

# TRADE POLICY AND THE PRODUCTION OF ELECTRIC VEHICLES

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## KEY POINTS

- The transition to electric vehicle (EV) production is changing vehicle manufacturing and supply chain arrangements.
- Trade policy can have a direct impact on companies' industrial location and supply chain policies. This is often evident at the firm level sooner than it is evident in economic data.
- Recent policy and political events (e.g. Brexit, US incentives for EVs and the European Commission (EC) investigation into Chinese EV subsidies) have had notable responses in terms of changing manufacturing policies by major vehicle manufacturers (VMs).
- The UK-EU Trade and Co-operation Agreement (TCA) requires not just a standard 55% local content requirement for UK- and EU-made vehicles traded across the UK-EU border, but also includes provisions for local content of EVs and their batteries.
- Brexit led to fears that the UK could lose its vehicle manufacturing sector. The UK-EU TCA allowed UK vehicle production to continue to operate in a largely unchanged manner. However, as the industry transitions to EVs, the country faces new challenges to retain production.
- The US Inflation Reduction Act (IRA) has attracted investment to the US and North America on an unprecedented scale and has diverted some investment from Europe.
- Chinese EV manufacturers are growing in importance, and in response the US has imposed a 100% supplementary tariff on Chinese EVs exported to the US. The US has also persuaded Mexico to change its incentives policy for Chinese VMs.
- Meanwhile, the EC has investigated Chinese EV companies, concluding that they are unfairly subsidised by the Chinese authorities. In June it announced additional tariffs on Chinese EVs ranging from 17.4% to 38.1% on top of the existing standard import tariff of 10%. Rising tariffs and other countervailing duties or policies will likely soon be applied in Europe. Ahead of the EC announcement, Chinese VMs have begun to establish European operations to avoid future tariffs.
- The automotive manufacturing sector shows how trade policy impacts not just the sector overall, but also individual companies and countries.

## INTRODUCTION

The car industry, especially electric vehicle (EV) manufacturing, is often the focus of much attention from policy makers and analysts. Historically, this has been due to the sector's economic significance for many countries. However, more recently, it is because of its role in the green transition. The industry is global, dominated by multinationals, who make long term investment decisions based on multiple factors, including the impact of government policy. In this Briefing Paper we explain how policy has shaped the choices made by EV producers. This is particularly relevant given the increased government intervention in the industry in the US, the EU and China. It also raises important policy questions for the UK in terms of consumers, support for automotive manufacturing and EV infrastructure which requires further analysis.

### **How automotive manufacturing works**

Vehicle manufacturers (VMs) typically stamp the steel or aluminium parts which constitute the vehicle body in-house. These parts and some bought-in stampings are then welded together (or riveted and bonded for aluminium parts) to create the vehicle body. This is painted and then moves onto the assembly line. In most cases these processes take place on the same site, in vertically integrated operations. There are exceptions such as Mini in the UK, where stampings are done in Swindon before the parts move to Oxford for welding, painting and assembly.

In the assembly hall, the engine, transmission (or batteries and motors for EVs), seats, dashboards and other bought-in parts are fitted. Most components come from outside the vehicle assembly plant. While there are exceptions<sup>1</sup>, VMs normally make their own engines and transmissions, normally at different sites. However, typically c70% of a vehicle's content comes from external suppliers, with supply chains stretching across the globe.

Policy issues aside, several major events, including the Japanese tsunami of 2004, the Thai floods of 2011, and more recently the semi-conductor or chip crises and supply chain disruption due to COVID, led to European VMs progressively switching component sourcing away from Asia and back to Europe, or in some cases to North Africa for low-value parts such as wiring harness assemblies. This trend is reinforced for EVs by trade policy, although the need for critical minerals from distant sources, in Central Africa or South America, means local or regional sourcing is not always possible.

## THE UK VEHICLE MANUFACTURING SECTOR

The UK has five large VMs, JLR, Mini (BMW), Nissan, Stellantis (Vauxhall) and Toyota, plus several low volume, high value VMs, such as Aston Martin, Bentley and Rolls Royce. Prior to Brexit, there was also Honda which no longer produces in the UK. Back in 2017, the UK

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<sup>1</sup> In Sunderland Nissan makes its own engines within the car plant footprint. Meanwhile, BMW and Mercedes make some of their own seats, while Toyota and Nissan make their own large plastic mouldings for dashboards and bumpers.

produced over 1.7m cars and vans<sup>2</sup>. Since then, production has fallen, with Honda leaving the UK, Nissan reducing its range and volume of vehicles, and falling volumes at Jaguar, Toyota, and Vauxhall, which now only makes vans. The fall in production reached a nadir in 2022 when only 854,000 cars and vans were made<sup>3</sup>. However, in 2023 production climbed back to just over 1 million<sup>4</sup>. Production in 2024 and 2025 will be less than 1 million because of changing model line-ups as the UK transitions to EVs. It is likely that, once all the major UK VMs are producing, as is expected, predominately EVs by 2030, production will once again be over 1 million units per year.

