLAZA ACCORDS: THE STRATEGY THAT SAVED THE US CAR INDUSTRY

The Plaza Accords were signed on September 22, 1985, at the initiative of the US. By the mid-1980s, the US economy was grappling with significant challenges, including high unemployment and stagnant growth. The strong dollar made American goods expensive abroad, adversely affecting export competitiveness and exacerbating the trade imbalance, which reached approximately USD 124 billion. US policymakers, recognizing the need for a coordinated effort with other major economies to devalue the dollar, enhance the competitiveness of American exports, and stimulate economic growth sought to collaborate with other countries.

Consequently, on September 22, 1985, finance ministers from the US, Japan, Germany, France and the UK agreed to coordinate efforts to depreciate the dollar. Between 1986 and 1987, the signatory countries began implementing their agreement, resulting in a significant depreciation of the US dollar against the yen and the Deutsche mark. This coordinated action led to a notable decline in the dollar's value, which fell by approximately 40% against both currencies by 1987.

As a result, US exports became more affordable in international markets, providing a much-needed boost to the manufacturing sector. In particular, the Plaza Accords had profound and lasting implications for the automotive industry. With the dollar's depreciation, Japanese automakers faced pressures from a stronger yen, prompting many to establish production facilities in the US to substitute domestic production for Japanese vehicle imports. This shift not only increased investment and job creation in the US but also intensified competition within the automotive sector. Over the long term, the changes initiated by the Plaza Accords contributed to a more globalized automotive market, thereby reshaping the landscape and fostering ongoing innovation among manufacturers from both countries.

The global automotive industry is undergoing a significant transformation amid the EV transition. In Europe, **the push for rapid market penetration that is enshrined in law with the 2035 target has not been followed up by a synchronized effort to convert supply chains.** In turn, this is raising the prospect of an increasing number of electric vehicle assembly plants in the EU, resulting from partnerships between Chinese and European manufacturers. These partnerships could relegate the latter to a secondary role in the supply chain, particularly upstream, resulting in a mixed outlook for the industry's future.

On one hand, such agreements can help the EU meet its ambitious carbon reduction targets while maintaining production capacity on European soil. **This approach could satisfy both the environmentally-conscious European citizen and the worker concerned about job security**.

On the other hand, in this scenario, the creation of assembly plants controlled by China could signal a further **weakening of Europe's industrial autonomy**. It would not only expose Europe's technological lag, particularly in battery manufacturing, but also raise the risk of Europe falling further behind. Job displacement would be a threat and a politically sensitive issue. In addition, this approach represents an uncertain solution amid rising diplomatic tensions between the West and China.

As European carmakers face marginalization, significant lobbying efforts both in national capitals and in Brussels are likely. As recent political developments, including the 2024 European elections, suggest, **the possibility of revising the 2035 target is gaining credibility**. Ultimately, the future of the European automotive industry highlights multiple trade-offs between three non-necessarily competing objectives: sustainability, competitiveness and economic security. Accordingly, the price that Europe must pay to remain in the driver's seat of the automotive industry may well create friction.

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