### **EV production in the UK**

UK EV production is currently limited to small vans made by Stellantis at Ellesmere Port, the Rolls Royce Spectre and limited volumes of fully electric Range Rovers. The Nissan Leaf and electric Mini have stopped production and their replacements do not start production until late 2025 and mid-2026 respectively. By early 2025, production of new electric Jaguars will begin, along with electric versions of the Range Rover Sport and new Velar. Other than Toyota, which has not made its UK plans public yet, all the large VMs and most of the small volume VMs should be producing largely or solely EVs by 2030. According to current plans, by 2035 more than 95% of UK production should be electric.

EV production is driven by UK and EU policies regarding Net Zero, but also by other governments' less aggressive emissions policies (US and Japan) to eliminate internal combustion engine (ICE) and hybrid vehicle production. While production of ICE or hybrid models is not being banned, increasingly tough rules will ultimately ban sales of new ICE or hybrid vehicles. In the UK this is taking place under the Zero Emissions Vehicle (ZEV) mandate. Until late 2023, the plan was to ban the sale of ICE and hybrid vehicles by 2030, but this was delayed until 2035, in line with EU policy. The Labour Party has indicated that it will reinstate the 2030 date for banning ICE sales if it wins the upcoming election. Such a decision would have very limited impact on VMs' plans as these are now largely set in stone. VMs are planning to phase out ICE and hybrid models and replace them with EVs by 2035, with some planning to do this by 2030, regardless of government policy or any changes to it.

It is worth adding that around 80% of UK vehicle production is exported, mainly to the EU, with the remainder going to the US, and China especially. By contrast, around 90% of the vehicles which UK consumers buy are imported. So, if a Labour government decides to reinstate the 2030 date, the dependence of UK consumers on imported EVs will grow. UK factories will not suddenly switch to making cars that UK consumers will buy. However, the current slowdown in EV sales shows that consumers are resistant to EVs for several reasons, including price and concerns over charging infrastructure.

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<sup>2</sup> <https://www.smmmt.co.uk/2017/01/17-year-high-british-car-manufacturing-global-demand-hits-record-levels/>

<sup>3</sup> <https://www.smmmt.co.uk/industry-topics/sustainability/automotive-production/>: the 877,000 referenced here includes c23,000 trucks and buses.

<sup>4</sup> <https://media.smmmt.co.uk/december-2023-uk-car-manufacturing/>

## THE INTERACTION OF UK AUTOMOTIVE PRODUCTION AND TRADE POLICY

For several decades, especially since the start of the European Single Market, UK vehicle manufacturing operated in a largely tariff-free or low tariff environment. Tariffs for some export markets remain, eg in the US they are just 2.5%. Elsewhere, including in Japan, Korea and Australia, these have reduced to zero. Of the major markets served from the UK, by the premium brands mostly, only China applies tariffs of note - currently 15% but these may rise.

Inside the EU, UK VMs could export to the EU (and Turkey) tariff free, and vehicles could be imported from these locations also tariff free. Vehicles from markets outside the EU Customs Union are subject to a 10% tariff, the EU's common external tariff (CET), a practice also followed by the UK post Brexit. This applies to the US-made BMW and Mercedes SUVs and Jeeps. It also applied to Korean and Japanese vehicles until trade agreements between these countries and the EU eliminated tariffs. This meant that UK VMs and, crucially, the UK government, had limited understanding of how trade rules and Rules of Origin (RoO) requirements worked in practice. There were also no RoO requirements for vehicles made and sold within the EU, and because there was no trade deal with the US or China, exports to these markets did not have to address these requirements.

### **Brexit disruption**

Brexit changed this status quo significantly. Government officials, industry policy makers, and individual companies suddenly had to understand the nuances and details of trade policy, tariffs and non-tariff barriers in far more detail than before. Events since then, plus the increase in EV production and the RoO requirements of the UK-EU TCA have intensified the need for this understanding. Moreover, much of the necessary information did not exist prior to Brexit.

Brexit meant the appearance of a trade border. A trade deal was required, and the two sides had to address tariffs, local content and regulatory alignment in all industries, not just automotive. What Brexit meant in practice was unclear.

In absence of an agreement with the EU, there would be a “No Deal Brexit” with tariffs on cars and components, as well as non-tariff barriers (NTBs) with their own costs. Across the industry, it was recognised that even an agreed, orderly departure from EU would mean new NTB costs for the UK's automotive manufacturing sector. Believing that a deal would be agreed, the industry's view was that any costs and disruption, while undesirable, would be manageable. However, the potential cost of a Hard Brexit, a No Deal or a WTO Brexit, caused the industry significant concern regarding its future in the UK.

Modelling by AutoAnalysis showed that tariffs would add between £2.8-3.2bn or more to UK vehicle manufacturing's annual costs. This is based on a very detailed model by manufacturer and plant which considers several types of tariffs: on imported components used in UK-made cars; on finished vehicles exported into the EU; and on engines and other components exported by UK VMs to their operations in the EU - and in the case of Ford, Toyota and, at that time,

Honda to their factories in Turkey<sup>5</sup>. This would have severely undermined the economic and financial basis for manufacturing in the UK<sup>6</sup>.

### Tariffs were not the only concern of the industry

In addition to tariff costs, the industry faced potential NTB costs, ranging from: regulatory compliance; customs processing; border delays; additional stocks needed to cover supply chain disruption; increased working capital requirements to cover additional stocks, fund tariff payments; and changes to the VAT regime. Academic research suggests that NTBs amount to between 0.5-1.5 times the cost of tariffs, equivalent to around 9%<sup>7</sup>. However, industry interviews undertaken by AutoAnalysis suggest that NTB costs would be in the range 4-5%. Taking the potential c£3bn tariff cost for the industry, NTBs would mean added costs of at least £120-150m per year, further intensifying the financial pressure on the industry. UK vehicle production operates on a just-in-time principle with minimal stock holding at the factories. Any disruption to this, as Brexit would cause, undermined this arrangement and thereby increased costs.

In the end, the UK government and the EU recognised that imposing tariffs on the automotive industry, and other economic sectors, would help no one and the two sides signed the UK-EU TCA. The UK-EU TCA however contained a number of significant requirements for the automotive industry, as explained below.

## IMPACT OF RULES OF ORIGIN AND TRADE DEALS ON AUTOMOTIVE PRODUCTION

The automotive chapters of trade deals typically state that 55% of the ex-works value of a car or van must originate from either or both of the parties to the deal to avoid tariffs; this is **bilateral cumulation**. In the UK-EU TCA context, UK VMs can count EU content with UK content to achieve 55% cumulated local content for vehicles exported to the EU and thereby avoid tariffs. If this were not allowed, tariffs of 10% would be applied on the landed value of the car declared at the arrival port (not on the retail price). The same rule applies in reverse, for EU imports into the UK.<sup>8</sup>

Similar rules regarding cumulation apply to other countries. For example, a vehicle exported from the UK to Korea must have 55% UK-Korean content to avoid tariffs. This would be

<sup>5</sup> For details of the model see Ch.3 of “Keeping the Wheels on the Road”, <https://www.bitesizedbooks.com/shop/public-affairs-books/keeping-the-wheels-on-the-road/#>

<sup>6</sup> Stellantis' CEO, Carlos Tavares, explicitly warned that tariffs would have made manufacturing in the UK [uneconomic](#). Ford, which only makes engines and transmissions in the UK, described a No Deal Brexit as “catastrophic”, [costing the company at least US\\$800m a year](#).

<sup>7</sup> Olivier Cadot & Julien Gourdon, 2016. “[Non-tariff measures, preferential trade agreements, and prices: new evidence](#),” *Review of World Economics (Weltwirtschaftliches Archiv)*, Springer; Institute für Weltwirtschaft (Kiel Institute for the World Economy), vol. 152(2), pages 227-249.

<sup>8</sup> This has not been a major issue for petrol or diesel (ICE) powered vehicles, because all UK-made vehicles meet the 55% cumulated content provision for exports to the EU; and the same applies in reverse. There were a few exceptions, eg a small number of high-performance Fords made in Germany used North American engines and transmissions, the value of which tipped them below the 55% local content level. However, these vehicles are no longer made so the issue does not apply today.

impossible for UK VMs to achieve because there is little or no Korean content in UK-made vehicles and there is much less than 55% UK content in UK-made vehicles. This means that UK-made vehicles should be subject to tariffs when exported to Korea, but they are not because Korea allows EU content to be cumulated along with UK content. This is called **diagonal cumulation**. When the UK-Korea trade deal is renewed, there is no guarantee that Korea will continue to allow this.

No country is obliged to agree to diagonal cumulation. For example, recent UK-Canada trade talks foundered on many things, including this issue; Canada will not allow diagonal cumulation in the automotive sector going forward (unless the UK concedes in some other area of trade talks) and so UK-made vehicles sold in Canada have been subject to a 6.1% import tariff since April 2024<sup>9</sup>.

The impact on the automotive sector can be calculated based on the number of vehicles exported to Canada: in 2023, the UK exported just over 9,000 vehicles to Canada, a mixture of Minis, Land Rovers and other premium models. Based on 2023 data, the mix of cars exported to Canada and their varying price points would have generated close to £28m in tariffs, an average of c£3,000 per vehicle. It remains to be seen how Canadian consumers will react to the price rise which the 6.1% tariff engenders.

Mexico and South Africa currently allow diagonal cumulation, but Australia does NOT allow it; however, Australia has a much lower local content threshold, so almost all UK-made vehicles can be imported without a tariff<sup>10</sup>.

## Rules of origin and batteries for EVs

The RoO issue re: EVs add another complication to UK-EU trade, although matters were simplified when plans to increase EVs' RoO requirements in January 2024 were delayed until 2027. Currently, UK-made EVs (and hybrids) exported to the EU only have to achieve 40% local (UK and EU cumulated) content. However, from 2027 they will have to meet the 55% local content required of ICE-powered vehicles. While this ratio applies to the overall value of the car, there are additional rules for the batteries used in EVs and hybrids traded between the EU and the UK.

At present, batteries used in EVs and hybrids must have 30% local UK-EU content. This is not an issue for hybrid vehicles' batteries as these have a higher level of EU content<sup>11</sup>. However, higher local content was proposed from January 1, 2024. This would have seen the 30% local content for batteries rise to 60%, and to 70% on January 1, 2027. Achieving 60% local content for the batteries in UK- or EU-made EVs from January 2024 was seen as impossible for most

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<sup>9</sup> <https://www.ft.com/content/edfb3af5-a32a-4800-8494-1913709be295>, January 26, 2024 cites AutoAnalysis data on this issue.

<sup>10</sup> The rules for calculating local content in Australia are complex, and are explained at: <https://www.great.gov.uk/markets/australia/sector-explainers/automotive-goods/>

<sup>11</sup> For batteries in fully electric vehicles (BEVs), the value of the assembly process, ie creating the battery pack with imported (Chinese or Korean) cells, along with other locally sourced parts (battery housing and cover, wiring, cooling systems and bracketry etc) mean that EV batteries can achieve at least 30% local content. Therefore, UK- or EU-made EVs qualify for zero tariffs.

of the market. This was because, although battery cell production capacity is rising across Europe, too much of the value of the cells still comes from outside Europe. Almost all the mineral/metal content comes from Africa/Asia/South America and the overwhelming majority of cathode and over 90% of anode supply comes from Asia, mainly China and Korea. In practice, there would not have been enough UK or EU content in the batteries used in UK- or EU-made BEVs traded across the border from January 1, 2024 to avoid a tariff being levied. In the meantime, ICE vehicles would not have been subject to a tariff - a rather perverse situation since UK government and EU policies are designed to encourage consumers to switch to EVs. In light of the above, the UK and the EU agreed to delay the 2024 change in RoO protocols until 2027, when the 70% local battery content rule will apply. This means that even if UK-made EVs use Chinese-sourced cells until the end of 2026, because of the value of the battery pack components and the assembly process, they can and will continue to meet the 30% RoO rule. Extensive investment is currently taking place across Europe, especially in the EU<sup>12</sup>, in battery component production capacity, particularly for cathodes, the most expensive part of the battery. Most of this should be operational by January 1, 2027, giving vehicles crossing the UK-EU border sufficient local content to avoid tariffs.

### Two additional complications

There are two other issues of note deriving from the operationalisation of the UK-EU TCA and broader regulatory development:

1. From 2027, EV batteries must be “qualifying batteries”, requiring that certain components, and specifically the cathode, originate in the UK or EU. Imported batteries or UK- or EU-assembled batteries using imported cathodes will not qualify under the new rules. Any EU- or UK-assembled vehicles using Asian battery cells or cathodes after 2027 would face a 10% tariff on their declared landed value, equivalent to 6-7% on the transaction price paid by the customer tariff when crossing the Channel.
2. A further twist will come later with rules regarding battery passports and the use of recycled material in battery production. These future changes in requirements for battery production are described [here](#). VMs should have the required systems for passports and the use of recycled material in place or be close to being ready for these new rules by 2027. While these do not impact directly on RoO requirements, they are a useful example of the kind of changing regulatory environment which the industry constantly has to address. In early June 2024, Volvo announced it would be the first VM to issue a battery passport: for the new EX90 SUV which will be manufactured in South Carolina, US<sup>13</sup>.

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<sup>12</sup> It is not yet known where Nissan or Tata/JLR will source cathodes from for their UK factories – it is assumed within the industry that sourcing will be inside the EU or in the UK as if the cathodes come from outside the UK/EU the batteries and the cars using these batteries would not meet RoO requirements and would therefore face tariffs when shipped across the UK-EU border

<sup>13</sup> <https://europe.autonews.com/automakers/volvo-issue-worlds-first-ev-battery-passport-ahead-eu-rules>

## THE US IRA

Automotive production in the US has been boosted by the Inflation Reduction Act (IRA). Signed into law in 2022, this is a multi-trillion-dollar subsidy or incentive scheme aimed at boosting EV manufacturing and the associated supply chain in the US especially, and North America more broadly. Although applicable across a range of industries, its biggest impact has been in the automotive sector. IRA's terms are so attractive that Volkswagen switched investment from a planned battery cell factory in Eastern Europe to take advantage of the subsidies on offer<sup>14</sup>. It would not be surprising to see more US investment at the expense of Europe as IRA provisions develop.

By August 2023, a year after IRA came into effect, the US had seen investment in 280 clean energy projects, worth around US\$282bn<sup>15</sup>; nearly US\$120bn was in the EV supply chain<sup>16</sup>. Although some of the battery production facilities due to come on stream in the next few years had been planned prior to IRA, these schemes have been either expanded or brought forward<sup>17</sup>. Existing tax credit schemes were due to expire in 2023 and early entrants in the EV sector, notably Tesla and GM, were about to lose their EV allowances when IRA came into effect. The pre-IRA benefits for EVs functioned as sales subsidies to encourage the take-up of EVs but they also allowed Tesla especially to import EVs from China. By contrast, IRA focuses explicitly on encouraging investment in EV production and the supply chain in the US instead<sup>18</sup>.

The first and most public incentive under IRA's provisions for consumers was a US\$7,500 federal tax credit for the purchase of 30 specific models assembled in North America. The list of models benefiting from these incentives has since changed. To democratise the policy and avoid appearing to subsidise the wealthiest in US society, tax credits now only apply to conventional cars priced below US\$55,000 and SUVs and vans below US\$80,000. The benefits are moreover limited to low- and middle-income earners. Reduced tax credits are also available for used EV sales, although given the nascent state of the EV market in the US, the number of used EVs benefiting here is likely to be small<sup>19</sup>.

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<sup>14</sup> <https://www.reuters.com/business/autos-transportation/volkswagen-canada-battery-plant-targets-90-gwh-capacity-its-biggest-yet-2023-04-21/>

<sup>15</sup> <https://www.telegraph.co.uk/business/2024/02/13/worlds-green-juggernaut-unstoppable-clean-tech/>

<sup>16</sup> <https://electrificationcoalition.org/after-one-year-the-inflation-reduction-act-is-spurring-private-investments-in-the-electric-vehicle-industry/>

<sup>17</sup> Volkswagen's battery cell plant in Ontario, Canada (to which investment was diverted, from a planned cell plant in the Czech Republic, as result of IRA) will use critical minerals sourced or processed within the USA. Volkswagen is building a new US\$2bn EV factory for its Scout brand in [South Carolina](#) and has spent US\$800m on an EV factory at its existing vehicle plant in [Tennessee](#). Meanwhile, Toyota, Northvolt, Hyundai in JVs with SKI and LG, LG alone, Stellantis, Panasonic and Ford in a JV with SKI are building battery factories in the US, benefiting from IRA's provisions while ensuring the VMs' supply chains are fully compliant.

<sup>18</sup> <https://www.era-environmental.com/blog/inflation-reduction-act-automotive-industry> provides a very good overview and much detail on the impact of IRA; and a shorter, more readable analysis is available at <https://www.forbes.com/sites/energyinnovation/2022/09/07/inflation-reduction-act-benefits-electric-vehicle-tax-incentives-for-consumers-and-us-automakers/?sh=15bf4b52117e>

<sup>19</sup> <https://theweek.com/finance/1020531/what-bidens-ira-means-for-ev-tax-credits>



## IRA is changing the geography of sourcing and therefore of component production

To benefit from the tax credit, vehicles must have a rising proportion of their components sourced from the US or a country with which the US has free trade deal. This ratio started at 40% in 2023, and will rise to 80% in 2026. Secondly, battery components must be made in North America, at a rate of 50% in 2023, rising to 100% by 2028-29<sup>20</sup>. Moreover, components and critical minerals cannot be sourced from or processed by a “foreign entity of concern”<sup>21</sup>. Finally, IRA also subsidises critical mineral production and the production of cathode active material (CAM), the most expensive element in the battery, both to the tune of a 10% tax allowance. Battery cell production receives a \$35 per kWh incentive, while full battery assembly benefits from a \$10 per kWh incentive.

These requirements fundamentally change the economics of EV production, leading to a major reassessment of supply chains and significant redirection of investment funds. By mandating local mineral sourcing and processing, the US mining sector has received a new lease of life to extract and process lithium, cobalt, nickel and manganese.

Whether US consumers switch to EVs as quickly as the government and the VMs would like to justify the huge federal support and industrial investment being made remains uncertain. EV sales in Europe<sup>22</sup> and North America<sup>23</sup> slowed in the first quarter of 2024, and many analysts expect this will continue for the rest of 2024 and probably into 2025.

Fears over charging infrastructure, the performance of batteries in cold winters, and the continued price premium EVs command over ICE models mean that the switch from ICE- to electrically-powered vehicles is likely to be slower than anticipated. As a result, the industry and the US government will experience a delay in seeing the desired returns on investment and IRA subsidies. Another uncertainty in this evolving sector is the duration of this delay.

## THE CHANGING POLITICAL DIMENSION CANNOT BE IGNORED

Political pressure has focused on the perceived threat of Chinese EVs. US politicians on both the Democrat and Republican sides have argued for higher tariffs on Chinese vehicles<sup>24</sup>. President Biden has decided to implement a 100% tariff on Chinese EVs, and from August 1 these will now be subject to a 102.5% tariff, including the standard 2.5% US import tariff on vehicles and the 25% tariff which had been levied on all Chinese-made vehicles since the Trump presidency in 2019<sup>25</sup>.

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<sup>20</sup> <https://bipartisanpolicy.org/blog/ira-ev-tax-credits/>

<sup>21</sup> As defined at: <https://www.bis.gov/entity-list>

<sup>22</sup> <https://www.bloomberg.com/news/articles/2024-04-18/europe-car-sales-drop-in-march-as-ev-weakness-persists>

<sup>23</sup> <https://www.nytimes.com/2024/04/15/business/ev-car-sales-tesla.html>

<sup>24</sup> Donald Trump and Republican Senator Josh Hawley both [suggested 100% tariffs on Mexican made Chinese brands on top of existing rates](#). Three Democrat senators, two from Michigan and one from Ohio, also urged the Biden administration [to raise tariffs on Chinese vehicles](#)<sup>24</sup>.

<sup>25</sup> <https://taxfoundation.org/research/all/federal/tariffs-trump-trade-war/>

In reality, this is a gesture as very few Chinese EVs are now sold in the US, namely Polestars which will soon switch to US production at the Volvo plant. Teslas used to be imported from China, but those sold in the US are now all made in the US, although there are still Tesla shipments from China to Canada<sup>26</sup>. Significantly, BMW does not sell its Chinese-made iX3 EV in the US and this vehicle will not be sold in the US until production starts in Hungary in 2026.

### **Mexico complicates the picture**

In April 2024 it was reported that, under strong pressure from the US authorities, Mexico had withdrawn incentives to Chinese EV manufacturers<sup>27</sup>. Around 20 Chinese car brands are sold in Mexico, with the Chinese collectively already having around a 30% market share. However, other than JAC, a truck maker, there is no Chinese production in the country. This is something which the US authorities are keen to avoid; the Office of the United States Trade Representative (USTR) regards Mexico as potentially offering a back door route for Chinese VMs (with very low levels of local or regional content) into the US.<sup>28</sup> This would breach the existing US-Mexico-Canada (USMCA) trade agreement which mandates 75% regional local content for tariff-free sales across USMCA borders<sup>29</sup>.

Mexican vehicle production, particularly its compliance with USMCA regulations, will face increasing scrutiny leading up to discussions in 2026 regarding the extension to the USMCA deal. July 2026 is when the deal could be extended for 16 more years. Mexico will be especially wary of the US' leverage at this point, especially if there is a second Trump presidency.

### **The Chinese response remains to be seen**

BYD, the largest Chinese EV company, is considering opening a factory in Mexico and has said that this will be for the local market. However, Mexican demand alone would not support a facility of the size which BYD would ideally want; in Hungary BYD will open a plant with an initial capacity of 150,000 cars per year for example, which shows the likely size of investment it would make in Mexico<sup>30</sup>.

Whether Mexican-made Chinese brand vehicles end up in the US or not, Chinese VMs' Mexican factories would need export markets as Mexico alone would not justify the cost of building the factories. The EU-Mexico trade deal could make the EU a possible tariff-free market should the

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<sup>26</sup> <https://www.bloomberg.com/news/articles/2024-05-17/chinese-made-teslas-pour-into-canada-as-biden-erects-us-tariff-wall>

<sup>27</sup> <https://www.motortrend.com/news/report-mexico-halts-federal-incentives-to-chinese-automakers/> and <https://uk.finance.yahoo.com/news/exclusive-mexico-facing-us-pressure-101754870.html>

<sup>28</sup> The USTR's position is in direct response to: <https://selectcommitteeontheccp.house.gov/sites/evo-subsites/selectcommitteeontheccp.house.gov/files/evo-media-document/11.7.2023-letter-to-ambassador-tai-auto-301.pdf>

<sup>29</sup> Full details in:

<https://ustr.gov/sites/default/files/2022%20USMCA%20Autos%20Report%20to%20Congress.pdf>, especially page 4; USMCA requires certain core components are produced within North America, including batteries; this rule was in place before IRA's provisions came into force

<sup>30</sup> <https://www.reuters.com/business/autos-transportation/chinas-byd-plans-new-electric-vehicle-plant-mexico-says-nikkei-2024-02-13/> and <https://www.bloomberg.com/news/articles/2023-12-22/byd-picks-hungary-for-its-first-european-ev-factory-site>

Chinese VMs not receive the desired support from European governments to locate there. Chinese VMs in Mexico would need to meet the 55% (Mexican) local content target to comply with the EU-Mexico deal's RoO requirements<sup>31</sup>.

## EUROPEAN COMMISSION INVESTIGATION INTO CHINESE EV SUBSIDIES

Although BYD and Chery will soon start production in Europe, probably followed by other Chinese VMs, the EC fears that Chinese EVs (who are expected to take a 25% share of the European EV market in 2024) will alter the structure and dynamics of this market. This concern led to the EC launching an investigation into subsidies given to Chinese VMs. The EC announced in March 2024 that it had evidence to show that Chinese VMs had been receiving subsidies in a variety of forms, including the direct transfer of funds from or revenue foregone by the Chinese government<sup>32</sup>.

The EC believes that Chinese EVs are sold in Europe at prices below those which European VMs can sell at profitably. The EC has mandated border agencies to monitor Chinese EVs imports in the quarter between April and June and in early June announced a range of tariffs on Chinese EVs; these will come into effect provisionally on July 4 and are scheduled, subject to discussions between the EU and the Chinese, to be definitive, ie permanent in November. Interestingly, while the US has settled on a blanket tariff of 100% on all Chinese EVs, the EC has proposed company specific tariffs ranging from an additional 17.4% for BYD (the most company which co-operated best with EC investigators) to 38.1% for SAIC and a number of other unnamed companies (who were the least co-operative). These tariffs are moreover on top of the standard EU 10% import tariff<sup>33</sup>.

The Chinese authorities have suggested they will respond to potential EU and actual US tariffs with a 25% tariff of their own on imported vehicles with petrol or diesel engines above 2.5 litre capacity<sup>34</sup>. The 25% rate (up from the current 15%) would hit top-of-the-range German brands and US SUVs especially. BMW, Mercedes and the Volkswagen group could respond by increasing production in China where they have long-established manufacturing operations and reduce their exports. They fear that their Chinese business could be negatively impacted if the EU imposes these tariffs. For example, China is BMW's biggest market, accounting for nearly 1/3 of revenue in 2023<sup>35</sup>. It is moreover committed to further investment in China, and recently announced a US\$2.76bn investment in its factory there<sup>36</sup>.

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<sup>31</sup> As noted above, BYD (the largest EV producer in the world) will open a plant in Hungary, while another Chinese company, Chery, will start production in Spain in the near future too. Other Chinese companies, SAIC, Dongfeng and Great Wall (which are also reported to be looking at Mexican production) have yet to decide where their potential European plants will be located. They may supply Europe from Mexico if European incentives do not meet their expectations.

<sup>32</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L\\_202400785](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202400785)

<sup>33</sup> <https://www.ft.com/content/5df0e9d1-110b-439a-a91e-a898b0f1b077>; <https://www.ft.com/content/0545ed62-c4b9-4e8a-80fa-c9f808e18385>; and <https://europe.autonews.com/automakers/eu-levy-multi-billion-euro-tariffs-38-chinese-evs>

<sup>34</sup> <https://electrek.co/2024/05/24/china-threatens-tariffs-up-to-25-imports-retaliation-eu-probe-us-tariffs/>

<sup>35</sup> <https://www.statista.com/statistics/267252/key-automobile-markets-of-bmw-group/>

<sup>36</sup> <https://www.reuters.com/business/autos-transportation/bmw-invest-276-billion-chinese-production-site-2024-04-26/>

Although it is almost certain that the European Commission will follow the US and impose tariffs on Chinese EV imports, European VMs do not entirely support this approach. BMW's CEO Oliver Zipse has said that the risk of the Chinese in Europe is overstated<sup>37</sup>. Stellantis' CEO Carlos Tavares has made similar comments<sup>38</sup>, as has Volkswagen's finance chief who expects Chinese retaliation<sup>39</sup>. This reflects these companies' extensive investments in China rather than just a fear of tariffs on exports to China; many of the cars sold by the German brands in China are actually made in China.

However, the European trade body, ACEA, has repeatedly called for an industrial strategy across Europe to support the EV industry, while Renault's CEO, Luca di Meo, wants the EU to subsidise the European EV sector<sup>40</sup>. Elon Musk has contributed to the debate, saying that Chinese VMs will dominate the global market unless they face trade barriers; Tesla, it is worth noting, still imports a sizeable proportion of the Model 3 vehicles it sells in Europe from China<sup>41</sup>.

The threat of increased tariffs on Chinese vehicles has already led to a change in strategy by both Chinese and European VMs; the economics of the EV switch are being directly impacted by EU policy or the threat of a change in policy. Currently, several European VMs import vehicles from China, including EVs, eg the Dacia Spring, Cupra Tavascan, Volvo EX30 and BMW iX3, plus some low volume ICE-powered models, eg Volvo's S90 and Stellantis' DS9. However, recognising that tariffs were likely to be imposed, Volvo decided to switch supply of the electric EX30 for Europe from China to Belgium<sup>42</sup>, and BMW will make the new electric iX3 in Hungary as well as in China<sup>43</sup>. The Chinese-made DS9 will be replaced by the Italian-made DS8 in the next couple of years<sup>44</sup>.

European VMs' policy of importing EVs, ie the Dacia Spring, Cupra Tavascan, Volvo EX30 and BMW iX3, from China will soon either stop or reduce to a trickle. A 10% tariff is absorbable because it is more than compensated for by the lower costs of production in China. A tariff of even 25% would significantly reduce the margin afforded by lower Chinese production costs and a 50% tariff or higher would erode it entirely.

The situation is different for the Chinese VMs who, like their European counterparts, have also recognised that the European Commission would not allow unfettered market access in perpetuity. Chinese EVs sold in Europe are priced much higher than their equivalent models in China: for example, BYD's Seal U sells for the equivalent of 20,500 euros in China but is priced at 42,000 euros in the EU, including a 10% tariff. Even allowing for transport costs, there would

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<sup>37</sup> <https://www.bmwblog.com/2024/03/25/bmw-thinks-impact-chinese-imports-europe-exaggerated/>

<sup>38</sup> <https://europe.autonews.com/automakers/stellantis-ceo-carlos-tavares-calls-chinese-ev-tariffs-trap>

<sup>39</sup> <https://europe.autonews.com/automakers/vw-warns-eu-china-tariffs-will-cause-retaliation>

<sup>40</sup> See <https://media.renaultgroup.com/luca-de-meos-letter-to-europe/?lang=eng> for a broader understanding of de Meo's wishes for the sector

<sup>41</sup> <https://insideevs.com/news/688830/tesla-reportedly-part-eu-probe-china-made-built-ev-imports/>

<sup>42</sup> <https://www.automotivemanufacturingsolutions.com/volvo/volvo-cars-taps-ghent-for-ex30-production-supplementing-china/44816.article>

<sup>43</sup> <https://www.carmagazine.co.uk/spy-shots/bmw/ix3-neue-klasse/>

<sup>44</sup> <https://www.reuters.com/business/autos-transportation/stellantis-start-production-five-new-mid-sized-models-italys-melfi-2023-10-03/>

appear to be plenty of margin for BYD to absorb additional tariffs<sup>45</sup>. Other press reports suggest that Chinese EV companies should be able to absorb at least a 30% tariff without affecting margins.

In late 2023, BYD announced plans to build an all-new car plant in Hungary, although this will not open before 2026<sup>46</sup>. Meanwhile Chery is taking over the former Nissan plant in Barcelona and will assemble cars from completely knocked down (CKD) kits there by the end of 2024<sup>47</sup>. Chery will also likely build an all-new full manufacturing plant of its own in Europe. Recent reports suggest that several Chinese companies are in advanced talks with Turkey about opening factories there<sup>48</sup>, although the French are also keen on attracting BYD<sup>49</sup>. These moves are designed to avoid the risk of penal tariffs on imports, while allowing Chinese brands, directly or indirectly, to grow their presence in Europe

### **A simple twist of fate?**

Government policy can have unusual impacts. In April 2024, Tesla started building vehicles in Berlin for export to India. This followed the decision in March by the Indian government which cut the import tariff on EVs on up to 8,000 vehicles a year per company for five years from between 70-100% to just 15%. However, to qualify for this reduced tariff, a company has to invest at least US\$500m in India, starting production within three years. Moreover, vehicles made in India must have 25% local content within three years and 50% within five years, meaning significant investment in the EV supply chain is required. Also, the initially imported vehicles must have a landed imported cost of at least US\$35,000 to prevent undercutting any low cost EVs made in India<sup>50</sup>. This is a case of a policy (reduced tariffs) stimulating short-term EV demand while encouraging long-term manufacturing investment in EV production and the supply chain. If Tesla confirms a reported US\$2bn investment by the end of 2024, then India's policy in this area will have its first success, while also having given a short-term boost to European EV production. The reduced tariffs apply immediately, subject to the proposed later investment taking place. This gave Tesla's German factory an unexpected production boost and new export market in India.

## **CONCLUSION**

### **Automotive's global dynamics have potentially significant implications for the UK**

The automotive industry is concentrated in three locations: China, North America and the EU. Japan and Korea retain global significance because of the strength of their domestic players.

<sup>45</sup> <https://fortune.com/europe/2024/04/29/eu-unwinnable-price-war-chinese-evs-byd-cars-11-times-more-profitable-in-europe-than-in-china/>

<sup>46</sup> <https://www.bloomberg.com/news/articles/2023-12-22/byd-picks-hungary-for-its-first-european-ev-factory-site>

<sup>47</sup> <https://europe.autonews.com/automakers/chery-ev-motors-form-iv-build-cars-ex-nissan-barcelona-plant>

<sup>48</sup> <https://www.reuters.com/business/autos-transportation/turkey-advanced-talks-with-chinas-byd-chery-ev-plants-bloomberg-news-reports-2024-05-17/>

<sup>49</sup> <https://europe.autonews.com/automakers/france-would-allow-chinas-byd-build-cars-country>

<sup>50</sup> <https://www.businesstoday.in/technology/news/story/tesla-begins-production-of-right-hand-drive-evs-for-indian-market-may-hit-roads-this-year-report-424229-2024-04-04>

By contrast, the UK lacks a significant indigenous VM with limited decision-making authority. Jaguar Land Rover (JLR) must get approval for major strategic moves from its Indian owners. At Nissan, Mini, Stellantis and Toyota, decisions about UK production, markets supplied from the UK and investment in the UK are made outside of the country. In general, other than JLR, the large UK vehicle plants play a secondary role to other factories within their group.

In turn, this means that key supply chain and sourcing decisions are also made outside the UK. Significantly, UK-made vehicles have lower UK content than the French content of French-made vehicles and the same applies to German vehicles. Hence the reliance on EU sourcing cumulation for the UK VMs in meeting RoO requirements of trade agreements.

As the transition to EVs accelerates, the UK will remain dependent on EU suppliers as much as it does in existing automotive technologies. Although Nissan and Tata/JLR will make battery cells in the UK, the sourcing of key components, notably cathodes, will not necessarily be in the UK. Much of the content value of UK-assembled batteries could remain outside the country. This could be problematic if future UK trade deals with markets outside the EU require a high level of UK content to ensure tariff-free trade.

RoO protocols for EVs and batteries will become increasingly significant. Without further battery cell and supply chain investment, UK vehicle factories may have to accept tariffs on vehicle exports beyond the EU, or not supply these markets if tariffs make UK-made vehicles uncompetitive. Within the EU, the UK benefited from EU supply chains' RoO contribution when supplying markets beyond the region. Outside the EU, maintaining a significant global role in EV manufacturing may become increasingly difficult.

Experience from the US with IRA and from China with its subsidies to VMs in one form or another and having secured the supply of crucial minerals from Africa or Latin America shows that state power on a grand scale can determine the fate of an industry. Major markets will respond to threats from other countries with tariffs on imports or incentives contingent on local sourcing, ignoring complaints about protectionism. And perhaps this is the most important lesson from this briefing: protectionism, in various disguises, is on the march and different parts of the automotive industry are acting as protagonists, both for and against, with those uncommitted either way caught in the associated crossfire. Free trade may be desirable, but sadly it may prove to be a chimera. Policy makers need to balance immediate consumer interests (access to cheap EVs), longer term societal interests (the green transition), differing producer interests (automobile production), as well as helping to maintain vital manufacturing capacity (economic and job security). That balance may be quite different across countries and, given the lack of critical decision-making for the industry in the UK, this poses significant challenges for the UK which have currently not been well articulated by politicians.

## ABOUT THE AUTHOR

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## FURTHER INFORMATION

The UK Trade Policy Observatory (UKTPO), a partnership between the University of Sussex and Chatham House, is an independent expert group that:

- 1) initiates, comments on and analyses trade policy proposals for the UK; and
- 2) trains British policy makers, negotiators and other interested parties through tailored training packages. The UKTPO is committed to engaging with a wide variety of stakeholders to ensure that the UK's international trading environment is reconstructed in a manner that benefits all in Britain and is fair to Britain, the EU and the world.

The Observatory offers a wide range of expertise and services to help support government departments, international organisations and businesses to strategise and develop new trade policies in the post-Brexit era.

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